University of Sousse/Faculty of Medicine
&
The Middle Eastern Association for Cancer Research

Sousse, Tunisia

27-28th Oct. 2023

The 13th Annual Meeting of the

MEACR

Welcome Message

From Congress Chair

It is with great pleasure that we extend a sincere welcome to all of you joining us in Sousse, Tunisia, for the 13th Annual Meeting of the Middle Eastern Association for Cancer Research (MEACR).

This year, we will explore the best in basic, clinical, and translational cancer research across a wide range of topics.

The 13th Annual Meeting of MEACR brings together over 500 researchers from Tunisia, North Africa, Middle East, and beyond. We would like to thank each of you for your active involvement as you strengthen your research. We hope you enjoy two days of excellent science in a friendly atmosphere, with plenty of opportunities to make new contacts and collaborations to support your research.

We are confident that the 13th annual Meeting of MEACR will offer you new insights, ideas, and inspiration gained from all colleagues.

Prof. Hédi Khairi,

Dean of the Faculty of Medicine of Sousse
University of Sousse, Tunisia

It is a great pleasure to welcome you all in Sousse at the 13th annual meeting of the Middle-Eastern Association for Cancer Research (MEACR). We take this opportunity to thank the University of Sousse and its faculty of medicine for their outstanding efforts in co-organizing the event this year. Also, we would like to express our gratitude to the various collaborators and sponsors that allowed us to open the event for all participants.

As you may know, the MEACR was established as a nonprofit organization in 2009 and with its first executive committee meeting in May 2010 at Aleppo University (Aleppo, Syria); it began its journey as the first association for cancer research in our region. The MEACR aims to enhance the exchange between clinicians, cancer scientists, graduate students and other health workers who deal with cancer patients in all Middle East (ME) countries including North Africa. Thus, and in order to achieve this mission, the MEACR holds an annual meeting in a different ME country each year, to provide equal opportunity for all cancer researchers across the region and help them build a collaborative base with various educational and research institutions. On the other hand, and in 2012 the MEACR launched its official scientific journal, the Clinical Cancer Investigation Journal (CCIJ). We hope that one day we will be able to garner enough support to provide a constant online platform for our Middle-Eastern scientists, where they can communicate, provide support and collaborate with their colleagues from other institutions. As our ultimate aim is to build collaborative scientific bridges that unite us in the fight against one of the most prolific diseases of our generation.

Herein, we take this occasion to express our appreciation for all scientific and organizing team members who have contributed their time and effort to making this event a success. Wishing you an inspiring meeting and an enjoyable stay in Sousse.

Ala-Eddin Al Moustafa
Founder, Middle-Eastern Association for Cancer Research (MEACR)
Prof. College of Medicine, Qatar University
Adjunct Prof. Oncology Dep. McGill University, Montreal, Canada

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The 13th Annual Meeting of the

MEACR

DAY 1

Friday 27 Oct. 2023

7:30 – 8:30	Registration
8:30 – 9:00	Opening Ceremony

9:00 – 10:00 SESSION I:
Cancer Immunology

Moderators: Khrouf M., Mokni M., Mezni F.

09:00 – 09:30 **Salem Chouaib**
Gustav Roussy Institute, France
The tumor Microenvironment: Obstacles and opportunities for cancer immunotherapy

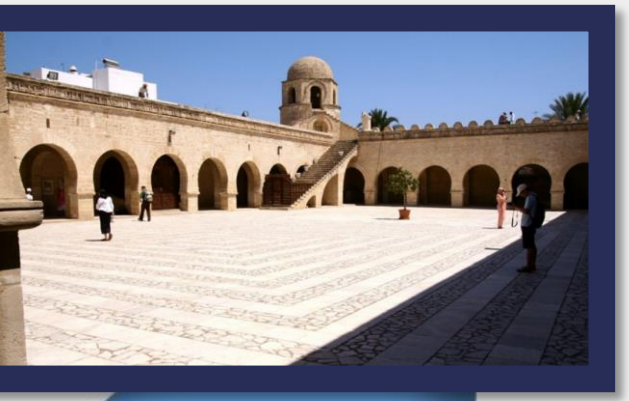
09:30 – 09:45 **Wouter Hendrickx**
Sidra Medicine, Qatar
An Atlas and Compass of Immune-Cancer-Microbiome interactions (AC-ICAM)

09:45 – 10:00 **Yosr Hamdi**
Pasteur Institute of Tunis, Tunisia
Cancer Genomics in Tunisia: What comes next?

10:00 – 10:20 **Biopole Symposium**
Vivik Kelshiker, USA
Digitalization in Pathology

10:20 – 11:00 Coffee Break and Poster Visit

Sousse/Faculty



11:00 – 12:00 SESSION II: Cancer Genetics

Moderators: Chouaib S., Boussen H., Saad A.

11:00 – 11:15 **Raja Gargouri**
Biotechnology Center of Sfax, Tunisia
Using Next Generation Sequencing for the detection of BRCA1/BRCA2 germline mutations in South-Tunisian patients with breast/ovarian cancer

11:15 – 11:30 **Mona Mlika**
Faculty of Medicine of Tunis, Tunisia
A meta-analysis about the diagnostic performance of micro-RNA and metabolites in lung cancer

11:30 – 11:45 **Julie Decock**
Qatar Biomedical Research Institute (QBRI), Qatar
Development of a novel therapeu�c approach to target Lactate Dehydrogenase C(LDHC) in 2D and 3D breast cancer-cell models

11:45 – 12:00 **Besma Loueslati**
Faculty of Sciences of Tunis, Tunisia
Identification of theranostic biomarker panels for breast cancer

12:00 – 12:20 Medibio Symposium
Marwa Ben Brahim
Illumina Solutions in Oncology: Facilitating Access to Personalized Medicine

12:20 – 13:50 Lunch & Poster Visit

13:50 – 14:10 Zymo Research Symposium
Roula Arch, USA
To the infinite and beyond, Epigenetics Analysis Solution

DAY 1

Friday 27 Oct. 2023

DAY 1

Friday 27 Oct. 2023

Hall A

14:10 – 15:25 SESSION III A: Cancer Therapeutics
Moderators: Gargouri R., Kenani A., Charfeddine B.

14:10 – 14:25 **Dorra Abdelmalek**
Centre of Biotechnology of Sfax, Tunisia
Density Functional Theory & Molecular Dynamics Simulation Support Newly Designed Reversible Tyrosine Kinase Inhibitors Targeting Double Mutant Epidermal Growth Factor Receptor (EGFR)

14:25 – 14:40 **Aschraf Chadli**
Faculty of Medicine of Tunis, Tunisia
Analysis of T-cell receptor gamma gene rearrangements using BIOMED-2-protocols inpatients with cutaneous T cell lymphoma

14:40 – 14:55 **Asma Omezzine, Yassine Khalij**
Faculty of Pharmacy, University of Monastir, Tunisia
Predicting fluoropyrimidine toxicity in cancer patients via DPYD genotyping

14:55 – 15:10 **Mohamed Jemaa**
Faculty of Medicine of Tunis, Tunis El Manar University, Tunisia
Synergistic lethality of mitotic kinase inhibitors and spindle poison in chemoresistant neuroblastoma

15:10 – 15:25 **Ilham Zarguan**
International University of Rabat, Morocco
Anticancer and Hsp90 inhibitory effects of plant extracts in breast cancer: A systematic review of in vitro studies

15:25 – 16:00 Coffee Break and Poster Visit

Hall B

14:10 – 15:25 SESSION III B: Cancer & Digital Health
Moderators: Mestiri S., Essokri N., Bousarsar M.

14:10 – 14:25 **Sihem Hmissa, Ahlem Bdioui**
Faculty of Medicine of Sousse University, Tunisia
Application of machine learning in pathology

14:25 – 14:40 **Khawla Alhajaj**
Dubai Academic Health Corporation (DAHC), UAE
No-shows at primary health care clinics mammography screening appointments atDubai Health Authority

14:40 – 14:55 **Salma Mohamed Amer**
National Cancer Institute Misurata, Libya
The initiative of Libyan cancer control activities: Midland region in particular

14:55 – 15:10 **Saoussen Alouani**
Fattouma Bourguiba University Hospital, Monastir, Tunisia
The impact of lifestyle on the quality of life of colorectal cancer survivors: The DOT study

15:10 – 15:25 **Muna Abusanuga**
National Cancer Institute Misurat, Lybia
Assessment of cancer primary preventive vaccination program in Tripoli - Libya 2019

Hall A

16:00 – 17:30 SESSION IV: Molecular Oncology I

Moderators: Rammeh S, Mougou S, Bouaziz H,

16:00 – 16:15 **Neila Fathalla**
Faculty of Medicine of Sousse University, Tunisia
Pharmacogenetics in oncology: state of the art

16:15 – 16:30 **Yasmine Ben Taher**
Charles Nicolle Hospital, Tunisia
Single-tube Multiplex PCR and Capillary Electrophoresis for High-Risk HPV Genotyping

16:30 – 16:45 **Mariem Ben Rekaya**
Charles Nicolle Hospital, Tunisia
Plasma EGFR T790M testing using digital PCR in Tyrosine Kinase Inhibitor metastatic non-small-cell lung cancer patients (TKI-NSCLC)

16:45 – 17:00 **Meryem Jalte**
CHU Fes, Morocco
Cytogenetic Study of Acute Leukemia at HASSAN II University Hospital, Fes: Initial Findings

17:00 – 17:15 **Hewida Fadel**
Faros University of Alexandria, Egypt
Applications of Bioinformatics in Cancer Research

End of Day 1

Hall B

16:00 – 17:15 Workshop: Cancer Biobanking as a Platform for Biomedical Research

Moderators: Mansour W., Abid N., Chabchoub E.

16:00 – 16:15 **Zisis Kozlakidis**
International Agency for Research on Cancer (IARC), France
Biobanking in LMICs: Potentials, Challenges & Future Trends in Oncology

16:15 – 16:30 **Fayek Elkhwsky**
Medical Research Institute, Alexandria University, Egypt
Education in Biobanking in LMICs: MSC degree at Alexandria University

16:30 – 16:45 **Amal Farahat Allam**
Medical Research Institute, Alexandria University, Egypt
Best Practices & Guidelines, Standard Operating Procedures (SOP) in Biobanking

16:45 – 17:00 **Fayek Elkhwsky**
Medical Research Institute, Alexandria University, Egypt
Automated Biobanking

17:00 – 17:15 **Radwa Ibrahim Ali Hassan**
Faculty of Medicine, Cairo University, Egypt
Artificial Intelligence in Cancer Healthcare and Biobanking

DAY 1

Friday 27 Oct. 2023

DAY 2

Saturday 28 Oct. 2023

Hall A

8:30 – 10:15 SESSION V A: Cancer Biomarkers

Moderators: Decock J., Belaid I., Mrad K.

08:30 – 09:00 **Semir Vranic**
Qatar University, Qatar
A Review of Predictive Biomarkers to Immune Checkpoint Inhibitors in Merkel Cell Carcinoma

09:00 – 09:15 **Mojhgan Sheykhpor**
Pasteur Institute of Iran, Iran
MiR-146a is a suitable diagnostic and therapeutic biomarker for lung cancer

09:15 – 09:30 **Soumaya Kouidhi**
ISBST, University of Manouba, Tunisia
Metabolomics and Microbiome Profiling: The Key to Unlocking Precision Medicine for Breast Cancer and Hematopoietic Stem Cell Transplantation

09:30 – 09:45 **Awatef Ben Jemaa**
Faculty of Sciences of Bizerte, University of Carthage, Tunisia
A novel regulation of VEGF-A, VEGF-C AND FGF-8 expression by Q640X AR in 22RV1 and LNCaP prostate cancer cells

09:45 – 10:00 **Fatima Maarouf**
Ibn Rochd University, Morocco
Genetic sequencing of cancers and precision medicine

Hall B

8:30 – 10:00 SESSION V B: Cancer Epidemiology & Risk Factors

Moderators: Zidini Ch., Harrabi I., Lassoued L.

08:30 – 08:45 **Omar Nimri**
Jordan Center for Disease Control, Jordan
Cervical Cancer burden in Jordan, 2000-2018

08:45 – 09:00 **Rahima Bel Haj Rhouma**
Pasteur Institute of Tunis, Tunisia
Distribution of high-risk human papillomavirus in Tunisian women with and without cervical lesions

09:00 – 09:15 **Hana Khenine**
Faculty of Medicine of Tunis, Tunisia
The Role of Vitamin D in the Etiopathogenesis of Solid Cancers: Unraveling the Intricacies

09:15 – 09:30 **Fatma Ben Youssef**
Abderrahmen Mami University Hospital, Tunisia
Knowledge, attitudes and practices of Tunisian women regarding breast cancer screening

09:30 – 09:45 **Juma Almataani**
Jaalan Bani Bu Hassan Health Center, Oman
Early detection of colorectal cancer campaign at South AS Sharqiyah

09:45 – 10:00 **Sassi Chayma**
Abderrahmen Mami University Hospital, Tunisia
Postoperative respiratory morbidity in onco-thoracic surgery: Risk factors

10:00 – 10:30 Coffee Break and Poster Visit

DAY 2

Saturday 28 Oct. 2023

Hall A

10:30 – 11:45 SESSION VI A: Molecular Oncology II

Moderators: Boubaker S., Chouaib S., Loueslati B.

10:30 – 10:45 **Haifa Tounsi**
Pasteur Institute of Tunis, Tunisia
Molecular diagnosis in solid tumors at Institut Pasteur of Tunis

10:45 – 11:00 **Kais Ghedira**
Pasteur Institute of Tunis, Tunisia
Bioinformatics Analysis of Curated Transcriptomics Data reveals common DEGs and pathways for Multiple Cancer Types

11:00 – 11:15 **Marwa Manai**
Pasteur Institute of Tunis, Tunisia
Targeting CDK7 enhances the antitumor efficacy of enzalutamide in androgen receptor-positive triple-negative breast cancer

11:15 – 11:30 **Aida Jlassi**
Salah Azaiz Institute, Tunisia
Immune checkpoints VISTA, CTLA4, PDL1 and PD1 in Ovarian Carcinoma: Expression profile and correlations

11:30 – 11:45 **Fatima El Agy**
Sidi Mohamed Ben Abdella University, Morocco
Rare RAS mutations are associated with recurrence patterns and recurrence-free survival in colon cancer: First results from Morocco

11:45 – 12:00 **ABS African Biosystem Symposium**
Ghada Bouguerra
End-to-end genomic solutions

Hall B

10:30 – 12:00 SESSION VI B: Cancer Diagnosis & Prognosis

Moderators: Yacoubi M. T., Ben Dhiab T, Ben Ahmed S.

10:30 – 10:45 **Ibtissem Hasni Bouraoui**
Sahloul University Hospital, Tunisia
Primary Central Nervous System Lymphoma Imaging: Experience of Sahloul hospital in Sousse-Tunisia

10:45 – 11:00 **Ahem Bdioui**
Faculty of Medicine of Sousse University, Tunisia
Microenvironment study of colorectal and bladder carcinoma

11:00 – 11:15 **Samir Aloulou**
University Hospital of Gabes, Tunisia
Vertebral metastasis of breast carcinomas in Southeastern Tunisia: Anatomoclinical aspects and therapeutic management

11:15 – 11:30 **Sadok Megdiche**
Mongi Slim University Hospital, Tunisia
Liver metastases from colorectal cancer after curative treatment: prognostic factors affecting overall survival and recurrence-free survival

11:30 – 11:45 **Feriel Souissi**
Sahloul University Hospital, Sousse, Tunisia
Thymoma operated by sternotomy: prognostic factors

11:45 – 12:00 **Achraf Saoudi**
Sahloul University Hospital, Sousse, Tunisia
Chest wall reconstruction combining synthetic plates and locoregional flaps: About 13 cases

Hall A

12:00 – 14:00 **Lunch & Poster Visit**

14:00 – 15:30 SESSION VII:
Cancer Drugs & Therapeutics

Moderators: Bouzaiene H., Fathallah N., Zairi A.

14:00 – 14:15 **Hewida Fadel**
Pharos University, Egypt
Drug Docking of Phytochemicals to Stearoyl-CoA desaturase at critical residues; A novel mechanism against Colon Cancer

14:15 – 14:30 **Tarek Baati**
National Institute of Research & Physio-chemical Analysis, Tunisia
Chitosan coated ultrapure silicon nanoparticles produced by laser ablation: biomedical potential in nano-oncology as tumor targeting nanosystem

14:30 – 14:45 **Kalthoum Ayed**
Sahloul University Hospital of Sousse, Tunisia
The added value of 18F-FDG PET-CT in the initial staging of non-small cell bronchopulmonary cancers

14:45 – 15:00 **Oumayma Kouki**
Faculty of Sciences of Tunis, Tunisia
Anti-tumor effect of Annona muricata on cellular chemo-sensitivity in experimental breast cancer models

15:00 – 15:15 **Saoussane Kharmoum**
Regional Hospital Center, Morocco
Management challenges of extremity sarcomas in under-resourced settings: The first survey-based study in Morocco

15:15 – 16:00 **Coffee Break and Poster Visit**

DAY 2
Saturday 28 Oct. 2023

Hall A

16:00 – 17:15 SESSION VIII:
Translational Cancer Research
Moderators: Bdioui A., Boutay A., Ben Fatma L.

16:00 – 16:15
Mokni Baizig Nehla
Salah Azaiez Cancer Institute, Tunisia
Study of potential diagnostic and prognostic biomarkers in laryngeal squamous cell carcinoma samples from patients at the "Salah Azaiz" Cancer Institute

16:15 – 16:30
Omar Alqawi
National Cancer Institute, Libya
Common mutations of p53 gene in Libyan colorectal cancer patients

16:30 – 16:45
Ines Safra
Pasteur Institute of Tunis, Tunisia
Implication of TP53 gene codon 72 polymorphism in the severity of chronic lymphocytic leukemia

16:45 – 17:00
Meriem Mokni
Sahloul University Hospital, Tunisia
New electrochemical biosensors for fast and reliable diagnosis and monitoring of prostate cancer

17:00 – 17:15
Nabiha Missaoui
Faculty of Medicine of Sousse, Tunisia
Systematic Mapping of Gender Disparities in Oncology Publications of North-African Countries: The GEORGINA Study

17:15 – 17:30 Conference Closure & Committee Meeting of the MEACR

DAY 2

Saturday 28 Oct. 2023

DAY 1

Friday 27 Oct. 2023

Oral Presentations

Session I: Cancer Immunology

Moderators: Khrouf M., Mokni M., Mezni F.

09:00 – 09:30 **Salem Chouaib**

Gustave Roussy Institute, France

The tumour microenvironment: Obstacles and opportunities for innovative cancer immunotherapy

Salem Chouaib completed his undergraduate studies at the university of Pierre and Marie Curie (Paris VI) and Pasteur Institute. He received his Doctorate es-sciences (Ph.D.) in immunology from the same university. He then joined the Memorial Sloan Kettering Cancer Centre in New York where he undertook a post-doctoral training in Human Immunogenetics Laboratory. In 1986, he was appointed as research associate at the French National Institute of Health and Biomedical Research (INSERM) and joined the tumor biology department at the Institute Gustave Roussy. In 1994 he became Research Director at INSERM and head of tumor immunology laboratory (INSERM U487) at Gustave Roussy. In 2018, he founded the Thumbay Research Institute for Precision Medicine at Gulf Medical University. In 2019, he was nominated as Vice Chancellor for Research at the same University.

He is currently Research Director Emeritus and his research focuses on the investigation of the reactivity of killer cells in the context of tumor microenvironment complexity and plasticity. His research was constantly directed at impulsing the transfer of fundamental concepts in clinical application in particular in the field of cancer immunotherapy.

He was awarded the cancer research prize of the French league against cancer in 1992 and in 2004 the presidential prize in biotechnology. In 2022, he obtained the international award of Nencki Institute for experimental biology (Warsaw-Poland) for his contribution on the understanding of the influence of tumor hypoxic stress on the anti-tumor cytotoxic response and its potential impact on cancer immunotherapy.

He is lecturing cancer immunology for the PhD programs at the University Paris Sud since 1992. He has authored over 350 publications and several reviews in the field of human immunology and tumor biology as well as in editorship for contribution to several books. Furthermore, he is guest lecturer at different universities in France and abroad. He is a member of various professional associations and is scientific advisor and consultant in many scientific institutions

Cancer immunotherapy has seen tremendous scientific development and clinical success. Immune checkpoint blockade (ICB) has emerged as a powerful approach to cancer treatment. Despite the rapid advances made in the field, immuno-oncology is still in its relative infancy, with numerous challenges and hurdles yet to be overcome. The role of the tumor microenvironment (TME) during the initiation and progression of carcinogenesis is presently considered to be of critical importance to design efficient cancer treatment approaches. Hypoxia, a major metabolic component of tumor microenvironment, is currently attracting a lot of attention in the field of cancer biology and immunology. In this regard, we provided evidence that tumor hypoxic microenvironment leads to an increase in tumor heterogeneity, plasticity and favors immune escape by conferring tumor resistance and immunosuppression. We will discuss how exploiting hypoxia-associated pathways and their targeting can help the design of innovative immunotherapeutic strategies. We believe that future advances in the field of immuno-oncology will come from the challenging understanding of the crucial role of the tumour microenvironment in the modulation of anticancer immune responses as well as tumor plasticity and heterogeneity.

09:30 – 09:45 **Wouter Hendrickx**

Sidra Medicine, Qatar

Dr. Wouter Hendrickx is an investigator in Population Genomic Medicine Division of the Research Branch and member of the Cancer Program at Sidra Medicine. He Leads the Tumor Biology and Immunology Laboratory and has experience in stem cell and cancer research at the universities of Brussels (VUB), Leuven (KUL) and Norwich (UEA). Where he gained an MSc in biomedical Science (2004) and an MSc Bio-informatics (2005) and a PhD in Medical Science respectively (2012). He has worked on several different projects relating to the tumor micro environment including extensive work on the role of MMP's and the degradome. He has experience with classic molecular biology techniques as well as advanced 3D cell culture and proteomics technology. At Sidra Medicine he has focused since 2014 on the tumor immune micro environment deploying bio-informatic tools to analyze tumors for immune related signatures and other determinants of the immune phenotype and translating the findings to the wet lab environment. He was a participant of the EU FP6 and PF7 grant framework and is a 2015 QNRF JSREP awardee. Since 2019 he leads Sidra Medicine's efforts in establishing its Pediatric Precision Oncology Initiative which aims to provide NGS based molecular guided therapy recommendations to each child fighting cancer in Qatar. In this effort he was awarded with IRF2019, IRF2022 and PPM5.

An Atlas and Compass of Immune-Cancer-Microbiome interactions (AC-ICAM)

Cancer progression is influenced by complex interactions between cancer cells, the immune system, and the microbiome. The lack of extensive clinical follow-up datasets containing genomic, immunological, and microbiological information has made the identification of prognostic and predictive biomarkers challenging. In this study, RNA sequencing was performed on fresh-frozen colon cancer specimens from 348 patients, whole-exome sequencing of 562 samples, bacterial 16S-rDNA sequencing of 492 samples, and T-cell receptor profiling of 114 tumor samples. The Immunologic Constant of Rejection (ICR), a gene signature reflecting Th1-oriented immune activation, was found to have prognostic implications in colon cancer outperforming conventional prognostic molecular classifications, such as the consensus molecular subtypes. We demonstrated that an active immune tumor microenvironment in colon cancer is positively associated with a more clonal T-cell repertoire. This observation suggests that specific T-cell clones are expanded in colon cancer with a Th1 polarized immune response. We also explored associations between immune traits and the tumor-associated microbiome, and found that specific intra-tumoral bacteria were associated with improved survival. The combination of this bacterial composition with gene expression profiles that reflect immune activation identified patients with exceptional survival. This curated dataset and cancer-immune-microbiome metrics provide a valuable resource for gaining a better understanding of colon cancer immunobiology and the implementation of tailored interventions.

Published:

Roelands J, Kuppen PJK, Ahmed EI, Mall R, Masoodi T, Singh P, et al. An integrated tumor, immune and microbiome atlas of colon cancer. Nat Med. 2023 May 19;1–14.

09:45 – 10:00 **Yosr Hamdi**

Pasteur Institute of Tunis, Tunisia

Yosr Hamdi is a biologist and researcher at Institut Pasteur de Tunis, Tunisia. She is a specialist in cancer genomics and precision oncology. Dr. Hamdi is a member of several international Consortia including BCAC, CIMBA, H3ABioNet, and H3Africa. Dr. Hamdi started in the field of human genetics in 2004 with the Human Genome Project, at Laval University, Quebec, Canada. Then, she had a Master degree in Cellular & Molecular Biology at the Faculty of Medicine, Laval University, Canada. In 2009, she joined the Genomics Center of the Centre de Recherche du Centre Hospitalier de l Université Laval (CRCHUL), QC, Canada where she obtained a PhD degree in Molecular Medicine.

By combining genomics, molecular biology and bioinformatics, Dr. Hamdi is now leading the Genome Tunisia Collaborative Alliance (GTCA) and the PerMediNA Consortium (Personnalised Medicine In North Africa) in order to continue the investigations of Cancer Genomics in African populations as well as implementing Genomic Medicine and Precision Oncology in North Africa.

Cancer Genomics in Tunisia: What comes next?

Major advances in genetics and recent growing availability of health data present an opportunity to make precise personalized patient care a clinical reality. The goal of precision medicine is to deliver the right treatment to the right patient at the right dose and the right time.

Here we are presenting our experience in applying research knowledge in the implementation of precision oncology in Tunisia, a North African country that represents a central hub of population admixture and human migration between African, European and Asian populations.

We started by characterizing the genetic architecture of the Tunisian population in the framework of several national and international pilot research projects starting with rare and monogenetic diseases and up to complex diseases such as cancer. We used traditional and next generation sequencing technologies (NGS) to identify the mutational spectrum of several hereditary diseases. Novel and specific genetic mutations have been identified for each disease and population-specific genomics databases were set up. Then, we identified the steps towards building sufficient capacity to effectively integrate genomic medicine and molecular diagnostics in clinical practice. Several training activities in bioinformatics, biostatistics, NGS data analysis, Omics data annotation and interpretation have been carried as a part of the H3ABioNet and H3Africa projects. Finally, we promoted the precision oncology

ecosystem by involving all engaged stakeholders including health care providers, clinicians, pathologists, radiologists, oncologists, academic researchers, bioinformaticians, diagnostic companies, policy makers and advocacy groups.

Currently, an Oncogenetics Diagnosis Unit is implemented at Institut Pasteur of Tunis for several cancer types including breast, ovarian, cervical, prostate, melanoma, pancreatic and colorectal cancers. For each cancer patient, a genetic and molecular profiling is performed to identify actionable biomarkers. Based on the profiling report, our oncologists individualize disease prevention, detection, diagnosis, treatment and management.

In conclusion, our experience highlights the importance of conducting innovative translational research to enable greater precision in disease prevention, diagnosis and treatment. However, the degree of clinical annotation, data interpretation and data sharing remain challenging. Additional efforts are now made to advance personalized medicine in patient care by educating consumers and providers, accelerating research and supporting necessary changes in policy and regulation.

DAY 1

Friday 27 Oct. 2023

Oral Presentations

Session II: Cancer Genetics

Moderators: Chouaib S., Boussen H., Saad A.

11:00 – 11:15 **Raja Mokdad-Gargouri**

Center of Biotechnology of Sfax, Tunisia

Professor in Molecular Biology, Head of the Laboratory of Molecular Biotechnology of Eukaryotes at the Biotechnology Center of Sfax. The main area of research is related to the genetics and epigenetics of cancer. We have conducted several molecular studies in cancer patients looking for polymorphisms, mutations and epigenetic variations, including methylation status and expression of miRNAs to identify biomarkers for prognosis and patients follow-up. In collaboration with clinicians, we performed several molecular tests for target therapy as well as genetic analysis for patients with familial cancer as breast/ovarian for better management. We have also expressed some genes in yeast such as the Epstein Barr virus latent membrane protein (LMP1) and the human p53 gene. We then discovered that when it is overexpressed, the p53 protein triggers apoptosis in yeast. This model has been used to isolate genetic and phenotypic suppressors (biomolecules) of apoptosis in yeast, such as an interesting molecule extracted from nigella seeds.

Using Next Generation Sequencing for the detection of BRCA1/BRCA2 germline mutations in South-Tunisian patients with breast/ovarian cancer

Next-generation sequencing (NGS) is increasingly used in standard clinical practice to identify patients with pathogenic mutations for targeted therapy. To improve the management of cancer patients from the South region of Tunisia, we have used high-throughput sequencing, such as targeted sequencing or Exome sequencing.

For patients with Hereditary Breast/Ovarian cancer (HBOC), we have firstly screened germline mutations in BRCA1/BRCA2 genes. The overall frequency of the BRCA germline mutations was 14.17% and we identified recurrent mutations as the c.1310_1313 delAAGA in BRCA2 gene and the c.5030_5033 delCTAA in BRCA1 gene that were found in 4% and 20% of familial BC and OC respectively.

Exome sequencing was performed for BRCA negative patients to identify candidate genes that predispose to HBOC in Tunisian patients.

Male Breast Cancer (MBC) is a rare and aggressive disease, mutations in BRCA1 and BRCA2 account for 10% of all MBC cases. We analyzed 6 Tunisian MBC patients with family history for BRCA1/ BRCA2 mutations and we showed that only one harbored a novel frameshift mutation in exon 2 of the BRCA2 gene (c.17-20delAAGA, p.Lys6Xfs). Further, we selected one young MBC patient and performed analysis using the TruSight One sequencing panel (Illumina). We selected 9 rare variants after applying several filter steps on the exome sequencing data, and retained 6 candidate genes (MSH5, DCC, ERBB3, NOTCH3, DIAPH1, and DNAH11). Further studies are needed to confirm the association of the selected genes with family MBC.

Colon cancer is the third most prevalent cancer in Tunisia with 3500 new cases /year.

We performed a one case study using a Cancer panel analyzing 36 genes related to cancerogenesis. The patient developed colon cancer at an early age and then Glioblastoma. We demonstrated that he harbored a homozygous non sens mutation in the MSH6 gene which is linked to the Constitutionnal MisMatch Repair Deficiency.

Overall our data contribute for better management of cancer patients in Tunisia.

11:15 – 11:30 **Mouna Mlika Zorgati**

Faculty of Medicine of Tunis, Tunisia

A meta-analysis about the diagnostic performance of micro-RNA and metabolites in lung cancer

- PhD in medical pedagogy and didactics
- Head of Department of Pathology in the Major Burn and Trauma Center since 2023
- Full Professor in the Department of Pathology in Abderrahman Mami Hospital from 2010 to 2023

SIENTIFIC PUBLICATIONS:

- ORCID ID : 0000-0003-2470-0012
- Scopus : 135 documents, 293 citations, H-Index : 11
- Web of science : 93 documents, 129 citations, H-Index:11
- Publons : Publications : 227, 385 citations, H-index : 12
- Researchgate: H-index: 13.

Introduction: The diagnosis of lung cancer is based on the microscopic exam of tissue or liquid. During the recent decade, many biomarkers have been pointed to have a potential diagnostic role. These biomarkers may be assessed in blood, pleural effusion or sputum and they could avoid biopsies or other risky procedures. The authors aimed to assess the diagnostic performances of biomarkers focusing on micro-RNA and metabolites.
Methods: This meta-analysis was conducted under the PRISMA guidelines during a 9-year-period (2013-2022). the Meta-Disc software 5.4 (free version) was used. Q test and I2 statistics were carried out to explore the heterogeneity among studies. Meta-regression was performed in case of significant heterogeneity. Publication bias was assessed using the funnel plot test and the Egger's test (free version JASP).
Results: According to our inclusion criteria, 165 studies from 79 articles were included. The pooled SEN, SPE and dOR accounted respectively for 0.76, 0.79 and 13.927. The AUC was estimated to 0.859 suggesting a good diagnostic accuracy. The heterogeneity in the pooled SEN and SPE was statistically significant. The meta-regression analysis focusing on the technique used, the sample, the number of biomarkers, the biomarker subtype, the tumor stage and the ethnicity revealed the biomarker number (P=0.009) and the tumor stage (P=0.0241) as potential sources of heterogeneity.
Conclusion: Even if this meta-analysis highlighted the potential diagnostic utility of biomarkers, more prospective studies should be performed especially to assess the biomarkers' diagnostic potential in early-stage lung cancers.

11:30 – 11:45 **Julie Decock**

Qatar Biomedical Research Institute (QBRI), Qatar

Dr. Julie Decock is senior scientist at the Qatar Biomedical Research Institute (QBRI) and a joint Associate Professor at the College of Health & Life Sciences, Hamad Bin Khalifa University (HBKU). Dr. Decock obtained her PhD at the Catholic University of Leuven, Belgium and has since focused her research career on advancing our current understanding of breast cancer. Prior to moving to Qatar, she was a postdoctoral fellow at the University of East Anglia (UK) where she studied the role of several protease families in cancer.

Currently, research activities within her group fall within 3 main themes:

(1) Tumor target discovery and therapeutic applications,

(2) Biomarkers and modulators of anti-tumor immunity

(3) Immunogenomics.

Dr. Decock is the recipient of several research grants and her research at QBRI has resulted in 2 pending patents. Her track-record includes over 45 publications with an h-index of 26 and more than 2400 citations.

Development of a novel therapeutic approach to target Lactate Dehydrogenase C (LDHC) in 2D and 3D breast cancer cell models.

Background: Breast cancer is the leading cause of cancer-related deaths in women worldwide, highlighting the urgent need for a better understanding of the disease and development of novel therapeutic interventions. The standard of care treatment with chemotherapy has not been effective in patients with triple negative breast tumors due to treatment resistance. Targeting Lactate Dehydrogenase C (LDHC) might provide a novel therapeutic approach as it is highly expressed in

tumors while being absent in normal somatic tissues. Furthermore, we demonstrated that targeting LDHC significantly impairs long-term survival of breast tumor cells by affecting the cell cycle and DNA damage response. In fact, we have shown that silencing LDHC can sensitize breast cancer cells to common anti-cancer drugs. Hence, therapeutic targeting of LDHC could complement traditional cancer therapy.

Materials and methods: We designed four peptides to facilitate cellular uptake of LDHC siRNA molecules in tumor cells as a 10R polyarginine molecule with or without tumor homing (linear/cyclic RGD) or tumor penetrating ability (iRGD). Silencing efficiency was evaluated in 2D and 3D spheroid breast cancer cell models.

Results: Gel retardation assays demonstrated efficient complex formation for each of the individual peptides (10R, 10R-linear RGD, 10R-cyclicRGD and 10R-iRGD). Further, confocal imaging showed efficient cellular uptake of the peptide-siRNA complexes in MDA-MB-468 breast cancer cells. In 2D cultures, we found that complexing of siRNAs, in particular siLDHC#2, with peptides considerably reduced LDHC expression (30-53%), with the 10R-cyclicRGD:siRNA

complex showing the highest silencing efficiency. In 3D spheroids, we observed a 35% and 25% reduction in LDHC expression upon transfection with the 10R-cyclicRGD:siRNA and 10R:siRNA complex respectively.

Conclusions: Our findings indicate that peptide-assisted delivery of LDHC silencing molecules can reduce LDHC expression in 2D and 3D breast cancer cell models, suggesting that these complexes hold potential as novel tools for tumor-specific targeting.

11:45 – 12:00 **Besma Loueslati**

Faculty of Sciences of Tunis, Tunisia

Professor and researcher in Immunologie and molecular biology with 20 years of experience in university pedagogy and scientific research, with proven skills in ICTE and Molecular Biotechnology combined with a solid training in the field of molecular biology; genetics, immunology and vaccinology, and a strong aptitude for acquire new knowledge. Cofondator and Research Project Leader on Cancer Biomarkers of Laboratory Author and co-author of 69 scientific publications in peer-reviewed international journals among which: Cytokine, HLA, Journal of Clinical Virology and Tumour Biology and Frontiers in Physiology. One of the most quoted opinion leaders in the field of Cancer biomarkers with 928 citations and 11162 reads in Researchgate (RG h-index 20; RG Score 513.5).

Identification of theranostic biomarker panels for breast cancer

To date Breast cancer (BC) is the most commonly diagnosed form of female cancer with more than 2,261 419 cases diagnosed each year worldwide (11.7%). In Tunisia, BC is the leading cancer with a high incidence about 15.9% of all cancers and the second cause for cancer related death.

The majority of patients are not diagnosed until late stages, highlighting the need for the development of novel theranostic biomarkers that could promise better overall survival of BC patients. The alteration of various proteins, including immune mediators, in cancer, caused by apoptosis processes angiogenesis and activation of the immune system, especially those implicated in inflammation, might be measured and detected as potential biomarkers in body fluids.

Profiling of 65 serum proteins, using ProcartaPlex technique was performed for Tunisian patients with BC as compared to healthy controls and stratified according to their HER status, stage and metastasis. Specific early diagnosis and prognostic biomarkers panels were characterized for BC patients.

DAY 1

Friday 27 Oct. 2023

Oral Presentations

Session III A:

Molecular Targets / Cancer Therapeutics

Moderators: Gargouri R., Kenani A., Charfeddine B.

14:10 – 14:25 **Dorra Abdelmalek**

Biotechnology Center of Sfax, Tunisia

Dorra Abdelmalek Driss is currently working as an assistant Researcher at Centre of Biotechnology of Sfax CBS-Sfax, University of Sfax. Dorra does research in Engineering, Biochemistry Computer Science and Signaling pathways science. Her current projects are; project1 : Targeting EGFR family kinases: development of new molecules: design, synthesis and in vitro assays and project 2: Genertaing Active Human Kinases (ERBB family) Using Pichia Pastoris As A Host For Functional Assays And For Drug Discovery Purposes Investigating Possible Inhibitors That Can Be Used As Anticancer Agents.

Density Functional Theory and Molecular Dynamics Simulation Support Newly Designed Reversible Tyrosine Kinase Inhibitors Targeting Double Mutant Epidermal Growth Factor Receptor (EGFR)

Non-small cell lung cancer (NSCLC) is a leading cause of death in the world. Epidermal growth factor receptor (EGFR) is a well-characterized oncogene that was shown to be implicated in the development of NSCLC via the acquisition of the L858R activating substitution. In this work, we aimed to identify novel reversible double mutant EGFR TKIs via an in silico approach. First, a compound library containing more than 150000 kinase inhibitor analogs was subjected to an initial filtering step. The remaining molecules were tested via high-throughput virtual screening that was carried out to identify the best inhibitors. Following this, a total of 15 hits were retained and their binding interactions and ADMET properties were determined. Finally, molecular dynamic studies were performed for the top 10 scoring compounds. Simulation analysis revealed that both molecules possessed interesting characteristics in terms of RMSD, RMSF, radius of gyration and hydrogen bonds formation. Of note, this study evaluated and established a library of compounds, top ranked virtual hit compounds binding reversibly to the double mutant EGFR enzyme can act as potent newly designed EGFR inhibitors in management of mutations of non-small cell lung cancer.

14:25 – 14:40 **Aschraf Chadli, Sarra Klaii**

Faculty of Medicine of Tunis, Tunisia

Aschraf Chadli Debbiche, M.D., is a professor of pathology. In 1993, she obtained her medical degree in pathology from the Tunis Faculty of Medicine. She was certified in dermatopathology in 2006. By 2010, she had joined the Habib Thameur Hospital in Tunis as head of the pathology department. Since 2014, she has been involved in the organization of national quality control for pathological and cytological techniques. She is currently active in several research projects including the establishment of the study of T and B lymphocyte clonal rearrangement, the search for HER2 status by FISH in breast cancer, the detection of KIT and PFGFRA gene mutations in gastrointestinal stromal tumors, the search for translocation (11;18) by FISH in gastric MALT lymphomas, the search for microsatellite instability in patients with colorectal cancer and the typing of human papillomavirus by reverse hybridization on a DNA chip.

Analysis of T-cell receptor gamma gene rearrangements using BIOMED-2-protocols in patients with cutaneousT cell lymphoma

Introduction: The etiology of most variants of cutaneous T-cell lymphoma (CTCL) remains poorly understood. Detection of the monoclonal T-cell receptor gamma (TCR gamma) gene rearrangement by PCR has become an important adjunct in the diagnosis of CTCL.

This study explored the diagnostic value of TCR gamma clonality analysis in

confirming CTCL.

Methods: This was a descriptive study of cutaneous lymphoproliferative disorders followed in the department of Dermatology from 2012 to 2021 and carried out in the department of pathology in the Habib Thameur hospital, in 2020. PCR tests were performed with TCRG Biomed-2 clonality methods followed by capillary electrophoresis and Genescan analysis.

Results: Of the 54 patients included in this study, 30 (56%) were monoclonal for the TCRG rearrangement. We detected monoclonality in sixteen (57%) of the 28 patients with confirmed MF and in 12/19 (64%) of borderline cases. The results of TCRG molecular analysis were in agreement with the histological analysis of the biopsy.

TCRG clonality results showed significant agreement with the histopathological

diagnoses of the specimens (p<0.001).

Conclusion: The Biomed-2 PCR protocol is a powerful tool for detecting clonal T-cell populations for the diagnosis of CTCL. However data from molecular clonality tests must be interpreted in association with the morphological and immunophenotypic features of the lesions.

14:40 – 14:55 **Asma Omezzine**
Yassine Khalij
University of Monastir, Tunisia

- Resident in biology (hospitals of Tunisia and France)
- Doctoral student INSERM unit 407, Lyon Sud Faculty of Medicine, Oullins, France.
- Hospital-University assistant in biochemistry, Faculty of Pharmacy of Monastir /Sahloul University Hospital of Sousse
- Associate lecturer in Biochemistry, Faculty of Pharmacy of Monastir /Sahloul University Hospital of Sousse
- Hospital-University Professor in biochemistry Faculty of Pharmacy of Monastir /Sahloul University Hospital of Sousse
-president of the doctoral thesis and university accreditation committee in pharmaceutical and biological sciences
- Project manager at the LR12SP11 research laboratory, molecular biology applied to hereditary nephropathy, cardiovascular diseases and neurological and pharmacogenetics.
- Expert at the General Directorate of Scientific Research since 2016
- Eco-C international trainer

Scientific productions
H index 17, 75 international publications indexed and impacted, 5 book chapters
https://orcid.org/0000-0002-0537-5384
https://www.researchgate.net/profile/Asma-Omezzine

Predicting fluoropyrimidine toxicity in cancer patients via DPYD genotyping

BACKGROUND-AIM: 5 fluorouracil (5-FU), remains the reference chemotherapy for the treatment of solid tumors. However, it is a drug with a narrow therapeutic margin that can lead to severe toxicities. These toxicities present great inter-individual variability, which is attributed to genetic and non-genetic factors, hence the interest of the pharmacogenetic study applied to 5-FU.

METHODS: This prospective study involved 195 cancer patients treated with 5-FU-based chemotherapy recruited from the service of oncology medicine, at the Salah Azaeiz Institute and the carcinology service of the university hospital Farhat Hached. The genotyping was carried out by PCR-RFLP for DPYD: 1601G>A, 1627 A>G, 1905+1G >A, 496A>G, 85T>C, 1679T>G, c.483+18G>A; TYMS: 5'UTR VNTR du 28-bp, 3'UTR 6pb ins/del, VNTR du 28-bp G>C, and MTHFR: 677C>T. Statistical analysis was performed on SPSS21.

RESULTS: Diabetes, the type of cancer and the localization of the tumor, were considered confounding factors and were used to adjust the association between genetic polymorphisms and the risk of toxicity according to the dominant model. We noted that the homozygous variant allele of the DPYD 1627A>G polymorphism would be significantly associated with a decreased risk of neuropathy (OR=0.122) and hematotoxicity (OR=0.236). This same allele would also be significantly associated with a decrease in the severity of toxicity (OR=0.216). Furthermore, we reported a significant difference between the DPYD 1601G>A polymorphism according to the presence or absence of constipation (p=0.025). For the TSER 3G>C and 3'UTR polymorphisms of the TYMS gene, no significant association with the occurrence of toxicity was reported. However, the TYMS 5'UTR polymorphism was significantly associated with development of vomiting (p=0.039). In addition, we noted a decreased risk of diarrhea (OR=0.751), constipation (OR=0.392) and hematotoxicity (OR=0.743) with the variant allele of the MTHFR 677C>T polymorphism.

We established a prediction score for severe toxicity that would, after validation, allow clinicians to predict possible 5-FU-related toxicity.

CONCLUSION: Integration of genetic factors in the prediction of 5-FU toxicity would contribute to a better prescription.

14:55 – 15:10 **Mohamed Jemaa**

1 - Human Genetics Laboratory, Faculty of Medicine of Tunis, Tunis El Manar University, Tunis, Tunisia.
2 -Department of Biology, Faculty of Science of Tunis, Tunis El Manar University, Tunis, Tunisia.

Mohamed Jemaà is a cancer scientist specialist in Cell Death Subroutine with focus on Mitotic catastrophe and Apoptosis. Working on Cell migration/invasion and Cell Cycle and Aneuploidy/Polyploidy in the context of death and/or metastasis. I am being internationally recognized as an expert in the field of genomic instability, particularly the identification of antineoplastic strategies based on chromosomal instability.

Cofounder and Coordinator of the large Diaspora Network YTRB (Young Tunisians Researchers in Biology) and active in Science Diplomacy Scientific Advisor, MEF, Maghreb Economic Forum

Young Researcher Award, African Academy of Science 2021

Young Researcher Award, Tunisian Academy of Science, Letters and Art, 2019

Cancer Project Award, Royal Physiographic Society of Lund, Sweden 2018

Cancer Research Paper Award, Pôle Rabelais, France, 2017

Synergistic lethality of mitotic kinase inhibitors and spindle poison in chemoresistant neuroblastoma

Drug resistance is recurrently observed in high-risk neuroblastoma. Currently the treatment strategies available for relapse and refractory neuroblastoma is very limited. Here, we report the successful overcoming neuroblastoma chemoresistance by the inhibition of the Mps1 kinase, a key player of the mitotic checkpoint, in synergy with Paclitaxel.

We found that neuroblastoma cell line succumbed to the mitotic catastrophe after Mps1 inhibition. Vincristine (antagonist of paclitaxel, NDLR) resistant tumours overexpress mitotic kinase and do not undergo aneuploidy cascade when treated with Mps1 inhibitors, and de facto, the activation of the mitotic catastrophe pathway of apoptosis is prevented. However, the combination of Mps1 inhibitors and paclitaxel synergized at increasing the frequency of chromosome misalignments and missegregations resulting in massive polyploidization followed by the activation of mitotic catastrophe.

Altogether, these results suggest that Mps1 inhibitors combined with microtubule-targeting chemicals may exert robust anticancer activity in chemoresistant and relapsed neuroblastoma form.

15:10 – 15:25 **Ilham Zarguan**

International University of Rabat, Morocco

Ilham Zarguan is a Ph.D. student at the International University of Rabat, driven by a profound passion for unravelling the complexities of biological mechanisms, particularly in the context of cancer research. Her academic journey began with a bachelor's degree in applied biological sciences and health, where she honed her skills in early cancer detection through cell-free DNA analysis.

This pursuit led her to a master's degree in medical biotechnology at the University of Medicine and Pharmacy of Rabat, complemented by a six-month internship in the oncology unit of CHU Fez, focusing on cancer diagnosis, where she conducted in-depth research on germline mutations in BRCA1/2, gaining expertise in both molecular biology and bioinformatics. Currently, Ilham is dedicated to advancing innovative therapies and drug design for life-threatening diseases, with a strong focus on cancer, collaborating with esteemed professors and colleagues to contribute to the ongoing fight against cancer and improve healthcare outcomes.

Anticancer and Hsp90 inhibitory effects of plant extracts in breast cancer: A systematic review of in vitro studies

Background: Breast cancer, the most invasive cancer globally and the second major cause of cancer-related deaths, requires novel treatments due to the current limitations of usual treatments. Hsp90, a chaperone protein, is implicated in breast cancer pathogenesis, making it an interesting target. Plant-derived compounds and natural Hsp90 inhibitors offer promising prospects for innovative therapeutic strategies.

Aim: This study aims to identify plant-based compounds with anticancer effects on breast cancer cell lines and elucidate their mechanism of action in vitro, particularly focusing on the inhibition of Hsp90 protein.

Material and methods: A systematic literature review exploring PubMed, Scopus, Web of Science, and Dimensions databases was conducted and arrested on May 17, 2023. The inclusion criteria were restricted to original articles exploring natural plant-based compounds.

Results: Fifty-one articles were identified, and 11 were included in the review following the screening process. The MTT assay was the main in vitro technique used to analyze the anticancer effect, and Western blot, RT-PCR, and luciferase-based assays for Hsp90 inhibition. The most extensively studied cell lines were MCF-7, followed by MDA-MB-231, SKBR3, and finally, BrCSCs. Six plants, Foeniculum vulgare, Spatholobus suberectus, Flueggea leucopyrus, Tubocapsicum anomalum, Trianthema portulacastrum and Jasminum multiflorum were explored. Twenty-four compounds from 6 different classes: withanolides, flavonoids, diarylheptanoids, phenylethanoids, secoiridoids, and diterpenoids were identified and proved to be effective against Hsp90 in breast cancer cell lines. The studied plant extracts showed a dose and time dependent decrease in cell viability. Variable IC50 values exhibited antiproliferative effects, with the Chinese plant Tubocapsicum anomalum displaying the lowest value. Withanolides was the most studied class inhibiting Hsp90.

Conclusion: The identified plant extracts and compounds demonstrated effectiveness in inhibiting Hsp90 in breast cancer cells. More comprehensive research is required to elucidate the mechanism of action of Hsp90 inhibitors through standardized preclinical observations.

DAY 1

Friday 27 Oct. 2023

Oral Presentations

Session III B:

Cancer & Digital Health

Moderators: Mestiri S., Essokri N., Bousarsar M.

14:10 – 14:25 **Sihem Hmissa, Ahlem Bdioui**

Faculty of Medicine of Sousse, Tunisia

Sihem Hmissa completed her medical studies at the Faculty of Medicine Ibn Jazzar, University of Sousse, Tunisia. She obtained her specialized medical degree in Pathological Anatomy in 1999.

In 2000, she was appointed coordinator of the Cancer Registry at the Tunisian Center of the International Agency for Research on Cancer (IARC). She joined the teaching staff of the Faculty of Medicine in Sousse in 2001.

In 2007, she was appointed Director of the Higher School of Health in Sousse, where she actively participated in the reform of higher education (LMD system).

In 2014, she was appointed president of the National College of Pathological Anatomy in Tunisia, where she contributed to the reform of the residency program in pathology.

Currently, she serves as the Director of the Research Laboratory LR21ES03 "Oncogenesis and Tumor Progression," The Head of the Pathology Department at CHU Sahloul, The Director of the Doctoral School at the Faculty of Medicine in Sousse, and The Editor-in-Chief of Biomedicine & Healthcare Research (ISSN : 2811-6658). She authored of over 74 indexed international publications (H-index: 14).

https://www.scopus.com/authid/detail.uri?authorId=8937955100

Application of machine learning in pathology

Background: The parallel advancement of medicine and computer science has provided revolutionary techniques in the localisation and treatment of serious pathologies, however, evaluating prognosis remains a difficult task despite the precision of medical equipment. The solution that is becoming more and more apparent is to implement another computing alternative, which is artificial intelligence for cancer staging and prognosis evaluating.

Objectives: Application of machine learning to evaluate important prognosis parameter in cancer : Ki67 Estimation in neuro endocrine tumor and mean of largest nucleolei in uveal melanoma.

Methods :Data was collected retrospectively in the Department of Pathology of the FarhetHached University Hospital, Sousse and treated in the Pathology Department of Sahloul Hospital, Sousse, Tunisia. From slides of of neuro endocrine pancreatic tumors and uveal melanoma, we took microscopic pictures. The achievement of our model was taken in four steps: Data processing (Clean and label the collected data), Model creation (organized in 5 parts: Import libraries, Load Dataset, Create the CNN Model, Train the Model and Visualize the Result), Model training and Model evaluation.

Results: Throug an Interface, the application should do the doctor task : calculate the mean of the 10 largest nucleolei for cases of uveal melanoma, calculate the estimation of KI67 for neuro endocrine tumor.

Conclusion: Artificial intelligence was a very useful and facilitating tool in this case it allowed us to calculate an important parameter with precision and it allow us to improve patients care. The training of AI methods and validation of AI models using large data sets prior to applying the methods to personal data may address many of the challenges facing the medicine today.

14:25 – 14:40 **Khawla Alhajaj**
Dubai Health Authority, UAE

Dr. Khawla currently serves as a Consultant Family Physician and the Head of Zabeel Health Center under the Dubai Health Authority (DHA).

Her position allows her to combine clinical responsibilities with administrative oversight, offering a platform for both immediate patient care and long-term healthcare strategies.

Her current work is emblematic of her broader commitment to medical care and innovation, especially as it pertains to the management of chronic conditions like diabetes and NCDs. With an ongoing role in research and a keen interest in the digital transformation of healthcare, she is an invaluable asset in leading Zabeel Health Center towards a future that is both medically sound and technologically advanced

No-shows at primary health care clinics mammography screening appointments at Dubai Health Authority

Background: Breast cancer is a health concern in the United Arab Emirates (UAE), particularly due to its earlier age of onset compared to other regions. [1] National statistics show that breast cancer accounts for 36.7% of all female cancer cases and 24.4% of female cancer deaths.[4] Screening is essential for early detection and successful treatment, but current rates of participation are suboptimal.[5] Studies have indicated poor awareness about breast cancer and its screening methods among women in the UAE.[2] Furthermore, despite the existing recommendations for mammography screening starting from the age of 40, a high no-show rate for these appointments has been reported. This poses critical challenges in public health management and resource allocation.[3]

Methodology: The study employs a cross-sectional approach through year 2022, surveying 461 women from a pool of 2000 who were referred for mammograms but did not show up. Conducted across twelve primary healthcare centers in Dubai Health Authority, the research aims to identify barriers to mammography attendance.

Results: Our statistical analysis indicates varying factors that influence attendance for mammogram screenings at Dubai Health Authority. Emotional aspects like procedure-related pain, fear, or shyness were found to have no significant association with attendance, regardless of age (p-value < 0.001). In contrast, practical constraints like being too busy, hesitancy to request time off work, and weekday morning unavailability significantly influenced attendance, especially among women aged 40-50 years (p-value < 0.001). There was no significant age-related variation concerning appointment-related issues such as forgetfulness, challenges in rescheduling, or the absence of reminders (p-value = 0.5). Lastly, location preference for mammogram screenings was not significantly influenced by age (p-value = 0.017). Overall, practical constraints appear to be the most substantial barriers to attendance, particularly in the 40-50 age bracket.

Conclusion: The study reveals that emotional factors are not key determinants for missing mammogram appointments in the UAE. Instead, practical issues like work commitments affect attendance, particularly among women aged 40-50.

Recommendations:

1. Consider offering extended hours or weekend appointments to accommodate work schedules.
2. Create a mammogram off day as at government and private sector to ensure the attendance of busy women.
3. Redirect public awareness campaigns to focus on overcoming practical issues rather than emotional barriers.
4. Introduce virtual pre-screening consultations to make the appointment process easier.
5. Make information and appointment materials available in multiple languages to cater to the diverse UAE population.
6. Develop and implement a AI tracking and follow-up system to minimize no-shows, especially targeting the 40-50 age group.

By targeting these practical barriers, we can improve mammogram attendance rates, enabling earlier breast cancer detection and more effective treatment outcomes in the UAE.

14:40 – 14:55 **Salma Mohamed Amer**

National Cancer Institute Misurata, Libya

Position: Junior General Surgeon
Residency: National Cancer Institute, Misrata (from June/2020)
College: Faculty of Medicine, Misrata University (Graduated in 2019)
Activities & Certifications: First part Arab Board of General Surgery in Sept/2022
Workshop in Basics of GI Surgery & Suture techniques in Apr/2021 at NCI
Lecturer at Nursing Institute at NCI (2021-2023)
Attendance Libyan Breast Cancer Conference, held on 11th-13th of Nov/2021 at NCI
Certificate of completion of ACLS from LEMA, held on 5th- 6th of Nov/ 2021 at NCI
Workshop in Advanced laparoscopic surgery (UGIT, LGIT), held on 26th- 27th of May / 2021 at NCI
Words like effort, efficiency and challenge really determine the foundations of all my activities. Mutual trust and respect when working with others, keep me more initiative, decent, and industrious. Building good relationships with people is one of my prior objectives in the life. All of the above increase my interest in the field of medical work to improve the skills that my duty requires, and to provide the best services to cancer patients.

The initiative of Libyan cancer control activities: Midland region in particular

Introduction: The fragility of Libyan situation affected directly the health sector, and it initiated critical health concerns such as shortage of essential medicines and equipment, lack of essential health care services. Cancer is the second leading cause of death in Libya. National Cancer Control Program established in 2018, and it composed of five geographical areas (regions). Midland region is one out of these five representative regions, and the National Cancer Institute Misurata is located in this region. This study aimed to describe the previous cancer control activities at the midland region of Libya.

Methodology: This study intended to be a narrative review. The information taken from the archive of the Midland region. Permission was taken from the authorities.

Outcome: Midland Cancer registry established in 2021, and the first Libyan Cancer Registry will be formally released soon. The first awareness campaign towards the importance of early detection of breast cancer that targeted the healthcare providers at the primary healthcare centers and units in the cities of midland region, Libya done in 2022. The National Cancer Institute Misurata awarded in 2022 by a grant for the early detection of breast cancer by the Union of International Cancer Control.

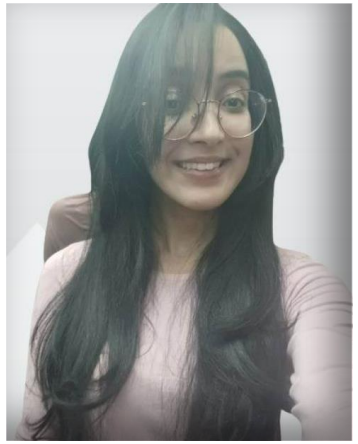
Conclusion: With the current Libyan situations, those in charge of the cancer control program at midland region were able to carry out some cancer preventive activities.

Recommendation: We recommend to expand the future activates of the midland region at the National Cancer Control Program, Libya according to evidence based cancer control plan.

Key words: Libya, Cancer Control Program, NCCP Libya, Midland region, Cancer Registry

14:55 – 15:10 **Saoussen Alouani**

Fattouma Bourguiba University Hospital, Tunisia



Dr. Alouani is a family medicine resident in Fattouma Bourguiba Monastir University Hospital with a master degree in nutrition from the university of Rennes, France.

Her works focuses on helping patients adjust to basic lifestyle guidelines in the different departments, particularly those who suffer from chronic diseases and cancer.

The impact of lifestyle on the quality of life of colorectal cancer survivors: The DOT study

Introduction: Colorectal cancer is the third most common cancer. Tunisia is no exception. This study investigates the effect of lifestyle patterns on the quality of life of colorectal cancer survivors.

Methods: It is a cross-sectional study performed in the Department of Digestive and Visceral Surgery at Fattouma Bourguiba Monastir University Hospital. We included patients diagnosed with CRC between January 2014 and January 2021 and who are currently disease-free. The study was based on a package of 3 questionnaires : EORTC-Q30, MDSS and IPAQ.

Results: We retained 57 patients of a total 213 colorectal cancer patients with a participation rate of 26.7%. These patients have been diagnosed with colon cancer in 59.6% and rectal cancer in 40.4%. The mean QoL score was 78,7. Nearly 70% had low emotional and social functioning scores. Bowel movements and insomnia were the most disturbing symptoms. Only 40.4% of patients were considered adherent to the Mediterranean diet, while 49.1% had high physical activity. A better quality of life was significantly correlated to female gender (p=0.02), being single (p=0.05) or having children (p=0.027), moderate socioeconomic group (p=0.05), adherence to the Mediterranean diet (p=0.028), and a higher physical activity (p=0.043). While a worse quality of life was significantly correlated to postoperative complications (p=0.04), chemotherapy (p=0.011) and cancer recurrence (p=0,00)

Conclusion: While we are cautious in making recommendations based on these findings, this relationship should be explored in future studies. The DOT study refers to the Dream of Tunisians of fitter survival. In the hope that this dream may come true.

Key Words : Quality of life, Colorectal cancer, survivors, diet, physical activity

15:10 – 15:25 **Muna Abusanuga**

National Cancer Institute Misurata, Libya

Muna Mohamed Abusanuga is a community medicine specialist that interested in field of cancer epidemiology and prevention. She is the head of Midland Cancer Registry, Libya.

She has a master degree in genetic engineering in 2019. In addition, she has a Libyan board of community medicine which equivalent to a doctoral degree.

In 2001, after her graduation from the faculty of medicine at Tripoli University, she started her medical career as a clinician at hemato-oncology department in the Tripoli medical Centre for 11 years. In 2013, she completely shifted to the academic field when she started to work at the National Centre for Disease Control (NCDC), Libya as an investigator. In 2015, she was the head of cancer control department at NCDC, Libya where she initiated the initial steps of the Libyan Cancer Registry, with complete support of the general director of NCDC, Libya and in collaboration with the World Health Organization and the International Agency for Research on Cancer in 2016.

In 2020, she helped during the pandemic where she was hired at that time by the primary healthcare administration, Tripoli by a contract for one year's duration.

The National Cancer Institute Misurata hired her from 2021 and up to now, where she built her team then established and activated the Midland Cancer Registry, Libya.

Assessment of cancer primary preventive vaccination program in Tripoli – Libya, 2019

Introduction: Libya has introduced earlier the cancer preventive vaccines: hepatitis B vaccine (HBV) in 1993 and human papillomavirus (HPV) vaccine in 2013. The ongoing conflicts and unstable situations in any country will affect the performance of vaccination program. As a consequence, the present study was aimed to evaluate the current status of cancer preventive vaccines in Libya.

Objectives: The study conducted to assess the status of cold chain system and the cancer primary preventive vaccines at central, regional and peripheral levels in Tripoli; to assess KAP of vaccination providers and knowledge of parents towards cancer preventive vaccines at vaccination facilities.

Materials and methods: A descriptive cross sectional type. Four different study tools designated to assess the status of five different subjects in Tripoli: cold chain system at central, regional and peripheral level in working vaccination facilities; KAP study towards cancer vaccines targeted available vaccination providers; knowledge of parents towards cancer vaccines. Statistical analysis and descriptive statistics used.

Results: The mean percentage of cold chain system at central level was within satisfactory quality performance (83.65%); at regional level was inadequate quality performance (76.4%); overall assessment of cold chain's status within 47 vaccination facilities showed good mean percentage score (60.42 % ± 7.02). The overall mean percentage score of KAP of vaccination providers towards vaccine preventive cancers was at average level (68.93 % ± 8.97). Assessment of Knowledge of Parents of vaccinated children towards vaccine preventable cancers was at low level of overall mean score (21.62 % ± 9.67).

Conclusions: The status of vaccine storage at central and peripheral levels was within satisfactory and good quality performance. Additionally, it revealed some critical gaps at vaccination facilities. Vaccine providers have a strong positive attitude towards the cancer preventive vaccines, but they have showed some significant gaps in their knowledge and in their vaccination practice in general. Parents showed extremely poor knowledge towards the cancer preventive vaccines and their benefits in the society.

Recommendations: Continuous medical education program for vaccine providers is essential, and community education activities to enhance the community awareness about the general benefits of the vaccines, and cancer preventive vaccines are recommended. Establishment of a national cancer control program that relays on the cost benefit analysis and include the cancer primary preventive measures in its structure.is highly recommended.

Key words: EPI, cold chain, cancer preventive vaccines, HBV, HPV

DAY 1

Friday 27 Oct. 2023

Oral Presentations

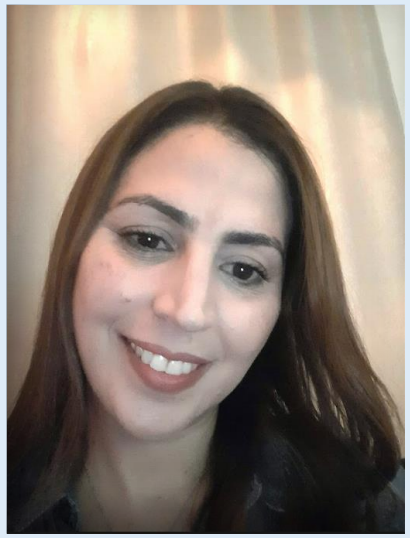
Session IV:

Molecular Oncology I

Moderators: Rammeh S., Mougou S., Bouaziz H.

16:00 – 16:15 **Neila Fathalla**

Faculty of Medicine, Sousse University, Tunisia



Dr. Fathallah Neila is a Professor in Clinical Pharmacology with a remarkable career in the field of clinical pharmacology and pharmacovigilance. She contributed to the advancement of medical knowledge and practice of pharmacology and drug safety. Her commitment to research and education has solidified her position in the field. Her contributions to the department of clinical pharmacology in the Faculty of Medicine of Sousse have been invaluable, as she actively shaped the academic and research landscape within her institution.

As a Medical Doctor, Dr. Fathallah possesses a comprehensive understanding of medical science and patient care with a diverse training background, which includes expertise in pharmacology, molecular biology, pharmacogenetics, and pharmacogenomics. Her research areas include pharmacovigilance and pharmacogenetics, leading to significant contributions in understanding drug interactions, safety, and efficacy. Her work in pharmacovigilance has advanced the understanding of drug safety, ensuring the well-being of patients. Furthermore, her contributions in pharmacogenetic area and personalized medicine have contributed to better knowledge in particularities of genetic Tunisian data available.

Pharmacogenetics in oncology: state of the art

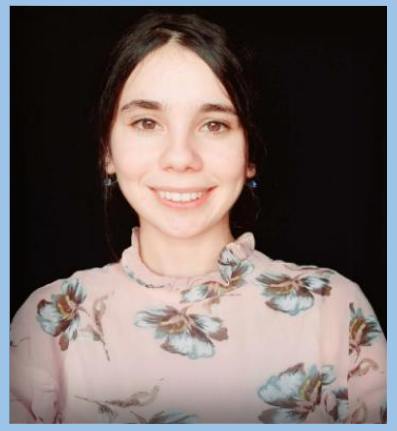
Pharmacogenetics is the study of genetic variations leading to interindividual drug disposition and effects, with the goal of selecting the optimal drug therapy and dosage for each patient. The application is of a great significance because of the risk for life-threatening adverse effects and the narrow therapeutic index of chemotherapeutic drugs, affecting prognosis and quality of life in cancer patients.

Applications of pharmacogenetic testing include both germline and somatic testing highly impacting treatment decisions and optimized treatment regimens. Applications are numerous, validated in many situations such as for enzyme dihydropyrimidine dehydrogenase (DPD) gene testing and toxicities with 5-fluorouracil and capecitabine, UGT1A1 genotype and toxicity of irinotecan, TPMT genotype and thiopurine-dosing adjustments. Effects and impacts in other newly used anticancer agents, including targeted therapies and antibody-drug conjugates are highlighted and should be recognized. As for somatic genotype testing, applications are important, based on somatic mutations in cancer cells that function as drug targets. Multiple examples are available, validated and even included in drug labels showing the importance and pertinence of these testing.

Recognition of the role and the importance of pharmacogenomic markers may offer a better treatment and a step towards personalized medicine and improvements in oncologic outcomes.

16:15 – 16:30 **Yasmine Ben Taher**

Charles Nicolle Hospital, Tunisia



Passionate researcher in cancer biology, striving to advance knowledge for
better health.
I'm currently a first year PhD student in Human biology at the laboratory of onco-theranostic
biomarkers in cancer LR23ES02, faculty of medicine Tunis, under the direction of PR
Soumaya Rammeh. My research focuses on finding new strategies for the prevention and the
early diagnosis of cervical cancer.

Single-tube Multiplex PCR and Capillary Electrophoresis for High-Risk HPV Genotyping

Background: HPV-induced malignancies represent a global health challenge and account for 5% of all cancers worldwide. Molecular tests designed for the detection of HPV hold a significant importance not only in the prevention, but also in the treatment of these cancers.

In this study, an inhouse single tube multiplex PCR followed by capillary electrophoresis, was designed to detect and type 14 high oncogenic risk (hr) HPVs.

Method: A total of 79 formalin fixed paraffine embedded cervical cancer tissues were included in this study. After DNA extraction, HPV detection was performed using short PCR fragment (SPF) primers system and CYP2C8 to assess the quality of DNA. HPV positive samples were then genotyped using Xpert HPV test and multiplex PCR targeting the E6-E7 HPV genes. Fourteen hrHPV specific primers and two universal fluorescent primers were employed in each reaction tube and the reaction was followed by capillary electrophoresis.

The results of both tests were then compared, and discordant results were tested using Uniplex PCR using type specific primers.

Results: Ten hrHPV genotypes were detected. The two tests were concordant in 76 samples (96%) with a κ value equal to 0,79. Two samples were negative with the Xpert HPV test and positive using multiplex PCR. One sample was HPV positive and showed a negative result with both genotyping tests. Comparison between Xpert HPV test genotypes group and genotypes identified using multiplex PCR showed disagreement in two cases. Multiple infections were detected in eight cases using the Xpert HPV test and nine cases using multiplex PCR.

Conclusion: Our inhouse single-tube multiplex PCR demonstrates high accuracy in hrHPV typing, rendering it well-suited for routine research laboratories. It can also serve as a valuable complement to traditional HPV tests for the identification of HPV genotypes.

16:30 – 16:45 **Mariem Ben Rekaya**

Charles Nicolle Hospital, Tunisia

Dr Mariem Ben Rekaya is a specialist in Molecular Pathology at the Charles Nicolle Hospital of Tunis, where she has been carrying out all the molecular diagnosis and clinical research in patients with solid tumours since 2019.

Dr Ben Rekaya obtained her University Master Degree in Human Genome in 2006 and her PhD in Genetics from the Institute of Biotechnology of Monastir in 2011.

She has over fifteen years of experience as a molecular biologist, molecular genetics at Pasteur Institute of Tunis.

She is currently a professor assistant at the pathology department of Charles Nicolle hospital where, responsible for the molecular pathology area in solid tumours and for the essential aspects for the molecular diagnosis. She is an active member of several national scientific societies that help to develop research and clinical innovation ATPM, ACNPRM, AJC-IPT.

She has authored or co-authored more than 30 research publications.

Plasma EGFR T790M testing using digital PCR in Tyrosine Kinase Inhibitor metastatic non-small-cell lung cancer patients (TKI-NSCLC).

Background: Over half of non-small cell-lung-cancer patients progress under epidermal growth factor receptor-tyrosine kinase inhibitors due to the gatekeeper T790M point mutation. We report the experience of the Tunisian Charles Nicolle pathology department in the development and performance detection of the T790M using digital PCR.

Methods: EGFR T790M detection has been validated using T790M positive and wild-type controls. The protocol was optimized using the QIAcuity nanoplate 26K-based digital PCR. Thirty-five circulating DNA (cDNA) samples isolated from TKI-NSCLC blood patients have been tested by dPCR.

Results: There was 100% concordance in the detection of all the 50%, 5%, 1%, and 0.1% positive EGFR T790M and wild-type controls between the experimental and theoretical values. The mutational fraction ranged from 0% to 8%. Twenty cDNA samples (57%) showed no copy of the mutated allele. The mutational fraction ranged between 0.01% and 2% for 12 cases (34%) and between 2.1% and 8% for three samples (9%). In one case, after nine months of monitoring, we observed a significantly increased mutation fraction (from 0.25 to 7.7).

Conclusion: The dPCR assay is a sensitive and validated technique to detect the low frequency of the EGFR T790M mutation expected up to 0.1% at the circular level. Applied to the liquid biopsy, the dPCR solution helps to follow response to target therapy and deliver the right treatment at the right moment

16:45 – 17:00 **Meryem Jalte**

CHU Fes, Morocco

Meryem JALTE, PhD student in oncogenetics at the Faculty of Sciences Dhar El Mehraz, Biotechnology, Environment, Agri-Food and Health Laboratory (LBEAS), also affiliated with the Cytogenetics and Molecular Biology Laboratory at Hassan II University Hospital (CHU) in Fes and the Adult and Pediatric Onco-Hematology Center at CHU-Fes.

Cytogenetic Study of Acute Leukemia at HASSAN II University Hospital, Fès (CHU-Fès): Initial Findings

Acute leukemia is a group of blood cancers characterized by the abnormal proliferation of hematopoietic stem cells. An in-depth understanding of its underlying mechanisms is necessary to improve treatment options. This pioneering study aims to explore the cytogenetic aspects of acute leukemia within the context of CHU Fès. Cytogenetics plays a vital role in diagnosing and determining prognosis. The current WHO classification of acute myeloid leukemia references the primary cytogenetic abnormalities and recommends tailored therapy according to risk.

Samples from patients with acute leukemia were collected, and comprehensive cytogenetic analyses were performed to identify specific chromosomal abnormalities associated with this disease. Karyotyping permitted the detection of numerical and structural alterations, such as translocations, deletions, and inversions, providing vital insights into the genetic basis of acute leukemia in CHU Fès patients. Furthermore, we employed the FISH technique to provide a more detailed analysis of chromosomal abnormalities. We used specific probes to target chromosomal regions of interest. This approach refined the characterization of genetic alterations and identified potentially significant prognostic markers to guide therapeutic decisions.

The preliminary results of this study provide noteworthy insight into the cytogenetic profiles of acute leukemia in patients at CHU Fès, thereby facilitating a deeper comprehension of this intricate malady at the molecular level. These findings could have significant implications for future therapeutic modalities and the customization of treatments for patients with acute leukemia in the Fès-meknès region and beyond.

17:00 – 17:15 **Hewida Fadel**
Pharos University of Alexandria, Egypt

Dr. Hewida obtained her Bachelor of Science, Biochemistry, Faculty of Science from Alexandria University, 1992. Her master's degree in medical applied chemistry (Sept. 2005), excellent degree from the Medical Research Institute (MRI), Alexandria University; And PhD degree (March 2011), Major (Medical Applied Chemistry), Minor (Cancer chemistry), Medical Research Institute (MRI), Alexandria University.

Dr. Hewida was a Lecturer assistant (2009-2011), then became Lecturer of Applied Medical Chemistry in Medical Laboratory department in Faculty of Allied Medical Sciences (2011 till now). Recently, she achieved the proceeding and discussion of promotion to Associate Professor successfully. She is interested in the determination of novel markers and therapies for COVID-19 and Cancer, studying the impact of polymorphic variations and SNP in carcinogenesis and severity of COVID-19 and apply of Bioinformatics in exploring therapies for COVID-19 and cancer. I published 4 articles about COVID-19 markers and therapies in international journals (Scopus and web of sciences). World Health Organization (WHO uploaded them on the website).

Applications of Bioinformatics in the Scientific research; From a proposal to interpret and present Data

Growth evidence emphasizes the importance of Bioinformatics as novel tools to connect computational procedures with laboratory and clinical procedures to improve scientific research including In Silico, experimental studies and Clinical trials. Bioinformatics help the researchers to interpret the data or explore a proposed mechanism or mode of actions of a novel drug or herbal extract or nutrients.

For example, if we did a clinical trial to investigate the benefits of any novel therapy in improving the clinical outcomes in cancer patients and performed the analytical or clinical procedures and get data but we need to interpret these data, we can apply the bioinformatics tools to interpret these data. This can proceed via getting the active ingredients of the novel therapy from the drug bank website and by using Bioinformatic tools, we can examine the docking of these ingredients with the target protein or biomolecules in human body such as any oncogenes or protein or receptor. Herein, we will support our finding from clinical trial by using bioinformatics to show a novel proposed mechanism or mode of action of these ingredients. Also, we can study the epigenetic alterations of certain genes in any diseases including Cancers or infectious diseases such as COVID-19 or auto-immune diseases. Also, we can explain certain phenomena such as correlation a certain disease with population or the epidemiology of disease. Topics will include some Bioinformatics tools such as Genbank, Chromatogram, Clustal Omega, QUMA, iGemdock, ClusPro and Pymol.

Keyword: Bioinformatics, Cancer, research

DAY 1

Friday 27 Oct. 2023

Workshop

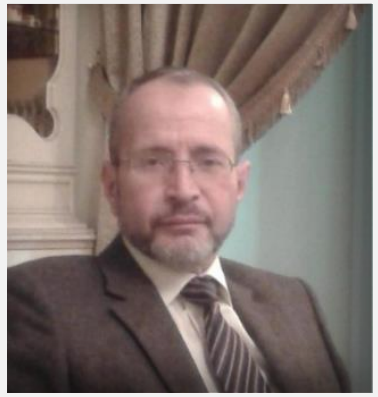
16:00 – 17:15 Cancer biobanking as a platform for biomedical research

Moderators: Mansour W., Abid N., Chbchoub E.

16:00 – 16:15 **Zisis Kozlakidis**

International Agency for Research on Cancer (IARC) Morocco

Biobanking in LMICs: Potentials, Challenges and Future Trends in Oncology



16:15 – 16:30 **Fayek Elkhwsky**

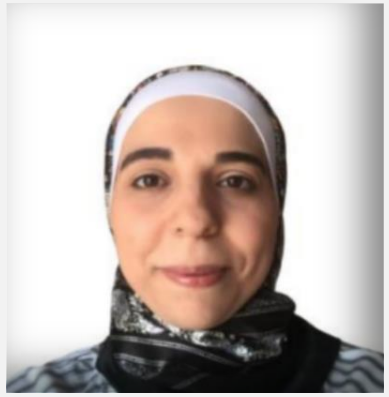
Medical Research Institute, Alexandria University, Egypt

Education in Biobanking in LMICs: MSC degree at Alexandria University

16:30 – 16:45 **Amal Farahat Allam**

Medical Research Institute, Alexandria University, Egypt

Best Practices and Guidelines , Standard Operating Procedures (SOP) in Biobanking



16:45 – 17:00 **Fayek Elkhwsky**

Medical Research Institute, Alexandria University, Egypt

Automated Biobanking

17:00 – 17:15 **Radwa Ibrahim Ali Hassan**

Faculty of Medicine, Cairo University, Egypt

Artificial Intelligence in Cancer Healthcare and Biobanking

DAY 2

Saturday 28 Oct. 2023

Oral Presentations

Session V A:
Cancer Biomarkers

Moderators: Decock J., Omezzin A., Mrad K.

08:30 – 09:00 **Semir Vranic**

Qatar University, Qatar

Dr. Vranić graduated from the Faculty of Medicine at the University of Sarajevo in 2004. He completed his specialization in pathology (2011) and his doctoral studies in pathology at the Faculty of Medicine at the University of Zagreb (2012). From 2006 to 2017, he worked at the Clinical Center of the University of Sarajevo. In September 2017, he joined the Faculty of Medicine at the University of Qatar.

He completed two postdoctoral research stays (2008/2009 at Creighton University in Omaha, Nebraska, USA; 2012/2013 at the Department of Medical Sciences at the University of Turin, Italy). He also completed additional educational programs in breast pathology at Nottingham City Hospital (2008) and at Guy's and St. Thomas' NHS Foundation Trust/King's College London (2012).

He is the recipient of the UICC Lifetime Fellow Award in 2010 and 'The rising stars in pathology' award from The Pathologist magazine in 2016. His research interests include breast cancer, the study of genitourinary and gynecological system carcinomas, and predictive biomarkers for precision medicine.

He is active in many professional and academic associations focused on pathology and academic/research publications (USCAP, ECP, UICC, COPE, WAME). He is actively involved in pathology education through the establishment of the Bryan Warren School of Pathology (held annually since 2007) in collaboration with the British Division of the International Academy of Pathology (BDIAP) and the Bosnian-Turkish School of Cytopathology (held annually since 2016) in collaboration with the Turkish Division of IAP (TDIAP). He is the Editor-in-Chief of the journal Biomolecules and Biomedicine (since 2014) and an academic editor for the journal PLOS One (since 2018). He serves as an ad hoc reviewer for more than 100 biomedical journals. Number of Publications: 218 peer-reviewed papers, one book, four book chapters, including the WHO classification of breast tumors (IARC 2020). He has received 12 grants as the lead researcher or co-researcher (2019-2023).

Current H-Index: 42 (number of citations according to Google Scholar: 7055, as of October 6, 2023).

He is in the top 2% of most-cited scientists worldwide (Stanford University Study, 2021-2023)

A Review of Predictive Biomarkers to Immune Checkpoint Inhibitors in Merkel Cell Carcinoma

Merkel cell carcinoma (MCC) is a rare neuroendocrine skin neoplasm with aggressive clinical behavior and poor clinical outcome. MCC is predominantly observed in older Caucasians, usually affecting those over 50. Treatments involving immune checkpoint inhibitors (ICIs) have exhibited favorable outcomes in patients with MCC. Some 1/3 of patients with MCC are positive for at least one predictive biomarker, such as PD-L1, a high tumor mutational burden (TMB-H), or microsatellite instability. However, the clinical implications of these biomarkers in MCC remain somewhat unclear. The role of PD-L1 expression in predicting ICI response in MCC is still not definitively confirmed. Our review of existing literature reveals contradictory findings on the prognostic value of TMB for ICI treatment in MCC. Avelumab treatment has shown encouraging results in MCPyV-negative MCC patients with TMB-H, whereas pembrolizumab treatment has been more effective in those with low TMB. An investigation into neoadjuvant therapy with nivolumab found no notable correlation between tumor etiology and levels of TMB in terms of treatment response. Besides ICIs, other apoptotic inducers like milademetan have yielded positive results, particularly in MCPyV-positive MCC cases featuring few somatic mutations. This review aims to consolidate current understanding and explore emerging biomarkers that may serve as predictors for ICI-based MCC treatment.

Keywords: Skin; Merkel cell carcinoma; therapy; immune checkpoint inhibitors; biomarkers

09:00 – 09:15 **Mojhgan Sheykhpor**

Pasteur Institute of Iran, Iran

Dr Mojghan Sheikhpour is associate Professor at the Pasteur Institute of Iran. She has completed her Ph.D at the Tarbiat Modaress University. Her main research area includes novel delivery systems by discovering new therapeutic targets, Nano formulations for the treatment of cancers and infectious diseases, and study of specific genes, miRNAs, and proteins as therapeutical and diagnostic biomarkers. Her academic highlights are as follow:

- Publishing more than 52 WOS papers (mostly in the high IF journals).
- Scopus h-index: 14.
- Reviewer of over 200 manuscripts for accredited journals.
- Referee for research proposals in National Institute for Medical Research Development (NIMAD)
- Presenter of more than 40 papers amd Over 20 oral presentations in national and international conferences.
- Author of 4 books.
- Distinguished professor in the 2020 Research Festival of Pasteur Institute of Iran.
- Supervisor/advisor of over 40 Ph.D. and M.S theses.
- Principal Investigator of 5 experimental research projects
- Holder of 5 registered national patents.
- Conductor and presenter of more than 20 workshops at universities and institutes from 2017 until now
- Four years of collaboration in annual meetings of the Middle-Eastern Association for Lung Cancer Research (MEACR) from 2019 until now.
- Head of Laboratories, Faculty of New Science and Technologies, University of Tehran (2009-2013).
- Research manager, Faculty of New Science and Technologies, University of Tehran (2012-2013).

MiR-146a is a suitable diagnostic and therapeutic biomarker for lung cancer

MicoRNAs are a large subgroup of RNAs that are evolutionarily conserved. These molecules control gene expression after transcription by inhibiting the translation of mRNAs or inducing their degradation, and they do this by binding to the 3'UTR region of the end of mRNA.

MiR-146a reduces cell growth, induces cell apoptosis and inhibits important genes such as TRAF6 and interferes in cell signaling. Our results showed that these effects of miR-146a are due to TRAF6 targeting and NF-κB signaling. In our previous studies, the low expression of miR-146a in patients with NSCLC compared to normal subjects showed that miR-146a is a strong prognostic indicator in NSCLC ($p<0.05$). Therefore, the induction of miR-146a may be a therapeutic strategy for NSCLC. Continuing to transfect miR-146a into lung cancer cells, the results of our studies indicated that miR-146a induces apoptosis in lung cancer cells by targeting the main TRAF6 gene and subsequently affecting genes such as BCL2 through the NF-κB signaling pathway, while it does not have a lethal effect on normal lung cells.

Further studies in the field of inducing the expression of this microRNA in animal models can provide a new treatment strategy in the field of lung cancer gene therapy.

Keywords: MiR-146a, therapeutic biomarker, lung cancer, TRAF6 targeting, NF-κB signaling

09:15 – 09:30 **Soumaya Kouidhi**

ISBST, University of Manouba, Tunisia

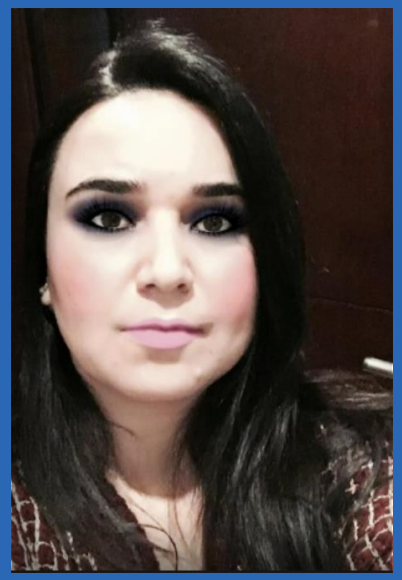
Dr. Soumaya is currently interested in the implementation of emerging precision medicine approaches for the study of the biological complexity of systems. She was able to adopt and introduce innovative approaches in the study of the intestinal microbiota and the metabolome. These approaches are high-throughput sequencing and metabolomics techniques applied to organ transplantation and oncology. Targeted metagenomics (16S rRNA) approach, based on next generation sequencing, and untargeted metabolomics using different analytical platforms, such as UHPLC, GC-MS and NMR, allow us to study the microbiota and the molecular links constituting the host-microbiota ecosystem under normal or dysbiotic conditions. These approaches help us to better understand how the microbiota participates in maintaining an optimal ecological balance and therefore good health. Non-invasive, these new precise and rapid detection approaches would allow: 1) early diagnosis of diseases; 2) the definition of prognostic and/or predictive criteria; 3) the identification of therapeutic targets. Research areas are reflected by articles published in ISI journals and journals indexed in international databases.

H index: 20
Orcid: (https://orcid.org/0000-0002-3987-8617)
Scholar profile: https://scholar.google.com/citations?hl=fr&user=ps7vTpMAAAAJ

Metabolomics and Microbiome Profiling: The Key to Unlocking Precision Medicine for Breast Cancer and Hematopoietic Stem Cell Transplantation

The intricate relationship between the human gut microbiota (GM) and our overall health cannot be ignored. Disruption of this delicate balance can lead to the onset and progression of various diseases, including breast cancer (BC) and hematologic malignancies treated with allogeneic hematopoietic stem cell transplantation (allo-HSCT). Indeed, investigating gut microbiota composition and metabolite profiles can offer deep insights into the interaction between gut microbiota-host, response to treatment in BC and the developpment of graft versus host-disease (GvHD) following HSCT. Metagenomics and gut metabolomics have arisen as fascinating microbiome-targeted strategies that are considered to be powerful tools for early diagnosis and treatment of different diseases. The present study was performed in order to investigate the cross-talk between the GM-host and BC or HSCT. First, we investigated changes in GM composition by NGS and fecal metabolic signature by NMR of 8 patients undergoing neoadjuvant chemotherapy. Then, we investigate changes in GM composition by NGS and fecal metabolic signature by untargeted GC-MS between allo-HSCT patients (n = 15) and healthy controls (n = 18). For the BC, we found lower relative abundances of Firmicutes, Proteobacteria, Roseburia, Faecalibacterium, Clostridium et Ruminococcus and a higher abundance of Bacteroidetes after chemotherapy treatment compared to patients before chemotherapy and metabolic profiles of feces showed upregulated amino acids, downregulated lactate and fumaric acid in patients under the second and third cycles compared with patients before treatment. While the GM of the HSCT patients was characterized by lower relative abundances of Actinobacteria, Firmicutes, Bacteroidetes and short-chain fatty acid-producing bacteria and a higher abundance of Proteobacteria phylum after allo-HSCT. Furthermore, the most notable altered metabolic pathways in the allo-HSCT patients vs controls included the TCA cycle; butanoate, propanoate, and pyruvate metabolisms; steroid biosynthesis; and glycolysis/gluconeogenesis. Overall, these data provide valuable insights into the interplay between the gut microbiota-host and breast cancer or allo-HSCT. The information obtained can be used to complement and improve clinical tools for disease monitoring, ultimately leading to enhanced precision medicine. By understanding the host-microbe associations on a deeper level, we can reveal individualized host-microbiome phenotypes that can be integrated with other ‘omics’ data sets to enhance precision medicine even further.

09:30 – 09:45 **Awatef Ben Jemaa**
University of Carthage, Tunisia



Dr. Awatef Ben Jemaa is an Assistant Professor of Immunology at Faculty of Science of Gafsa, Gafsa, Tunisia. She received his Ph.D in Science Biology from the Faculty of Science of Bizerte, Bizerte, Tunisia under the supervision of the Professor Ridha Oueslati. Current research in the IMEC (Immunology Microbiology Environmental and Carcinogenesis) lab emphasizes the use of immunological techniques to: 1) study the tumor microenvironment in prostate and colorectal cancer; 2) assess the impact of infiltrate immune cells in the prostate and colorectal cancer progression; and 3) determine the involvement of immune cell subsets in COVID-19 disease. Determination of the impact of androgen receptor mutations as well as an assessment of cytokines effect on prostate cancer progression is presently key research areas.

A NOVEL REGULATION OF VEGF-A, VEGF-C AND FGF-8 EXPRESSION BY Q640X AR IN 22RV1 AND LNCaP PROSTATE CANCER CELLS

Objective: Herein, we aimed to investigate the expression of VEGF-A, VEGF-C and FGF-8 transcripts in androgen-dependent (LNCaP) and androgen-independent (22Rv1) prostate cancer cell lines. We also enquired whether Q640X CTE-truncated AR has an impact on transcription of mRNA for VEGF-A, VEGF-C and FGF-8 in transfected androgen-sensitive prostate cancer LNCaP cells.

Materials and Methods: Wild type LNCaP, 22Rv1 PC cells, prostate stromal cells (PrSC) and LNCaP cells transfected with p-Q640X AR, p-WT AR or p-C3 empty plasmids were studied. The expression of VEGF-A, VEGF-C and FGF-8 were detected by real-time PCR after transfection for 4 and 7 days.

Results: The most relevant result showed that VEGF-A was upregulated in LNCaP cells transfected with Q640X-AR. Moreover, the expression of VEGF-A mRNA was increased by two folds in LNCaP cells co-cultured with PrSC cells. Likewise, the highest VEGF-C mRNA expression was found in LNCaP cells transfected with Q640X-AR after 4 and 7 days of transfection. The highest FGF-8 mRNA expression was observed in LNCaP cells transfected with Q640X-AR after one week of transfection, whereas no significant difference was found after 4 days of transfection.

Conclusion: Taken together, our results demonstrated that Q640X mutated AR may have an important regulatory role in mediating the VEGF-A, VEGF-C and FGF-8 genes expression during the progression of PC from androgen-dependence to androgen-independence. Understanding their functional properties and mechanisms by which ARs involved in regulation of those growth factors will allow the identification of new target therapies for the treatment of hormone-resistant.

09:45 – 10:00 **Maarouf Fatima**

University Ibn Rochd, Morocco

Fatima MAAROUF obtained her general medicine degree from Hassan II University, Faculty of Medicine and Pharmacy of Casablanca, in 2018, where she excelled in her academic performance. Passionate about medicine from a young age, she strives to deepen her knowledge and skills to provide the best possible care to her future patients.

Currently, in her second year of residency in the Medical Genetics department at CHU Ibn Rochd Casablanca, Morocco, she obtained her interuniversity diploma in medical cytogenetics in the 2021-2022 session.

During her medical training, Fatima actively participated in various academic and clinical activities. She completed internships in different hospital departments, gaining valuable experience in the management of patients with various conditions. She also participated in medical research and contributed to the writing of scientific articles in specialized medical journals. During her residency, Fatima developed a keen interest in cytogenetics and completed an advanced training internship at the Pasteur Institute of Morocco for three months in 2022. In May 2023, she joined the team of the Cytogenetics and Reproductive Biology department in Sousse, Tunisia, as an intern for a period of six months. In 2023, Fatima was awarded the prestigious Best Poster Communication Prize for 4th international scientific conference for research and ethics, march, 2023.

Genetic sequencing of cancers and precision medicine

High-through put next-generation sequencing gives a new insight in the molecular landscape of cancer. Molecular profiling underlines that a same tumor type can contain variable molecular subgroups with different molecular properties. Importantly, particular mutation and related active molecular pathways lead to the identification of druggable targets.We here address the feasibility and utility of routine whole exome sequencing in the management of colon cancer, breast cancer and Li-Fraumeni syndrome.

Three patients treated for different cancers (colon cancer, breast cancer and Li Fraumeni syndrome) with a positive family history were seen in our department in order to search for a genetic predisposition. The molecular profile identified three types of mutations (KRAS K117N (p.Lys 117 Asn; c351A>T)). (BRCA2 (p.Phe 1127fs; c.3381del)), (TP53 (17p13.1)). All patients provided signed informed consent for genomic analysis.

The use of constitutional analysis is useful for determining genetic predisposition to cancer and for finding targeted therapies and requires good organization between oncogeneticists and oncologists to improve the information and management of our patients. Molecular profiling of these cancers may identify not only specific new genes, but also genes that are critical to their progression. Probably multiomics strategies and the incorporation of novel technologies like RNA-sequencing, whole genome sequencing and circulating cell-free DNA detection should be emphasized for future studies in order to estimate the possibility of novel targets and potential agents for these targets. All these efforts are important to improve Cancer Precision Medicine.

Keywords : Whole exome sequencing, colon, breast, Li-Fraumeni syndrome, cancer, Precision Medicine.

DAY 2

Saturday 28 Oct. 2023

Oral Presentations

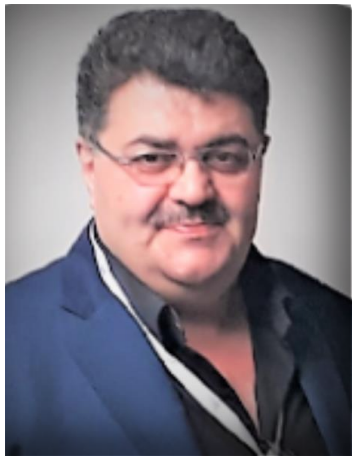
Session V B:

Cancer Epidemiology & Risk Factors

Moderators: Zidini Ch., Harrabi I., Lassoued L.

08:30 – 08:45 **Omar Nimri**

Jordan Center for Disease Control, Jordan



Dr. Nimri is working in the Disease Prevention &Control Directorate at the Jordan Center for Disease Control (JCDC).

Dr. Nimri was the, Head of the Cancer Prevention Department at MOH, as well the Director-PI, of the national Jordan Cancer Registry, for more than twenty years. Dr. Nimri obtained his medical & surgery bachelor's degree from Pakistan, trained as public health and epidemiology specialty, obtained several higher degrees and diplomas, Community medicine from Jordan in 2002, Applied Epidemiology (FETP) 2003-2005, Cancer Prevention and Control Diploma from the NIH; USA-2006. Cancer registration from IARC France in 2005/2007 and Cancer prevention and Etiology Diploma from School of Public Health, University of Michigan, USA 2008.

Master Public Health, Jordan University. 2021. Dr. Nimri is a member of many local and international committees. Speaker and presenter at local and international meetings and conferences as well a Lecturer and Trainer, with more than (46) publications. He was elected President, Jordan Cancer Society. (2022-2024).

Cervical Cancer burden in Jordan,2000-2018.

Background: Globally in 2020, there were an estimated 604 127 cervical cancer cases and 341 831 deaths. In Jordan cervix cancer is quite few, on annual average less than 50 cases are newly diagnosed which account to 1% of females' cancers.

Method: This descriptive study based on secondary analysis of cervical cancer data that are registered in the Jordan Cancer Registry (JCR). The study utilized all data about cervical cancer cases among Jordanians that were registered in the JCR during the period from 2000 to 2018. Cases of cervical cancer for non-Jordanian patients were excluded from this study.

Results: A total of 829 women were diagnosed with cervical cancer in Jordan during the study period 2000–2018. The age at diagnosis ranged between 15 and 97 years, with a median of 51 years and 44 years mode. The average age standardized rate (ASR) was 2.1/100,000 women. The incidence of cervical cancer remained relatively constant with minor fluctuations, over the 19-year period, ASR for cervical cancer decreased by 29.2 % from 2.1 per 100,000 women in 2000 to 1.03 per 100,000 women in 2018. About 55.5% of the cases were of squamous cell carcinoma morphology,11.2% were Adenocarcinoma type. Early -Mid cancer staging constituted about 44.1% of the cases,11% were advanced with Mets ,44.9% with unknown stage.98.8% of the cases were microscopically verified as a base of diagnosis. More than 85% of the cases were from Amman, Irbid and Zarqa governorates inhabitors.

Conclusions: Compared to regional and international figures of cervical cancer incidence, Jordan shows a low number and remained relatively much lower in occurrences of cervix neoplasms. Implementation of screening and early detection measures or program could lead to better case finding, early diagnosis, and prevention of the cervical cancer, which unfortunately still do not exist yet and recommended highly.

08:45 – 09:00 **Rahima Bel Haj Rhouma**

Institute Pasteur de Tunis, Tunisia

Rahima Bel Haj Rhouma, PhD, she obtained her PhD in Microbiology from the Faculty of Science of Tunis in March 2006. Since 2006, she was recruited as an Assistant Professor in High Institute of Sciences and Technology of Environments of Borj-Cedria, University of Carthage, Tunis, Tunisia. She is a researcher at the Laboratory of Molecular Epidemiology and infectious diseases at Pasteur Institute of Tunis-Tunisia.

She has multidisciplinary research skills on Molecular Biology, Biochemistry, and protein engineering. During her PhD thesis, she worked on the cloning, expression, purification, and characterization of scorpion toxins in E. coli and baculavirus-insect cell systems. From 2012, she began working on oncoproteins of the Papillomavirus and their implication in cervical cancer progression in the Tunisian women. She also, teaches molecular biology and biochemistry to bachelor's and master's students. She has co-authored different articles in indexed journals and numerous communications in international conferences.

Distribution of high-risk human papillomavirus in Tunisian women with and without cervical lesions

Cervical cancer (CC) is the second most prevalent gynecological cancer in women worldwide with a global annual incidence of 569,847 in 2018, and 311,365 annual death rates. In Northern Africa, the incidence of CC is 7652 cases with 5243 deaths annually. Among Tunisian women, CC ranks second after breast for gynecological cancer, with an incidence of 3.8% (342 new cases in 2020) and about 200 deaths per year. Human Papillomavirus (HPV) infection is the etiological agent for the development of precancerous and cancerous lesions of the cervix. It is known that most HPV infections are self-limited, and the data show that 90% of infections are cleared within a few years, but approximately 10% of low squamous intraepithelial lesions (LSIL) progress to High grade squamous intraepithelial lesion (HSIL). the present study aimed to investigate the High-risk HPV genotypes distribution in Tunisian women with and without lesions. Samples are collected from the fresh frozen uterine cervical pap smears that were collected from routine diagnostic of cervical cancer from the laboratory of Human and Experimental Pathology at Pasteur Institute of Pasteur Institute of Tunis.DNA was extracted using Qiagen Mini prep kit. DNA quality was controlled by Beta Globin PCR. Only positive samples for Beta Globin test were used. HPV detection was performed by a nested PCR using PYGMY and GP5+/6+ primers. Genotyping was performed by Reverse Line hybridization using 31 probes.

In our analysis 32 genotypes were identified and were classified into HR-HPV and LR-HPV. The most prevalent LR-HPV type was HPV11 followed by HPV66, 42, 40. The predominant HR-HPV were HPV16, HPV18, 31, 45, 53 detected in single and multiple infections. HPV16 was the most prevalent HR-HPV, detected in 129 samples leading to a global prevalence of 21.60 %. Our findings will be useful for vaccine implementation in Tunisia.

09:00 – 09:15 **Hana Khenine**

Faculty of Medicine of Tunis, Tunisia

In 2017, Dr. Khenine obtained a degree in Clinical Biology, specializing in immunology. The same year, she successfully passed the assistantship examination. In 2018, she assumed the role of a Hospital-University Assistant in Immunology at the Faculty of Medicine in Tunis and Taher Maamouri Hospital in Nabeul.

Dr. Khenine established state-of-the-art laboratories for autoimmune analysis, monoclonal gammopathy, and serum complement, while diligently training dedicated personnel. Thanks to her tireless efforts, Nabeul now boasts a Clinical Immunology laboratory at Mohammad Taher Maamouri Hospital, with Dr. Khenine at its helm.

Beyond her devotion to Clinical Immunology, Dr. Khenine displayed a keen interest in oncoimmunology research. She fortified her knowledge with additional certificates and a master's degree in cancer biology and tumor immunology. This specialized focus drives her research efforts.

Dr. Khenine Hana's remarkable journey from Nabeul to becoming a pioneering immunologist serves as an inspiration to her community and the broader medical field. Her contributions in the realms of clinical practice and research continue to make a significant impact on healthcare in Tunisia and beyond.

The Role of Vitamin D in the Etiopathogenesis of Solid Cancers: Unraveling the Intricacies

Carcinogenesis is a complex process that initially involves genetic mutations altering cellular proliferation. The accumulation of mutations and the failure of the anti-cancer immune response lead to the emergence of an invasive tumoral cell clone, which forms the basis for distant metastases [1].

Recently, some authors suggested an antitumor effect of vitamin D in various types of cancer, including breast, colon, prostate, and hematological cancers. This effect is thought to be achieved through a combined action of vitamin D on both cancer cells and the microenvironment.

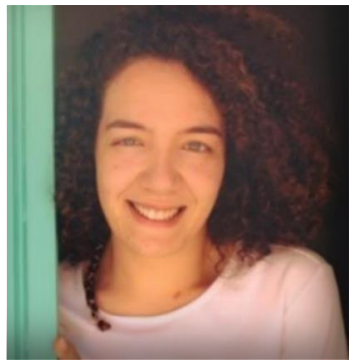
Vitamin D has been recently found to have an immunomodulatory effect via specific nuclear receptors (nVDR)[2]. The vitamin D-nVDR complex regulates target gene transcription by either increasing or decreasing it. nVDR is expressed in cancer cells [3] and immunocompetent mediators [4].

Its effect primarily proceeds through four mechanisms: at the level of the transformed cell, an antiproliferative action through the induction of cell cycle arrest and pro-differentiation by the inhibition of epithelial-mesenchymal transition has been established for vitamin D [5]. Additionally, a pro-apoptotic effect mediated by the manipulation of pro- and anti-apoptotic proteins, as well as the stimulation of autophagy, has been described by certain authors [6]. Within the tumor microenvironment, an immunomodulatory effect characterized by the enhancement of cytotoxicity in CD8+ T lymphocytes and NK cells [7], along with anti-angiogenic and anti-inflammatory actions by inhibiting the expression of pro-inflammatory cytokines and the prostaglandin pathway, has also been highlighted [8].

This anti-tumoral promotive effect of vitamin D appears to be cautious during tumor proliferation. However, at advanced stages, some authors have reported an immunosuppressive action of this vitamin through the proliferation of Tregs (regulatory T cells) and the stimulation of the production of anti-inflammatory cytokines, including IL-10 [10]. This thereby explains the controversies observed in clinical trials investigating the therapeutic effect of vitamin D in cancer.

09:15 – 09:30 **Fatma Ben Youssef**

Abderrahmen Mami University Hospital, Tunisia



Dr. Ben Youssef is a medical resident in community and preventive medicine.

She obtained her degree as a medical doctor from the University of Monastir, Faculty of Medicine. She is also a certified FETB mentor. She also underwent training in ECDC epidemic intelligence and rapid risk assessment.

Dr. Ben Youssef participated in several national and international conferences.

Knowledge, attitudes and practices of Tunisian women regarding breast cancer screening

Introduction: We aimed to evaluate the knoledge, attitudes and practices of Tunisian women regarding breast cancer screening

Methodology: We conducted a cross sectional descriptive study among female tunisian population during 10 days (from 6 till 16 October 2022). Women who accpeted the participation filled an autoadmisteder survey on Facebook.

Results: In total 183 femals participated in the study. Mean age was 33.7±8.2[18 – 64]. Almost all the group (96.7%) lived in urban areas and 74.3% were married. One third of the group were houswifes (33.6%) and 83.6% had an academic education. One participant had a personal history of breast cancer and 26.2% had a family history of breast cancer. Breast cancer was reported as the most frequent among tunisian population in 80.3% of participants, and as the most dangerous in 36.6% of participants. Less than half of the group (41.5%) knew about breast cancer risk factors and 86 believed that breast cancer could be prevented with early detection. The following means for early detection reported: medical screening (90.7%) , self exam 89.6%) , mammography (82.5%) and breast ultrasound (72.7%).

Patients who did not want to perform early breast cancer screening (11.5%), listed these causes : beeing under age 40 (36.1%), not having enough time (34.4%), beeing afraid of the results (26.2%), not knowing where to do the screening (21.3%).

Self exam was performed at least once in 70.5% of participants. Half of the participants (49.2%) have had at least one medical screening for breast cancer.

Mammography and breast ultrasound were performed for 27.9% of participants : among them, 16.4% of patients had it during a screaaning day and 39.9% found the examination painful or annoying.

Conclusion: Stategies to prevent breast cancer should take into consideration the lever of this knowledge and the attitude of the Tunisian female and male population regarding this disease.

Early detection of Colorectal cancer campaign at South AS Sharqiyah

09:30 – 09:45 **Juma Almataani**

Jaalan Bani Bu Hassan Health Center, Oman

Mr. Almataani obtained his bachelor's degree in medical laboratory sciences from Muscat, Oman in 1997. Afterwards he attained certificate of higher education in biomedical sciences from UK in 2005, followed by a Master's degree in biomedical sciences from the UK in 2007.

Mr. Almataani is in charge of the pathology laboratory of Bani Bu Hassan Hospital since 2000, in addition to the blook bank, lab store and TB program. He is also in charge of lab statistics and training of medical laboratory science students.

Mr. Almataani attended several workshops in laboratory medicine on various topics including primary health care, HCV infections and safe blood, strategies for effective presentation & facilitating skills.

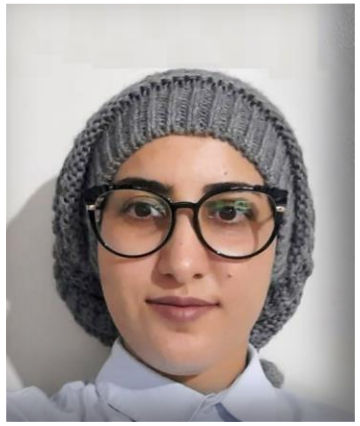
He also participated as a speaker in several national and international conferences.

Colorectal cancer (CRC) is the third most commonly diagnosed cancer in Oman after breast and thyroid. However, the South Ash Sharqiyah governorate showed the highest incidence rate in 2019 among all Omani governorates via 11.2 per 100,000 populations. Awareness of CRC screening programme is valuable as it is reflected in its ability to prevent cancer morbidity, mortality, and excess treatment cost by detecting significant lesions before they become cancerous and early-stage cancer before it spreads beyond the bowel wall. The aim of this survey to study the risk factors including lifestyle, which related to steady increases of CRC in the community and to increase the awareness against these factors. Methods: This stratified random study conducted at South Ash-Sharqiyah governorate, Oman. Also, the survey focused mainly on adult (over 40 years old) who suspected free from CRC disease. Furthermore, current CRC screening campaign procedures were included filling information on participant registration, testing occult blood in stool and colonoscopy examination. Results: the respond rate was about 70% (697 participants out of 1000) due to constrain time, embarrassment and emotional factors. More than three quarters of the participants were younger age, obesity and overweight (85%, 82 % respectively). Around 8% of the participants showed positive occult blood and more than half of those positive occult blood was refused (63%) to do colonoscopy test. They refused probably due to lack of public knowledge and due to barrier of embarrassment. Furthermore, more than quarter of colonoscopy significant results presented adenomatous polyps and one case was detected as CRC disease. Conclusion: the magnitude of Western lifestyle in the community increased the obesity dramatically; which has a significant relationship in raising CRC cases as adenomatous polyps were dominant and one CRC diseases was confirmed. On other hand, the majority of public were reluctance or refused to do colonoscopy might be due to emotional barriers and lack awareness of CRC screening program. A strategy to establish a CRC screening programme including stool occult blood testing and colonoscopies in Oman could be paramount as the incidence of CRC increased.

Keywords: Colorectal cancer, Awareness, Screening, South Ash Sharqiyah, Oman.

09:45 – 10:00 **Sassi Chayma**

Abderahman Mami Hospital, Nabeul, Tunisia



Dr. Sassi is a 4th year medical resident at the Department of Anesthesia, Abderahman Mami Hospital

Postoperative Respiratory Morbidity in Onco-Thoracic Surgery: Risk Factors

INTRODUCTION: Onco-thoracic surgery (OTS) remains a surgery with a high risk of serious complications and postoperative management represents a challenge in the intensive care unit. These complications are dominated by respiratory complications (RC). Our objective was to determine the incidence of RC after OTS and to identify the risk factors for these complications.

METHODS: A retrospective, observational study over a period of 15 months, including all patients over the age of 18, having undergone pulmonary or mediastinal oncological resection. The primary endpoint was the occurrence of a RC after OTS. The data was analyzed using SPSS software.

RESULTS: 108 patients were included. The median age was 63 years, a predominance of the male sex with 82.4% and the incidence of smoking was 79,6%. The primary tumor was pulmonary in 96,3% and other locations in 4 cases. An average stay in intensive care of 2.36 days (extremes: 1-12). The main complications were respiratory (pneumonia 39.8%-ventilatory disorders 10.2%) followed by arrhythmias (9.3%), postoperative bleeding (5.6%), subcutaneous emphysema (2.8%), chylothorax (1.9%), other complications (6.5%). The risk factors for RC in multivariate analysis are summarized in **Table 1:**

Smoking	OR: 5,5, P: 0,009
COPD	OR: 2,37, P: 0,048
Dyslipidemia	OR: 4,72, P: 0,029
Tiffeneau	OR: <70% P: 0,029
Analgesia	OR: 2,75, P: 0,012

The use of NIV in 31 patients (28.7%) and HFO in 4 cases. Fibroaspiration was performed in 5 patients (4.6%) and the mortality rate was at 4.6%.

CONCLUSIONS: OTS remains a major source of complications mainly related to the patient's comorbidities. RC are the leading cause of perioperative morbidity and mortality in this population. Whence the interest of new protocols and early postoperative rehabilitation to optimize the care of these patients.

DAY 2

Saturday 28 Oct. 2023

Oral Presentations

Session VI A:
Molecular Oncology II

Moderators: Boubaker S., Chouaib S., Loueslati B.

10:30 – 10:45 **Haifa Tounsi**

Pasteur Institute of Tunis, Tunisia

Dr TOUNSI GUETTITI Haifa, received her MD from the University of Tunis el Manar faculté de médecine de Tunis. She's currently a pathologist at the laboratory of Anatomie Pathologique humaine et expérimentale at the Institut Pasteur de Tunis and responsible of oncogenetic diagnosis on solid tumors unit. She worked on HPV since 2004 and implemented the HPV testing in Tunisia in 2006. His laboratory was a WHO regional reference lab for HPV screening and training.

Since 2012, she worked on the development and implementation of molecular tests in solid tumors beginning by KRAS testing in CRC followed in 2013 by NRAS and BRAF and other molecular tests according to guidelines.

Dr Tounsi is member of Tunisian society of molecular pathology and the European Society of medical oncology. She's member of research laboratory on medical genetics and oncogenetics at Institut Pasteur de Tunis and involved in several national and international research projects.

Her main research topics are on CRC and HPV; she's a principal collaborator in research on treatment by medicinal plants. She have more than 40 peer reviewed publications and more than 100 meeting abstracts

Molecular diagnosis in solid tumors at Institute Pasteur of Tunis

The prevalence of solid tumours has changed considerably in recent years, with a clear improvement in their prognosis and therapeutic management. the development of targeted therapies has made a considerable contribution to this improvement. these therapies target a receptor, a proliferation pathway or an oncogene in order to inactivate it. The development of these therapies has been associated with a revolution in molecular diagnostic techniques and the necessity to provide them for all patients with cancer.

The molecular pathology and oncogenetics unit at the Institut pasteur de Tunis, Tunisia has been a pioneer in this field, developing and implementing these analyses for more than 10 years and this experience and expertise has enabled more than 6,000 molecular analyses of solid tumours to be carried out.

The aim of this presentation is to report on our experience in this field and to discuss the challenges that lie ahead.

10:45 – 11:00 **Kais Ghedira**

Pasteur Institute of Tunis, Tunisia

Kais Ghedira is a senior researcher at the IPT holding a PhD and HdR in Bioinformatics with a large experience in bioinformatics education and training as well as the supervision of multi omics and bioinformatics projects. He obtained his master degree in bioinformatics in 2007. He performed a PhD thesis between 2007 and 2011 and joined IPT as a permanent staff at 2013.

He has been PI/co-investigator/WP leader for several national and international grants including H3ABioNet (h3abionet.org), PHINDaccess (phindaccess.org), TriOmics-CoV, PerMediNA and other funded projects. He is highly contributing to build capacities in Bioinformatics at the intitutional, local, regional, African and International levels through providing theoretical and practical trainings.

He is mainly interested in functional genomics, integrative multiomics data, precision medicine, network generation and analysis, analysis of NGS high throughput data, gene regulation analysis, host pathogen interaction studies and databases and webtools development.

Bioinformatics Analysis of Curated Transcriptomics Data reveals common DEGs and pathways for Multiple Cancer Types

Cancer is a group of more than 100 diseases that develop across time and involve the uncontrolled division of the body's cells. It remains one of the most challenging health problems, necessitating a comprehensive understanding of its underlying mechanisms. Furthermore, cancer is often described as a disease of altered gene expression. This means that the normal regulation of gene activity within a cell is disrupted, leading to changes in the expression of various genes.

These changes can result in the uncontrolled growth, differentiation and division of cells, which is a hallmark of cancer, in addition to the dysregulation of several signaling pathways. Here we aim to identify differentially expressed genes (DEGs) and key pathways associated with diverse human cancer types with the purpose of identifying potential drugs that may target the identified pathways. For this, 32 publicly available microarray datasets and 15 publicly available RNA-seq data were retrieved from the Gene Expression Omnibus (GEO) and SRA databases using specific keywords based on inclusion criteria.

Retrieved datasets include samples of normal and cancer cells corresponding to nearly 20 different types of tissues and cancers which were investigated using appropriate bioinformatics pipelines. For each investigated type of cancer, we were able to identify a list of DEGs, enriched biological processes and pathways as well as common genes/pathways involved in these different cancers. Preliminary results showed that most common enriched biological processes to different types of cancers correspond to angiogenesis, response to hypoxia, apoptotic process, cell adhesion, cell-cell signaling, cell proliferation and migration. Similarly, the most common enriched pathways correspond to p53 signaling pathway, PI3K-Akt signaling pathway, Focal adhesion and ECM-receptor interaction. This study enabled us to cluster different types of cancers based on patient gene expression profiles and will contribute to identify drugs that could target common pathways in different cancers.

11:00 – 11:15 **Marwa Manai**

Pasteur Institute of Tunis, Tunisia

Marwa Manai is an Assistant Professor currently at the Pasteur Institute of Tunis. She worked in different national (ISA, FMT, and FST (Tunis, Tunisia)) and international cancer research centers/laboratories (Paoli Calmettes Institute (Marseille, France), MD Anderson Cancer Center (Houston, USA), Northwestern University (Chicago, USA), and recently Weill Cornell Medicine (New York, USA)). Her research studies focus mainly on understanding the mechanisms involved in the aggressiveness of Inflammatory Breast Cancer and aggressive breast in preclinical studies to develop new therapeutic targets and combination treatments.

Targeting CDK7 enhances the antitumor efficacy of enzalutamide in androgen receptor-positive triple-negative breast cancer

Triple-negative breast cancer (TNBC) is an aggressive subtype of breast cancer. Among TNBC subtypes, the luminal androgen receptor (LAR) subtype expresses high levels of androgen receptor (AR) and generally responds poorly to neoadjuvant chemotherapy. AR has been reported as a promising therapeutic target for the LAR TNBC subtype. Here, we evaluated the preclinical anti-tumor efficacy of enzalutamide, an AR inhibitor, in TNBC. Enzalutamide had moderate anti-proliferation activity against AR-positive (AR+) TNBC cells (IC50 > 15 µM).

To enhance its anti-tumor efficacy, we performed high-throughput kinome siRNA screening and identified the cell cycle pathway as a potential target. Inhibition of cell cycle progression using the CDK7 inhibitor KRLS-017 showed a synergistic anti-proliferation effect with enzalutamide in AR+ LAR MDA-MB-453 and SUM185 TNBC cells. Downstream target analysis revealed that enzalutamide and KRLS-017 combination dramatically reduced c-MYC expression at both mRNA and protein levels. c-MYC knockdown significantly suppressed growth of MDA-MB-453 and SUM185 cells to a degree comparable to that of enzalutamide and KRLS-017 combination treatment, whereas c-MYC overexpression reversed the synergistic effect.

The synergistic anti-tumor effect was further confirmed using the MDA-MB-453 mouse model. Our study suggests that KRLS-017 and enzalutamide synergize via inhibiting c-MYC–mediated tumorigenesis and presents a potential new approach for treating AR+ LAR TNBC.

11:15 – 11:30 **Aida Jlassi**

Salah Azaiz Institute, Tunisia

PHD in Oncology-Immunology

- Research Laboratory of Precision Medicine/Personalized Medicine and Oncology Investigation (LR21SP01) Salah Azaiz Institute, Bab Saadoun, Tunis 1006, Tunisia.
- Department of Biology, Mycology, Pathologies and Biomarkers Laboratory (LR16ES05), Faculty of Sciences of Tunis, University of Tunis El Manar, 2092 Ariana, Tunisia.

- Prize : best poster in ATRIO congres 2023.

Immune checkpoints VISTA, CTLA4, PDL1 and PD1 in Ovarian Carcinoma: Expression profile and correlations

Background: Immunotherapy by blockading the immune checkpoint regulators has emerged as new target for some cancer therapeutic. Recent studies have shown that patients who have developed resistance to immunotherapy combining a blockade of CTLA4 and PD1/PDL1 have a high expression of VISTA.

VISTA (V-domain Ig-containing suppressor of T cell activation) protein is a recently discovered immune control protein that suppresses T cell activation. This study sought to determine the expression of VISTA, CTLA4, PD1 and PDL1 and its correlations in ovarian carcinoma (OC).

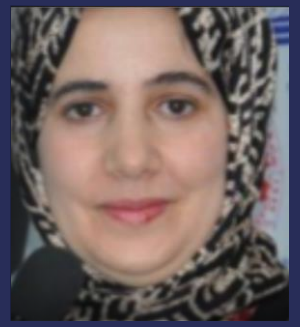
Methods: The expression of VISTA, CTLA4, PDL1 and PD1 proteins was assessed in 171 HCC tissue microarrays (TMAs) by immunohistochemistry (IHC). The associations between VISTA, CTLA4, PDL1 and PD1 encoding gene from patients with OC in The Cancer Genome Atlas (TCGA) database was included as a validation cohort. Associations between these checkpoints were analyzed.

Results: VISTA expression was detected in 65,5%, CTLA4 in 87,6%, PDL1 in 50,9% and PD1 in 57,6% of patients. VISTA+/CTLA4+ in 91,8%, VISTA+/PDL1+ in 58,7% and VISTA+/PD1+ in 66,7% of cases.

VISTA expression was associated with CTLA4 expression(p=0,03), PDL1 expression (p=0,006) and with PD1 expression (p=0,001) which was consistent with mRNA level analysis from the TCGA database.

Conclusion: These results showed that VISTA expression was associated with high expression of CTLA4, PDL1 and PD1 in OC, suggesting the combinaison VISTA/CTLA4/PD1or PDL1 as a novel synergic therapeutic target in OC.

11:30 – 11:45 **Fatima El Agy**
Sidi Mohamed Ben Abdella University, Morocco



Dr. Fatima El agy works at SIDI MOHAMED BEN ABDELLAH University, FES, Morocco. She received her Ph.D. degree in genetics and molecular biology in 2022 at the faculty of medicine and pharmacy.

During the preparation of her thesis, she published several articles on colon cancer and molecular biomarkers.

Rare RAS mutations are associated with recurrence patterns and recurrence-free survival in colon cancer: First results from Morocco.

Background: RAS mutations have been reported to be associated with the worst overall survival in colon cancer. However, the effect of RAS mutation on recurrence-free survival and patterns of recurrence remains unclear. This exploratory study aimed to evaluate the impact of RAS mutations, especially the rare mutations type on recurrence patterns in patients with stage I-IV CRC, and to identify the risk factors predicting recurrence-free survival in colon cancer.

Methods: Full RAS mutations were analyzed using Sanger and pyrosequencing for 270 patients. The MSI status was determined using immunohistochemical analysis. The correlation between Molecular alterations and recurrence patterns and recurrence-free survival was investigated. Statistical analysis was performed using the Kaplan–Meier method and the log-rank test.

Results: The mean patient's age was 55,4±14.7 with a moderate dominance of the male sex (n=146; 54.1%). The rate of recurrence after the first-line therapy was 31.5% (n=85). 13 (15,3%) patients had local recurrence, and 72 (84,7%) had distal recurrence. The most common distal recurrence site was the liver (n=34 ; 40,0%), followed by the lung (n=19 ; 22,4%). Of the 270 patients, 85 (31,5%) experienced recurrence, among whom 52,9% had mutant full RAS status, and 48,2% had KRAS mutations. Outside KRAS exon 2 mutations or rare mutations, were identified in 22 (8.1%) patients. The p.Q61L (Nras exon 3) mutation had the highest frequency in the rare mutation group (n=5 ; 22,7%), followed by the p.A146T (Kras exon 4) variant (n=4 ; 18,2%). RAS mutation status, KRAS mutations, and rare mutations were more common in patients with lung recurrence. Rare mutation status was correlated with worse recurrence-free survival (p=0,001). Multivariate logistic regression analysis revealed that differentiation, perineural invasion, full RAS mutant status, and KRAS codon 12 mutations were independent factors for recurrence-free survival in colon cancer.
Conclusion: In this cohort, recurrence patterns seemed to be associated with rare RAS mutations. KRAS codon 12 mutations were the worst predictor of recurrence-free survival at all stages in our population.

Keywords: Colon cancer. Rare RAS mutations. Recurrence.

DAY 2

Saturday 28 Oct. 2023

Oral Presentations

Session VI B:

Cancer Diagnosis & Prognosis

Moderators: Yacoubi M. T., Ben Dhiab T., Ben Ahmed S.

10:30 – 10:45 **Ibtissem Hasni Bouraoui**

Sahloul University Hospital, Tunisia

UNIVERSITY ROLES: Professor in radiology, Associate Dean of Student Affairs, Head of the Medical Imaging Section, Representative of the Radiology College at the Faculty of Medicine in Sousse.

HOSPITAL ROLE: Radiologist, Chief of the Medical Imaging Department at Sahloul Hospital, Sousse, Tunisia.

Primary Central Nervous System Lymphoma Imaging: Experience of Sahloul hospital in Sousse Tunisia

Primary Central Nervous System Lymphoma (PCNSL) is a relatively rare but significant form of non-Hodgkin lymphoma, constituting about 6% of all primary central nervous system (CNS) malignancies. Identifying PCNSL through MRI scans is crucial for avoiding unnecessary neurosurgical procedures and guiding towards a biopsy.

Over the last 10 years, our institution has reviewed pretreatment imaging of patients with confirmed PCNSL through biopsy. Selected cases were used to showcase typical and atypical imaging features of PCNSL. Additionally, we included MRIs of other CNS conditions with similar imaging characteristics to demonstrate potential diagnostic challenges. PCNSL typically manifests as intra-axial, homogenous, single or multiple contrast-enhancing lesions, accompanied by pronounced surrounding edema and restricted diffusion, often in proximity to cerebrospinal fluid surfaces. Uncommon features such as necrosis, peripheral enhancement, hemorrhage, or calcification should raise suspicion for alternative diagnoses. Possible mimics encompass high-grade gliomas, infarcts, metastatic diseases, demyelination, abscesses, and secondary lymphomas. Diffusion imaging, magnetic resonance spectroscopy, and perfusion imaging significantly contributes to accurate diagnosis in these cases.

Thorough evaluation of MR features and their correlation with clinical data empowers radiologists to consider PCNSL and reduce the likelihood of unnecessary surgical interventions.

10:45 – 11:00 **Ahlem Bdioui**

Faculty of Medicine of Sousse University, Tunisia

Dr. Ahlem graduated from the Faculty of Medicine of Monastir, Tunisia in 2004, after which she did her residency in the pathology department of Farhat Hached Hospital of Sousse Tunisia and the pathology department of Fattouma Bourguiba Hospital of Monastir until the end of 2011. Her experience includes:

-Fellow ship:

. Brabois hospital , at Nancy France, from July 2018 to October 2018

. European Georges Pompidou Hospital, at Paris France, from November 2018 to November 2019, as part of an advanced medical training diploma

- MD in Zaghouan Hospital (Tunisia): December 2013 to April 2016

- MD in Farhat Hached Hospital of Sousse (Tunisia), from April 2016 until July 2020, And lecturer in Sousse medical school

-MD in Sahloul Hospital of Sousse Tunisia, from July 2020 until now

Microenvironnement study in colo rectal and bladder carcinoma

Introduction: Understanding of patients subsets that respond to immune checkpoint inhibitors and in the context of their tumor microenvironment (TME) is becoming increasingly important. The TME is composed of a heterogeneous milieu of tumor and immune cells. Tumor-infiltrating neutrophils (TIN) and lymphocytes (TILs) are found to play essential roles in many tumors and associate with patient prognosis.

Methods: Our study was retrospective on 105 cases of CRC and 72 patients with bladder cancer, collected in the pathology department of the CHU Sahloul of Sousse, over a period of two years. The quantification of TILs was done in accordance with the recommendations of the international working group on TILs. The concordance study was analyzed using Cohen's Kappa concordance coefficient. TIN also were scored on HE whole slides. Two groups are defined: low and high.

Results: For colo rectal carcinoma: the study of the correlation between TILs density and histo-prognostic factors showed that high TIL density was associated with early pT and pN stages. We found the same results for the pTNM stage. Low TIL density was associated with the presence of venous and lymphatic emboli and perineural sheathing. A low density of TILs was associated with the presence of tumor deposits. Extensive fibrosis was inversely associated with high TIL densities.

For bladder carcinoma: Our results found that low amounts of TILs were significantly associated with perineural invasion, lymphovascular invasion and blood vessel invasion. High amounts of TIN were significantly associated with pathological T-stages, pN-stages, perineural invasion, lymphovascular invasion and blood vessel invasion. Elevated TIN was associated with poor OS patients, whereas higher TILs were related to longer OS.

Conclusion: TILs and TIN could be new relevant prognostic factors that should be included in histological reports. Thus, the implementation of a standardized method for their evaluation is necessary.

11:00 – 11:15 **Samir Aloulou**

University Hospital of Gabes, Tunisia

Dr. Aloulou is a specialist in medical oncology since 1999.

He is an associate Professor in medical oncology since 2016

Head of department of medical oncology CHU Gabes since 2017

President of medical committee of CHU Gabès from 2018 to 2022

Associate general secretary of the Tunisian Society of Medical Oncology (STOM) since

January 2023

Vertebral metastasis of breast carcinomas in Southeastern Tunisia: Anatom-oclinical aspects and therapeutic management

Background: Breast cancer is the leading cancer in women. Bone metastases are common. The aim of our work is to study the anatomoclinical characteristics, therapeutic results and prognostic factors of vertebral metastases of breast carcinomas in south-eastern Tunisia.

Patients and Methods: This is a retrospective study including patients with spinal metastases of breast carcinomas treated at Gabes University Hospital between January 2015 and December 2019. For each patient, we collected clinical, pathological and therapeutic data.

Statistical analysis using SPSS 20.0 made it possible to determine the prognostic factors influencing overall survival.

Results: Our series included 57 patients. The median age was 48 years. 41 patients (71.9%) had metachronous metastases and 16 patients (28.1%) had synchronous metastases. The tumors were classified T4 in 42.1% of cases, immediately metastatic (M1) in 31 cases (54.4%). Spinal metastases mainly affected two vertebral levels (61.4%) and more than three vertebrae (70.2%). Spinal cord compression was the most frequent complication (24.6%). Extravertebral bone, pulmonary, hepatic and brain metastases had respective frequencies of 80.7%, 43.9%, 49.1% and 12.3%. The tumors expressed hormone receptors in 73.3% of cases and overexpressed HER2 in 19.3% of cases.
Under no circumstances was spinal metastasis surgery performed. 80.7% had received Bisphosphonates. Breast radiotherapy was done in 52.63% of cases, that of spinal metastases in 42.1% of cases.

The median survival was 28 months. Overall survival at 3 years and 5 years was 38.6% and 22.7% respectively. The significant prognostic factors for overall survival in univariate analysis were: age ($p = 0.041$) and metastatic disease at diagnosis ($p = 0.01$).

Conclusion: Vertebral bone metastases can jeopardize the neurological prognosis.
Various systemic and locoregional therapeutic means are available for management of vertebral metastasis. The treatment strategy must be discussed in a multidisciplinary consultation meeting.

11:15 – 11:30 **Sadok Megdiche**

Mongi Slim University Hospital, Tunisia

Dr. Megdiche Sadok is currently a 3rd year resident in general surgery at Mongi Slim Hospital, La Marsa, Tunis. He is originally from Sfax, where he completed his medical degree at the Faculty of Medicine of Tunis. He spent the two first years in the Surgery department "A" at La Rabta Hospital where he learned the basics of general Surgery especially colorectal surgery and chronic inflammatory Bowel disease. Presently, he is focusing on hepatobiliary surgery at Mongi Slim Hospital where he is conducting several studies and surgical training. Dr. Sadok is a highly motivated surgery resident seeking to improve surgical skills and contribute to providing exceptional patient care. Dedicated and detail-oriented professional, adept at collaborating with interdisciplinary teams to achieve optimal outcomes.

Liver metastases from colorectal cancer after curative treatment: prognostic factors affecting overall survival and recurrence-free survival

Introduction: Despite the progress of systemic chemotherapy and targeted therapy, surgical resection or radiofrequency therapy remains the only curative treatment for metastases from colorectal cancers improving long-term survival and recurrence-free survival. The aim of the study is to identify factors affecting overall survival and disease-free survival in patients who have received curative treatment for colorectal metastases.
Methods: We conducted a retrospective study that included sixty-seven patients who had received curative treatment for either surgical resection or radiofrequency ablation between 2013 and 2020. The primary endpoints were overall survival and disease-free survival.

Results: The median age was 58 years. The Sex ratio was 1.39. The site of the primary tumor was the sigmoid colon (31.3%), followed by the right colon (28.4%). Metastases were localized to the left liver in 71.6% and synchronous in one third of cases. 3-year recurrence-free survival was 56% and 3-year overall survival was 62%.
Factors affecting overall survival were age greater than 55 years (p=0.023), low socioeconomic status (p=0.001), high ACE (p=0.001), moderately differentiated or undifferentiated tumors (p=0.017), tumor size less than 5cm (p=0.031) especially in cases of synchronous metastases (p=0.002) and multisegmental location (p=0.004).
Factors affecting recurrence-free survival were age greater than 55 years (p=0.02), low socioeconomic status (p=0.006), high ACE (p=0.025), moderately differentiated or undifferentiated tumors (p=0.001), presence of vascular emboli (p=0.005), and multisegmental location (p=0.001).

Conclusion: the factors influencing overall and recurrence-free survival are complex. In our study, ACE elevation, synchronous metastasis, and multisegmental localization were independent factors of overall survival and recurrence-free survival.

11:30 – 11:45 **Feriel Souissi**

Sahloul University Hospital of Sousse, Tunisia

Dr. Souissi graduated from the Faculty of Medicine of Tunis in 2022.

Additional study certificates

-Proliferative pathology of the thorax (Sfax - 2021)

-Thoracic oncology (Tunis – 2022)

-Tobacco and help with smoking cessation (Sousse-2023)

*Memories

-Evaluation of knowledge concerning broncho cancer-pulmonary and the acceptability of its screening in patients arteritic and/or coronary (October 2021)

-Smoking and bronchopulmonary cancer in women (ongoing)

Thymoma operated by sternotomy: prognostic factors

Background: Thymomas are the most common thymic tumors. The identification of their prognostic factors remains a controversial issue because of their rarity. The main aim of our work was to identify the factors influencing the survival of operated thymomas.

Methods: We performed a retrospective study over 49 cases of thymoma operated and histologically confirmed in the department of Cardiovascular and Thoracic Surgery of Sahloul-Sousse Hospital over the period from January 2000 to March 2021.

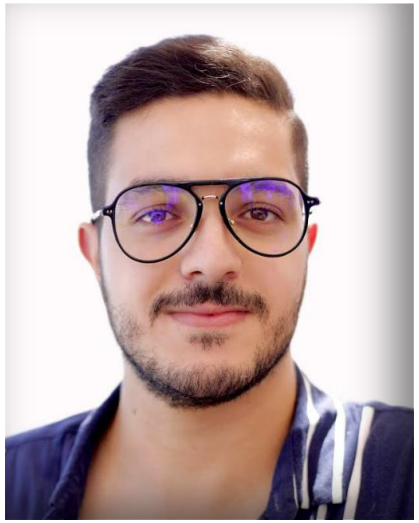
Results: The average age was 44±16 years [8-76 years] with a sex ratio M/F of 0.6. Myasthenia was discovered in 68% of cases. Surgical treatment was the cornerstone of management. Eighty-six percent of patients had exclusive surgery. The most frequent MASAOKA stage was stageII (44%) and the most frequent histological type was B2 (40%). The average size was 10 cm. The limits of excision were R0, R1 and R2 in 88%, 8% and 4% of cases respectively.

Three patients had only adjuvant radiotherapy and three had adjuvant radiochemotherapy. The average follow-up time was 50months. No deaths were noted and 2locoregional recurrences were found in 4% of patients. The mean overall survival was 108 months. Survival at 1, 2 and 5years was 88%, 82% and 72% respectively. Analysis of survival according to age (p=0,757), gender (p=0,135), myasthenia gravis(p=0,116), surgical approach (lymph node dissection p=0,424), adjuvant treatment (radiotherapy p=0,118), MASAOKA clinical stage (p=0,984), and WHO histological type (p=0,243) did not show significant differences. Only the quality of resection (p=0,036) and tumor size (p=0,026) influenced the survival.

Conclusion: The prognostic factors of operated thymoma by sternotomy are still debated. There is no clear consensus. This justifies the importance of conducting larger studies. Only the knowledge of these prognostic factors can improve the management and thus the survival of patients operated for thymoma.

11:45 – 12:00 **Achraf Saoudi**

Sahloul University Hospital of Sousse, Tunisia



Achraf Saoudi is affiliated to the faculty of medicine "Ibn El Jazzar" of Sousse, Tunisia and is a medical resident in Plastic, Reconstructive and Aesthetic surgery currently working in the department of Plastic, Reconstructive and Aesthetic surgery of the university hospital Sahloul, Sousse, Tunisia.

Chest wall reconstruction combining synthetic plates and locoregional flaps: About 13 cases

Introduction: Extensive chest wall reconstruction after massive tumor resection is a challenging procedure that requires a multidisciplinary approach.

Cases presentation: We present 13 cases of destruction of the anterolateral and sternal chest wall after wide tumor resections. 2 of them had pediatric age. The histological workup concluded to a chondrosarcoma in most cases and desmoid tumor in one.

The mean number of ribs resected was 4+/-1. All patients underwent immediate reconstruction with synthetic mesh and Latissimus Dorsi / Pectoralis Major flap. Bone immobilization appeared satisfactory.

There were no postoperative respiratory disorders, with the exception of one case of dyspnea during sustained efforts.

No vascular complications of the flaps were noticed. Follow-up showed only one case of recurrence related to a desmoid tumor.

Conclusion: Combining synthetic plates with locoregional flaps is a safe, inexpensive surgical solution for managing reconstruction of extensive chest wall defects.

DAY 2

Saturday 28 Oct. 2023

Oral Presentations

Session VII:

Cancer Drugs & Therapeutics

Moderators: Bouzaiene H., Fathalla N., Zairi A.

14:00 – 14:15 **Hewida Fadel**

Pharos University, Egypt

Dr. Hewida obtained her Bachelor of Science, Biochemistry, Faculty of Science from Alexandria University, 1992. Her master's degree in medical applied chemistry (Sept. 2005), excellent degree from the Medical Research Institute (MRI), Alexandria University; And PhD degree (March 2011), Major (Medical Applied Chemistry), Minor (Cancer chemistry), Medical Research Institute (MRI), Alexandria University.

Dr. Hewida was a Lecturer assistant (2009-2011), then became Lecturer of Applied Medical Chemistry in Medical Laboratory department in Faculty of Allied Medical Sciences (2011 till now). Recently, she achieved the proceeding and discussion of promotion to Associate Professor successfully. She is interested in the determination of novel markers and therapies for COVID-19 and Cancer, studying the impact of polymorphic variations and SNP in carcinogenesis and severity of COVID-19 and apply of Bioinformatics in exploring therapies for COVID-19 and cancer. I published 4 articles about COVID-19 markers and therapies in international journals (Scopus and web of sciences). World Health Organization (WHO uploaded them on the website).

Drug Docking of Phytochemicals to Stearoyl-CoA desaturase at critical residues; A novel mechanism against Colon Cancer

Background: Colorectal cancer is the third most common cancer worldwide and the second cancer causing deaths among all cancers and in both sexes. Stearoyl-CoA desaturase (SCD) has a central role in biosynthesis of monounsaturated fatty acids which in turn play role in cancer progression. Numerous studies explored the anti-cancer mechanisms of phytochemicals where more than 60% of anti-cancer drugs are derived from natural products.

Methods: We determined the gene expression of stearoyl-CoA desaturase in colon cancer patients and control subjects by RT-PCR. In silico study was performed to explore the efficacy of drug docking of 14 herbal products to SCD;

Results: We found that SCD was overexpressed in colon cancer compared to control subjects with high specificity 84.21 % and moderate sensitivity 64.71% (AUC=0.721, 95% C.I 0.547 to 0.857, p=0.015). Additionally, overexpression of SCD more than 16.63-fold change showed poor prognosis. The data collected from our in-silico study demonstrated that 5 out of 13 herbal compounds docked SCD with high affinity and the lowest binding energy (<-100 Kcal/Mol). These compounds include Quercetin, Kaempferol, Indirubin, Apigenin and artemisinin which targeted critical residues such as cHis157, His171, Asn148, Trp153, Thr261, Trp262, Asn265, Trp184 which lie at the binding interface between SCD and its substrate. It is well known that Quercetin, Apigenin and Kaempferol are active ingredients in Chamomile. However, ascorbate failed to dock SCD.

Conclusions: natural medicine containing Quercetin, Apigenin, kaempferol, Indirubin and artemisinin may improve the clinical outcomes in colon cancer patients via interfering with the binding of SCD to its substrate.

Keywords: Stearoyl CoA desaturase; drug docking; Quercetin; Indirubin; Apigenin; Kaempferol; Chamomile; artemisinin; colon cancer, gene expression

14:15 – 14:30 **Tarek Baati**

National Institute of Research & physio-chemical Analysis, Tunisia

Dr Tarek Baati, 47 years old, received in 2003 his master degree in Biology in the High Institute of Biotechnology of Monastir then he joined the laboratory of Trace Elements and antioxidants in the Faculty of Medicine of Monastir as Research Engineer. In 2005 he completed his PhD of toxicology at the Faculty of pharmacy (University of Paris 11), focusing his work on toxicity and antioxidant effects of fullerene. Then he joined in 2009 the Porous Solids group in the Institute of Lavoisier as a Postdoctoral Researcher (CNRS UMR 8180, University of Versailles). In 2013 he joined the Research center in biological oncology and onco-pharmacology (INSERM UMR 911 University of Aix-Marseille, France) as a postdoctoral researcher. From 2015 until now he joined the Natural Substance Laboratory team (INRAP, Tunisia) as a permanent Associated Professor. In 2022 he received his "Habilitation to Direct Research" With a background in Toxicology, in vitro and vivo experiments and bioanalysis, his main research interests concerns the application of nanoparticles on biomedicine and cosmetics as drug delivery system as well as detoxifying agent.

Chitosan coated ultrapure silicon nanoparticles produced by laser ablation: biomedical potential in nano-oncology as tumor targeting nanosystem

Ultrapure Silicon nanoparticles (SiNPs) produced by femtosecond laser ablation in water have gained great interest in the area of cancer therapy as they are efficient as photosensitizers in photodynamic therapy modality and induces cell hyperthermia under radio frequency radiation. These biocompatible nanoparticles are not able to reach tumor after intravenous injection in mice due to their rapid clearance from the bloodstream. In order to increase their half-life time and therefore their chances to reach and accumulate in tumor by the EPR effect, a capping agent on SiNPs surface acting as a colloidal stabilizer suspension is required. In this regard, this work focuses for the first time on the functionalization of SiNPs through the modification of their surface by chitosan (SiNPs-CH) to enhance their therapeutic properties in cancer therapy. The in vivo experiments were carried out during 15 days on nude mice developing subcutaneously grafted malignant human brain tumor (glioblastoma). Characterization of SiNPs-CH shows a hydrodynamic size around 142 ± 65 nm as well as a relatively neutral charge (-5.2 mv) then highly colloidal suspension stability. The point of our work concerns the improvement of the biodistribution of SiNPs-CH with regard to tumor, bloodstream and organs. After the intravenous administration of 20 mg.Kg-1, all studied parameters (animal behavior, organs morphology and histopathology) are in according with the absence of toxicity due to SiNPs-CH confirming their biocompatibility even size and surface charge are modified compared to bare nanoparticles. Moreover an increased time in the bloodstream circulation up to 7 days was observed indicating stealth nanoparticles which are escaped to opsonization and premature elimination by macrophages and reticuloendothelial system. As evidenced by silicon assessment the interaction of SiNPs-CH with the liver and spleen is significantly reduced compared to the bare nanoparticles. At the same time, SiNPs-CH concentrates progressively in tumor from 12.03 % after 1 day up to 39.55% after 7 days confirming their uptake by the tumor microenvironment through the enhanced permeability retention effect. Subsequently silicon level is declined progressively down to 33.6 % after 15 days evidencing the degradation of pH-sensitive SiNPs-CH under acidic tumor microenvironment. Taken together, stealth SiNPs-CH exhibited an ideal biodistribution profile within tumor microenvironment with a sustainably biodegradation and elimination promising their application in the nano-oncology field as tumor targeting system.

14:30 – 14:45 **Kalthoum Ayed**

Sahloul University Hospital of Sousse, Tunisia

A medical professional, specializing in the field of Nuclear Medicine.

My practical experience includes internships in neonatology, physical medicine and rehabilitation, emergency medicine, and gynecology and obstetrics at two hospitals in Sousse.

Regarding my residency program, I have gained experience at various Nuclear Medicine departments (Habib Bourguiba hospital in Sfax, Sahloul hospital in Sousse and Salah Azaiez institute in Tunis).

During my two residency years, I have attended several post-university courses and scientific events. I have also presented my research findings at various conferences.

The added value of 18F-FDG PET-CT in the initial staging of non-small cell bronchopulmonary cancers

Background: NSCLC (non-small cell lung cancer) accounts for around 85% of all lung cancers. The current staging criteria are based on the TNM system, which defines therapy options and forecasts patient survival rates.

The study's goal was to assess the diagnostic accuracy of 18F-fluorodeoxyglucose (18F-FDG) positron emission tomography PET/CT in NSCLC staging.

Methods: A retrospective descriptive study was conducted. We confronted the results of 18F-FDG PET/CT with the data of conventional evauation in the initial staging of NSCLC in the period between January 2020 and January 2023.

Results: A total of 61 patients were reviewed, ranging in age from 41 to 82 years old, with a mean of 65 years old (SD 8.73). There were 57 male and 4 female cases. When contrast enhanced CT was compared to 18F-FDG PET-CT for staging, PET-CT helped changing N statuts as follows : upstaging in 21 cases (34,4%) and downstaging in 12 cases (19,7%). For M status, PET-CT allowed upstaging in 24 patients (39,3%) and downstaging in 4 patients (6,6%). However, no major changes were made for T staging : 82% of patients kept the same T status.

Based on the previous results, PET-CT allowed changing the stage of the disease in 40 cases (65.6%) and the therapeutic management in 27 cases (44.3%).

Conclusion: PET/CT is a valuable imaging technique in the initial staging of newly diagnosed NSCLC patients. It is superior to CT alone for detecting and staging malignant lesions. It has the ability to alter treatment method based on its findings.

14:45 – 15:00 **Oumayma Kouki**

Faculty of Sciences of Tunis, Tunisia

Oumayma Kouki is a third year PhD student in laboratory of Neurophysiology, Cellular Physiopathology and Biomelcules Valorisation, faculty of sciences of Tunis, Tunisia.

Currently, she is working on "The Anti-tumor effect of Annona muricata on cellular chemo-sensitivity in experimental breast cancer models" under the supervision of Pr Olfa MASMOUDI.

She is licensed in anesthesia, but her passion for biology and research was a strong factor that led her to switch fields by pursuing a master's degree in Biomedical Sciences, then, PhD in oncology.

Dr. Kouki benefited from two internships with Mr Gérard LIZARD in university of Burgundy, that enhanced her knowledge, competency and soft skills.

Added to that, she participated in international congresses and schools such as BMAT, IBRO School, and ISN School... where she discussed her work with colleagues from different nationalities and with esteemed professors.

Anti-tumor effect of Annona muricata on cellular chemo-sensitivity in experimental breast cancer models

Background: Breast cancer (BC) is the most common femal disease worldwide. It is known for its heterogeneity, its hight morbidity and mortality that constitute a serious socio-economic burden especially in developing countries. Many therapies can be used such as surgery, chemotherapy, hormonotherapy, phytopherapy... However, results are not promising as evident because of its recurrence and its side effects. The aim of this study is to evaluate the anti-tumor effect of Annona muricata on chemo-sensitivity on 4T1 cell line in vitro.

Materials and methods: Our study was carried out on the aqueous extract of A. muricata (AM) leaves obtained by cold maceration in distilled water. The series of increasing concentrations of AM extract and CIS were used to observe its effect on viability and adhesion of 4T1 cell line by Fluorescein diacetate test and Sulforhodamine test respectively. We tested also, the effect of AM combined with CIS on cell death by cell cycle, AnnexinV/IP assay, caspases 3/7 activity, intra-cellular calcium, RT-qPCR and Western blot.

Results: Results have shown a dose-dependent effect of AM and CIS on 4T1 cell viability and adhesion. Furthermore, AM-CIS blocks cell cycle on early S and on sub-G1 after 24 and 48H respectively. In addition, CIS activate intrinsic cell death pathway that leads to apoptosis by cleavage of caspases 3 and 7. However, its combination with AM convert cell death pathway to autophagy by inhibiting caspases 3, 7, mTOR, AKT and phospho-AKT gene expression and the conversion of LC3-I protein into LC3-II.

Conclusion: A. muricata enhances chemo-sensitivity of 4T1 cell line by cell cycle arrest and it converts cisplatin's cell death pathway.

Keys words: A. muricata, cisplatin, cell cycle, convert, apoptosis, caspases, and autophagy.

15:00 – 15:15 **Saoussane Kharmoum**

Regional Hospital Center, Morocco

Dr. Saoussane Kharmoum is a medical oncologist and passionate researcher from Tangier, Morocco. She completed her medical studies at the Faculty of Medicine and Pharmacy of Mohammed V University of Rabat and underwent medical oncology training at the National Institute of Oncology in Rabat, as well as at Geneva University Hospitals in Geneva, Switzerland.

She holds a PhD degree from the Faculty of Medicine and Pharmacy of Rabat at Mohammed V University, which she obtained in 2019. She practiced as a medical oncologist at the Regional Oncology Center of Al Hoceima for 8 months and at the Oncology Center of University Hospital Mohamed 6 of Tangier for 6 years. Currently, she is a member of various international scientific societies such as the European Society for Medical Oncology (ESMO) and the American Society of Clinical Oncology (ASCO), as well as national scientific societies including the Moroccan Association of Research and Formation in Medical Oncology (AMFROM) and the Moroccan Cancer Society (SMC).

Dr. Saoussane Kharmoum has participated as a speaker or moderator in numerous national and international conferences. She is an author and co-author of several publications in indexed journals. Her research has primarily focused on Sarcoma, Gynecological and Breast Cancers, Geriatric Oncology, and she also has a keen interest in oral therapy in oncology and therapeutic patient education in oncology.

Management challenges of extremity sarcomas in under-resourced settings: The first survey-based study in Morocco

Background: Patients treated for rare cancers, such as sarcomas, are exposed to reduced survival rates. The diagnostic and therapeutic management of soft tissue and bone sarcomas is challenging, particularly in settings with limited resources. This cross-sectional survey aims to investigate key difficulties in managing these malignancies with a focus on extremity sarcomas by Moroccan practitioners.

Patients and Methods: Our report is a national cross-sectional study based on an anonymous self-administered questionnaire, designed on the freely available Google Forms® platform. The target population included Moroccan medical oncologists, radiation oncologists, and orthopedic traumatologists practicing in both the public and private sectors.

Results: A total number of 153 Moroccan practitioners were surveyed including medical oncologists (47.1%), radiation oncologists (34%), and orthopedic traumatologists (19%). Mostly all of them (92.8%) received 1 to 5 cases of sarcomas per month, including 25.5% who often received extremity sarcomas surgically and immediately treated without prior biopsy and 32% without a prior imaging assessment. Remarkably, 50.3% of practitioners who managed cases by surgery were non-specialist surgeons. The time to have an appointment for an extensive assessment by imaging was beyond one month in 46.4% for MRI, 26.8% for CT, and 65.4% for isotopic assessments.

60.8% of surveyed participants did not have a pathologist specialized in the diagnosis of sarcomas in their settings of practice, and more than half of surveyed practitioners did not take part in sarcoma multidisciplinary meetings. 92.2% of practitioners stated to have difficulties to indicate the best therapeutic options for their patients. In Moroccan cancer centers treating adult patients, high-dose methotrexate-based protocols were not used. The inaccessibility of rehabilitation and physiotherapy services was noticed (46.4%) in addition to the absence of psychotherapeutic management (72.5%).

Conclusion: In Morocco, the practice of extremity sarcoma oncology faces several diagnostic and therapeutic challenges. Therefore, reconsidering the current practice of sarcomas management is urgently needed. Notably, the creation of a national reference sarcoma center with expert multidisciplinary teams is particularly awaited.

DAY 2

Saturday 28 Oct. 2023

Oral Presentations

Session VIII:

Translational Cancer Research

Moderators: Bdioui A. T., Boutay A., Belaid I.

16:00 – 16:15 **Mokni Baizig Nehla**

Salah Azaiez Cancer Institute, Tunisia

Nehla Mokni Baizig: PhD holder in Genetics and Molecular Biology . I have been conducting research at the "Salah Azaiz" Cancer Institute since 1994. I am affiliated with Research Unit 17ES13, focusing on "Inflammation, Proliferation, and Cell Death," then with the Research Laboratory focusing on " Personalized medicine, precision medicine and oncology research".

In addition to my research work, I am a member of the scientific committee and serve as the Deputy Secretary of the ethics committee at the ISA.

I began my research journey at the "Jacques Monod Institute" in Jussieu, Paris, where I focused on epigenetics. At the "Salah Azaiz" Institute, my research interests lie in immunogenetics, viral approaches (EBV and HPV), and the study of new biomarkers for diagnostic, prognostic, and therapeutic purposes in nasopharyngeal and laryngeal cancers.

I have also served as a reviewer for several impactful journals, contributing to the evaluation of scientific articles.

I am honored to be part of this congress, where I hope to share and exchange knowledge with fellow researchers.

Study of potential diagnostic and prognostic biomarkers in laryngeal squamous cell carcinoma samples from patients at the "Salah Azaiz" Cancer Institute

Laryngeal cancer is a significant public health issue in Tunisia, with an increasing annual incidence rate. Our research team focused on identifying biomarker expression as predictive factors for clinical management and prognosis.

We assessed HPV status, P16, Survivin, P53, IGF-1R, and immune cells: CD8 lymphocytes, Treg FoxP3 and Tumor-Associated Macrophages (TAM) in tumors from 70 patients diagnosed with Laryngeal Squamous Cell Carcinoma (LSCC) at the "Salah Azaiez" Cancer Institute. Furthermore, we measured the concentrations of sCD163, FoxP3, and IGF-1 in serum samples collected from 70 pretreatment LSCC patients, along with 70 age and sex-matched healthy controls.

According to our findings, HPV High Risk (HR) DNA was detected in more than half tumor cases explored and was associated to the LSCC good prognosis. Expression of CD8 lymphocytes was also found to be associated with a better survival in LSCC patients. Multivariate analysis identified HPV HR DNA+ as an independent prognostic factor.

In addition, levels of Treg FoxP3 and TAM infiltration were dependent on the presence of HPV HR DNA. However, these immune cells did not hold prognostic value.

Furthermore, the study revealed that the presence of Survivin and IGF-1R were associated with unfavorable outcomes and with a higher recurrence rate. Moreover, weak expression of IGF-1R was correlated with the presence of HPV HR DNA.

Additionally, elevated serum levels of sCD163, FoxP3, and IGF-1 beyond specified cutoff values were significantly associated with the diagnosis of LSCC.

In summary, among biomarkers tested in this study, HPV HR DNA, CD8 Lymphocytes, IGF-1R and IGF-1 demonstrated their promising potential as indicators for LSCC progression

16:15 – 16:30 **Omar Alqawi**

National Cancer Institute, Libya

Dr. Omar Alqawi, recently working as a senior researcher at Genetic Engineering Centre, and research coordinator at National Cancer Institute, Misurata, Libya. My research interest is studying the molecular diagnostic

profile of different cancers. I have published several papers in this area of research such as: Kras mutations in Libyan colorectal cancer patients, BRAF mutations in thyroid cancer, HER-2 expression in breast cancer patients, EBV detection in lymphoma patients, HPV detection in cervical cancer patients, and Bcl-2 expression in prostate cancer patients.

Common mutations of p53 gene in Libyan colorectal cancer patients

Colorectal cancer (CRC) is one of the types of malignancies that records an increased incidence in the last years. It is the third most common cancer in men and the second most common cancer in women worldwide. Although the diagnosis and its prevalence are rising and the 5-year survival rates are still poor until now. CRC develops through a multistep process of mutations that inactivate tumor suppressor genes or activate oncogenes. Generally, it is known that the progression of CRC follows mutations of the APC, KRAS, and P53. Mutations in the TP53 gene are the most commonly observed genetic alterations in CRC, an estimated 40-70% of CRC cases harbor p53 mutations. Mutations in p53 leading to CRC commonly occur in exons 5 to 8 and mainly in some hot spot codons such as 175, 245, 248 and 282 which coding for the amino acids that are extremely important for its DNA binding activity. We examined, 40 tissues from CRC Libyan patients in National Cancer Institute-Misurata for mutations in p53 at exons 5–8 using PCR-direct sequencing. We found 74 of p53 mutations in 20 cases (50%) and protein accumulation in 22 cases (55%).

The mutations distribution in the exons subjected to analysis were: exon 5, (10.9 %), exon 6; (13.3 %); exon 7; (54.6 %), exon 8; (8%), intron 7; (8%), Splice junction (5.5%). Most of p53 mutations were substitutions (76.9%) and frame shift (23.1%). Four mutations were ascribed to hot spot regions; codon 245; codon 248. Distal CRCs were more frequently mutated than rectal and proximal CRCs. Overall our data have shown that the frequency, types of mutations, and correlations with p53 accumulation were in agreement with the reported p53 mutations in CRC.

Key words: colorectal cancer, p53 mutations, DNA sequencing, exons,

16:30 – 16:45 **Ines Safra**

Pasteur Institute of Tunis, Tunisia

Born in Tunisa in 1974, Safra I, MD, professor is a graduate from Tunisia Medicine Faculty. Diplomas are Master's degree on medical science: in genetic. Post graduate Diploma in hematology, Pierre Marie and Curie Institute, Medical University, Paris 5. Post graduate Diploma in Quality Management, Rene Descartes University, Paris 5.

Ines has been practicing since 2005, at Laboratory of Molecular and Cellular Hematology Pasteur Institute of Tunis, specialized in Flow cytometry of hematologic malignancies and interested by research about multiple myeloma and acute leukemia.

Ines is also active in quality Management introduces in the laboratory.

Implication of TP53 gene codon 72 polymorphism in the severity of chronic lymphocytic leukemia

Chronic lymphocytic leukemia (CLL) stands as the most prevalent B-cell lymphocytic malignancy predominantly affecting the elderly population. Despite advancements in treatment modalities, the progression of CLL exhibits variability among patients, TP53 gene aberrations constitute the paramount prognostic indicators often associated with resistance to chemo-immunotherapy. Early screening of TP53 gene mutations is necessary. These mutations lead to the inactivation or production of a dysfunctional protein. The codon 72 polymorphism (rs1042522) within the TP53 gene, marked by the substitution of G with C, exerts a profound influence on carcinogenesis. This variation results in the coding of either arginine (Arg) or proline (Pro).

The aim of our investigation is to establish a correlation between this genetic variant and the severity of the disease.

A total of 160 patient samples, including 104 males and 56 females, were collected from 2019 to 2021 at the Hematology laboratory of IPT. Clinical information was compiled. The molecular examination of the TP53 gene codon 72 polymorphism was conducted using the PCR-RFLP technique.

The distribution of this polymorphism revealed genetic diversity, with the prevalent phenotypes of Arg/Arg (42%), Arg/Pro (49%), and Pro/Pro (9%). A significant association was observed between the proline variant and hemoglobin levels ($p= 0.003$), platelet count ($p=0.016$), and subsequently the prognostic classification of Binet stage C ($p= 0.001$).

The presence of the Proline variant seems to be linked to the severity of CLL and requires further investigation with other molecular abnormalities of the TP53 gene.

16:45 – 17:00 **Meriem Mokni**

Sahloul University Hospital, Tunisia

Dr. Meriem Mokni is a University Hospital Assistant currently holding a position at Farhat Hached University Hospital of Sousse. Additionally, since February 2020, Dr. Mokni has been teaching Clinical Pharmacy modules at the Faculty of Pharmacy of Monastir.

In 2022, Dr. Mokni earned her dual PhDs in Pharmaceutical Sciences from the Faculty of Pharmacy of Monastir and in Materials Sciences from the University of Paris Saclay. Her doctoral research was a testament to her multidisciplinary approach, conducted under the collaborative partnership between two laboratories: the SATIE laboratory at the Conservatoire National des Arts et Métiers, Paris, and the LR12SP11 research laboratory at Sahloul University Hospital in Sousse.

Her research focuses on the development of electrochemical biosensors as a new diagnostic and monitoring aid for prostate cancer. She explored various tumor markers in serum (the "gold standard" PSA) and urine (such as Engrailed 2).

New electrochemical biosensors for fast and reliable diagnosis and monitoring of prostate cancer

Prostate cancer (PC) is the second most frequently diagnosed malignancy in men worldwide and the fifth leading cause of cancer-related death [1]. Tissue biopsies, ultrasound, and magnetic resonance imaging (MRI) are the most effective tools for the diagnosis of PC. Although the reliability of these techniques, they severely require centralized laboratories, long-time analysis, highly qualified personnel, expensive devices, and most importantly that they are painful processes (biopsy).

Electrochemical biosensor platforms for the early diagnosis of different forms of tumors are proposed as a promising alternative. Biosensors are a potential fusion of recombinant electronics, chemistry, and biology, permitting fast and early point-of-care of different biomarkers detection at very lower concentrations from a small amount of biological sample with the advantages of high sensitivity, portability, simple construction, and easy operation [2].

To provide accessible information on sensor design for PC diagnostic, in our laboratories, we have largely investigated several binding-affinity biosensors, by using antibodies, and molecularly imprinted polymer as biorecognition elements for the recognition of PC biomarkers: Engrailed-2 and prostate-specific antigen (PSA). To enhance the biosensors' performances, several types of surface modifications are monitored, including self-assembled monolayers, polymers, and nanomaterials.

The different elaborated sensors have demonstrated high performances in terms of limit of detection, which is in order of 1 fg.ml-1, a value much lower than that found by conventional methods, a good selectivity, specificity, high rapidity, and especially a good validation in real samples.

The encouraging results found as well as the plausible evolution of sensors make them a promising trend in the real-time quantification of a variety of analytes in clinical diagnostics.

References:

[1]https://www.frontiersin.org/articles/10.3389/fpubh.2022.811044/full#:~:text=Prostate%20cancer%20is%20the%20second,and %20375%2C304%20deaths%20in%202020
[2] D. G. Macovei et al., Point-of-care electrochemical testing of biomarkers involved in inflammatory and inflammatory-associated medical conditions, 2022.

17:00 – 17:15 **Nabiha Missaoui**

Faculty of Medicine of Sousse, Tunisia

I obtained my PhD from the University of Monastir (Tunisia) and the University Claude Bernard Lyon 1 (France). The Research project was focused on the uterine cervix oncogenesis and was carried out in The INSERM UMR 590 Oncogenesis and Tumor Progression, Léon Bérard Center; International Agency for Research on Cancer, Edouard Herriot Hospital of Lyon (France).

After more than 10 years of scientific research activities, I obtained my Accreditation to Supervise Scientific Research (HDR) in Biological Sciences and Biotechnology from the University of Monastir (Tunisia, 2020). Since June 2022, I am an Associate Professor in Cell Biology (Medicine Faculty of Sousse, University of Sousse, Tunisia).

At present, I am a Senior Scientist in the LR21ES03 ''Oncogenesis and Tumor Progression'', Medicine Faculty of Sousse, University of Sousse, Tunisia. I authored more than 50 scientific papers with an h-index of 13. Furthermore, I am an Academic Editor of Journal of Oncology as well as the Executive Editor of Biomedicine & Healthcare Research.

https://orcid.org/0000-0001-6964-075X

https://www.scopus.com/authid/detail.uri?authorId=14829324700

Systematic Mapping of Gender Disparities in Oncology Publications of North-African Countries: The GEORGiNA Study

Background: GEORGiNA (“Gender Equity in Oncology Research” Group of North Africa) is a gender focusing bibliometric study that reviewed cancer research of North-African countries, intending to build policy, recommendations, and gender equality actions in the field of cancer research.

Methods: A bibliometric analysis using Pubmed/Medline indexing database was conducted over a period of five years (2018-2022). Descriptive statistics, Chi-squared test, and logistic regression were used to assess factors associated with the gender distribution in included articles.

Results: A total number of 4,414 articles published by North-African cancer researchers in the last 5 years were included in the final analysis (Egypt: n=2507; Tunisia: n=843, Morocco: n=711, Algeria: n=142, Sudan: n=138; and Libya: n=73). 52.5% of first positions were females with a significantly notable feminine dominance found in Tunisia (72.6% vs. 27.4%). More importantly, Morocco, Algeria, and Egypt had an equitable distribution in this important authorship position. However, Sudan and Libya had more male dominance over females (62% and 70%, respectively). Regarding the last position, known as a leadership place for principal investigators (PIs), male researchers were considerably dominating the field of oncology research in all countries ($p<0.001$). Promisingly, a welcome finding from our research is that the trend of female distribution in first and last positions has markedly increased over the last years, even during the period of the COVID-19 outbreak. We also revealed that male PIs and first authors made more international collaborations as compared to females in the same position ($p<0.001$). In addition, male dominance of last positions was also highly significantly associated with a reduced number of females in co-authorships ($p<0.001$). An important observation was that high proportions of female first positions were associated with more females as co-authors ($p<0.001$).

Conclusion: Globally, women in North-African cancer research score well. Beyond this, barriers to have more women as PIs, lack of funding, and accessibility to international collaborations have still existed in this African region.

Recorded Session

Khalil Choukri

Hassan II University, Morocco

Khalil is a PhD student at the faculty of Medicine and Pharmacy, Hassan II University, Casablanca, Morocco.

He has graduated with a bachelor's degree at Faculty of Sciences and Technologies (Mohammedia, Morocco), and with a master's degree at Faculty of Sciences (Rabat, Morocco).

He joined the Immunogenetic and Human Pathologies, as a PhD Student under the supervision of Pr. Abdallah Badou.

His field of research is related to the study of tumor microenvironment and the immune response in cancer.

Khalil's hobbies and interests are documentary photography, reading, and a little bit of cooking.

Tumor mutation burden and potential response to lung cancer Immunotherapy

Immunotherapy which involves blockade of immune checkpoint inhibitors has improved patient's survival in different types of cancer, counting lung cancer. This novel cancer therapy remains to be one of the most promising approaches, for the effective activation of therapeutic antitumor immunity. Despite this, it remains challenging to predict the response or the resistance to immunotherapy based on the expression of immune checkpoints only. The genetic instability caused by endogenous (germline mutations), or exogenous factors (tobacco smoke) unravel new insights into the association between tumor mutational burden and immune response. Here, we provide an overview of the present status of immunotherapy in lung cancer, delving into emerging targets, and examining the convergence of genetic instability with immunotherapy.

Patients presenting with a co-mutation of EGFR and TP53 in fact show a worse prognosis overall, due to the upregulation of specific signalling pathways like COMP. Therefore, it may be advisable to consider these patients for TKI therapy. Secondly, a combination of Atezolizumab and platinum-based chemotherapy has showing promising results in prolonging the survival of patients with squamous lung cancer. Even though there has been a great development of ICI, drug resistance remains to be an ongoing problem for the course of treatment. Therefore, despite progressions in gene therapy, better understanding of combination therapies in NSCLC is required for future treatments to prolong survival.

Inas Al Khatib

American University of Sharjah, UAE

Chartered transformation, strategic and change program professional

15+ years of demonstrated experience in various business sectors (healthcare, aviation, Life Sciences, Distribution, Shared Services).

Skilled in Operations Management, Facility Management, Space Activation, Continuous Improvement, Project Delivery & Management, Operational and Digital Transformation, Business Process Improvement, Policy and Procedure writing, Revenue Optimization, Strategic Planning, Market Researching, Integration and Resource Management

The positive impact of AI-based Clinical Information System on cancer clinical diagnosis and treatment

This study investigates the various incorporations of AI into various dependencies of clinical information systems and accessories and its positive effect on the patient and their journey is the main goal of this study. To compile those positive implications of AI-based Clinical Information System on the patient, a thorough literature analysis was conducted using secondary data sources, including academic literature,

industry reports, and government publications. To categorize and find patterns in the data, thematic analysis was used. The research shows that AI-based Clinical Information Systems (CIS) leads to scale productivity, increase in cancer diagnostic accuracy, reduction in costs, enhancement of caregiver satisfaction, better patient outcomes, early detection of ailments, improves decision-making, assists in treatment, better end of life care, and enhancement of patient experience, and better connectivity to wearables. This study adds to the body of knowledge already existing about AI-based Clinical Information Systems and its various advantages.

Standardization of AI-based Clinical Information Systems (CIS) from a technical design aspect, early symptom predictions, drug discovery and diagnostics are opportunities of future research. Such aspects would support determine a design and build framework on how to integrate AI into Clinical Information Systems (CIS) from coding, workflow design and Machine Learning (ML) algorithms.

Keywords—AI, CIS, patient, SRL, patient experience, access to care

Hayet Douik

Salah Azaiez Institute, Tunisia

Dr. Douik is a scientist and researcher at the Salah Azaiz Institute of Cancer. She holds a PhD degree in Biology from the University of Tunis El Manar (Faculty of Sciences of Tunis, Tunisia).

Her principal skills are genetics, molecular biology, and immunogenetics. She has worked for more than 20 years on cancer research, especially on genetic polymorphisms as risk factors in diverse cancer types (breast, nasopharyngeal, colorectal, pancreatic, retinoblastoma, etc.) and treatment resistance in breast cancer.

She developed and managed the molecular biology laboratory at Salah Azaiz Institute, supervising many students in master's and doctoral theses; she managed diverse collaborations on research projects with France and India teams; and she is a principal Investigator in the Human Genetic Laboratory of Tunis' Faculty of Medicine. She joined the Pathology department two years ago, and she developed molecular pathology, particularly of colorectal cancer, melanoma, and endometrial cancer.

Targeting Exonucleasic region of POLE gene in endometrial carcinoma

Background: Molecular classification of endometrial cancer involves characterization of mutational status of POLE gene, especially for the exonucleasic region. A number of studies have revealed a set of mutations affecting the catalytic subunit of Pol ε (POLE) in human tumors.

These mutations cluster in the sequence encoding the exonuclease proofreading domain of POLE and are found in cancers from many tissue types, including high incidence in colorectal (3%) and endometrial (8%).

Aim: Our objective was to search for mutations in exonucleasic region of POLE gene in endometrial carcinoma samples.

Method: Thirty samples of endometrial carcinoma were collected at the pathology department of Salah Azaiz Institute for POLE exons 9 to 14 screening by Sanger sequencing, after DNA extraction by Qiagen DNA extraction kit.

Results: Twenty eight samples could be amplified and sequenced for POLE screening; Sanger sequencing revealed a new silent mutation in exons 9 (L343L), two missense mutations in respectively exons 9 and 13 (M359V and W410G) and the stop mutation W410X in exon 13.

Conclusion: Pathogenic mutations in exonucleasic region of POLE gene define a better prognosis for endometrial cancer patients allowing a less aggressive radiotherapy. Herein, we found two new mutations in exon 9 (M359V) and exon 13 (W410G) of which pathogenicity was predicted by in silico methods.

Arij Fouzat Hassan

College of Pharmacy, Qatar University, Qatar

Arij Fouzat Hassan has a BSc. degree in biological science minored chemistry, and recently she graduated with a MSc. in pharmacy with distinction from Qatar university. Arij's research focused on drug discovery and cancer since 2018. During her master she worked on the effect of natural and novel synthetic compounds on colorectal cancer under the supervision of Prof. Ashraf Khalil and Prof. Ala-Eddin Al Moustafa, and she obtained outstanding results. She found that both resources of treatment work on an important pathway in cancer development and metastasis which is epithelial mesenchymal transition. It is worth mention that Arij awarded three graduate awards for her master thesis. Thesis award, second place in three-minute thesis (3MT) competition at Qatar university level and the people choice award at national level. Arij is a current PhD. Student in health sciences in Qatar university, she is now focusing on more advanced methodology for drug discovery and nanotechnology as her PhD. Project for treating triple negative breast cancer.

Novel Synthetic Compounds Suppresses Epithelial-Mesenchymal Transition in Human Colorectal Cancer via Akt/mTOR Signaling Pathway: In vitro and in vivo study

Great studies have been made in Colorectal cancer (CRC) treatment, which is the third most common cancer in the world and the fourth most common cancer related death. KRAS mutant CRC subtype is associated with poor prognosis and respond weakly to available anticancer drugs. Therefore, novel anti-cancer drugs are synthesized in our lab by bearing chalcones with nitrogen mustard as an alternative treatment. In this study, two of these chalcones (DK13 and DK14) have been tested on KRAS mutant CRC cell-lines, HCT-116 and LoVo and in vivo using KRAS mutant Drosophila melanogaster. Our data showed that DK13 and DK14 significantly reduced cell viability deregulate cell-cycle progression in both cell lines. Further, both chalcone compounds caused a significant reduction in the cell invasion ability of both CRC cell lines, additionally, they significantly inhibited the colony formation of both cell lines in comparison to 5-FU and DMSO-treated control. The molecular pathway analysis of chalcone compounds exposed cells revealed that DK13 and DK14 inhibited the expression of both AKT and mTOR, which may play the role behind all these events.

Our results showed that chalcone compounds are potential as chemotherapeutic agents RAS mutant CRC cancer via Akt/mTOR Signaling Pathway. Moreover, DK13 and DK14 significantly increased the survival rate of RAS mutant D. melanogaster compared to the wild type.

Emene Benammou

Faculty of Medicine of Sousse, Tunisia

MEDICAL STUDIES: Faculty of Medicine of Sousse, University of Sousse

RESIDENCY:

01/11/2022 – Present: Department of Pathology, Armand Trousseau Hospital – Sorbonne University, Paris, France

01/07/2022 – 31/11/2022: Department of Dermatology, Farhat Hached University Hospital, Sousse, Tunisia

01/01/2022 – 30/06/2021: Department of Pathology, Fattouma Bourguiba University Hospital, Monastir, Tunisia

01/07/2021 – 31/12/2021: Department of Pathology, Farhat Hached University Hospital, Sousse, Tunisia

01/07/2020 – 30-06/2021: Department of Pathology, Sahloul University Hospital, Sousse, Tunisia

01/01/2020 – 30/06/2020: Department of Pathology, Charles Nicolle University Hospital, Tunis, Tunisia

Dr. Emene co-authored a published article: "The input of GATA-3 in the identification of parathyroid carcinoma diagnosis: Case report with review of literature".

Tumor deposits in colorectal cancer: How well do we know entity?

The tumor-node-metastasis (TNM) staging system for colorectal carcinoma, as detailed in the 8th edition of the American Joint Committee staging on Cancer's (AJCC) Staging Manual, defines tumor deposits (TD) as "discrete tumor nodules ... that lack associated lymph node tissue, vascular structures or neural structures, found within the lymph drainage area of the primary carcinoma". When encountered in the absence of lymph node invasion, TD constitute the pN1c category. However, their diagnostic criteria remain unclear.

This study aims, first, to assess interobserver agreement between pathologists when diagnosing TD based on the 8th TNM edition's diagnostic features and second, to determine whether associations between TD and other histopathological prognostic markers could be found.

Slides from 123 stage III and IV colorectal carcinoma resection specimen, with no preoperative treatment, were collected from the pathology department of Sahloul university hospital. They were reviewed by 3 pathologists each separately identifying TD, even when the tumor was metastatic to lymph nodes. Upon agreement, the association between TD and other prognostic makers was assessed.

39.8% of the tumors had TD. The overall interobserver agreement was poor ($k=0.34$). The presence of TD was associated with lymphatic, vascular and perineural invasion ($p=0.004$; $p<10\text{-}3$; $p<10\text{-}3$), the presence of lymph node metastasis ($p=0.007$) and especially extramural venous invasion (EMVI) ($p<10\text{-}3$).

As a histological feature mostly associated with bad prognostic markers, we recommend TD be reported even in the presence of lymph node invasion. Therefore, the criteria provided by the current TNM edition should be revised and clarified to improve diagnosis.

Nawras Sawafta

Al Quds University, Palestine

MD from Al-Quds University, Palestine. Intern at Tubas Turkish Hospital - Tubas, Palestine. A researcher at Palestinian Neuroscience Initiative.

Anticipated Time to Seek Medical Advice for Possible Lung Cancer Symptoms and Perceived Barriers to Early Presentation: A Cross-sectional Study from Palestine

Background: Lung cancer (LC) has poor survival outcomes mainly due to diagnosis at late stages. This study explored the anticipated time to seek medical advice for possible LC symptoms and barriers to early presentation in Palestine.

Methods: This cross-sectional study recruited adult participants from hospitals, primary healthcare centers, and public spaces of 11 governorates using convenience sampling. A modified, translated-into-Arabic version of the validated LC awareness measure was used to assess LC symptom awareness, the time needed to seek medical advice and barriers to early presentation.

Results: A total of 4762 participants were included. The proportion that would immediately seek medical advice for possible LC symptoms varied according to the symptoms' nature. For respiratory symptoms, this ranged from 15.0% for 'painful cough' to 37.0% for 'coughing up blood'. For non-respiratory symptoms, this ranged from '4.2% for 'unexplained loss of appetite' to 13.8% for 'changes in the shape of fingers or nails'. Participants with good LC symptom awareness were more likely to seek medical advice within a week of recognizing most LC symptoms. About 13.0% would delay their visit to see a doctor after recognizing an LC symptom. The most reported barriers were emotional with 'disliking the visit to healthcare facilities' (59.8%) as the leading barrier.

Conclusion: LC respiratory symptoms were more likely to prompt early seeking of medical advice. Good LC symptom awareness was associated with a higher likelihood of help-seeking within a week. Educational interventions are needed to promote LC awareness and address the perceived barriers to early presentation in low resource settings, such as Palestine.

Keywords: Lung cancer, awareness, early presentation, barriers, early diagnosis, Palestine.

Amal Shaikhah

Alexandria University Egypt

Amal Shaikhah is a dedicated professional with a strong background in biomedical informatics, medical statistics, and epidemiology. As a driven PhD candidate in Biomedical Informatics, Amal's research focuses on leveraging cutting-edge data analysis techniques to unravel complex healthcare challenges. , . With a Master's degree in Epidemiology, Amal possesses a profound understanding of disease dynamics and population health. As an accomplished epidemiologist, Amal contributes significantly to public health initiatives, utilizing her expertise to drive impactful change.

Beyond her academic pursuits, Amal Shaikhah serves as a seasoned medical data analytical consultant, offering invaluable insights to organizations seeking to extract meaningful information from intricate datasets. Her proficiency extends into the realm of artificial intelligence and machine learning, particularly in the fields of oncology and medical research. Amal's expertise in harnessing these technologies bolsters her ability to drive transformative advancements in healthcare, with a focus on improving patient outcomes and informing evidence-based practices.

Amal Shaikhah's multifaceted career spans the nexus of research, data science, epidemiology, and cutting-edge technologies. Her dedication and contributions continue to shape the landscape of healthcare, positioning her as a prominent figure in the pursuit of better health worldwide.

Robust Artificial intelligence for Prediction Colorectal Cancer: Challenges and Opportunities

Colorectal cancer is considered one of the three most severe and fatal types of cancer globally 1. Early diagnosis is of utmost importance in the case of any kind of cancer. Artificial intelligence (AI) has shown significant advancements in the medical field, exhibiting considerable potential for therapeutic use in recent times 2.

The use of machine learning (ML) application has seen a surge in popularity within the medical field. This may be attributed to the notable advantages and accomplishments they have shown in the timely detection of malignant tissues and organs via the analysis of medical texts and pictures. 3 The objective of artificial intelligence is to examine the correlations between treatment methodologies and the results experienced by patients.

Artificial intelligence (AI) has shown its promise in several aspects of cancer research, including enhancing the precision and efficiency of cancer detection, facilitating more dependable therapeutic judgments, and ultimately resulting in improved health outcomes. 4 Artificial intelligence (AI) has shown a remarkable ability to predict cancer with a degree of accuracy that surpasses that of a typical statistical expert. Therefore, the use of AI-based cancer detection models has the potential to enhance healthcare facilities by providing assistance to medical professionals in confirming their diagnostic decisions without encountering any hindrances. 5

This work aims to provide a comprehensive overview of the current research on artificial intelligence (AI)-based machine learning (ML) and deep learning (DL) approaches used in the modeling of colorectal cancer. The collection of research articles pertaining to colorectal cancer mostly relies on machine learning (ML) and deep learning (DL) methods. Subsequently, a comprehensive synopsis and an inventory of the collected research pertaining to each subject matter are provided. The research culminates with a comprehensive analysis of the obstacles and potential advantages associated with the use of machine learning (ML) and deep learning (DL) methods for the prediction of colorectal cancer. This analysis primarily focuses on the technical and medical perspectives.

In conclusion, we posit that our research will provide valuable insights for researchers contemplating the use of machine learning (ML) and deep learning (DL) techniques in the realm of colorectal cancer diagnosis.

Myasar Alkotaji

Ninevah University, Iraq

Associate Professor Dr. Myasar Al-kotaji

Dean of the College of pharmacy, Ninevah University, Mosul, Iraq

Former head of the department of pharmaceutics at college of pharmacy, University of Mosul.

PhD in Biomolecular drug delivery (Pharmaceutics), University of Manchester, UK.

Post-doctorate at School of pharmacy, University College of London (UCL) in 2018

27 articles published in different national and international journals

Three patents registered in Iraq and supervision of nine postgraduate students

https://orcid.org/0000-0002-9465-5627

https://scholar.google.com/citations?user=Yz93CYUAAAAJ&hl=en

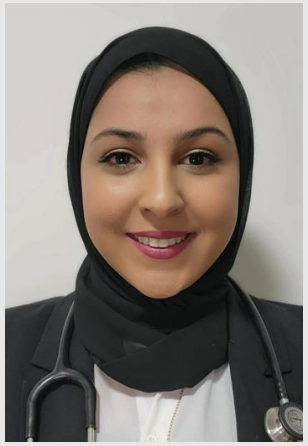
Insights on the role of Cell Penetrating Peptides (CPPs) in cancer therapy

Cell Penetrating Peptides (CPPs) are group of short peptides that have unusual ability to transduce cell membranes. CPPs have vast applications in drug delivery, however CPPs could play a major role in the future of cancer therapy. Today, pharmacological cancer therapy face many limitations including (but not limited) the non-selectivity, the cytotoxicity, and the drug resistance. CPPs have been used to overcome many of these obstacles and this work try to highlight these multiple and varied applications. Several CPPs including the HIV-derived peptide, transacting activator of transcription (TAT) peptide, have been attached covalently or non-covalently to enhance the effectiveness of many cytotoxic agents such as doxorubicin, chlorambucil, paclitaxel and bleomycin. Other researches manifested the use of CPPs to enhance the selectivity of anticancer drugs, or to deliver pro-apoptotic peptides whereas other works included the using of CPPs to overcome drug resistance. The promising application of CPPs in cancer therapy is in improving gene transfer. For instance, the using of Tat-LK15 peptide in delivery of siRNA and shRNA targeting bcr-abl in chronic myeloid leukemia. One of the most interesting application of CPPs in cancer is the recent use of CPPs in co-delivery of gene and cytotoxic drug for treatment of cancer by attaching the peptide to enhance the cellular delivery of the genes and pharmacological agents. The decorating of nanoparticles with CPPs will enhance the targeting and will aid in improving cellular delivery. Overall, the research on CPPs might be translated from the laboratory to the clinic sooner than expected.

Common Misconceptions and Myths About Ovarian Cancer Causation: A National Cross-sectional Study from Palestine

Inas Jaber

Al Quds University, Palestine



Inas Jaber, MD I am Palestinian General Practitioner in my internship year. I was born and raised in Ramallah- Palestine. I obtained my medical degree from Al-Quds university-Jerusalem. I am ambitious, motivated, and always looking forward to learning more. Besides improving my clinical practice, I am very interested in research as I consider it the backbone for medicine. Currently I am working on different research projects in aspects of tumors, cardiac surgery and neurosurgery. I am looking forward to doing a couple years of research especially in surgery as my goal is to become a surgeon

Introduction: The women's inability to recognize OC causation myths to be incorrect may lead to behavioral changes, that could distract them from actual risk factors and impact their treatment decision making. This study examined Palestinian women's recognition of OC mythical causes, and explored factors associated with good recognition.

Methods: A national cross-sectional study was conducted. Adult Palestinian women were recruited from hospitals, primary healthcare facilities, and public areas in 11 governorates. The Cancer Awareness Measure-Mythical Causes Scale was modified and utilized for data collection. Awareness level was determined based on the number of myths around OC causation recognized to be incorrect: poor (0-4), fair (5-9), and good (10-13).

Results: A total of 5618 participants agreed and completed the questionnaire out of 6095 approached (response rate= 92.1%), and 5411 questionnaires were included in the final analysis. The most recognized food-related myth was 'drinking from plastic bottles' (n= 1370, 25.3%) followed by 'eating burnt food' (n= 1298, 24.0%). The least recognized food-related myth was 'eating food containing additives' (n= 611, 11.3%). The most recognized food-unrelated myth was 'having a physical trauma' (n= 2899, 53.6%), whereas the least recognized was 'using mobile phones' (n= 1347, 24.9%).

Only 5.1% of the study participants had good awareness to recognize OC causation as incorrect. Earning higher monthly incomes as well as governmental healthcare facilities were associated with a decrease in the likelihood of exhibiting good awareness.

Conclusion: The overall recognition of OC causation myths was low. Addressing mythical beliefs should be included in OC preventions strategies and public health interventions in order to improve women's understanding of OC risk factors and myths.

Myths and Common Beliefs About Cervical Cancer among Palestinian Women:

A National Cross-sectional Study

Mariam Thalji

Al-Quds University, Palestine

Faculty of Medicine, Al-Quds University, Jerusalem, Palestine.

Background: Cervical cancer (CC) myths and beliefs can negatively impact women's preventive behaviors. This study examined Palestinian women's awareness of myths around CC causes to be incorrect and investigated factors associated with good awareness.

Methods: A national cross-sectional study was conducted to recruit adult Palestinian women from hospitals, primary healthcare facilities, and public areas in 11 Palestinian governorates. A modified version of the Cancer Awareness Measure-Mythical Causes Scale was used to collect data. Awareness level was determined based on the number of CC myths around CC causation recognized to be incorrect: poor (0-4), fair (5-9), and good (10-13).

Results: A total of 7058 questionnaires were included. Myths unrelated to food around CC causation were more commonly recognized as incorrect compared to those related to food. The most recognized food-unrelated myth was 'having a physical trauma' as a cause for CC (n= 3714, 52.6%), whereas the least recognized was 'using mobile phones' (n= 2238, 31.7%). The most recognized food-related myth was drinking from plastic bottles as a cause for CC (n= 2708, 38.4%), whereas the least recognized was 'eating food containing additives' (n= 1118, 15.8%).

Only 575 participants (8.1%) displayed good awareness and promptly recognized at least 10 out of 13 myths around CC causation as incorrect. Living in the West Bank and Jerusalem, being married, widowed or divorced, knowing someone with cancer, and visiting hospitals or primary healthcare centers were all associated with lower likelihood of displaying good awareness of myths around CC causation.

Conclusions: A very small proportion of Palestinian women recognized 10 or more myths around CC causes as incorrect. Initiatives addressing CC myths are needed in the Palestinian community.

Farah Choulli

CHU Mohammed VI of Marrakesh, Morocco

Farah Choulli is currently a third-year PhD student under the supervision of Professor Rhizlane Belbaraka at the Faculty of Medicine and Pharmacy (FMP), Biosciences and Health Laboratory, Cadi Ayyad University, Marrakech, Morocco.

Her thesis title is "The use of Artificial Intelligence (AI) for modeling the costs of prevention, screening and treatment of cancer patients."

Her previous education included a Medical Bioanalysis diploma (2017-2018) at the Faculty of Sciences and Technologies (FST), Marrakech, followed by a master's degree in Neurosciences and Biotechnologies (2018-2020) at the Faculty of Sciences Semlalia (FSS), Marrakech.

AI mobile health app for remote support and monitoring of breast cancer patients undergoing chemotherapy.

Aim: Chemotherapy patients who are treating breast cancer are at risk of experiencing serious and even fatal toxicities. The objective of this study is to create an AI mobile health app for remote support and monitoring of breast cancer patients undergoing chemotherapy.

Methods: The study is conducted in two phases. Phase A entailed the development of the tool using a data set in collaboration with an expert group of physicians, biologists and computer scientists. Phase B which is still in progress and which aims at the predictive accuracy of the tool which will be measured using a set of prospective data from a number of breast cancer patients undergoing chemotherapy.

Results: Patients will be able to report a variety of side effects throughout their chemotherapy treatments using this app without waiting until their next appointment. Additionally, they will have access to health information and self-help advice that will help them manage their symptoms by fostering their knowledge, independence, and self-belief. Depending on how severe these side effects are, the program may create a prescription, suggest emergencies, or provide guidance. On the other hand, the app enables the physicians to view each patient's entire medical records and therefore to continuously and remotely monitor them.

Conclusion: We are particularly concerned with the concept of mobile health apps for patient support and remote monitoring as our goal is to provide both doctors and patients with a tool that would allow for continuous care while reducing the time and costs associated with frequent visits to the doctor, especially for patients living in medically underserved areas or with limited mobility.

Soumaya Samba

University of Mohammed First, Morocco

Soumiya Samba, born in 1992, originates from Taza, Morocco, where she had her formative years and educational pursuits. She has effectively fulfilled the requirements for her PhD degree in medicine at the School of Medicine and Pharmacy at University Mohammed first in Oujda. Currently, she is a senior resident in the radiation oncology program at the University Hospital Mohammed VI, where she is mastering the fundamental pillars of radiation therapy.

It is of significance to acknowledge that she has been afforded the privilege to participate in the 13th Annual Meeting of the Middle East and Africa Cancer Research (MEACR), during which she will offer an oral presentation entitled "Management of Cervical Cancer Relapse: Experience of the Radiation oncology department at the University Hospital Mohammed VI, Oujda, Morocco."

Recurrences of the cervical cancers: monocentric retrospective study

Introduction: Cervical cancer is the second most frequently diagnosed cancer and the third leading cause of cancer-related death in developed countries. The aim of our study is to describe the epidemiological, clinical, and therapeutic aspects, and to evaluate the contribution of imaging in the detection and prediction of recurrences of cervical cancer.

Material and Methods: This is a retrospective descriptive and analytical study of 62 cases of recurrent cervical cancer, collected between 2006 and 2018 at Hassan II Oncology Hospital in Oujda.

Results: Recurrences were diagnosed during regular surveillance examinations through clinical examination, confirmed by pelvic CT scan or MRI, and verified by new biopsies. The median recurrence time was less than 2 years in 58% of cases, and the median age was 51 years. The predominant histological type was squamous cell carcinoma (82% of cases). Tumor recurrence occurred after a mean time of 14.7 months. Among the patients, 43 were symptomatic (69.3%), with the main symptom being metrorrhagia in 42% of cases, and 30.64% of patients were asymptomatic. Clinical examinations found vaginal induration in 12 cases, cervico-vaginal roughness in 4 cases, ulcerative and fungating cervical tumor in 2 cases, and hepatomegaly in two cases. MRI was performed in 29 patients, with a mean tumor size of 35.09 mm, vaginal invasion in 41%, unilateral parametrial invasion in 17.24%, and bilateral parametrial invasion in 82.76% of cases. Bladder and rectum infiltration were 38% and 17%, respectively. Metastatic locations on thoraco-abdomino-pelvic CT scan were pulmonary in 21% of patients, osseous in 10%, hepatic in 6%, peritoneal in 5%, and sigmoid colon in one patient. In two patients, there was a process of lumbosacral invasion involving soft tissues. Treatment mainly relied on palliative chemotherapy, decompressive analgesic radiotherapy, and palliative care.

Poster presentations

1. The Care Pathway Delays of Cervical Cancer Patient in Morocco

Hind Mimouni, Khalid Hassouni, Boujemaa El Marnissi, Bouchra Haddou Rahou, Leila Alaoui, Rachid Ismaili, Abderraouf Hilali, Leila Loukili, Rachid Bekkali and Ahmed Nejmeddine

Introduction: The aim of this study is to document time intervals in cervical cancer care pathways, from symptom onset to disease detection and start of treatment, and evaluate how clinical, sociodemographic, and treatment factors influence delays throughout a patient's clinical pathway.

Methods: A retrospective study was conducted at the FEZ Oncology Hospital of the Hassan II University Hospital Center in Morocco.

Results: 190 medical records of cervical cancer patients were collected. The dominant age group was 35–44, the median patient delay (PD) was 6 days, the median healthcare provider's delay (HCP) was 21 days, the median referral delay (RD) was 17 days, the median diagnostic delay (DD) was 9.5 days, the median total diagnostic delay (TDD) was 16 days, the median treatment delay (TD) was 67 days, and the median health system interval (HSI) was 92 days.

Multivariate analysis revealed that age was associated with the patient delay, the healthcare provider's delay, the diagnosis delay, and the health system interval. The diagnosis year (the year in which the patient was diagnosed (either before 2012 or during 2012 as well as the other study years (from 2013 to 2017))), all investigations done prior to admission to the oncology hospital, and the age of first sexual activity were significantly associated with healthcare provider's delay.

Conclusion: The integration of a model and standard care pathway into the Moroccan health system is essential in order to unify cervical cancer care in the country.

2. Uterine perivascular epithelioid cell tumors

W.Gais- CHU Beni Messous -Alger

Introduction: Uterine perivascular epithelioid cell tumors (PECOMES) are rare mesenchymal neoplasms characterized by the coexpression of melanocytic and myoid markers. It is often difficult to distinguish it from other uterine tumors such as : endometrial stromal sarcoma, smooth muscle tumors especially epithelioid tumors , melanoma and clear cell sarcoma.

Case Presentation: We report the case of the 52 years old Mrs. S.D, with no children, without any particular pathological history; who consulted in December 2020 for postmenopausal metrorrhagia. The symptoms seem to go back to 02 years, marked by an increase in abdominal volume, but the patient did not consult. Faced with the onset of a pelvic pain and weight loss, the patient consulted in a private medical institution, where the discovery of a huge uterine mass has been established, she was referred to us for a better approach of treatment. In the clinical exam; the patient was in a good general condition, obese, she reports a 10kg weight loss in 02 months, the abdomen was increased in size almost comparing to a pregnancy of 08 months. Gynecological examination: under speculum: a healthy-looking cervix, clean vaginal walls VE: long closed posterior cervix, topped by a uterus with a size similar to a 08 months pregnancy and a filled rectouterine pouch. he Pelvic ultrasound objectified a large pelvic mass exceeding the limits of the screen; measuring approximately 270 × 140 mm, strongly taking type 4 Doppler, the 02 ovaries: were not seen. No effusion detected. Thoraco-abdomino pelvic CT objectified; a large pelvic malignant tumor mass with abdominal extension, with a probable uterine starting point (sarcomatous tumor?) Associated to peritoneal and bilateral hepatic (liver), pulmonary metastatic localizations. A CT-guided biopsy of a hepatic metastases revealed a liver localization of a malignant uterine perivascular epithelioid neoplasia (PECOME) with the positivity of HMB45, AML, hcaldesmone and desmin: The CD10 AE1 / AE3 negativity eliminates a leiomyosarcoma. The CD 10 and Cyclin D1 negativity clears high-grade endometrial sarcoma. The patient was put on inhibitors of the MTOR signaling pathway: Everolimus 10 mg / day with very good clinical and biological tolerance. The radiological evaluation showed a very objective partial response; with a survival rate estimated to 11 months.

Conclusion: Multicenter clinical trials are needed to try finding unambiguous and effective treatment to improve patient survival.

3. The impact of travel distance on cancer stage and diagnosis: A systematic review

C. Elattabi 1, Khalis Mohamed 2, Inge Huybrechts 3, Elodie FAURE 4,

1. university mohamed 6 of health sciences
2. International School of Public Health, Mohammed VI University of Health Sciences, Casablanca, Morocco
3. International Agency for Research on Cancer, Lyon, France
4. International Agency for Research on Cancer, Lyon, France. And CESP – Equipe Générations et Santé, UMRS 1018 : Inserm, Université Paris-Sud, Gustave Roussy, Villejuif, France

Introduction: It is well known that patients with cancer must overcome many psychological, social, economic, and family barriers to obtain the diagnosis and treatment needed. In addition, the burden of travel from a patient's residence to his or her health care provider can be an important issue that can influence access to diagnosis .

The necessity for repeated visits for cancer diagnosis an outpatient or an inpatient basis makes distance an important issue with which the patient with cancer must manage during the disease course .

Several studies have documented that the travel burden (measured as the travel distance or travel time) and its relationship with delays in diagnosis and stage of cancer, and have shown mixed results with regards to direction of the association and statistical significance.

Objective: The purpose of this review is to synthesize the existing literature examining the relationship between travel distance to cancer screening services and cancer stage at diagnosis

Methods:

1- Types of study to be included There will be no language restrictions if a translation is available. Articles without abstract and articles whose full text is not available will be excluded. Studies where a proximity rather than the actual travel distance was given (for example: rural vs urban remote vs very remote areas) will be excluded.
2- Condition or domain being studied distance to health care services that influence the stage of disease in patients with cancer (the distance between the patient's residence and the nearest health care services).
3- Participants/population: Eligible patients participants consisted of individuals diagnosed with the 10 cancer types mentioned in keywords
4- Intervention(s), exposure(s) Proximity to health services will be measured by travel distance or travel time from the patient's residence to health care services.
5- Comparator(s)/control The comparator will also be proximity to hralth services : the study will be comparing compare whether living closer to health service is associated with primitive cancer stage at diagnosis.

Main outcome(s): All variables related to travel burden identified in all included studies and which negatively or positively influence the stage at cancer diagnosis for patients with cancer will be extracted and classified by categories.

Additional outcome(s): Characteristics of included studies: (Author, country, Year and country of publication, population, type of study, limits, sample size). Data extraction (selection and coding): References will be exported into the reference manager Zotero in order to manage the duplicate results.

Two reviewers will independently screen all titles and abstracts identified by the search for relevance to the review question according to the eligibility criteria by using the PRISMA Diagram flow for selection, and gather information such as: Characteristics of selected studies (Country / countries; Type of study; Description of the population; Type of cancer(s); Stage of cancer/ journey / treatment; Healthcare location(s); Patient study participant home location residence description; Proximity measure (e.g. travel time / distance) and calculation method; Statistical model) Any disagreements in the selection process will be resolved through consultation with a third reviewer Strategy for data synthesis

A narrative synthesis will be conducted for all the included studies to analyze the relationships within and between studies.

Keywords: Cancer; Travel burden; cancer stage at diagnosis

4. About a case: Diffuse large B-cell lymphoma with appendicular manifestation

Kastalli S, Marrach W, Faidi B, Zaidi B, Ben salah K, Abdelkefi MS

Introduction: Diffuse large B-cell lymphoma is the most common non-Hodgkin's lymphoma. These lymphomas are most often single and if they reach the digestive tract, the ileocecal location is the most frequent. They may appear as a mass in the lumen intestine responsible for an intestinal obstruction or at the level of an intestinal diverticulum' such as the appendix resulting in appendicitis.

We thus report the case of a patient operated for acute appendicitis whose postoperative anatomopathological analysis revealed the presence of a diffuse large B-cell lymphoma.

Observation: This is the 52-year-old patient LS, with no notable pathological history, presented with acute abdominal pain in the right iliac fossa with notion of vomiting, without transit disorder or notion of alteration of the condition, evolving for 24 hours. Upon examination, the patient presents a low-grade fever with sensitivity at the level of the FID. No palpable mass, no superficial adenopathies. Biology showed hyperleukocytosis without lymphocytosis. Abdominal CT showed an appearance of the appendix evoking acute abscessed appendicitis, with no signs of deep lymphadenopathy.

The patient was operated on and perop, the appendix was destroyed with suspicious thickening of the lower ceacal fundus. Hence the decision to perform a carcinological right hemicolectomy with ileo-transverse anastomosis and the surgical specimen was sent for anapath examination. The postoperative course was simple. Histological and immuno-histochemical analysis of the samples taken from the appendix shows that its wall is largely infiltrated by a malignant tumoral proliferation of diffuse architecture consistent with a diffuse large B-cell lymphoma. The tumor infiltrates the various parietal tunics with extension to the meso. The patient was thus referred to the hemato-onco service for additional CEP.

Conclusion: Diffuse large B cell lymphoma by its digestive location can give variable clinical pictures resulting in the circumstances of discovery varying from fortuitous discovery to tumor complication.

5. About a case: Adenocarcinoma of the gallbladder, what circumstance of discovery in a young subject

Marra ach W, Kastalli S, Faidi B, Zaidi B, Ben salah K, Abdelkefi MS

Introduction: Gallbladder cancer is uncommon (2.5/100,000), with adenocarcinoma (ADK) representing the most common subtype. The preoperative diagnosis of adenocarcinoma appears difficult because it is often asymptomatic and frequently discovered incidentally. We thus report the case of a young patient operated for acute lithiasic cholecystitis whose anatomopathological analysis of the surgical specimen revealed the presence of an ADK.

Observation: 24-year-old MR patient, without notable pathological ATCDs, who presented for abdominal pain in the right hypochondrium (HCD) with notion of incoercible vomiting, all evolving since the day before. On examination, the patient was febrile, presenting with sub-jaundice conjunctival with hemodynamic stability. Defense at the level of the HCD and epigastrium was found with a positive murphy sign without a palpable abdominal mass. Biology showed a biological inflammatory syndrome with rest of the assessment without abnormality. We completed with an abdominal echography which showed an acute cholecystitis with a gallbladder seat of a 1cm stone wedged at the level of the collar.

The patient was operated on urgently for cholecystectomy and the surgical specimen was sent for antomopathological examination. The postoperative course was simple. The result of the anapth showed a well-differentiated ADK from the BV infiltrating the entire wall classifying as pT3. We thus re-read a negative extension assessment and the patient benefited from additional oncological surgery by hepatic bisegmentectomy (seg 4 and 5) with simple surgical follow-up and the patient was referred to the oncology department for additional PEC .

Conclusion: Gallbladder ADK is the most common type of gallbladder cancer. But it poses a problem of early diagnosis in view of the rarity of clinical expression at the initial stage of evolution (the rate of diagnosis at this stage does not exceed 10%). The anatomopathological diagnosis on post-cholecystectomy surgical specimen remains the most frequent circumstance of discovery.

6. Hereditary predisposition to develop colorectal cancer: About a Tunisian family with Peutz-Jeghers syndrome

Marwa MAHDOUANI1,2, Badreddine SRIHA3,5, Mohamed DENGUEZLI4,5, Moez GRIBAA1,5

1 Laboratory of Human Cytogenetics, Molecular Genetics and Reproductive Biology. Farhat Hached University Hospital. Sousse – Tunisia.
2 Higher Institute of Biotechnology. Monastir – Tunisia.
3 Department of Pathological anatomy and cytology. Farhat Hached University Hospital. Sousse – Tunisia.
4 Department of Dermatology and Venerology. Farhat Hached University Hospital. Sousse – Tunisia.
5 Faculty of Medicine Ibn El Jazzar of Sousse. University of Sousse. Tunisia

Introduction and objectives: Peutz-Jeghers syndrome (PJS) is a rare inherited autosomal dominant disease, characterized by mucocutaneous perioral lentigines, which are flat-pigmented, distinguished by their small size (0.5 cm), irregular borders, and discrete brown and black markings. Their histology reveals prominent epidermal thickening and basal cell hyperpigmentation, which is associated with melanocyte hyperplasia. PJS is also characterized by gastrointestinal hamartomatous polyps, and an increased risk of malignancies such as colon, small intestine, stomach, breast, pancreas, lung, reproductive organs, and thyroid cancers. This disorder is caused by germline mutations in the tumor suppressor gene STK11, located on 19p13.3, encodes for the LKB1 protein comprising 433 amino acids and belonging to the serine/threonine kinase family. This study aimed to identify the STK11 gene mutation responsible for PJS in our Tunisian family.

Materials and methods: Two PJS patients belonging to the same family (father and daughter) were sequenced for the open reading frame of the STK11 gene using the Sanger technique.

Results: A novel frameshift variant; c.605-606insA (p.H202Qfs*265) at a heterozygous state was identified in exon 5 of the STK11 gene for our two patients.

Discussion and Conclusion: Most of the mutations associated with PJS are located in the kinase domain of the STK11 gene, extending from exon 2 to exon 7, involved in substrate recognition. Several studies have shown that an important proportion of mutations, including our variant, lead to a truncated protein increasing the risk of developing cancers. Our results confirm the diagnosis of PJS, which should be early identified for an adequate genetic counseling.

Key words: Peutz-Jeghers syndrome, STK11, LKB1, intestinal polyposis

7. Unusual presentation of cutaneous metastatic breast cancer

EL IDRISSI MANAL, LAHOUEL INESS, KADDOUSSI RANIA*, ZILI JAMELEDDINE

Service de dermatologie, *Service de pneumologie, CHU Monastir, Tunisie

Introduction: Cutaneous metastases are rare, representing 2% of all metastases. They are rarely indicative of underlying neoplasia. Breast cancer is the most frequent cause . We report a case of unusual presentation of cutaneous metastasis of breast cancer

Observation: We report a case of 54 years old women witch presented with a dyspnea and left chest pain evolving for ten days. She had a medical history of ovarian cancer17 years ago, currently in remission. Also, she had a history of a right breast cancer diagnosed 5 months ago treated with chemotherapy and mastectomy. Clinical examination showed induration of the right hemi thorax with a bluish cardboard appearance. Skin biopsy was performed and histopathological examination showed a cutaneous localization of a breast carcinoma. Chemotherapy was programmed, but the general condition of the patient rapidly deteriorated, and the patient passed away after respiratory arrest.

Discussion: Besides melanoma, breast carcinoma is the malignant tumor that gives the most skin metastases with an estimated incidence of 23.9% . These metastases are most often found on the chest wall and abdomen, but can also be observed on the head and neck . Skin involvement can occur in different ways: directly from the underlying structures, vascular extension, especially lymphatic, or accidental implantation during surgery . The morphology of skin lesions in metastatic breast cancer is variable. Histologically, they usually show features that reminds of the primary malignancy with variable degrees of differentiation.

Therapeutic approach should be based on control of the primary tumor, even in patients with skin-only lesions. Chemo and hormone therapy are commonly used to manage skin metastasis and their progression

Conclusion: Compared to other organs, skin is an uncommon site of metastasis and usually appears during known neoplasia but it can be one of the first clinical manifestations.

8. DAE-CNN for the prediction of microsatellite instability in colorectal cancer

Blagui Hedi 1 , Ahlem Bdioui 2 , Iness Rahmany 3 , Nawres Khlifa 4 , Sihem Hmissa 2,5 , Nabiha Missaoui 5

1) National Engineers School of Tunis, El Manar.University of Tunis, Tunisia.
2) Pathology Department, University Hospital of Sahloul, Sousse, Tunisia.
3) Faculty of Sciences and Techniques of Sidi Bouzid, University of Kairouan, Tunisia.
4) Higher Institute of Medical Technologies of Tunis, El Manar.University of Tunis, Tunisia.
5) LR21ES03 Research Laboratory, Oncogenesis and Tumor Progression, Faculty of Medicine of Sousse, University of Sousse, Sousse, Tunisia.

Colorectal cancer (CRC) is one of the most frequently diagnosed cancers in the world and in Tunisia. Treatment of patients diagnosed with this cancer is based on microsatellite instability (MSI) profile analysis. The objective of this project is to evaluate the potential of a system based on deep learning by Transfer Learning as well as the Denoising Auto-Encoder for Data Augmentation, whose goal is to find a denoised output from a noisy input, for the classification of the MSI.

The main objective was to develop a tool that could make it possible to detect the instability of microsatellites in colorectal cancer through artificial intelligence with a view to a diagnostic aid system. The method applied for this project includes the exploitation of two deep learning models of the best known by Transfer Learning VGG-19 and ResNet-50 accompanied by different data augmentation methods, among them the Auto Encoder denoising (DAE) and this by exploiting both public data and data of the Pathology Department of the Sahloul University Hospital of Sousse. Our findings are very promising for the future of computer-aided diagnostic systems. Indeed, the results obtained on some models displayed an accuracy of 95% and even above. Each architecture has its own characteristics and ultimately different architectures have proven to perform better depending on the scenario. This approach opens the door to many perspectives such as the possibility of combining the knowledge of the different models to obtain a hybrid model which will have all the qualities required to assist pathologists in their responsibilities and allow them to save considerable time for the CRC patient management.

9. Investigation of KI, WU, and Merkel cell polyomaviruses in pediatric gliomas

Nabiha Missaoui1, Sarra Limam2, Moncef Mokni2, Sihem Hmissa1,3.

1) Research Laboratory LR21ES03, Oncogenesis and Tumor Progression, Faculty of Medicine of Sousse, University of Sousse, Tunisia.
2) Pathology Department, Farhat Hached University Hospital, Sousse, Tunisia.
3) Pathology Department, Sahloul University Hospital, Sousse, Tunisia.

Introduction : Polyomaviruses were detected and involved in several human malignancies. Their implication in gliomas pathogenesis has been studied, but has never been proven. Previous studies have reported the detection of SV40, JCV and BKV in glial tumors, but the involvement of novel polyomaviruses, such as Merkel cell virus (MCV), KIV and WUV has been not yet investigated. Herein, we investigated the prevalence of MCV, KIV and WUV in pediatric gliomas.

Methods: The DNA sequences of polyomaviruses were examined by PCR on 74 pediatric gliomas samples using archived tissues. Tumor characteristics and patient outcome were collected. The association of polyomavirus infection with tumor features and patient outcome was evaluated using SPSS.

Results: MCV DNA was identified in 8 gliomas (10.8%). However, neither KIV nor WUV were detected in all samples. No association was identified with the tumor features ($p > 0.05$) and patient survival (Log Rank test, $p > 0.05$).

Conclusion: Our study supports the occurrence of MCV infection in pediatric gliomas. Further investigations are required to more reveal the potential implication of this DNA polyomavirus in gliomagenesis.

10. Expression of DNA methyltransferases DNMT1, DNMT3a and DNMT3b in glioma

Nabiha Missaoui 1 , Sarra Limam 2 , Ahlem Bdioui 3 , Oussema Belkacem 3 , Moncef Mokni 2 ,Sihem Hmissa 3

1) Research Laboratory LR21ES03, Oncogenesis and Tumor Progression, Faculty of Medicine of Sousse, University of Sousse, Sousse, Tunisia.
2) Pathology Department, Farhet Hached University Hospital, Sousse, Tunisia.
3) Pathology Department, Sahloul University Hospital, Sousse, Tunisia.

Introduction: Epigenetic alterations constitute a complex and heterogeneous tumor carcinogenesis pathway. Global DNA hypermethylation and specific gene hypermethylation are observed in many cancers and are regulated by DNA methyltransferases, mainly DNMT1, DNMT3a and DNMT3b. The aim of this study is to explore the differential immunoexpression of DNMT1, DNMT3a and DNMT3b in glial tumors as well as their potential clinicopathologic associations.

Material and Methods: We carried out a multicenter study of 186 glial tumors diagnosed at the Pathology Departments of Farhet Hached University Hospital of Sousse, Sahloul University Hospital of Sousse, Fattouma Bourguiba University Hospital of Monastir, Habib Bourguiba University Hospital of Sfax and La Rabta University Hospital of Tunis. The expression of DNMT1, DNMT3a and DNMT3b was carried out by immunohistochemistry on tissue section fixed in formalin and embedded in paraffin. The expression profile of DNMTs was correlated with the clinicopathologic particularities of the patients.

Results: In pediatric patients, DNMT1 expression was detected in all cases showing diffuse nuclear labeling in more than 50% of tumor cells. DNMT3a immunoexpression was observed in 16 glial tumors (21.6%), divided into 8 glioblastomas multiformes (GBMwt), 7 pilocytic astrocytomas (AP) and one oligodendrioglioma (OD NOS). In contrast, DNMT3b expression was only identified in 7 tumors (9.5%), including four AP and three GBMwt. The correlation study between the expression of DNMTs and the clinicopathologic characteristics of the patients showed no statistically significant association ($p>0.05$).
In adult patients, DNMT1 expression was detected in 51 cases (45.5%). It was significantly correlated with female gender ($p=0.036$), patient age >50 years ($p=0.001$), glioma grade IV ($p=0.000$) and GBMwt histological type ($p=0.004$). DNMT3a expression was detected in 24 glial tumors (21.4%). A significant correlation was observed with female gender ($p=0.008$), grade IV ($p=0.000$) and GBMwt histological type ($p=0.007$). DNMT3b expression was only identified in 8 cases (7.1%). It was significantly correlated with the age of patients >50 years ($p=0.029$).

Conclusion: DNMT1, DNMT3A and DNMT3B were expressed in gliomas in adult and pediatric patients, supporting the involvement of DNA hypermethylation in the development and progression of glial tumors. Global DNA demethylation and/or demethylation of tumor suppressor gene promoters could be a future therapeutic target for glial tumors.

11. Study of human cytomegalovirus in pediatric glioma

Nabiha Missaoui1, Sarra Limam2, Moncef Mokni2, Sihem Hmissa1,3.

1) Research Laboratory LR21ES03, Oncogenesis and Tumor Progression, Faculty of Medicine of Sousse, University of Sousse, Tunisia.
2) Pathology Department, Farhet Hached University Hospital, Sousse, Tunisia.
3) Pathology Department, Sahloul University Hospital, Sousse, Tunisia.

Introduction: Over the last decades, chronic viral infections have been associated with a number of human malignancies, including primary central nervous system tumors. However, evidence of association between infection with human cytomegalovirus (HCMV) and certain brain tumors such as gliomas has been an area of considerable controversy. In this study, we investigated the presence of HCMV among74 pediatric gliomas.

Material and Methods: We carried out a multicenter study of 74 glial tumors diagnosed at the Pathology Departments of Farhet Hached University Hospital and Sahloul University Hospital, of Sousse, Tunisia. HCMV infection was examined by PCR technique for the detection of a 240pb sequence in IE2 gene, by in situ hybridization for RNA transcript presence and by immunohistochemistry to detect immediate early antigen (IE), early antigen (E) and late antigen. The association of HCMV with tumor features and patient outcome was evaluated using SPSS.

Results: HCMV DNA was identified in 8 (10.8%) gliomas, including 3 glioblastoma IDH wild type, 3 pilocytic astrocytomas and 2 diffuse astrocytomas IDH wild type. However, neither in situ hybridization nor immunohistochemistry have detected HCMV in all tested samples.

Conclusion: Our results suggest that HCMV may play a causative role in the development of a subset of pediatric glial tumors. Further investigations are required to more elucidate the promising involvement of HCMV in these aggressive tumors.

12. Investigation of miR-124a methylation in pediatric glioma

Nabiha Missaoui1, Sarra Limam2, Moncef Mokni2, Sihem Hmissa1,3.

1) Research Laboratory LR21ES03, Oncogenesis and Tumor Progression, Faculty of Medicine of Sousse, University of Sousse, Tunisia.
2) Pathology Department, Farhet Hached University Hospital, Sousse, Tunisia.
3) Pathology Department, Sahloul University Hospital, Sousse, Tunisia.

Introduction: MicroRNA (miR) hypermethylationhas been implicated in various tumors. In adult glioma, miR-124a hypermethylation status is largely studied, but it is not investigated in pediatric glioma. Herein, we analyzed miR-124a methylation status and DNA methyltransferase enzyme (DNMTs) expression in pediatric glioma.

Material and Methods: Methylation status of three loci encoding for miR-124a (miR-124a-1, miR-124a-2, and miR-124a-3) was investigated using methylation-specific PCR in 74 pediatric gliomas. DNMTs expression was assessed by immunohistochemistry. Findings were correlated with clinicopathological parameters.

Results: MiR124a-1, miR124a-2, and miR124a-3 were detected hypermethylated in 17.6%, 21.6%, and 10.8% of pediatric gliomas, respectively. miR124a hypermethylation was correlated with glioma grade IV and glioblastoma IDH wild type histopathologic subtype. MiR-124-a2 hypermethylation was associated with male patients. Overexpression of DNMT1, DNMT3a and DNMT3b was detected in 100%, 21.6% and 9.5%, respectively. No significant association was detected between DNMTs overexpression and clinicopathological features. DNMT3a was correlated with hypermethylation of the three loci, while DNMT3b was correlated with miR-124-a1 and miR-124-a2 hypermethylation.

Conclusion: Our results suggest that miR-124a hypermethylation could be associated with pediatric glioma development and may be an interesting prognostic factor. DNMTs overexpression could be implicated in miR-124a hypermethylation.

13. MiR9 methylation in pediatric gliomas

Nabiha Missaoui1, Sarra Limam2, Moncef Mokni2, Sihem Hmissa1,3.

1) Research Laboratory LR21ES03, Oncogenesis and Tumor Progression, Faculty of Medicine of Sousse, University of Sousse, Tunisia.
2) Pathology Department, Farhet Hached University Hospital, Sousse, Tunisia.
3) Pathology Department, Sahloul University Hospital, Sousse, Tunisia.

Background: MiR9 is an important tumor suppressor microRNA regulated by DNA methylation in various types of cancers. In gliomas, many studies have found that miR9 expression was repressed, but there is no evidence that low expression level of miR9 was due to its promoter hypermethylation. In this study, we investigated the methylation status of miR9 as well as DNA methyltransferase enzymes (DNMTs) expression in pediatric gliomas.

Material and Methods: We carried out a multicenter study of 74 glial tumors diagnosed at the Pathology Departments of Farhet Hached University Hospital and Sahloul University Hospital, of Sousse, Tunisia. We analyzed the methylation status of the 3 members of the miR9 family. We also assessed DNMTs expression by immunohistochemistry. The relationship between miR9 methylation, DNMTs expression and clinicopathological parameters was analyzed using SPSS.

Results: We found that 17.6% of pediatric glioma cases had a methylation in at least 1 of the 3 loci of miR9. The highest rate of methylation was found in miR9-2(14.9%), followed by miR9-3(8.1%) and miR9-1(8.1%). The promoter hypermethylation of miR9 family was associated with glioma grade IV, glioblastoma IDH wild type histopathologic subtype and supratentoriel tumor location. MiR9 hypermethylation was also associated with DNMT3a overexpression. However, no significant correlation was found between miR9 methylation and DNMT3b overexpression.

Conclusion: These results suggest that miR9 hypermethylation is a frequent epigenetic event in pediatric gliomas and may be involved in gliomagenesis.

14. HPV detection in pediatric glioma

Nabiha Missaoui1, Sarra Limam2, Moncef Mokni2, Sihem Hmissa1,3

1) Research Laboratory LR21ES03, Oncogenesis and Tumor Progression, Faculty of Medicine of Sousse, University of Sousse, Sousse, Tunisia.
2) Pathology Department, Farhet Hached University Hospital, Sousse, Tunisia.
3) Pathology Department, Sahloul University Hospital, Sousse, Tunisia.

Introduction: Gliomas pathogenesis remains not completely understood and their etiological factors remain indefinable. Human papillomaviruses (HPV) were supposed to be involved in gliomagenesis. The aim of this study was to investigate the occurrence of HPV in a series of 74 pediatric gliomas with different histological subtypes.

Material and Methods: We carried out a multicenter study of 74 glial tumors diagnosed at the Pathology Departments of Farhet Hached University Hospital and Sahloul University Hospital, of Sousse. PCR assays were performed to amplify regions within the L1 and E7 genes of HPV genome. In addition, we performed an in-situ hybridization analysis using HPV biotinylated DNA probes for the detection of high-risk HPV types (HPV16 and 18). The association of HPV with tumor features and patient outcome was evaluated using SPSS.

Results: HPV DNA was identified in seven samples (9.5%) by PCR, using the broad-spectrum consensus primer GP5+/GP6+. Five cases were GBM IDH wild type, one case was diffuse midline glioma and one pilocytic astrocytoma. PCR HPV typing identified HPV16 and HPV18 in two and five cases, respectively. In situ hybridization analysis confirmed PCR results. Significant association was identified between HPV presence and glioma grade IV ($p=0.009$) and patient age >10 years ($p=0.012$).

Conclusion: Our study supports the HPV occurrence in pediatric glioma, suggesting their probable causative role in gliomagenesis. Further analyses are required to more explore the implication of HPV in the glioma pathogenesis.

15. Optimizing chronic myeloid leukemia therapy

R.Ben Sghaier, H.Hafsa, E.Bouslama, K.Zahra, M.guermazi, W.chenbah, H.Regaieg, N.Ben Sayed, W.Bouteraa, M.Zaier ,Y.Ben Youssef, A. Khelif.

Clinical Hematology Department, Farhat Hached Hospital, Sousse

The advent of tyrosine kinase inhibitor (TKI) targeting BCR-ABL has revolutionized the prognosis of chronic myeloid leukemia (CML).

Methods: We conducted a retrospective study on patients treated in the clinical hematology department of Farhat Hached Hospital for CML, over a period of 15 years to identify the interferences with the treatment adherence.

Results: A total of 50 patients were included in this study. The most detected bcr-abl transcript type is b3a2 in 49% of the patients , the proportion of the transcript b2a2 is 41% and 5% of our patients coexpressed b2a2 and b3a2. Therapeutically, 49 patients received imatinib as first line treatment when diagnosed and only one patient was treated with dasatinib for initial therapy because he was in the accelerated phase.

We decided to switch 60% of our patients to second generation of TKI : 70% of them for treatment failure and 30% patients for having side effects to the first line treatment.

68% of our patients were not adherent to their medication, the main reasons are: forgetting in 36% of the patients and drug shortages for 31% of patients and 9% for economic issues and 8% for side effects of the medication.

All the patients were evaluated by the Gired questionnaire of the medication compliance: 56% of them had a minor non compliance, 28% were non-compliant and only 8% had good compliance.

The actual molecular status of our patients 64% are in MMR under treatment, 10% are in the treatment free remission; 4% are candidates of stopping treatment ; 6% are in HCR 4% are in CCR and 10% are failing to treatment.

Conclusion: As long as the patients are compliant with the TKI based regimens, monitored regularly and change therapy in time before CML progression, the therapeutic outcomes are satisfying.

16. Therapeutic Results of Patients With Refractory/ Relapsed Hodgkin Lymphoma in Two Tunisians Centers

R.Ben Sghaier, K.Zahra, M.guermazi, W.chenbah, H.Regaieg, N.Ben Sayed, W.Bouteraa, M.Zaier, Y.Ben Youssef, A. Khelif.

Clinical Hematology Department, Farhat Hached Hospital, Sousse

Problematic: In spite of improved therapeutic results, 10% of Hodgkin lymphoma (HL) remains refractory and the relapse rate is about 5 to 10% in the early stage and 30 to 40% in the advanced stage.

Patients And Methods: It is a retrospective study about adult patients (<60 years old) with R/R HL, treated between January 2014 and December 2020 at the hematology and oncology departments of the hospital of Farhat Hached Sousse, Tunisia with the aim of determining the characteristics of patients with refractory or relapsed HL and reporting the therapeutic results.

Results: The median age was 34 years (18-67 years) with a male predominance (sex ratio 1.05). Salvage therapy was indicated for relapsed HL in 7 patients (17%), and for HL refractory to first-line CT in 34 patients (83%).The distribution of relapsed HL cases according to the LYSA score showed that 43% were high risk and 57% were intermediate risk. Second-line treatment was based on chemotherapy of the following types: DHAsalts of platinium, IGEV and BVB in 33.5%, 59% and 7.5% of cases, respectively. At the end of the second-line treatment, the overall response (CR+PR) was 53.7%. The chemotherapy used in the 13 patients whom the stem cell collection was performed was IGEV in all patients. Autograft was performed in only 5 of the 14 patients responding to second-line chemotherapy (35.7%). The median follow-up time of the patients was 48 months. The OS, EFS and RFS at 3 years were 63%, 10% and 33% respectively.

Lymph node involvement > 3 sites (p=0.027) and lack of chemo sensitivity at the second line of therapy (p=0.07) were associated with a shorter OS.

Conclusion: Our results can be improved by the respect of autograft in patients with good response to salvage therapy and by the early introduction of BV in the arsenal therapeutic for these forms.

17. Treatment-free remission for chronic myeloid leukemia patients

R.Ben Sghaier, H.Hafsa, M.guermazi, W.chenbah, H.Regaieg, N.Ben Sayed, W.Bouteraa, M.Zaier Y.Ben Youssef, K.Zahra, A. Khelif.

Clinical Hematology Department, Farhat Hached Hospital, Sousse

Background: The prognosis of CML has improved since the advent of tyrosine kinase inhibitors (TKI). But this targeted therapy has surely its therapeutic risks. Achieving treatment-free remission is a new perspective for patients qualified according to the ELN 2020 criteria.

Methods: The study took place in the hematology department of Farhat Hached Hospital between 2002 and 2017 and fulfilling the TKI stopping criteria: first-line treatment or second-line treatment if the cause was intolerance or development of adverse events, Bcr-Abl type b3a2 or b2a2, treatment duration greater than 5 years (4 years for TKIs2G), a response RM4 or higher for more than 2 years.

Results: We analyzed the follow-up of 30 patients in chronic phase CML. The sex ratio was 0.5. The SOKAL score was high in nine patients studied, intermediate in 50% and low in six patients. Switching to a second-generation TKI in the face of intolerance to the first-generation TKI was necessary in half of the patients. For all these patients, a major molecular response was achieved for a period of more than 2 years. The time to MMR (major molecular response) ranged from 6 to 24 months with an average of 15 months.

Eighteen patients are lost to follow-up, six patients meet the criteria for discontinuation of TKIs, and six others have stopped treatment and are currently under monthly clinical, cytological, and molecular monitoring.

During the treatment-free phase, no progression to advanced CML occurred and all relapsed patients regained MMR and MR4.5 after restarting treatment. This study was stopped 3 months later due to the inability to maintain close molecular monitoring.

Conclusion: The concept of treatment free remission in patients with CML has many advantages in terms of reducing the toxicity and cost of TKIs, but it is only applicable in certain patients and requires closer molecular monitoring.

18. Monitoring Based on Risk Factors effects of Lung Cancer in IRAN

Aliasghar Keramatinia 1 , Maryam Mohseni 1 , Esmat Davoudi-Monfared 2 , Fatemeh Shahabi 3 , Mohammad Reza Masjedi 4,5,6 , Mostafa Rezaei Tavirani 7 , Abolfazl Movafagh *8

1- Department of Community Medicine, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 2- Health Management Research Center & Department of Community Medicine, School of Medicine, Baqiyatallah University of Medical Sciences, Tehran, Iran. 3- Endoscopic and Minimally Invasive surgery research center, Mashhad University of Medical Sciences, Mashhad, Iran. 4- Cancer Control Research Center, Cancer Control Foundation, Iran University of Medical Sciences, Tehran, Iran. 5- Department of pulmonary medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 6- Tobacco Control Research Center (TCRC), Iranian anti-tobacco association, Iran University of Medical Sciences, Tehran, Iran. 7- Proteomics Research Center, Research Institute for Gastroenterology and Liver Diseases, Shahid Beheshti University of Medical Sciences, Tehran, Iran. 8- Department of Medical Genetics, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

Lung cancer is the leading cause of cancer deaths in the world. This study reviews important factors in lung cancer risk assessment in Iran. Similar to other countries, smoking is known as the main cause of this cancer. The pattern of smoking in Iran is increasing, especially among women at young ages. In the case of second-hand smokers, exposure is increasing as a result of smoking. There is scattered and vague information about gas. But in the case of air pollution, its contribution to lung cancer is increasing.

Occupational exposure has a small share of lung cancer, and the factors related to lifestyle, nutrition and obesity have almost the same pattern as in other countries .regarding genetic factors, considering that lung cancer is more common in certain geographical areas, the possibility of genetics playing a role in this cancer becomes stronger.

Therefore, although smoking is known as the most important risk factor for lung cancer, there are other important risk factors that must be considered in lung cancer risk assessment - like many ommon diseases of the new century - a combination of factors related to lifestyle and living and work environment conditions. And multifaceted measures to modify lifestyle and environmental pollution can be the priority of the actions being taken to reduce the risk of lung cancer.

19. The effects of the Dostaxel and the new Bcl 2 Oligo Antisense on the apoptosis of the LNCaP and the PC3 Prostate cancer cell lines

Reyhaneh Ardestani 1 , Mohsen Sedaghat Janaghard 1 , Ali Akbar Saffar Moghadam 1,2,3 Abolfazl Movafagh 4*

1- Department of Medical Genetics, School of Advanced Technologies in Medicine, Golestan University of Medical Sciences, Gorgan, Iran.

2- Research Center for Stem Cell, Golestan University of Medical Sciences, Gorgan, Iran

3- Cancer Research Center, Golestan University of Medical Sciences, Gorgan, Iran

4- Department of Medical Genetics, School of medicine, Shahid Beheshti University of Medical Sciences, Iran

Background: Prostate cancer is the second most common cancer and the fifth cause of death in men. The progression and development of prostate cancer largely related to the number of genetic abnormalities that affect not only the androgen receptor but also in the regulation of the apoptotic pathways. Its growth also dependent to increases the expression of the anti-apoptotic genes. Studies show, defects in apoptotic pathways cause cancer cell survival and resistance to chemotherapy drugs. The Bcl 2 protein is an anti-apoptotic protein that it's over expression directly related to the progress of prostatic cancers. It is clear that targeting the Bcl 2 protein can lead to the death of more cancer cells and prevent drug resistance and metastatic behavior of the prostatic cancer cells. The Docetaxel can stabilize microtubules and causes the destruction of cancer cells. Studies show, the Antisense Oligonucleotide (ASO) can also help to treat prostatic cancer.

Methods: In this study, a new Antisense Oligonucleotides (ASO) designed based on Anti-sense oligo G3139. The LNCaP and the PC3 prostatic tumor cell lines used to evaluate cellular proliferation. We investigated and compared the effects of the Docetaxel and the oligoantisense on the apoptosis of the LNCaP and the PC3 prostatic tumor cell lines by real time RT – PCR and flow Cytometry in several cancer cell groups. We also used the Lipofectamine for transfer of the Docetaxel and the oligoantisense to the cell lines.

Results: The new designed ASO functional potency to assess apoptosis and expression of Bcl 2 mRNA are compared in different caner cell groups. The results of RT-PCR indicated significant down regulation of Bcl 2 gene and inhibition of the LNCaP and the PC3 prostatic tumor cell lines proliferation. Flow-cytometry showed early apoptosis in all caner cell groups.

Conclusions: In all stages of investigation the new designed ASO could reduce the expression of the Bcl 2 gene. The new designed ASO alone has been able to reduce more the expression of the Bcl 2 gene in compared to the Doxtacel. It also had the synergistic effect with the Doxtacel. The Flow Cytometry shows us that the expression of the Bcl 2 gene decreased almost twofold when the new designed ASO and the Docetaxel encapsulated with the Lipofectamine. As a result, it can expect that a more appropriate treatment response will be obtained.

20. Down-regulation of Bcl-2 expression with antisense Oligonucleotide in MCF-7 and MDA-MB-231 cell lines induce cell death

Mohsen Sedaghat Janaghard 1 , Abolfazl Movafagh 4,*2 , Ali Akbar Saffar Moghadam 3 , Vahid Erfani Moghadam 5 , Ayoob Khosravi 1

1-Department of Medical Genetics, School of Advanced Technologies in Medicine, Golestan University of Medical Sciences, Gorgan, Iran. 2- Cancer Control Research Center, Cancer Control Foundation, Iran University of Medical Sciences, Tehran, Iran, Department Medical Genetics, Shahid Beheshti University of Medical Sciences. Tehran, Iran. 3-Research Center for Stem Cell, Golestan University of Medical Sciences, Department of Medical Genetics, School of Advanced Technologies in Medicine, Golestan University of Medical Sciences, Gorgan, Iran. 4. Cancer Control Research Center, Cancer Control Foundation, Iran University of Medical Sciences, Tehran, Iran. 5- Cancer Research Center, Golestan University of Medical Sciences, Department of Medical Nanotechnology, School of Advanced Technologies in Medicine, Golestan University of Medical Sciences, Gorgan, Iran.

Breast cancer is a hormone-dependence and heterogenic disease. Drug-resistance is the main reason in failure of breast cancer treatment. Combinatory medications are methods for treatment but they are not sufficient in action. However, new approaches like molecular-therapy reveal a new insight into cancers treatment. Studies show that Bcl-2 gene family inhibitors and ER blockers cause the improvement of the recovery. Interfering molecules such as antisense ones can inhibit the expression of Bcl-2 and push the cancer cells to apoptosis. Our team designed an Antisense Oligonucleotide (ASO) based on Antisense oligo G3139. MCF-7 and MDA-MB-231 cell lines used to evaluate cellular proliferation.

Liposome and cationic nano-complex (Niosome) are used to increase the cellular delivery of ASO and Tamoxifen. We also investigated the cytotoxicity and apoptotic effects of Tamoxifen, naked ASO and Nano-packed ASO. The results indicated significant down regulation of Bcl-2 gene and inhibition of MCF-7 and MDA-MB-231 cellular proliferation. Flow-cytometry showed early apoptosis in all groups. The ASO reduced the expression of Bcl-2 gene. It also had a synergistic effect with the Tamoxifen. The cationic nano-complex (Niosome) was more efficient than liposome in delivering designed oligo antisense Bcl-2 in the cancer cells.

KEYWORDS: BCL-2, G3139, Antisense Oligonucleotides (ASO), Liposome, Niosome, Tamoxifen, Apoptosis

21. Nano-drug delivery to cancer cells based on a direct active targeting system can be a good and successful strategy for lung cancer treatment

Mojgan Sheikhpour 1, 2*

Department of Mycobacteriology and Pulmonary Research, Pasteur Institute of Iran 1 Microbiology Research Center, Pasteur Institute of Iran, Tehran, Iran 2

Lung cancer is the most drug-resistant and common cause of cancer death, in the world with a high incidence and mortality in both genders. Shifting paradigm in lung cancer treatment from the traditional methods, which are often unsuccessful, to targeted therapy based on the genomic profile is inevitable and can be useful to overcome drug resistance. Recently, we got new evidences about the relationship between changes in D2-like dopamine receptor genes expression profiles and lung cancer. Using specific agonists of these receptors, Bromocriptine (BR), and Cabergoline (CAB) we attempted to activate D2-like expression and apoptotic induction in Lung cance cell lines. So we found that dopamine receptors are good therapeutic targets for the treatment of lung cancer. Since the high doses of this drugs cause necrotic effects on cells and also metabolic effects in patients, in complementary studies Multi-wall carbon nanotubes were conjugated with BR and CAB and were delivered to lung cancer cells. In this delivery system the drugs those were conjugated on the surface of MWCNTs acts as ligands for active targeting and can bind to specific receptors on the surface of target cells. The functional evaluation of this nano-targeted drug delivery system showed that it could be a new strategy for the treatment of non-small-cell lung cancer, increase drug delivery efficiency, and consequently induce apoptosis in cancer cells while reducing drug-induced side effects in normal cells. Other studies showed that DRD2 inhibits NSCLC cell growth by blocking the NF-κB signaling pathway both in vitro and in vivo. So deep functional and cellular and molecular pathway studies are necessary and ongoing in vivo.

Keywords: Nano-drug delivery, direct active targeting, specific agonists, D2-like dopamine receptors, lung cancer, treatment

22. Vaginal metastasis of colon cancer About a case

S. BOUGHERRAF; M.A. MELZI; A. BOUNEDJAR
Medical oncology service -uhc Blida

Introduction: The most common metastases for colon are the liver and the lung, whereas vaginal metastases from colorectal cancer are very rare entities, and most of these patients also have other metastatic lesions in locations such as the liver or lung. Isolated vaginal metastases are extremely rare, with very few previous reports in the literature.

Case report: A 45 year-old female diagnosed with a colon cancer underwent sigmoidectomy in June 2014. The histopathological examination confirmed the diagnosis of well-differentiated colon adenocarcinoma in T3N2M0. After the resection, the patient received adjuvant chemotherapy:08 courses of capecitabine (1250mg /m2 orally twice daily days1-14 every 3 weeks). The following routine surveillance computed tomography scan indicated no evidence of tumor recurrence or distant metastasis. In September 2017, The patient noticed a bloody vaginal discharge . gynecological examination showed a 3 cm ulcerated lesion located in the left lateral vaginal wall. Magnetic resonance imaging (MRI) revealed a 30 mm vaginal tumor witch was hypo-intense on T2w (T2-weighted) images, and biopsy showed a well-differentiated adenocarcinoma . CK-20 immunohistochemistry (IHC) examination of tumour cells revealed diffuse and strong cytoplasmic staining pattern. Contrarily, there was no CK-7 staining pattern observed in tumour cells With the diagnosis of isolated metachronous vaginal metastasis in a patient with history of colon cancer, surgical treatment was indicated; transvaginal tumor resection was performed. Microscopic examination confirmed the diagnosis of an intestinal-type adenocarcinoma infiltrating the vagina. 3 months after surgery; A mesenteric mass located at the level of the left psoas muscle and measuring 30mm of large axes infiltrating the left ureter, at the origin of a large uretero upstream hydronephrosis was detected on CT scan The patient received chemotherapy :CapeOX (capecitabine1000mg/m2 days1-15 and oxaliplatin130 mg/m2day1 every 3 weeks); she received 6 courses of CapeOX ;then operated, she had a resection of the psoas nodule, left ureter section and left nephrectomy. Microscopic examination confirmed the diagnosis of an intestinal-type adenocarcinoma infiltrating the ureter and the psoas nodule; the left kidney was not infiltrated She had no recurrence or metastasis within the first year after the last surgery. currently, the patient has vulvar recurrence, the surgery is recused; she is under chemotherapy (FOLFIRI).

Discussion: Colonic carcinomas commonly metastasize to the liver. Less frequently they metastasize to other sites including; regional lymph nodes, lungs, and peritoneum. Moreover, isolated splenic, testicular, vaginal cuff and even urethral metastasis have also been reported. Genital tract involvement is an extremely rare event for colonic metastasis. Vaginal metastases from colorectal cancers are extremely rare, with only a handful of cases being reported in modern literature; Ng reviewed case reports of vaginal metastases from colorectal cancer from 1956 to 2012, the first document in the literature regarding the vaginal metastasis of colorectal cancer was reported by whitelaw in 1956 when a vaginal lesion was found to be adenocarcinoma. Further investigation of the patient showed that primary tumor was originated from mid sigmoid tumor. Mechanisms leading to the formation of vaginal metastases are thought to involve the lymphovascular pathways, direct infiltration through the Pouch of Douglas, and pathways via the fallopian tubes. Clinical presentations of tumors metastatic to the vagina include vaginal bleeding, vaginal mass, vaginal discharge, vaginal staining, and perineal discomfort. Most patients present with some symptoms from the metastatic vaginal tumor. Asymptomatic metastatic vaginal tumors from colorectal cancer are very rare. MRI evaluation is very useful to detect a vaginal lesion and to distinguish adenocarcinoma from squamous cell carcinoma. Adenocarcinomas usually have a T2w hyperintense signal, whereas squamous cell carcinomas appear with T2w intermediate and T1w (T1-weighted) hypointense signals on MR. Histological and immunohistochemical analysis may be required to aid diagnosis. CK profiles are fundamental to this. CKs are intermediate-sized filaments present within the epithelium. Individual CK profiles are of limited use but used in a panel of CKs, they can provide useful information to aid diagnosis by a process of elimination. The profile of CK 7 negative/CK 20 positive is typical of colorectal primaries, whereas CK 20 negative/CK 7 positive is suggestive of gynecological, breast or lung carcinomas. The pattern of CK 7 negative/CK 20 positive is present in 95% of colorectal adenocarcinomas. The inverse is true for endometrial cancers where 100% have the CK 7 positive/CK 20 negative pattern. Different forms of treatment have been described including local resection, radiotherapy or interstitial brachytherapy. Recent advances in the chemotherapy used to treat colorectal cancer may contribute to a better prognosis; however most of the articles did not specify the exact nature of the chemotherapeutic agent used or the duration of the treatment. Chemotherapeutic agents used were 5-fluorouracil, oxaliplatin, irinotecan, and capecitabine

Conclusion: Vaginal metastasis from colorectal cancer is a very rare entity. We should keep the vagina within the field of view of pelvic MRI in colorectal cancer patients. If female patients show gynecological symptoms, gynecological examination should be recommended. Isolated vaginal metastases are an indication for surgical resection, and adjuvant chemotherapy is also recommended. The dark prognosis might justify a systematic gynecological examination of women presenting colorectal neoplasy.

23. Investigation of the relationship between the frequency of common polymorphism genotypes and dopamine type 2 receptor function with the risk of lung cancer

Mojgan Sheikhpour1&2*, Adnan Khosravi 3, Erfan Rahimi1, Vahid Amiri1, Sogand Rafati1

1 Department of Mycobacteriology and Pulmonary Research, Pasteur Institute of Iran, Tehran, Iran.
2 Department of Virology, Pasteur Institute of Iran, Tehran, Iran.
3 Department of Medical Genetics, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
4 Microbiology Research Center, Pasteur Institute of Iran, Tehran, Iran.

Introduction: Lung cancer is one of the most common cancers and the most important causes of death worldwide. Since the genetic composition of people can play a role in the process of infection, progression of the disease and also in their treatment, its study in different people and the investigation of their possible connection with lung cancer can be used in early diagnosis, treatment and clinical management this disease is effective. In this study, the relationship between dopamine D2 receptor gene polymorphism and the risk of lung cancer was considered and the frequency of rs1079597 genotype, which is one of the common and functional polymorphism of the D2 receptor gene, was studied.

Method: In this research, the blood samples of 128 patients with small cell lung cancer were used as the patient group and 128 healthy individuals. DNA extraction from samples was done by salting out and PCR method. Then, by using the specific primers, the enzymatic digestion reaction with Taq1 enzyme was completed through RFLP technique.

Result: The allelic frequency of different D2 genotypes is related to the risk of lung cancer. This study is being conducted on normal people and needs more studies.

Conclusion: The abundance of genotypes related to the studied polymorphism showed that identifying common and rare genotypes can be a suitable prediction for estimating the risk of developing lung cancer.

Keyword: Lung cancer, polymorphism, Type 2 dopamine, Risk.

24 .Bioinformatics study and experimental evaluation of miR-182, and miR-34 expression profiles in Tuberculosis and lung cancer

Leila Alimardanian1, Bahram M. Soltani2, Shiva Irani1, Mojgan Sheikhpour3&4*

1Department of Biology, Science and Research Branch, Islamic Azad University, Tehran, Iran
2Department of Molecular Genetics, Faculty of Biological Sciences, Tarbiat Modares University, Tehran, Iran
3Department of Mycobacteriology and Pulmonary Research, Pasteur Institute of Iran, Tehran, Iran
4Microbiology Research Center, Pasteur Institute of Iran, Tehran, Iran

Lung cancer is the second most common cancer among men and women, and this affects many people every year, so it requires more effective treatment. A new form of treatment called virotherapy has proven effective when combined with chemotherapy, radiotherapy, and biological/immunological therapy. In virotherapy are used oncolytic viruses (OVs) which include Adeno (Ad), Coxsackie (CV), Herpes Simplex (HSV), Measles (MV), Newcastle disease (NDV), Vesicular Stomatitis (VSV). As well as, Semiliki Forest (SFV), Myxoma (MYXV), Vaccinia (VV), Influenza (IAV), Parapox (ORFV), Seneca Valley (SVV), Pox, and Reo viruses. A major reason for their popularity as vectors is their high transfer and proliferation rates, as well as their easy genetic manipulation without their genome merging into host chromosomes and encoding oncogenes. Likewise, OVs cause lysis, apoptosis, necrosis, metastasis, mitophagy, and autophagy of tumor cells. In addition, stimulate the host immune system such as CD8+, CD4+, NK, IFN, IL, T-cell, lymphocytes, neutrophils, macrophages, and caspases. Consequently, these oncolytic activities inhibit the growth of tumor cells and kill tumor cells by suppressing the S phase and stopping

OVs that promote anti-tumor immunity are attractive treatment options due to the fact that they are self-amplifying, kill by multiple mechanisms; stimulate the body's own immune response.

Keywords: oncolytic virus, lung cancer, treatment

25. Phyllodes tumor of the breast in young women: A retrospective study

Ben Ammar N 1 , khaldi O 1 , Ben Othmen S 1 ,Rahmouni E 1 , Houcine Y 2 , Boaziz.H 1 , Dhieb T 1

1 Department of oncologic surgery, Salah Azaiez institute

2 Department of anatomopathology, Salah Azaiez institute

Introduction: Phyllodes breast tumor (PT) is one of the rare breast tumors that is difficult to diagnose. They are most commonly diagnosed in the elderly population. We aim to determine the clinical, histological, therapeutic, and prognostic characteristics of phyllodes tumors in patients under 40.

Methods: We retrospectively reviewed eleven cases of female patients with histologically proven phyllodes tumors of the breast diagnosed below 40 years of age, between 2010 and 2022.

Results: 11 patients with phyllodes tumors of the breast were included in our study. 4 of our patients (36.36%) had a history of fibroadenoma. The average age of occurrence was 31.73 years [17-39 years]. The mean delay before consulting was 10.2 ± 9.2 months. The revelation was clinical, with the self-discovery of a breast lump in (97.9%). Of 11 tumors diagnosed 8 were benign (72.7%), 3 (27.3%) were borderline. The mean tumor size was 74.55 mm [20-220mm]. Tumors predominated on the right side (52.8%) and upper-outer quadrant (52.3%). All patients had primary surgical treatment. 5 (45.45%) were treated by mastectomy and 6 (54.54%) with lumpectomy with clear surgical margins. After a follow-up ranging from 6 to 120 months. Overall, local recurrence occurred in only one patient.

Conclusion : Due to the rarity of phyllodes breast tumor and because of the frequently benign nature of tumors in this age group, a more conservative approach with regular follow- up is advisable.

26. Tumor Characteristics and Clinical Outcome of phyllodes tumor in patients over 40 years old

Ben Ammar N 1, khaldi O 1, Ben Othmen S 1, Rahmouni E 1, Houcine Y 2, Boaziz.H 1, Dhieb T 1

1 Department of oncologic surgery, Salah Azaiez institute

2 Department of anatomopathology, Salah Azaiez institute

Introduction : Phyllodes tumors are rare, mix-type breast tumors. We aim to determine the clinical, histological, therapeutic, and prognostic characteristics of phyllodes tumors in patients over 40.

Methods : We retrospectively reviewed seventeen cases of female patients with histologically proven phyllodes tumors of the breast diagnosed at an age over 40, between 2010 and 2022.

Results : 17 patients with phyllodes tumors of the breast were included in our study. The average age of occurrence was 49.65 years [40-67 years] and 53.3% of the patients were menopausal. The mean delay before consulting was 13.4 ± 12.2 months. The revelation was clinical, with the self-discovery of a breast lump in 100%). From 17 tumors diagnosed 9 were benign (52.9%), 7 were borderline (41.2 %), and malignant phyllodes tumors in one case (5.9%). The mean tumor size was 71.59 mm [20-215mm]. Tumors predominated on the right side (58.8%) and upper-outer quadrant (41.2%). All patients had primary surgical treatment. thirteen (76.5%) were treated with mastectomy and four (23.5%) with conservative surgery with clear surgical margins. Adjuvant radiotherapy was performed on one woman (5.8%) of patients.

After a follow-up ranging from 6 to 120 months. Overall, local recurrence occurred in Three patients at 17.64 %.

Conclusions : In women over 40, Phyllodes tumors are bulky tumors that may often result in a mastectomy. The treatment is mainly surgical. The evolution may be marked by local recurrence and rarely metastases.

27. Phyllodes tumor of the breast: A retrospective analysis of 68 cases

Ben Ammar N1, khaldi O1, Ben Othmen S1, Rahmouni E1, Houcine Y 2, Boaziz.H1, Dhieb T1

1Department of oncologic surgery, Salah Azaiez institute

2Department of anatomopathology, Salah Azaiez institute

Introduction : Phyllodes tumor of the breast (PTB) is a rare tumor that accounts for less than 1% of all breast cancers. These are histologically fibro-epithelial tumors similar to fibroadenomas but with a predominant conjunctive tissue component. The aim of this work was to determine the specific diagnostic and therapeutic features of this tumor.

Methods : We retrospectively reviewed sixty-eight cases of PTB diagnosed between 2010 and 2022, We collected epidemiological, clinical, histological, therapeutical , and evolutive features of these tumors. Quantitative parameters were represented by mean and qualitative parameters by percentage or effective.

Results :14 of our patients (9.52%) had a history of fibroadenoma, and 37% of patients were nulliparous. The mean delay before consulting was 15.7 ± 17.56 months. A breast lump palpation was the chief complaint (98%). The mean age at diagnosis was 42.7 ± 11.93 years. The histological diagnosis was based on the biopsy (66.7%). From 68 tumors diagnosed 17 were benign (25%), 27 were borderline (39.7%), and malignant phyllodes tumors in 24 cases (35.3%). The mean tumor size was 6.25 cm. Tumors predominated on the right side (70.4%) and upper-outer quadrant (37%). 32 (47.05%) were treated by mastectomy and 36 (52.94%) with lumpectomy .19 (27.94%) patients underwent adjuvant radiotherapy, and three received chemotherapy.

Overall, local recurrence occurred in 33.1% justifies wide margin excision.

Conclusion : The diagnosis of the PTB is histological. Complete surgical resection is the standard treatment for localized breast PTB. Post-surgical treatments are still a matter of debate.

28. Prognostic factors in breast cancer

I.Jbir1 , N. Ben.Ammar2 , S. Ben.Othmen2 , H. Bel.Fekih 3 , H. Touinssi1

1 Department of General Surgery, Mohammed Taher Maamouri Hospital, Nabeul, Tunisia

2 Department of Surgical Oncology, Salah Azaiez Institute, Tunis, Tunisia

3 Department of Medical Oncology, Mohammed Taher Maamouri Hospital, Nabeul, Tunisia

Introduction : In Tunisia, breast cancer is the most common cancer among women and represents the leading cause of mortality. The prognosis of breast carcinomas is related to a large variety of clinical and pathological factors.

The aim of this study is to analyze the epidemiological and clinico-pathological features of breast cancer in the Cape Bon of tunisia and to determine the prognostic factors.

Method : This retrospective study includes 356 patients with histologically confirmed breast cancers diagnosed and treated between January 2014 and December 2019 at the Mohammed Taher Maamouri Nabeul University Hospital. The 3-year and 5-year survival rate of female breast cancer cases and some of the factors that affected survival were measured using Cox regression.

Results : The mean age of our patients was 52.5 years, ranging from 26 to 93 years. The average size of the cancer at the time of diagnosis was 34.6 mm. Tumour stage was T0 in 2.2% ,T1 in 17.4% cases, T2 in 54.2% cases, T3 in 10.4% cases and T4 in 15.8% cases.

Invasive ductal carcinoma was the most frequent histopathological type (93.8 %) followed by lobular carcinoma (2.8%). According to the SBR grading system, grade I was the most frequent grade (36%) followed by grade II (35.2%) and grade I (28.4%). The overall Kaplan-Meier survival rate was 98.8% after three years, and 97.6 % after five years.

Using univariate analysis, significant predictive value was found with the following factors: metastases at diagnosis , nodal capsular rupture , lymphatic embolism,and SBR grade. However, Cox proportional regression showed that metastases at the time of diagnosis ($p = 0.01$) was the only factor that significantly influenced survival analysis.

Conclusion : The prognosis of breast cancer remains reserved in Tunisian Cap Bon region, this is primarily due to the late diagnosis.

29. Inflammatory breast cancer

N. Ben.Ammar2 ,I.Jbir1 , S. Ben.Othmen2 , H. Bel.Fekih 3 , H. Touinssi1

1 Department of General Surgery, Mohammed Taher Maamouri Hospital, Nabeul, Tunisia
2 Department of Surgical Oncology, Salah Azaiez Institute, Tunis, Tunisia
3 Department of Medical Oncology, Mohammed Taher Maamouri Hospital, Nabeul, Tunisia

Introduction: Inflammatory breast cancer (IBC) is a rare and aggressive form of breast cancer with unknown etiology and generally poor outcome. Our work aims to clarify its pathogenic, anatomo-clinical, and evolutionary aspects at the Mohammed Taher Maamouri University Hospital in Nabeul.

Methods: This retrospective study includes 15 patients with inflammatory breast cancer diagnosed and treated between January 2014 and December 2019 at the Mohammed Taher Maamouri Nabeul University Hospital.

Results: In our series, this cancer represents 4.2% of all breast cancers. The patients were all female, with an average age of 49 years and 8 months. The patients were all female, with an average age of 49 years and 8 months. Clinically, our series was characterized by an average consultation delay of 7 months, a palpable tumor nodule in 46.7% of cases, The average size of the cancer was 45.6 mm. and the presence of metastases at the moment of diagnosis in two patients (13.3%). The histological study showed that the majority of tumors were invasive ductal carcinomas (65.2%) with a high histoprognostic SBR grade (II and III: 100%), accompanied by lymph node metastases in 60%, lymphatic emboli in 48%, and hormonal receptor negativity noted in 53% of cases.

The indication for neoadjuvant chemotherapy was broad, at 73.3%, and radical surgery was indicated for 86.6% of patients. Follow-up of the cases in our series revealed a 26.7% rate of metastatic relapse. The overall survival and recurrence-free survival at 3 years were 53.1% and 71.4%, respectively.

Conclusion: Inflammatory Breast Canceris a rare but aggressive variant of breast cancer. Its prognosis is unfavorable due to early metastatic spread and locoregional recurrence.

30. Atypical metastases disclosing follicular carcinoma of the thyroid: A case report

Ben Ammar.N ; ; Khaldi.O ; Sakhri.S ; Ben Othmen.S ;Boaziz.H ; Dhieb.T

Introduction : Thyroid cancer accounts for 1 to 2% of neoplastic diseases and 90% of endocrine cancers. Differentiated thyroid cancer uncommonly presents with distant metastases. Chest wall metastasis from differentiated thyroid cancer presenting as the initial finding is even less common.

The objective is to report an unusual form of secondary localization of follicular carcinoma and discuss the therapeutic approach.

Observation : We describe an extremely rare case of a 61-year-old man who was referred to our institute for a chest wall metastasis of follicular thyroid carcinoma that was previously undiagnosed, confirmed by the biopsy of the chest wall mass.

The patient was treated by total thyroidectomy with thyroid replacement by levothyroxine and was referred to nuclear medicine for radionuclide therapy before scheduling the thoracic mass excision.

Conclusion : Although the lung and bone are well-recognized sites for distant metastases in differentiated thyroid cancer (DTC), rare metastatic sites are often overlooked or disregarded due to their low incidence. However, understanding the patterns of these rare metastases is crucial for making clinical decisions and assessing the prognosis of patients with DTC.

Key words : Occult thyroid cancer / follicular thyroid carcinoma /chest wall metastasis / thyroid

31. Epidermoid carcinoma arising from lumbar myelomeningocele: A rare complication in a neglected case

Ben Ammar.N ; Fertani.Y ; Saadallah.F ;Khaldi.O ; Jaidane.O ; Dhieb.T

Introduction : Neural tube defects (NTDs) are frequently occurring congenital anomalies. The primary cause of this defect is attributed to non-spontaneous closure of the neural tube during intrauterine growth, which typically occurs between the third and fourth week of development.

Typically, patients present early due to visible swelling or neurological symptoms. However, it is uncommon for myelomeningocele to be ignored until it progresses to a malignant tumor.

Case Description : The case involves a 19-year-old boy who developed epidermal carcinoma at the location of a myelomeningocele. This highlights the need to consider the potential for malignant disease to arise in this congenital defect.

Conclusion : It is important to treat myelomeningocele promptly, and in cases that are left unattended and present in adulthood, there should be consideration for the potential of malignant transformation.

Keywords : Spina bifida, myelomeningocele, Epidermoid carcinoma, neoplasm, reconstruction.

32. Mucinous primitive skin carcinoma: a case report

Ben Ammar.N; Ben Othmen.S ; Khaldi.O ;Rahmouni.E; Ayadi.M; Dhieb.T

Introduction : Primary mucinous carcinoma of the skin is an exceedingly uncommon adnexal tumor.

Typically, it manifests on the head and neck region, with the periorbital area being the most frequently affected site. This neoplasm is commonly characterized by slow growth and a low metastatic potential. However, local recurrence after surgical removal is frequent. Due to the rarity of primary mucinous carcinoma of the skin a comprehensive evaluation should be conducted to rule out other internal malignancies that could potentially metastasize to the skin.

Case presentation: A 78-year-old woman presented with cutaneous tumor in the occipital region, which had been gradually increasing in size. Biopsy were performed revealing a Mucinous primitive skin carcinoma.

A full metastatic evaluation was conducted, including mammograms, colonoscopy, sigmoidoscopy, chest, abdomen, and pelvic computed tomography (CT) scans.None of these tests revealed any signs of malignancy.

The patient was treated surgically with a large excision of the tumor.

The pathologic diagnosis was mucinous primitive skin carcinoma.

Six months after surgery, the patient has experienced no recurrence of the tumor .

Conclusion : Primary cutaneous mucinous carcinoma is a low-grade malignant tumor with low metastatic potential, but it exhibits a high recurrence rate. It is crucial to be aware of this condition as it can mimic metastasis from breast or gastrointestinal origin.

33. Basaloid carcinoma of the anal canal: a case report

Ben Ammar.N; khaldi.O ; Ben Othmen.S; Saadallah.F ;Boaziz.H, Dhieb.T;

Introduction: Cloacogenic carcinoma also known as basaloid squamous cell carcinoma is a rare variant accounting for 1.6% of the anal canal cancers.

Methods: We report a rare case of a patient who developed a basaloid carcinoma of the anal canal.

Results: A 61-year-old Caucasian male suffered from rectal bleeding and constipation for two months. A polypoidal tumor was noted in anal canal. Computed tomography (CT) and magnetic resonance imaging (MRI) of the pelvis showed a heterogeneous solid mass arising above the dentate line with internal and external sphincter invasion without evidence of distant disease. The tumor was classified T4a N1 M0 .The histopathological analysis of the biopsy of this tumor showed a basaloid carcinoma of the anal canal.

The patient was given neo adjuvant chemo-radiotherapy, which included 45 Gy of pelvic irradiation and intravenous administration of 5-fluorouracil (5-FU) and carboplatin.

Post-therapy imaging showed a partial resolution.

The patient underwent subsequently an abdominoperineal resection with end colostomy with complex local-tissue reconstruction.

Conclusion: This report described a therapeutic case of anal canal basaloid carcinoma with the consecutive treatments. It is important to undergo the suitable treatments for the patients with anal canal basaloid carcinoma depending on the situation.

34. Primitive cutaneous neuroendocrine carcinoma : A case report

Ben Ammar N1, khaldi O1, Ben Othmen S1, Boaziz.H1, Dhieb T1

1Department of oncologic surgery, Salah Azaiez institute

Introduction: Primitive cutaneous neuroendocrine carcinoma is a rare tumor characterized by rapid evolution. Their severity and metastatic potential are higher than cutaneous melanomas.

We report a case of a particular clinical and anatomopathological presentation.

Observation: A 77 year-old man had a tumoral plaque on the right calf without palpable, inguinal lymphadenopathy. The histological and immunocytochemistry examination led to the diagnosis of cutaneous neuroendocrine carcinoma. The normality of the chest, abdominal and pelvis investigations confirmed the primitive cutaneous origin. The patient underwent extensive surgical excision and adjuvant radiotherapy. After a follow-up of one year and 2 months, the patient is still alive with no metastasis or recurrence.

Conclusion : The high survival rate for stage I lesions indicates the importance of early recognition and treatment of these tumors.

35. Investigation of genotoxicity in occupational exposure to electromagnetic fields (EMFs) emitted from electricity and gas generating company

Touil Raja 1, kacem Imen2,3, Nakhli Rania2,3, Aloui Asma3, Dimassi Sarra1,2, Ouahchi Ines1,2, Mrizak Nejib2,3 and Bennour Ayda1,2

1-Laboratory of Genetics, Farhat Hached Hospital, Sousse Tunisia

2-Faculty of medicine Ibn Al Jazzar Sousse Tunisia

3- Department of Occupational Medicine, Farhat Hached Hospital, Sousse Tunisia

Considerable controversy still exists as to whether electromagnetic fields (EMFs) at low frequencies are genotoxic to humans. Particularly, the workers in such companies are subjected to cumulative EMFs in their occupational environments. The study of DNA damage at the chromosome level is an essential part of genetic toxicology because chromosomal mutation is an important event in carcinogenesis. The micronucleus assays have emerged as one of the preferred methods for assessing chromosome damage because they enable both chromosome loss and chromosome breakage to be measured reliably .

This ongoing study was undertaken to assess the genotoxicity of EMF in electricity generating company workers, to valuate DNA damage and incidences of micronuclei in professionals.

58 workers in the electricity generating company were included in this study. 27 workers employed an administrative position and 31 work external the administration in the same company. Detailed occupational history and demographic data were collected from all participants

Blood samples were collected and cell cultures were done with cytochalasinB. Bi-nucleated cells were analyzed for micronuclei quantification and further fluorescent in situ hybridization (FISH) analyses were done to assess micronuclei content and to assume either the clastogen or the aneugen effect in micronuclei

Preliminary results showed that the frequency of micronuclei was higher in the exposed group compared with control group, suggesting that EMF exposure may lead to increased DNA damage and chromosomal instability. In addition, FISH showed a trend toward higher incidence of chromosomal aberrations in the exposed group, suggesting a possible genotoxic effect of EMF exposure.

To the best of our knowledge, the present study is the first attempt to carry out cytogenetic investigations on assessing genotoxicity in electricity generating companies. It will provide valuable insights into the genotoxic effects of EMFs on professionals and help developing appropriate safety policies and protective measures in these occupational settings.

36. Association of endometrial, breast and bladder cancers: Case report

Ben Ammar.N ; Rahmouni. E ; Ben Othmen.S ; Khaldi. O ; Saadallah.F ;Boaziz.H ; Dhieb.T

Introduction: Despite advancements in early detection and treatment protocols, individuals who have survived cancer face a higher likelihood of developing multiple primary malignancies.

This case report intends to present the clinical characteristics, diagnostic evaluation, treatment approaches, and results of a patient who was diagnosed with endometrial, breast, and bladder cancer.

Case report: An 83-year-old female treated in 2010 for a grade 3 endometrioid adenocarcinoma of the endometrium. The patient underwent hysterectomy and bilateral annexectomy with pelvic lymph node dissection, followed by external radiotherapy and brachytherapy. Since then, the patient has been regularly monitored until November 2022 when she presented with recurrent hematuria. A cystoscopy with biopsy was performed, confirming a high-grade urothelial carcinoma of the bladder. The patient underwent an endoscopic resection on 26/01/2023.

A thoracic scan conducted as part of the staging evaluation revealed the presence of a nodule of the right breast. A biopsy was performed, confirming a mucinous infiltrating carcinoma. The patient underwent a tumor excision with sentinel lymph node mapping on 12/07/2023.

Conclusion: In conclusion, this case report highlights a rare association between breast, endometrial, and bladder cancer. The simultaneous presence of these three cancers in the same patient underscores the importance of comprehensive evaluation and management when multiple malignancies are identified. Further research and larger studies are needed to better understand the underlying factors contributing to this unique association and to optimize treatment strategies for patients presenting with such rare combinations of cancers.

37. Sexuality and depression in women with breast cancer

Trigui Hela1, Aloulou Samir2, Bader Sondes1, Ben Azaiez Karama1, Aloulou Mariem1, Abbes Wafa1

1.Department of psychiatry. GABES University Hospital. Tunisia
2.Department of Medical Oncology. GABES University Hospital. Tunisia

Introduction: Sexuality is widely affected by cancer, especially for women who are treated for breast cancer. As a matter of fact, sexual health has long been a neglected, if not totally overlooked, aspect of oncology care.
Objectives: To determine the link between sexuality and the presence of depression in women with breast cancer.
Methodology: We conducted a cross-sectional, descriptive and analytical study over a two-month period from April to June of 2021. This study involved a population of 50 women consulting the carcinology department of GABES University Hospital. We used an information sheet containing patients' socio-demographic data, medical and gynecological-obstetric history, breast cancer clinical and therapeutic data, and data concerning the woman's sexual activity. We also used the Female Sexual Function Index (FSFI) and the Hospital Anxiety and Depression scale (HAD).
Results: The mean age of the women was 46.24 years with extremes ranging from 25 to 74 years. The majority of patients were of urban origin. Among women who were professionally active before the discovery of the disease (33%), their professional activity became irregular in 61.3% of cases and absent in 22.6% of cases after. On average, the disease was diagnosed 1 year and seven months ago. Cancer was localized in 58.3% of cases and metastatic in 29.2%. Sexual dysfunction was observed in 74% of women. Pain and desire were the most impaired domains, followed by sexual arousal.
We found a significant association between the presence of subjective sexual difficulty and having pathological depression (p= 0.012) according to the HAD scale.
Conclusion: Sexual difficulties can be a sign of post-cancer treatment depression, and the greater the psychological distress, the greater the impact on sexual functioning. Furthermore, the decrease in sexual relations and the change in body image can further reinforce a woman's sense of worthlessness and fuel her depression.

38. Molecular investigation using Microarray-based Comparative Genomic Hybridization in patients with myelodysplastic syndrome and normal karyotype

Ammar Mohamed Abdennacer 1, Bennour Ayda1,2; Ouahchi Ines1,2; Yahia Lamia,1; Dimassi Sarra1,2; Mougou Soumaya1,2 ; Saad Ali1,2; Hmida Dorra1,2; Sennana Halima1,2

1-Laboratory of Genetics, Farhat Hached Hospital, Sousse Tunisia 2-Faculty of medicine Ibn Al Jazzar Sousse Tunisia

Introduction: Myelodysplastic syndromes (MDS) are a group of blood cancers which are characterized by ineffective hematopoiesis of bone marrow cells and abnormal blood cell development leading to cytopenias and an increased risk for progression to acute myeloid leukemia. At diagnosis, 50% of MDS patients have a normal conventional karyotype, however, unbalanced chromosomal aberrations are common and have prognostic implications.

Objective: We aimed to investigate the unbalanced chromosomal aberrations in MDS patients with normal bone marrow karyotype using micro-array-based Comparative Genomic Hybridization (aCGH).

Methods: aCGH was performed on peripheral blood extracted DNA from 5 patients with clinical MDS features and normal bone marrow karyotype

Results: The aCGH analysis (NCBI36/hg18) revealed copy-number variations (CNV) in all patients with normal karyotype. All the 5 patients carried 16 copy-number variations (CNV), including 8 duplications ranging from 20 killobases (Kb) to 2,283 megabases (Mb), they include chromosomal regions 1q44; 2p16; 5q12, 10q27;14q12; 22q11; Xq21.3; Xq27.3 and 8 deletions ranging from 26.3 Kb to 948.9 kb, including chromosomal regions 1p36.1; 1q21; 4q31; 5p15.4; 9q21.1; 10q24; 22q21.

Subtelomeric CNV (5p15; 10q27 and 1q44) were approved by using Multiplex Ligation dependent Probe Amplification (MLPA) analysis with (SALSA MLPA Probemix P036 Subtelomeres Mix 1).

Conclusion: These results demonstrated that chromosomal defects in MDS may be more frequent than predicted by metaphase cytogenetics and new cryptic lesions may be revealed by precise analysis methods. This study suggests a significant role for the use of aCGH in the clinical workup of MDS patients.

39. Profile of caregivers of cancer patients and characteristics of the helping relationship

Trigui Hela1, Aloulou Samir2, Bader Sondes1, Hajjaji Sameh1, Aloulou Mariem1, Abbes Wafa1

1.Department of psychiatry. GABES University Hospital. Tunisia
2.Department of Medical Oncology. GABES University Hospital. Tunisia

Introduction: Providing care to a family member with cancer has an impact on the well-being of caregivers, and can negatively influence the health outcomes of both the patient and the caregiver. In fact, their heavy commitment to the caregiving role, and the priority they give to the patient, leads to self-neglect and changes in their lives.
Objectives: To determine the profile of caregivers of cancer patients and the characteristics of the helping relationship.
Methodology: We conducted a cross-sectional, descriptive and analytical study over a three-month period from January to March of 2020. Our study involved a population of 121 patient-caregiver pairs consulting the carcinology department at GABES University Hospital. We used an information sheet containing patients' socio-demographic and clinical data, clinical data and cancer progression, characteristics of the patient's caregiver and characteristics of the helping relationship.
Results: In the majority of cases, the caregiver was a spouse, child or parent. The average age of caregivers was 43.6 years. Two-thirds of the caregivers were women with a sex ratio of 0.47. Most of the caregivers lived with their sick loved ones. Among caregivers, 71.9% were married and 34.7% had a university education. Around half the caregivers (48.8%) had no occupation. The presence of comorbidity was noted in 34 caregivers. The average duration of assistance was 7 months. The majority of caregivers spend less than 4 hours a day helping. Reduction in their activity following the discovery of cancer in their loved ones was reported in 75.2% of the caregivers. Behaviorally, 72.7% of our patient population were aggressive towards their caregivers.
Conclusion: The diagnosis of cancer has its own impact on caregivers, both physically and mentally. Caring for a loved one with cancer can cause a number of psychological disorders, which need to be investigated as part of the overall care process.

40. Anxiety in caregivers of cancer patients

Flah N1, Aloulou S[2], Hajaji S1, Bader S1, Ben Azaiez K1, Abbes W1

1psychiatry department, University Hospital of Gabes, Tunisia

[2]medical oncology department, University Hospital of Gabes, Tunisia

Objective: Determinate the prevalence of anxiety in caregivers of cancer patients and it's associated factors.

Methodology: We conducted a cross-sectional, descriptive and analytic study in the oncology department of the University Hospital of Gabes on a period of three months from January to march 2020. Data was collected by a form containing general and medical information about caregivers and patients. The Hospital Anxiety and Depression Scale (HAD) was used for screening anxiety in caregivers.

Results: A total of 121 patient-caregiver dyad participated in the study, average age of patients was 54,2±13,4 years with a sex ratio of 0,65. Two-thirds of them had a regular professional activity before cancer which they lost after discovering it. In terms of medical information, average age of cancer onset was 52 years and it had been overall diagnosed 7months previously. Many types of cancer were noticed in our study where breast cancer was the most common and half of the patients were in metastatic phase. As for caregivers they were mostly the patient's partner, parent or child, they had an average age of 43,6 years and 67,6% of them were women. The half had no professional activity and two-thirds had medical or surgical history. In our study caregivers spent an average of two hours with the patients and two-thirds of them were brought to reduce their activity.

Results of HAD showed that 59,5% of caregivers had a certain anxiety state which was significantly associated with female gender, medical history and reduced activity.

Conclusion: Our results show that caregivers of cancer patients represent a population at risk of impaired health and emotional distress. Therefore early identification of the associated factors would make it possible to identify the most fragile patient-caregiver dyads in order to provide them with appropriate support, maintain their well-being and avoid their exhaustion.

41. Anxiety-depressive disorder in women with breast cancer

Flah N 1 , Aloulou S[2], Ben Azaiez K 1 , Aloulou M 1 , Abbes W 1

1 psychiatry department, University Hospital of Gabes, Tunisia

[2]medical oncology department, University Hospital of Gabes, Tunisia

Introduction: Cancer remains a major public health problem in Tunisia. Discovering it is a deathly experience and always represents a big shock. For women, breast cancer can cause anxiety and depression.

Objective: Screening for anxiety-depressive disorders in women with breast cancer.

Methodology: This is a cross-sectional and descriptive study which took place over a period of two months from 15 April 2021 to 15 June 2021 on a population of women attending the medical oncology department of the University Hospital of Gabes. Data were collected using a form containing general and clinical information and the HAD scale (Hospital Anxiety and Depression scale) for the screening of anxiety-depressive disorders.

Results: A total of 50 women took part in the study. Their average age was 46,2 years, with a standard deviation of 9,2 years. Two-thirds of the women were housewives (66%) and among those who were professionally active before the discovery of cancer, professional activity became irregular in 61,3% of cases and absent in 22,6% of cases after it. With regard to medical history, 20% reported that they were undergoing treatment for an other chronic illness. On average, the cancer had been diagnosed 1 year and seven months previously. It was localized in 58,3% of cases, locally advanced in 12,5% and metastatic in 29,2%. 70,8% of the women in our study, were receiving adjuvant chemotherapy and 47,9% were receiving radiotherapy. According to a categorical approach using the HAD scale, 40% of the women had a definite anxiety state, 28% had a doubtful state and 32% had none. Depression was definite in 36% of women, doubtful in 34% and absent in 30%.

Conclusion: Our study showed a high incidence of anxiety-depressive disorders in women with breast cancer, which can alter their response and compliance to treatment. Hence the need for multi-disciplinary care.

42. Depression in caregivers of cancer patients

ELLEUCH Oumayma1 , ALOULOU Samir2, HAJJEJI Sameh1, BADER Sondes1, TRABELSI Yosra1, ABBES Wafa1

1. Department of psychiatry, Gabes University Hospital, Tunisia

2. Department of medical oncology, Gabes University Hospital, Tunisia

Introduction: Providing care to a cancer patient can be a source of stress and lead to mental health problems in caregivers, such as depression.

Objectives: Our study aimed to examine the prevalence of depression among the caregivers of cancer patients, and to identify the factors associated to this depression.

Methods: We conducted a cross-sectional, descriptive and analytical study, between January and March 2020, among 121 caregivers of cancer patients who were followed-up in the oncology department of the university hospital of Gabes, Tunisia. We collected sociodemographic and clinical data of patients and their caregivers. We used the Activities of Daily Living (ADL) scale to assess the autonomy level in patients, and the Hospital Anxiety and Depression (HAD) scale to assess depressive symptoms in the caregivers.

Results: Among our patients, 60.3% were female. The most observed cancer types were breast cancer (38.8%) followed by lung (14%) and colorectal cancer (10.7%). The median age of the disease onset was 52 years ±13,5. The mean autonomy score was 4,7±1,3. Among the caregivers, 67.7% were female, 36.4% were the patients' spouses, and 48% had no profession. Their mean age was 43,6 years ±11,8. The majority (90.9%) practiced no leisure activities. A rate of 57% of caregivers were in a certain depressive state. Depression was significantly associated to the absence of leisure activities in caregivers (p=0,026; OR=9,46 ; IC95%=[3,71-24,12]). We also found a weak negative correlation between caregiver depression and the autonomy level of the patient (p=0,02, Rho=-0,20) and the age of cancer onset (p=0,03, Rho=-0,19).

Conclusion: Caregivers of cancer patients are at a high risk of depression, especially those with no leisure activities, and in case of patients with a low autonomy and young age of cancer onset. Psychological support is, thus, crucial to protect their well-being.

43. Sexual dysfunction and associated factors in women with breast cancer

Ben Azaiez K[1]., Aloulou S.[2], Bader S.[1], Trigui H.[1], Flah N.[1], Abbes W.[1]

[1]Psychiatry department, Gabes Universitary Hospital

[2] Medical oncology department, Gabes Universitary Hospital

Background: Breast cancer is a disease that affects a large number of women worldwide. In addition to its physical and emotional consequences, it is important to consider its impact on women's sexuality.

Objective: To assess sexual functioning in women undergoing treatment for breast cancer and determine the factors associated with this condition.

Materials and methods: The study was a cross-sectional, descriptive and analytical survey of women undergoing treatment for breast cancer at Gabes Universitary Hospital. A general information form was used, as well as the Female Sexual Function Index (FSFI), a self-administered questionnaire designed to assess sexual functioning.

Results: The sample consisted of 50 women. Mean age was 46.24 ±9.2 years. Another chronic disease was present in 20% of women, as well as an infertility problem in 8.3%. Contraception was used in 38% of cases. Regarding treatment, 70.8% of the population received adjuvant chemotherapy, 47.9% received radiotherapy, and 27.1% underwent hormone therapy. Assessment of sexual functioning revealed sexual dysfunction (SD) in 73.3% of the sample. Pain and desire were the most impaired domains in 100% of women, followed by sexual excitement and vaginal lubrication in 86% and 82% respectively. The average delay in onset of SD from the time of cancer diagnosis was 4.4 months ±9. Eighteen patients (38.1%) felt that their disease limited their sexual activity. But none of them had received a sexology consultation. Otherwise, the factors associated with the presence of female DS were: personal somatic history (p=0.03), personal surgical history (p=0.044), the existence of an infertility problem (p=0.02), the use of contraception (p=0.05), the intrauterine device (p=0.01) and hormone therapy (p=0.01).

Conclusion: Our work shows the frequency of sexual dysfunction in women with breast cancer. Consequently, it will be crucial for health professionals to prevent, detect and manage these difficulties.

44. Exploration and analysis of a large medical scene by a phenotyping approach: Application to Histological Whole Slide Imaging

Roua Jaafar, Hedi Yazid, Najoua Essoukri Ben Amara
LATiS-Laboratory of Advanced Technology and Intelligent Systems,ENISo Sousse, Sousse University, Tunisia

The automation of histopathological image analysis is a challenging field, aiming to assist pathologists in their diagnostic processes. With the rise of digital pathology and Whole Slide images (WSIs) usage, advanced and automatic tools are needed for interpreting these large-scale histological images efficiently. In this context, content-based histopathological image retrieval (CBHIR) has emerged as an effective approach to support pathologists in decision-making by providing insights from similar cases. In this study, we propose a CBHIR approach based on incremental phenotyping to provide pathologists with an additional and advanced modality to integrate it into the diagnostic process. The primary goal of the CBHIR system is to assist pathologists to develop an accurate and performed diagnoses. It leverages the phenotyping graph to identify patterns that may not be evident in isolated sections, enabling pathologists to compare current cases with previously interpreted instances.

A CBHIR uses phenotyping to explore complex histological images and identify meaningful correlations between regions of interest (ROI). This process generates a comprehensive representation of tissue in the form of a phenotyping graph. The incremental phenotyping approach allows the system to continuously learn from new examples, improving the phenotyping graph's capabilities to provide suitable references for current cases.

Our proposed CBHIR system integrates advanced technology and expertise, enhancing diagnosis efficiency and precision for pathologists. By adopting incremental phenotyping and utilizing the phenotyping graph's insights, the system assists in overcoming the challenges of histopathological analysis.

In conclusion, our CBHIR system represents a significant advancement in automating histopathological image analysis. Through content-based retrieval and incremental phenotyping, it offers more precise and informed diagnostic practices, ultimately improving patient care and outcomes. As digital pathology evolves, our CBHIR system holds great promise in transforming histopathological diagnosis and setting new standards for accuracy and efficiency.

45. Low-dose bisphenol S exposure induces Hypo-spermatogenesis and mitochondrial dysfunction in rats: A possible implication of StAR protein

Malek. Darghouthi(1), Raja. Rezg (2), Olfa. Boughmadi (2), Bessem. Mornagui (1)

(1) LR18ES36, University of Gabes, Faculty of Sciences of Gabes, Gabes, Tunisia.
(2) BIOLIVAL LR-14ES06, University of Monastir, Monastir, Tunisia.

A wide variety of environmental chemicals/ xenobiotics including bisphenol A (BPA) has been shown to cause male reproductive dysfunctions and infertility. Recently, bisphenol S (BPS) replaces BPA, in several products, including foodstuffs, under the BPA-free label. However, several studies have raised inquietude about the potential adverse effects of BPS. The present study was conducted to evaluate sperm parameters, biochemical parameters, mitochondrial function, and histopathological patterns after post-lactation BPS exposure at a low dose. Male rats (21 days old) were exposed to water containing BPS at 50 µg/L in drinking water for 10 weeks. Results showed no significant alteration in the gonadosomatic index (GSI) and relative reproductive organs weight. However, a significant reduction in epididymal sperm parameters (number, viability, and mobility) with morphological abnormalities were observed in the BPS group compared to control. An increase of malondialdehyde (MDA) level accompanied by antioxidant defense alteration, particularly, in glutathione peroxidase activity, as well as a defective mitochondrial function were observed in testicular tissues of BPS treated rats.

More importantly, in histopathological diagnosis, BPS treatment induces hypo-spermatogenesis and alteration in Sertoli cells. In silico docking studies illustrated BPS binds with steroidogenic acute regulatory (StAR) protein thereby affecting the transport of cholesterol into mitochondria resulting in decreased steroidogenesis. These results reflect a reprotoxic effect of BPS would potentially lead to fertility reduction, in sexually maturity age. We highlighted that post-lactation exposure to BPS, equivalent in humans to the period covering childhood and adolescent stages, disrupt male reproduction function.

46. Telomere Length And Telomerase Behaviors During Gastrointestinal Cancer Progression In Tunisia

Mehrez Fatma1*, Bougatef Karim1.2, Bongiorni Silvia3, Delle Monache Elisa3, Arisi Ivan4.5, Proietti-De-Santis Luca3, Prantera Giorgio3, Zouiten Lilia6.7, Caputo Manuela3, Benammar Elgaaied Amel1.

1. University of Tunis El Manar, Faculty of Sciences of Tunis, LR05ES05 Laboratory of Genetics, Immunology and Human Pathology, 2092 Tunis, Tunisia
2. University of Tunis El Manar, Higher Institute of Nursing Sciences of Tunis, 1007 Tunis, Tunisia Université des Etudes de Tuscia, Département des sciences écologiques et biologiques, Viterbo, Italie.
3. Bioinformatics Facility European Brain Research Institute (EBRI) "Rita Levi-Montalcini", Viale Regina Elena 295, 00161 Roma, Italy
4. Institute of Translational Pharmacology National Research Council (CNR), Roma, Italy
5. University of Tunis El Manar, Faculty of Medicine of Tunis, Laboratory of Physiology, 1007 Tunis, Tunisia
6. La Rabta Hospital, Gastroenterology Department A, 1007 Tunis, Tunisia

Introduction: Telomere shortening has been supposed to be implicated in carcinogenesis process and other human diseases. This phenomenon can lead to a chromosomal instability, contributing to a cellular immortalization and tumor induction. A high telomerase activity was also detected in 80% of cancer tissues and its correlation with telomere length was proved in many studies.

Aim: We wanted to study the telomere length behavior during cancer progression among Tunisian patients suffering from digestive cancer and we tried to better understand the regulation of telomerase which still not yet well understood.

Methods: We measured the absolute telomere length in adjacent tumor and healthy tissue using Q-PCR. In addition, through the TCGA databases, we studied the expression of miRNAs which, according to the TargetScan, miRBase and miRTarBase databases, can target telomerase during tumor progression in digestive cancer.

Results and conclusion: We observed that the tumoral tissues had shorter telomeres among 29 patients (53.7%), longer telomeres among 23 patients (42.6%) and equal telomeres among 2 patients (3.7 %) compared to telomeres in adjacent healthy tissue. Interestingly we found also that telomere length fluctuates significantly according to cancer stage, with shorter telomeres in stage 1 and 3 compared to stages 2 and 4. Secondly we identified a set of miRNAs with a decreased expression from stage 1 to stage 2 and from stage 3 to stage 4 and a set of miRNAs with increased expression from stage 2 to stage 3 in colon, gastric and rectal cancer which explains the profile observed in the first results. This discovery is important and valuable for the identification of new therapeutic targets and new prognostic biomarkers stage dependent.

Keywords: Telomere length; qRT-PCR; digestive cancer; Telomerase; miRNA; stages.

47. Postoperative pneumonitis in bronchopulmonary cancer surgery: prevalence and risk factor

Fitouhi N1, Mabrouk k1, Ouerghi S1,Ben zid I1, Ben Amara K[2], Abdenadher M[2], Dridi A1, Merghli A[2], Mestiri T1

1. Anesthesiology and ICU Department- Abderrahmen Mami University Hospital, Ariana
2. thoracic cardiovascular surgery Department- Abderrahmen Mami University Hospital, Ariana

Introduction: Postoperative pneumonitis (POP) in thoracic oncologic surgery is a frequent complication with a morbidity and mortality that increases with age. This complication is related to many risk factors that have yet to be specifically defined in the elderly.

The aim of this study is to evaluate the incidence and risk factors of POP in older patients treated for bronchoPulmonary cancer (BPC).

Methods: This retrospective descriptive, comparative and analytical study focuses on 50 patients aged more than 65 years old diagnosed with BPC collected in the anesthesia and intensive care unit and who have a pulmonary resection surgery over a period of 6 months between October 2022 and April 2023.

Results: 50 patients were included in our study. The prevalence of POP was 28%. The average age was 70.7 (±5.89) with a sex ratio of 1.17. All patients had at least one co-morbidity. 38% of patients were smokers.

For the multivariate study, the predictors of PPO were COPD with the highest P value (p=0.076), an ASA score ≥ 3 with an adjusted OR of 14.426 [2.269-91.719] and obesity with an adjusted OR of obesity with an adjusted OR of 15.677 [2.453-100.202].

Conclusion: The risk of POP becomes high after BPC surgery and increases with age.

Other factors appear to favor POP such as COPD, obesity, ASA score ≥ 3 and preoperative use of corticosteroids. Prevention and control of co-morbidities remain the best treatment for POP.

48. Surgical management of Non-small cell lung cancer with chest wall involvement: predictors of morbidity and mortality

Besrour H1, Zairi S1, Abdennadher M1, Bouacida I1, Zribi H1, Ouerghi S2, Mestiri T2, Marghli A1.

1. Service de chirurgie thoracique Hôpital Abderrahmen Mami, Ariana. Faculté de médecine de Tunis - Université Tunis El Manar.
2. Service d'anesthésie réanimation. Hôpital Abderrahmen Mami, Ariana. Faculté de médecine de Tunis - Université Tunis El Manar.

Introduction: Non-small cell lung cancer (NSCLC) tumors with chest wall involvement are considered an advanced stage and account only for 5% of resectable lesions. Although surgery is considered the only effective treatment in NSCLC, resection in these cases is technically more difficult and the postoperative course is burdened with higher rates of complications. Total en-bloc resection of the lung and the chest wall involved structures is required, and may include one or multiple ribs, the diaphragm or the spine. The occurrence of complications in the post-operative course may be fatal in such cases. Our aim was to study the predictors of morbidity and mortality of such procedures.

Methods: We conducted a retrospective study about 69 patients operated on for NSCLC with chest wall involvement between January 2010 and December 2020.

Results: The mean age was 59.7 years. All patients were smokers with a median of 50 packets per year. Parenchymal resection was enlarged to involve: the ribs in 84%, the ribs and vertebrae in 12% and the diaphragm in 4% of the cases. Lobectomy was performed in 58 cases (84%), a pneumonectomy in 7 cases (10%) and a bilobectomy in 4 cases. The postoperative course was uneventful in 36 cases (52.2%). The drainage duration was statistically correlated with smoking intoxication (p = 0.008). The average age and pre-operative FEV1 were correlated with postoperative complications (respectively: p=0.026 and p= 0.046).
We found a significant association between smoking cessation and postoperative mortality (p=0.021).

Conclusion: Surgical resection of NSCLC remains the gold standard. However, in the case of chest wall involvement, sspecific rrespiratory preparation and smoking cessation are necessary before surgery, in order to avoid the high rates of morbidity and mortality.

49. The impact of travel distance on cancer stage at diagnosis for cancer: A systematic review

C.elattabi 1, khalis mohamed 2, Inge Huybrechts 3, Elodie FAURE 4,

1. university mohamed 6 of health sciences
2. International School of Public Health, Mohammed VI University of Health Sciences, Casablanca, Morocco
3. International Agency for Research on Cancer, Lyon, France
4. International Agency for Research on Cancer, Lyon, France. And CESP – Equipe Générations et Santé, UMRS 1018 : Inserm, Université Paris-Sud, Gustave Roussy, Villejuif, France

It is well known that patients with cancer must overcome many psychological, social, economic, and family barriers to obtain the diagnosis and treatment needed. In addition, the burden of travel from a patient's residence to his or her health care provider can be an important issue that can influence access to diagnosis .

The necessity for repeated visits for cancer diagnosis an outpatient or an inpatient basis makes distance an important issue with which the patient with cancer must manage during the disease course .

Several studies have documented that the travel burden (measured as the travel distance or travel time) and its relationship with delays in diagnosis and stage of cancer , and have shown mixed results with regards to direction of the association and statistical significance.

Objective: The purpose of this review is to synthesize the existing literature examining the relationship between travel distance to cancer screening services and cancer stage at diagnosis

Methods: Types of study to be included

There will be no language restrictions if a translation is available. There will be no restrictions according to the study design. Articles without abstract and articles whose full text is not available will be excluded. Studies where a proximity rather than the actual travel distance was given (for example: rural vs urban remote vs very remote areas) will be excluded. Condition or domain being studied distance to health care services that influence the stage of disease in patients participants with cancer (the distance between the patient's residence and the nearest health care services).

Participants/population: Eligible patients participants consisted of individuals diagnosed with the 10 cancer types mentioned in keywords

Intervention(s), exposure(s): Proximity to health services will be measured by travel distance or travel time from the patient's residence to health care services .

Comparator(s)/control: The comparator will also be proximity to hralth services : the study will be comparing compare whether living closer to health service is associated with primitive cancer stage at diagnosis.

Main outcome(s): All variables related to travel burden identified in all included studies and which negatively or positively influence the stage at cancer diagnosis for patients with cancer will be extracted and classified by categories.

Additional outcome(s): Characteristics of included studies: (Author, country, Year and country of publication, population, type of study, limits, sample size).

Data extraction (selection and coding): References will be exported into the reference manager Zotero in order to manage the duplicate results. Two reviewers will independently screen all titles and abstracts identified by the search for relevance to the review question according to the eligibility criteria by using the PRISMA Diagram flow for selection, and gather information such as: Characteristics of selected studies (Country / countries; Type of study; Description of the population; Type of cancer(s); Stage of cancer/ journey / treatment; Healthcare location(s); Patient study participant home location residence description; Proximity measure (e.g. travel time / distance) and calculation method; Statistical model) Any disagreements in the selection process will be resolved through consultation with a third reviewer

Strategy for data synthesis: A narrative synthesis will be conducted for all the included studies to analyze the relationships within and between studies.

key words: Cancer; Travel burden; cancer stage at diagnosis

50. Assessment of the quality of pathological reports of colorectal carcinoma in a Tunisian institution

Maysa Ben thayer, Imen Helal, Chaima Naffouti, Fatma Khanchel, Raweh Hedhli, Ehsen Ben Brahim, Raja Jouini, Achraf Chadly-Debbiche.

Department of pathology, Habib Thameur Hospital, Tunis, Tunisia.

Background: Colorectal carcinoma (CRC) is a major public health problem in Tunisia. Standardized pathological reports (SPR) are the key to provide pathological data required to the prognostic evaluation and optimal therapeutic management of patients. We aimed to evaluate the quality of pathological reports (PR) for colonic carcinomas (CC) and rectal carcinomas (RC) in our institution.

Methods: We retrospectively reviewed the PR of CC and RC diagnosed in our department from January 2016 to August 2020. We evaluated the quality of PR according to each pathological parameter's specific completeness (PSC), essential data score (EDS) and overall completeness (OS).

Results: We retrieved 149 CC and 79 RC's PR. All PR were narrative. EDS was 86.7% in CC and 83% in RC. The percentage of OC was 1.3% in CC and 0% in RC. Specimen type and histological type were specified in 100% of CC and RC PRs. Tumor location, grade of differentiation, state of resection margins, presence or absence of vascular emboli and perineural involvement were provided in over 90% of CC and RC PRs. pT was mentioned in 94% and 95% of CC and RC PRs respectively while pN was mentioned in 93.3% and 94% of CC and RC PRs respectively. The presence or absence of tumoral perforation was specified in 16.8% and 14% of the PRs of CC and RC respectively and the presence or absence of tumor deposits in 12.1% and 15% of the PRs of CC and RC respectively.

Conclusion: Our results were in accordance with those of the literature and underlined the incompleteness of narrative PRs and the need to introduce SPR for CRC. The widespread use of these SPR in our country would enable to comply with the international recommendations and to provide all the necessary data for patients' management and prognostic stratification.

51. Pneumonectomy: a rare curative resection for lung cancer in women

Sassi Olfa1,4 , Mahdi Abdennadher 1,4 , Zairi Sarra 1,4 ,Zribi Hazem 1,4 , Ben Masour Amani1,3 , Abdelkebir Amina1,4 Braham Emna2,4 , Adel Marghli1,4

1. Thoracic Surgery Department. Abderrahmen Mami Hospital. Ariana. Tunisia
2. Pathology Department. Abderrahmen Mami Hospital.Ariana.Tunisia
3. Pneumology Department (Pav C). Abderrahmen Mami Hospital. Ariana. Tunisia
4. University Tunis El Manar. Faculty Of Medecine. Ariana. Tunisia

Introduction: Pneumonectomy is indicated for central tumors with hilar involvement or locally advanced tumors if the patient's pulmonary reserves allow it. It is associated with more postoperative complications and higher mortality. The objective of our work is to report the cases of pneumonectomy as a curative treatment of lung cancers in women.

Methods: This retrospective and descriptive study focuses on 6 cases of lung cancer in women collected in the thoracic surgery department of CHU Abderrahmane Mami Ariana and who have pneumonectomy over a period of 7 years, between January 2015 and December 2021.

Results: We collected 6 women who underwent pneumonectomy for lung cancer. The average age: 47 years (22-60), 33% were young (age < 50 years). Active smoking: 17% and passive smoking: 50%. Dry cough was the most frequent clinical sign (67%). The most frequent radiological aspect: intra parenchymal opacities (83%). The thoracic CT scan in all patients showed a right tumor process in 33% and a left tumor process in 67%. It was a mass in 83% of cases and an intra parenchymal nodule in 17%. A bronchial fibroscopy in all patients. The diagnosis was confirmed by a bronchial biopsy: 50%. The most common histological type: adenocarcinoma (67%), followed by carcinoid (33%). The stage of the disease: early (I and IIa) in 33% and late in 67%. Lymph node involvement: 33%. Pneumonectomy was associated with lymph node dissection: 83%. The main approach was posterolateral thoracotomy: 83% with one case of exclusive video thoracoscopy. Adjuvant chemotherapy:67%, concomitant radio chemotherapy:17%. Postoperative follow-up was simple in 83%. One case of pneumonectomy cavity collection (early complication). Death rate: 50 %.

Conclusion: Pneumonectomy is curative treatment option chosen for locally advanced tumors for which lobectomy is impossible. Superinfection of the pneumonectomy cavity is the most frequent complication and death rate is high.

52. Cancer survival in Monastir (Tunisia) (2002-2014)

Amani Maatouk1, Imen Zemni1, Amal Gara1, Ghada Nasri1, Meriem Kacem1, I. Maatouk2, Wafa Dhouib1, Cyrine Bennasrallah1, Hela Abroug1, Menel Ben Fredj1, I. Bouanene1, A.Sriha Belguith1

1. Department of Preventive Medicine and Epidemiology, University Hospital Fattouma Bourguiba of Monastir, Tunisia
2. Department of medical intensive care unit

Background : Cancer is a major public health problem worldwide. In Tunisia, there are three regional population-based cancer registers, but they do not record cancer survival. To the best of our knowledge, there is no Tunisian population-based registry studies investigating cancer survival. The objective of our study was to describe cancer survival in Monastir (Tunisia).

Methods: We performed a cohort study including patients originating from Monastir diagnosed with cancer between 2002 and 2014. Data were collected from the Centre's Register and associated with data from the Regional Hospital Morbidity Register of Preventive Medicine and Epidemiology department of Monastir Hospital. Patients were followed until 2022 to determine death status. Joinpoint software was used to analyse the trends in 5-year cancer survival rates over time.

Results: In total, 9318 cancer cases were identified of whom 5741 were included for the survival analysis. The 5-year cancer survival rate was significantly higher in females than males (40.3% (95% CI : 38.7-41.8) Vs 55.2% (53.2-57.1); p<10-3). The lowest 5-year cancer survival rate was noted in subjects aged ≥ 65 years (35.3% (95% CI: 33.3-37.2)) and the highest one was found in the youngest age group 0-4 years (78.3 (95% CI: 71.2-85.3). The cancers with the highest 5-year survival rates among men were skin cancer (other than malignant melanoma) (64% (95% CI : 54.5-73.4)), prostate cancer (59.1% (95% CI :54.7-63.4)) and colon cancer (55.1% (95%CI : 47.7-62.4). Cancers with the highest 5-year survival rates among women were cervical cancer (70% (95% CI : 61.8-78.1), skin cancer (other than melanoma) (66.2% (95% CI : 55.1-77.2) and breast cancer (63.8% (95% CI :58.8-67.7)). Between 2002 and 2014, all cancers had stable trends in the 5-year survival rate except for lung cancer and pancreatic cancer in which significant increasing trends were noted (AAPC : 6.9% (95% CI: 0.1; 14.1, p=0.047)) and (AAPC : 12.1% (95% CI: 1; 24.4, p=0.036) respectively).

Conclusion: Our study has shown that the 5-year survival rates differs according to gender, age and cancer sites. These results can help target prevention efforts among population groups with lowest prognosis.

53. Incidence of cancer in Monastir (Tunisia) from 2002 to 2014

Amani Maatouk1, Imen Zemni1, Amal Gara1, Ghada Nasri1, Meriem Kacem1, I. Maatouk2, Cyrine Bennasrallah1, Wafa Dhouib1, Menel Ben Fredj1, Hela Abroug1, I. Bouanene1, A.Sriha Belguith1

1. Department of Preventive Medicine and Epidemiology, University Hospital Fattouma Bourguiba of Monastir, Tunisia
2. Department of medical intensive care unit

Background : Over the last decades, Tunisia has experienced an emergence of non-communicable diseases such as cancers. Cancer is a major public health problem due to its frequency, severity and cost. The objective of our study was to describe cancer incidence in Monastir (Tunisia).

Methods: We performed a cohort study including patients originating from monastir diagnosed with cancer between 2002 and 2014. Data were collected from the Centre's Register and associated with data from the Regional Hospital Morbidity Register of Preventive Medicine and Epidemiology department of Monastir Hospital. Cancer sites were classified according to the International Statistical Classification of Diseases (ICD-10).

Results: From 2002 to 2014, there were 9318 new cancer cases. A male predominance was noted (57.2%). Sex ratio was 1.33. The most represented age group was between 40 and 64 years (46.9%) followed by ≥65 years (36.3%). The most frequent cancer all sexes combined was lung cancer (14.7%), followed by breast cancer (12.1%), bladder cancer (8%), colon cancer (6.4%), rectum cancer (6.2%), and prostate cancer (5.9%). Among males, the most frequent cancer sites were lung cancer (25,2%), prostate cancer (13.4%), bladder cancer (12.1%), and colorectal cancer (10.3%). Among females, the most frequent cancer sites were breast cancer (31.3%), colorectal cancer (11.9%), uterine cervix (5.9%), and lung cancer (4.7%).

Conclusion: In our study, the number of cancer new cases was high. This highlights the need for a widespread implementation of cancer control programs such as healthy lifestyle, education, screening, and early detection.

54. Identification of BRCA1 and RAD50 Mutations in Tunisian Breast Patients: Impact on the genetic screening and clinical management

Najah Mighri 1, Yosr Hamdi1 Maroua Boujemaa 1 Houcemeddine Othman2, Sonia Ben Nasr 1,3, Houda El Benna 4 Nesrine Mejri 1,4, Soumaya Labidi 1,4, Jihen Ayari 1,4, Olfa Jaidene5, Hanen Bouaziz 5, Mariem Ben Rekaya 1, Ridha M'rad6, Abderrazek Haddaoui 3, Khaled Rahal 3, Hamouda Boussen 1,4, Samir Boubaker 1, Sonia Abdelhak 1

1. Laboratory of Biomedical Genomics and Oncogenetics, LR16IPT05, Institut Pasteur de Tunis, University of Tunis El Manar, Tunis, Tunisia.
2. Sydney Brenner Institute for Molecular Bioscience, University of the Witwatersrand, Johannesburg, South Africa.
3. The Military Hospital of Tunis, Department of Medical Oncology, Tunis, Tunisia.
4. Department of Medical Oncology, Abderrahmane Mami Hospital, Ariana, Tunisia.
5. Department of Carcinological Surgery, Salah Azaiez Institute, Tunis, Tunisia.
6. Service des Maladies Congénitales et Héréditaires, Hôpital Charles Nicolle, Tunis, Tunisia.

Background: Deleterious mutations on BRCA1/2 genes are known to confer high risk of developing breast and ovarian cancers. The identification of these mutations not only helped in selecting high risk individuals that need appropriate prevention approaches but also led to the development of the PARP-inhibitors targeted therapy.

Aim: This study aims to assess the prevalence of the most frequent BRCA1 mutation in Tunisia, c.211dupA, and provide evidence of its common origin as well as its clinicopathological characteristics. We also aimed to identify additional actionable variants using classical and next generation sequencing technologies (NGS) which would allow to implement cost-effective genetic testing in limited resource countries.

Patients and methods: 112 breast cancer families were screened for c.211dupA. A set of patients that do not carry this mutation were investigated using NGS. Haplotype analysis was performed to assess the founder effect and to estimate the age of this mutation. Correlations between genetic and clinical data were also performed.

Results: The c.211dupA mutation was identified in 8 carriers and a novel private BRCA1 mutation, c.2418dupA, was identified in one carrier. Both mutations are likely specific to North-Eastern Tunisia. Haplotype analysis supported the founder effect of c.211dupA and showed its recent origin. Phenotype-genotype correlation showed that both BRCA1 mutations seem to be associated with a severe phenotype. Whole Exome Sequencing analysis of a BRCA negative family revealed a Variant of Unknown Significance, c.3647C >G on RAD50. Molecular modeling showed that this variant could be classified as deleterious as it is responsible for destabilizing the RAD50 protein structure. We explored also a family with discordant monozygotic twins. The analysis showed that the difference between the twins is mainly observed in hormonal intake and comorbidity.

Conclusion: This study allowed us to better understand the breast cancer genetic architecture in Tunisia. We recommend the prioritization of BRCA1-c.211dupA screening in high-risk breast cancer families originating from the North-East of Tunisia. We also highlighted the importance of NGS in detecting novel mutations, such as RAD50-c.3647C > G.

Keywords: BRCA1-founder mutation; RAD50; breast cancer; genetic screening; next-generation sequencing; novel mutation.

55. RAS-BRAF mutations screening in a Tunisian series of colorectal cancer

Hayet Douik1,2, Ghada Sahraoui1,3, Ines Nasri1, Raoudha Doghri1,3, Dorra Ben Ghezala1, Lamia Charfi1,3, Karima Mrad1,3

1. Pathology department, Salah Azaiz institute, Tunis, Tunisia
2. LR99ES10 Human Genetic Laboratory, University Tunis EL Manar, Tunis Faculty of Medicine, Tunisia
3. LR21SP01 Research Laboratory, University Tunis EL Manar, Salah Azaiz institute, Tunis, Tunisia

Background & Aim: Target therapy in metastatic colorectal cancer needs the determination of KRAS, NRAS, and BRAF mutation status to identify patients resistant to anti-EGFR treatment. Herein we described the clinical-genetic correlations between colorectal patients and RAS-BRAF mutations in a series of 1000 Tunisian patients.

Method: Patients were recruited by "Merck program" team from public and private Tunisian medical institution and RAS-BRAF mutations 'screening was realized in Pathology Department of Salah Azaiz Institute by the automatic Idylla technology.

Results: Our results showed 95% of valid results for both KRAS and NRAS-BRAF test: 58.5% of patients presented a mutation in RAS and/or BRAF gene (50.5% in KRAS; 4.3% NRAS; 0.001% for NRAS-BRAF and 3.7 % for BRAF).

Detailed distribution of KRAS mutations showed a high rate of mutation in codon 12 (70%), more notably for G12V mutation, whereas the half of NRAS gene mutations concerned codon 61. Moreover, we noted that MSI status was more frequent on KRAS mutated patients compared to no-mutated, whereas all NRAS* or BRAF* patient presented a proficient mismatch repair proteins. Analysis on the molecular profile of KRAS, NRAS,and BRAF mutations' distribution between metastatic colorectal cancer and non-metastatic ones showed that NRAS and BRAF mutations were associated with metastasis advent; moreover, the G13D mutation of KRAS was correlated to a better prognosis than mutations in codon 12 of KRAS.

Conclusion: Our study highlighted differential mutations 'distribution in KRAS, NRAS and BRAF genes regarding MSI and metastasis status.

56. Reliability of breast cytology: Fine-needle aspiration and nipple discharge

Houissa I2, Kamoun S1, Sakhri S2 ,Houcine Y1, Ben Othman N1, Beltaief S2, Loukil Y1, Zehani F1, Zouebi L1, Driss M1

1. pathology department, Salah Azaiez Institute Tunisia
2. surgical oncology department Salah Azaiez Institute

Introduction: Fine-needle aspiration (FNA) and nipple discharge (ND) examination are safe and reliable tests for the investigation of breast disease. The purpose of this study is to evaluate the accuracy of FNA/ND smears when compared with corresponding pathological diagnosis.

Methods: This study enrolled 86 breast cytological examination including FNA smears and ND specimen along with their corresponding surgical pathology in Salah Azaiez Institute during 2 years.

Results: Median age was 49.5years old. 59 were nipple discharge smears and 27 were FNA smears. Patients subsequently underwent either a duct galactophorectomy (49) or lumpectomy (37). The cytological diagnosis was benign, suspicious, malignant, non-diagnostic (acellular or non-interpretable) and inflammatory in 43%, 20.9%, 8.1%, 24.4% and 3.5% respectively.

The pathological diagnosis included 25 ductal carcinomas (14cases of papillary ductal carcinoma in situ and 11 invasive carcinomas), 2 cases of Paget disease, 31 galactophoritis associated with fibrocystic disease in 13 cases and 30 other benign lesions including fibrocystic change, mastopathy, intra-ductal papilloma and fibroadenoma. There was no statistically significant correlation between age and pathological diagnosis.

All diagnoses made as malignant were concordant in the final histological specimen. Meanwhile of the 18 suspicious cases, 10 patients were malignant. False suspicious specimen included galactophoritis and complex mastopathy equally. The sensitivity and sensibility of the cytology by FNA would be 90% and 94% respectively while it would be 43.75% and 84% respectively for cytology of ND.

Conclusion: Based on our study it is felt that cytological examination of FNA/ND smears seems to be a reasonably specific method in detecting malignant lesions and might be useful in guidance to clinicians for appropriate management.

57. Stress And Coping Strategies Among Parents Of Children With Cancer

Rihab ben Jaafer1, Nouha Ammar1, Imene chabchoub1, Asma Ammar2, Nihel Omri2, Olfa Ezzi2, Balsem Jdidi3, Mansour Njah2, Faten Ezzairi1, Slim ben Ahmed1

1. Medical oncology department, university hospital Faraht Hached, Sousse, Tunisia
2. Hospital Hygiene Department, university hospital Faraht Hached, Sousse, Tunisia
3. Faculty of medicine of Sousse, Tunisia

Background and aims: Childhood cancer is still a psychological and existential challenge. Both parents and children are affected by the psychological stress associated with childhood cancer.

Research on parental stress and coping strategies in pediatric oncology care in developing countries such as Tunisia is scarce.

We aimed to determine the level of perceived stress, coping strategies and association between these concepts among parents of children with cancer.

Methods: A cross sectional study was conducted in the pediatric oncology sector in a Tunisian university hospital, from April to September 2022. We included parents of children and adolescents with cancer, who were at distance of at least 02 month from diagnosis and at most 02 year s after the end of treatment.

Coping strategies and perceived stress were assessed using respectively the Brief COPE Scale and perceived stress scale (PSS). Association between coping strategies and PSS score was tested using the spearman correlation test (expressed by the Rho coefficient: rs).

Results: A total of 65 parents were included with mean age of 37.9 years ±7.42. Most parents were unemployed or daily workers (64.6%). The most adopted strategies by parents were, in descending order with mean scores±SD: Religion (7.2±1.2), planning(6.8±1.1), acceptance(6.5±1.3), active coping(6.3±1.3), seeking instrumental support and emotional support(5.96±1.6), positive reinterpretation(4.9±1.5), denial(4.2±1.9), expression of feelings(4.4±1.0), blame(4.0±1.8), self-distraction(4.0±1.3), humor(2.6±0.8), behavioral Disengagement(2.6±1.2) and substance use(2.2±0.5). PSS mean score was 20.8± 6.7. Moderate level of stress was observed in 66.2% (n=43).

The significant correlations ($p < 0.05$) between the total perceived stress score and the coping strategies are as follows: Positive reinterpretation (rs=-0,33;p=0.006), acceptance (rs= -0,46 ;p<10-3) and denial (rs=0,30 ;p=0.009).

Conclusion: Parents of children diagnosed with cancer are profoundly affected by their child's diagnosis. This study identified several sources of stress and strategies used to cope with stress by Tunisian parents of children with cancer.

58. Impact of childhood cancer on family functioning: evidence from Tunisia

Rihab ben Jaafer 1 ,Nouha Ammar1 , Imene chabchoub1 , Asma Ammar 2 , NihelOmri2, SouhirChelly2, BalsemJdidi3, Mansour Njah2, FatenEzzairi1, Slim ben Ahmed 1

1. Medical oncology department, university hospital FarahtHached, Sousse, Tunisia
2. Hospital Hygiene Department, university hospital FarahtHached, Sousse, Tunisia
3. Faculty of medicine of Sousse, Tunisia

Background and aims: The experience of childhood cancer (CC) poses many challenges to the functioning of families. Even off-treatment, there seems to be some long-term disruptions. Information on the impact of CCon the family is scarce in Tunisia. Thus, the study aimed to assess the impact of CC on Tunisian families and its association with the families socio-demographic covariables, and patients' clinical factors.

Methods: We conducted a cross-sectional study including parents of children with cancer diagnosed and treated in pediatric oncology department at FarhatHached hospital (from April to September 2022).We used The PedsQL Family Impact Scale providing summary parent Health related Quality of Life score (HRQOL): (physical, emotional, social, cognitive, worry, communication), summary family functioning (FF) score for daily activities and for relationships and total peds QL score (higher score indicate better FF) . Scores range from 0 to 100. Mean total pedsQL score was compared according to different covariables using t test of student or test of correlation.

Results: A total of 65 parents were included with mean age of 37.9 years ±7.42. Mean total PedsQL score, FF score and HRQOL were respectively 53.6±20.7, 59.0 ± 22.8 and 53.6±20.7. The most altered dimensions of the PedsQL score were: Worry, physical health and family functioning. The following factors were significantly associated with a better FF:the post-treatment stage (p=0.005), number of children ≥3 (p= 0.04) and a better socio-economic level (p<10-3). Age of the child was not significantly correlated with the PedsQL score. The correlation between the duration of the disease and the PedsQL in this sample was not significant (r=0.11, p= 0.37)

Conclusion: Parents of children suffering from cancer report numerous disturbances in their family functioning. The identification of factors associated to these problems should translate into specific interventions, thus creating support for the families of children with cancer.

59. A reliable method to detect microsatellite instability in colorectal cancer by next-generation sequencing: case report

Maarouf Fatima1, Tazzite Amal2,3, Dehbi Hind1,2

1- Laboratory of Medical Genetics, Ibn Rochd University Hospital, Casablanca, Morocco
2- Laboratory of Cellular and Molecular Pathology, Faculty of Medicine and Pharmacy of Casablanca, Hassan II University, Casablanca, Morocco.
3- The Higher Institute of Nursing Professions and Health Techniques in Casablanca, Morocco.

Colorectal cancer (CRC) is the second most common cancer in France, affecting both genders. Target genes are grouped into two categories: oncogenes (KRAS2) and tumor suppressor genes (APC, TP53, and DCC). Three major types of instabilities can be distinguished: chromosomal instability (LOH), microsatellite instability (MSI), and the CpG island methylator phenotype (CIMP). Each pathway leads to the same outcome, cancer, by altering a set of different genes that are specific to the pathway but whose proteins interact with each other.

Through the deep sequencing depth of next-generation sequencing (NGS), which reveals known or novel mutations and new therapeutic targets, two mutations, KRAS and PIK3CA, were identified in the tumor of a 62-year-old man with high tumor markers, liver and bone metastases, and a diagnosis of CRC. He was referred for genetic theranostic and prognostic consultation. A mutated RAS profile indicates resistance to anti-EGF receptor treatment, such as cetuximab, and contraindicates such treatment. Therefore, among stage 2 and 3 CRC with microsatellite instability, only those without a BRAF mutation, as in our index case, have a good prognosis, indicating the need for adjuvant chemotherapy.

Recent advances in genotyping and sequencing technologies have provided powerful tools for exploring the genetic basis of CRC, enabling better prognosis determination and modification of chemotherapy recommendations.

Keywords : Colorectal cancer (CRC), sporadic colorectal cancers (SCRC), molecular genetics, next-generation sequencing.

60. Quality of Life Among metastatic Cancer Patients on Chemotherapy in Tunisia

Rihab ben Jaafer 1 ,Rym Zanzouri1 , Imtinen Belaid1 , FatenEzzairi1, Slim ben Ahmed 1

1; Medical oncology department, university hospital FarahtHached, Sousse, Tunisia

Introduction: Metastatic cancer has historically been considered fatal, the chief therapeutic goal in is prolongation of survival with good quality of life. Much of management is focused upon palliation and symptom management. Our purpose is to evaluate quality of life in metastatic cancer patients on chemotherapy in Tunisia.

Methods: A descriptive cross-sectional study carried out with metastatic cancer patients admitted for chemotherapy at the oncology department of the University Hospital Farhat Hached, Sousse during a period of 1 month. Demographic profile, clinical history, performance status by Eastern Cooperative Oncology Group performance scale, nutritional status assessment by body mass index (BMI) and weight loss percentage were collected. The variable pain was measured through the Visual Analogue Scale (VAS).The quality of life was assessed using the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ-C30)

Results: A total of 62 patients were included in this study, 28 females and 34 males. The average age was 55.3 [30-73]. The majority (64.5%) were married. 66.12% had high education levels (complete high school or graduate studies). 17.74% of patients were working during treatment.66.12% patients were receiving first-line chemotherapy. Grade 3-4 toxicities were found in 25% of cases. 77.41% patients complained of pain. The mean pain level was 4.93±1.74 [3-9]. 56.25% patients receiving step 2 analgesics. Mean performance status was 1.62 ± 0.6 [0-3]. Weight loss>10% was found in 33.87% of cases and 19.35% were underweight.

Global quality of life score was 64.75 ± 12.98 [41-94]. Among the functional scales, role Functioning exhibited the highest score a t63.91 ± 22.53, while Cognitive Functioning had the lowest score at40.72±20.85 .The mean score in the symptom scale was highest for 'Fatigue' 60.34±19.12 and 'Pain' 58.66±21.42. Associations between quality of life and age, marital status, educationlevel and work were not statistically significant. There was a significant correlation between ECOG classification, weight loss percentage and global quality of life ($p<0.0001$). The score of QLQ-C30 positively correlated with the presence of pain ($p=0.007$) and VAS ($p=0.001$).

Conclusion: This study revealed that metastatic cancer patients experience many symptoms which affect their quality of life. The management of cancer pain is a critical issue in the care of patients with cancer.. The main issues are management of symptoms and need to use strategies that will empower the patients to have a better sense of control over their illness and treatment.

61. Oncological risk in the case of mosaic trisomy 8 discovered during genetic infertility test

Maarouf F1,2, Halila M4 , Gaaloul N2, Bennour A3, Sennana H 2,3, Ali SAAD2,3, Mougou-Zrelli S 2,3 , Ibala-Romdhane S2,3

1. Laboratory of MedicalGenetics, Ibn Rochd University Hospital, Casablanca, Morocco.
2. Departement of Genetic, CHU Farhat Hached, Sousse, Tunisia
3. Ibn El Jazzar Faculty of Medicine Sousse, Tunisia
4. Urologist-Sexologist, Monastir, Tunisia.

Constitutional mosaic trisomy 8 (CT8M) is a rare chromosomal anomaly, resulting from a post-zygotic event or a meiotic non-disjunction. It is observed in a variety of disorders, both constitutional and acquired. CT8M increases the risk of developing myelodysplasia, acute myeloid leukemia and Wilms' disease. Here we report a case of constitutional aneuploidy, not only for genetic counseling purposes, but also to investigate and understand the mechanisms by which CT8M influences cancer initiation and progression, and to discuss the importance of cancer surveillance. We present the case of a 34-year-old patient who was admitted to the Genetic Department of Farhat Hachad Hospital in Sousse for genetic infertility test.

On clinical examination, the patient presented with characteristic facial dysmorphia, a history of urogenital malformation and school difficulties suggesting an intellectual disability. Scrotal ultrasound showed small testes, while spermogram revealed non-obstructive azoospermia associated with hormonal imbalance. Constitutional karyotype and FISH using X and 8 centromeric probe revealed a mosaic trisomy 8 combined with mosaic sex chromosome aneuploidy. This result was confirmed by FISH: (mention the correct formula as in the medical report) with [48,XXY,+8 (79.3%), 47,XY,+8 (10.3%) and 47,XXY (10.3%) respectively]. .

CT8M should be considered a sufficiently powerful tumor marker for the diagnosis of hematologic malignancies, highlighting the importance of close monitoring. Consequently, for our patient, in addition to the fertility issue, management should be multidisciplinary, and genetic counseling should be offered to parents and patients. Trisomy 8 affects genes located on other chromosomes (the gene dosage effect), which could increase the risk of cancer observed in this syndrome. Interestingly, trisomy 8-positive cells also exhibited a general depletion of hydroxymethylation and global hypomethylation of gene-poor regions on chromosome 8. This novel discovery may be associated with a general mechanism for chromatin processing on other additional chromosomes.

Keywords: Constitutional mosaic trisomy 8 (CT8M); Myelodysplasia; Acute myeloid leukemia; Wilms' disease.

62. Idiopathic multicentric Castleman’s disease and adult-onset Still's disease: Overlap or mimic

Aisha Salem Alhani1(aishaalhany@gmail.com), Maarouf Fatima4, Abdulfattah Turki1,3, youssif swaisi1,3, Abdallah jebril1,3, Mohamed Ahmed Elfagieh2,3

1. Hematology _oncology department, National Cancer Institute Misurata, Libya.
2. Surgical oncology department, National Cancer Institute Misurata, Libya. General director for the national cancer institute.
3. Misurata university, medical faculty.
4. Laboratory of Medical Genetics, Ibn Rochd University Hospital, Casablanca, Morocco.

Castleman's disease (MCD) is a rare lymphoproliferative disorder having two types of presentation : the localized and the multicentric form. MCD typically presents with constitutional symptoms, generalized peripheral lymphadenopathy, hepatosplenomegaly and increase markers of inflammation. Conversely, Adult-onset Still's disease (AOSD) represents yet another uncommon inflammatory disorder, the underlying cause of which remains elusive.

We reported the case of a 23-year-old patient who presented acutely with symmetric, non-erosive, and non-deforming polyarthritis affecting the ankles, knees, and small joints of the hands, associated with intermittent fever, night sweats, lower limb edema, and a general deterioration of health. Laboratory analyses revealed anemia, thrombocytopenia, elevated levels of serum ferritin and LDH, as well as increased erythrocyte sedimentation rate and C-reactive protein. Liver and kidney functions were within normal limits. Autoantibody profiles, including ANA, anti-DNA, anti-Sm, anticardiolipin antibodies (APL), and rheumatoid factor (RF), were all negative. Bone marrow analysis indicated active proliferation, and the immunophenotypic marker was negative. A CT scan showed hepatosplenomegaly. Initially, the diagnosis of Adult-Onset Still's Disease (AOSD) was considered, and the patient was treated with corticosteroids. Although she responded well to treatment, the fever persisted. One year later, abdominal lymph nodes were observed, and a lymph node biopsy confirmed histological findings consistent with Castleman's disease. However, she underwent chemotherapy as part of her treatment plan.

AOSD doesn't have a specific diagnostic test ; instead, diagnosis depends on recognizing clinical and laboratory signs. It's essential to exclude infectious diseases, other rheumatic disorders, and cancers during the diagnostic phase. When evaluating patients suspected of having AOSD, it's important to also consider Castleman's disease. Performing an early biopsy can help ensure an accurate diagnosis and prevent the possibility of misdiagnosis and inappropriate treatment, even though Castleman's disease is relatively rare.

Keyword : Castleman's disease (MCD), Adult-onset Still's disease (AOSD).

63. Breast cancer associated with inherited mutations in BRCA2 in a Moroccan family

Maarouf Fatima 1, Tazzite Amal 2,3 , Dehbi Hind 1,2

1- Laboratory of Medical Genetics, Ibn Rochd University Hospital, Casablanca, Morocco
2- Laboratory of Cellular and Molecular Pathology, Faculty of Medicine and Pharmacy of Casablanca, Hassan II University, Casablanca, Morocco.
3- The Higher Institute of Nursing Professions and Health Techniques in Casablanca, Morocco.

Most cases of hereditary breast cancer are linked to inherited mutations in the BRCA1 or BRCA2 genes. These genes play crucial roles in various essential cellular functions, including DNA damage recognition, DNA repair, and transcriptional control. Mutations affecting genes involved in homology-directed repair (HDR) have significant implications for both future cancer risk and treatment options for patients. BRCA2, in particular, is a vital protein responsible for facilitating RAD51 loading onto resected DNA breaks, a critical step in HDR.

BRCA1 and BRCA2 are the primary tumor suppressor genes associated with breast cancer susceptibility, and genetic testing has become instrumental in assessing the risk of hereditary breast cancer. The challenge lies in detecting numerous rare variants found in these large protein-coding genes, making comprehensive sequencing using traditional Sanger methods difficult. To address this, we conducted a comprehensive next-generation sequencing (NGS) analysis, examining the entire coding regions of BRCA1 and BRCA2 in a breast cancer patient who shares similar symptoms and genetic mutation with her mother. The NGS analysis successfully identified a deleterious heterozygous mutation in the BRCA2 gene, known as c.3381del p.(Phe1127fs), underscoring the importance of NGS-based screening for BRCA1 and BRCA2 mutations in clinical diagnostics.

The identification of BRCA genes associated with breast cancer has revolutionized the future of precision medicine, empowering patients to make informed decisions to manage and reduce cancer risks effectively.

Keywords: BRCA2 genes, Breast cancer, NGS, inherited mutations.

64. Familial medullary thyroid carcinoma: A rare germline mutation in the RET protooncogene

Maarouf Fatima1(maaroufcadem@gmail.com), Tazzite Amal2,3, Dehbi Hind1,2

1- Laboratory of Medical Genetics, Ibn Rochd University Hospital, Casablanca, Morocco
2- Laboratory of Cellular and Molecular Pathology, Faculty of Medicine and Pharmacy of Casablanca, Hassan II University, Casablanca, Morocco.
3- The Higher Institute of Nursing Professions and Health Techniques in Casablanca, Morocco.

Medullary thyroid carcinoma (MTC) is one of the most aggressive forms of thyroid cancer, accounting for up to 10% of all thyroid cancers. Approximately 25% of MTC cases are hereditary. Gain of function mutations in the RET proto-oncogene are reponsibles for the different dominantly inherited MTC syndromes namely multiple endocrine neoplasia type 2A (MEN 2A), type 2B (MEN 2B), and familial medullary thyroid carcinoma (FMTC). The RET proto-oncogene encodes a transmembrane receptor tyrosine kinase that regulates a complex network of signal transduction pathways during the development, survival, proliferation, differentiation, and migration of the enteric nervous system progenitor cells. Gain of function mutations in this gene have been extensively implicated in MTC development. Thereby, genetic screening of RET mutations allows early detection of the disease and the possibility of prophylactic thyroidectomy for relatives. In this study, we describe a familial case of medullary thyroid carcinoma with the c.1597G>T (p.Gly533Cys) mutation in the RET gene and we emphasize the importance of RET genetic screening for early diagnosis and management of patients with FMTC.

Keywords : Medullary thyroid carcinoma ; RET proto-oncogene ; Familial medullary thyroid carcinoma (FMTC).

65. Synchronous and metachronous of multiple primary malignancies in the same patient at National Cancer Institute Misurata, 2022 : A rare case report

Aisha Salem Alhani1(aishaalhany@gmail.com), Maarouf Fatima4, Abdulfattah Turki1,3, Abdallah jebril1,3, youssif swaisi1,3, Mohamed Ahmed Elfagieh2,3

1- Hematology _oncology department, National Cancer Institute Misurata, Libya.
2- Surgical oncology department, National Cancer Institute Misurata, Libya. General director for the national cancer institute.
3- Misurata university, medical faculty.
4- Laboratory of Medical Genetics, Ibn Rochd University Hospital, Casablanca, Morocco.

Synchronous and metchronous accurence of multiple primary cancer in same patient is very rare but due to development of new diagnostic technique and rise in long _term survival of cancer, reports of multiple primary cancer have gradually increased. Multiple primary cancers are classified according to the time of appearance as synchronous, those occurred within six months of the diagnosis of the previous neoplasm, and metachronous, those occurred more than six months apart.

We report the case of a 52-year-old woman who was being treated for infiltrating ductal carcinoma. The patient underwent a right mastectomy and lymph node dissection. The tumor tested positive for estrogen receptors (ER) and progesterone receptors (PR) and was negative for HER2 receptor. Two months later, the patient complained of heavy menstrual bleeding, which revealed endometrial adenocarcinoma. However, a total hysterectomy with bilateral salpingo-oophorectomy was performed, along with chemotherapy. Seven months later, the patient presented with a right axillary mass, which histopathological analysis revealed to be small lymphocytic lymphoma, positive for CD5 and CD23, negative for CD3 and cyclin D1, with no evidence of breast cancer. She received chemotherapy and was treated with rituximab for 2 years. After 18 months, she developed chronic lymphocytic leukemia. She received chemotherapy with bendamustine and rituximab for 6 cycles. The last PET scan showed no metabolic activity. Currently, the patient is stable.

The management of this condition represents an interesting clinical scenario, The choice of which tumor to treat initially and how to schedule additional treatments based on each patient's tumor risk are also essential considerations. This process must be involves multidisciplinary physician team to Ensure favorable outcomes.

Keywords : Multiple primary cancer, Breast cancer, Endometrial cancer, small lymphocytic lymphoma, chronic lymphocytic leukemia.

66. Ovarian Torsion: a rare manifestation of ovarian cancer

Ben Slamia W[1],Miladi[1] I, Zaouali F[2], Zoukar O[1], Falah R[1]

1: Gynecology department of the Maternity and Neonatology Centre in Monastir
2: Department of Family Medicine, University of Monastir

Background: Mucinous adenocarcinoma is a rare epithelial tumor of the ovary. Patients often have pelvic pain, abdominal mass or gastrointestinal disorders. Prognostic factors include the early stage, the "expansive" form, the well differentiated character, the optimal cytoreduction and especially, the undisturbed character of the tumor. We report the case of a patient admitted for management of an ovarian torsion revealing a diagnosis of malignant mucinous tumor of the ovary.

Clinical Observation: This is a 23-year-old girl with no notable pathological history who presented for paroxysmal hypogastric pain for 4 days with massive 20cm solid cystic mass on ultrasound. An Ovarian torsion was suspected. A laparoscopy was performed objectifying the torsion with the presence of an ovarian mass. Detonation followed by unilateral oophorectomy was performed. The pathologist's examination objectified a mature cystic teratoma with a mucinous intestinal tumor with outbreaks of invasive carcinoma. It was the only malignant tumor (stage I) found among 60 cases of torsions over a period of 5 years from 01/01/2017 to 31/01/2022 at the gynaecology department of the Monastir Maternity and Neonatal Centre (CMNM). The course of action consisted of radical surgery and adjuvant chemotherapy with good clinical and radiological evolution.

Interest of the observation: Once the diagnosis of torsion is suspected on the clinical arguments whose intense acute pain dominates the picture, and on the presence of mass at the clinical examination and/or ultrasound, a laparoscopy must be performed in emergency. It apply to confirm the torsion, to specify the severity of the lesions and to ensure possible treatment. We insist at the crucial importance of early diagnosis of ovarian torsion and believe that the rate of radical treatment could be lowered, which will be limited only for suspicious masses of malignancy or in postmenopausal women.

67. Correlation between compassion fatigue and affective and cognitive empathy among Tunisian oncology healthcare professionals

Abidi N[1],Ezzi O[2],Ammar N[1], Ammar A[2], Chelly S2, Chabchoub I[1], Ben Fatma L[1], Ben Ahmed S1, Mahjoub M2, Mansour N2
1-Service of carcinological medicine_CHU Farhat Hached Sousse
2- Infection Control Department_CHU Farhat Hached Sousse

Introduction: Research is clear regarding the importance of empathy in the development of effective relationships between care providers and clients, and in successful health care provision. Although empathy plays an important role in making human interactions work, it can also lead to negative consequences as a result of the costs involved for the one who empathizes. The aim of this study was to investigate the relationship between empathy and quality of working life for staff working in oncology departments.
Materials and methods: A descriptive, cross-sectional, multicenter study was carried out among Tunisian oncology healthcare staff working in several departments caring for cancer patients (Carcinology Sousse, Monastir, Sfax, Institut Salah Azaiez and Ariana).
The instrument used to measure CF is the Professional Quality of Life (PRO-QOL version5), which is made up of 3 subscales: Compassion Satisfaction (CS), Burnout (BO) and Secondary Traumatic Stress (STS). The instrument used to measure empathy is the 31-item Cognitive and Affective Empathy Questionnaire (CAEQ). The QCAE is composed of five latent components of empathy: Online simulation, Perspective taking, Proximal responsivity, Peripheral responsivity and Emotional contagion. The correlation between the different dimensions is based on Pearson's coefficient (r).
Results: A total of 120 healthcare workers completed the questionnaire. The mean of affective empathy score was 20±4,49 and the mean of cognitive empathy score was 28±6,53. Affective Empathy was positively correlated with BO (r=0.364; p=10-3) and STS (r=0.429; p=10-3). Cognitive empathy was positively correlated with SC (r=0.232; p=0.012) and STS (r=0.220; p=0.01)
Conclusion: Being in contact with frail and end-of-life patients and developing feelings of empathy increases the risk of developing compassion fatigue among oncology department staff. Understanding the different links between compassion fatigue and empathy developed by oncology healthcare professionals will be necessary for prevention.

68. Correlation between secondary traumatic stress and compassion fatigue in medical carcinology departments

Ezzi O1, Abidi N2, Ammar N2, Ammar A1, Chelly S1, Chabchoub I2, Ben Fatma L2, Ben Ahmed S2, Mahjoub M1, Mansour N1
1- Infection Control Department_CHU Farhat Hached Sousse
2- Service of carcinological medicine_CHU Farhat Hached Sousse

Introduction: Healthcare professionals working in carcinology departments are, by virtue of their professions, particularly exposed to the most fragile patients, which can make them vulnerable to compassion fatigue and susceptible to suffering from it.
The aim of this study was to investigate the relationship between secondary traumatic stress and compassion fatigue in oncology staff.
Materials and methods: A descriptive, cross-sectional, multicenter study was carried out among oncology healthcare professionals in several Tunisian departments caring for cancer patients (Carcinology Sousse, Monastir, Sfax, Institut Salah Azaiez and Ariana).
The instrument used to measure CF was the Professional Quality of Life (PRO-QOL version 5), which is composed of 3 subscales: Compassion Satisfaction (CS), Burnout (BO) and Secondary Traumatic Stress (STS). The instrument used to measure secondary traumatic stress (Secondary Traumatic Stress Scale (STSS)) was the 17-item instrument designed to measure intrusion, avoidance, and hypervigilance symptoms associated with indirect exposure to traumatic events via one's professional relationships with traumatized patients.
Correlation between the different dimensions was based on pearson's coefficient (r).
Results: A total of 120 healthcare workers completed the questionnaire. The mean STSS score was 57.33±3.06. Results are presented according to 3 subscales: intrusion, avoidance and hypervigilance. STSS was negatively correlated with SC with a pearson coefficient r=-0.378 and a highly significant p at 10-3. STSS was positively correlated with BO and STS the r= 0.732 and r=0.739respectively (p=10-3).
Conclusion: Secondary Traumatic Stress, which results from the interaction between environmental demands and the person's capacities, and which these professionals experience, can degrade the person's well-being if it exceeds his or her capacities, as the effect of frequent contact with a suffering or traumatizing discourse becomes increasingly fragile. Learning to detect it in staff will therefore be essential to its successful prevention.

69. Compassion fatigue in Tunisian oncology healthcare workers: Results of a multicenter study

Abidi N[1], Ezzi O2,Ammar N[1], Ammar A[2], Chelly S2, Chabchoub I[1], Ben Fatma L[1], Ben Ahmed S1, Mahjoub M2, Mansour N2

1-Service of carcinological medicine_CHU Farhat Hached Sousse
2- Infection Control Department_CHU FarhatHached Sousse

Introduction: Compassion fatigue (CF) concerns health care workers in charge of people in distress. Exhaustion and deep moral pain result from excessive preoccupation and stress in response to the suffering of the person being cared for. Learning to recognize it is the first step in a process aimed at prevention. The objective of this study was to measure compassion fatigue in staff caring for cancer patients.

Materials and methods: A descriptive, cross-sectional, multicenter study was carried out among oncology professionals working in several Tunisian departments caring for cancer patients (Carcinology Sousse, Monastir, Sfax, Institut Salah Azaiez and Ariana).

The instrument used to measure CF was the "Professional quality of life" (PRO-QOL version 5), which is composed of 3 subscales: 10 items to measure compassion satisfaction (SC), 10 items to measure burnout (BO) and 10 items to measure secondary traumatic stress (STS).

Results: A total of 120 health personnel responded to the questionnaire. The average age of the participants was 36.13±8.06 with a female predominance (sex ratio=0.29). More than half of respondents were physicians (55.9%).

The mean CS score was 33.57±6.24, which is consistent with an average level of CS. However, 13.3% of the staff had a high SC score. The mean PE score was 29.88±5.12, which corresponds to an average level of PE. Only 10.9% had a low PE score. The mean STS score was 33.16±7.56, which corresponds to an average level of STS. However, 17.5% had a high STS score.

Conclusion: Compassion fatigue can contribute to negative consequences for individual healthcare workers, patients, and organizations. Our study showed that Interventions to mitigate CF in Tunisian oncology healthcare staff are required.

70. Genetic predisposition to pheochromocytoma in the Tunisian population

Guidara souhir1, Gharbi Nourhène1, Belghith Neila2, Giraud Sophie3, Mejdoub Nabila4, Affes Lilia4, Kamoun Hassen1

1. Department of genetic, Hedi Chaker hospital, Sfax, Tunisia
2. Congenital and Hereditary Diseases Department, Charles Nicolle hospital, Tunis, Tunisia
3. Genetics Department, Hospices Civils de Lyon, Bron, France
4. Endocrinology Department, Hedi Chaker hospital, Sfax, Tunisia
5. Introduction: Pheochromocytomas (PHEOs) are rare neuroendocrine tumors of the adrenal medulla. Their genetic analysis has made significant progress in recent years, defining familial PHEOs even in cases of apparently sporadic presentation.

Aim: Our aim was to perform a genetic study of PHEOs for personalized medical management of patients and to establish genetic counselling for affected individuals and their families.

Materials and Methods: To achieve our objective, we conducted a descriptive study of patients with PHEOs at the Endocrinology Department of Hedi Chaker University Hospital in Sfax. Our study included only patients in whom the diagnosis of PHEO was confirmed by histopathological examination. We first performed targeted analyses (Sanger sequencing) according to the recommendations of the ANPGM. Patients with negative results underwent next-generation sequencing (NGS).

Results: Our study included 16 Tunisian patients with PHEOs. We initiated Sanger sequencing of the SDHB gene for P1 and P5 with evidence of malignant PHEO. No variants were identified, so we proceeded with the second-line analysis of the VHL gene. In other patients, except P16, Sanger sequencing of the VHL gene was performed as a first-line analysis. This choice was justified by the fact that PHEO was isolated (most of cases) or associated with renal polycystic disease (P2). No VHL mutations were detected. In the case of P16, the clinical presentation strongly suggested MEN2A, which led us to analyze the RET gene in the first place. Therefore, NGS was performed, which revealed two mutations in the MAX (P9) and RET (P16) genes, as well as numerous variants of uncertain significance (VUS). No copy number variation (CNV) abnormalities were detected.

Conclusions: Our study represents the largest Tunisian series of patients with PHEO undergoing genetic analysis by NGS. Our findings are essential for improved patient management and, more importantly, for the study of family predisposition.

71. Anal Canal Neuroendocrine Tumors : Place Of Radiotherapy

Fz. Chraa, R. Laraichi, I. Mbarki, C. Ezzouitina, S. El Majjaoui, H. El Kacemi, T. Kebdani, K. Hassouni

Introduction: Small cell neuroendocrine carcinomas of the anal canal are rare, characterized by great aggressiveness and a bad prognosis, and often pose therapeutic management problems.

Clinical Cases: These are two cases of neuroendocrine carcinoma of the anal canal, a 65-year-old man and a 54-year-old woman, the tumor stage was respectively: T3N1M0 and T4N2M0, both patients received neoadjuvant chemotherapy (Etoposide, cisplatin), followed by exclusive concomitant radio chemotherapy at a total dose of 60 Gy, 2 Gy/fraction. The pelvic MRI of control done 3 months after the end of irradiation was in favor of a clear regression of the tumor process with persistence of a tumor residue at the parietal level.

The evolution was marked for the man by the appearance of hepatic and pulmonary lesions on the extension assessment, despite adequate local treatment, the patient's condition further deteriorated, the patient died 12 months after the initial diagnosis due to rapid tumor progression, for the case of the woman, she remained in good control and under close clinical and radiological surveillance.

Conclusion: Chemotherapy is the mainstay of treatment, although the response is only temporary. Radiotherapy is primarily used for local control and symptom relief.

Despite local control, the prognosis is bad, with early distant metastases .

72. Diffuse large cell B lymphoma of the thyroid in a case report

M.El Ouazzani(1), F Z.Ghlalou (1), H.Rachidi(1), M.Ouali Idrissi(2), H.Rais(1)
(1)Service d'anatomie pathologique, FMPM-UCA-CHU Mohamed VI 40000 Marrakech, Maroc
(2)Service de radiologie, FMPM-UCA-CHU Mohamed VI 40000 Marrakech, Maroc

Introduction: Primary non-Hodgkin's lymphoma (NHL) of the thyroid gland is not a usual pathology and represents 2-5% of thyroid malignancies. The aim of our work is to provide an update on this rare pathology, the main differential diagnoses and the contribution of immunohistochemical studies in confirming the diagnosis.

Observation: A 30-year-old female patient was admitted for cervical swellig. No remarkable medical history was found for the patient. The physical examination did not reveal also cervical adenopathy nor other peripheral lymph nodes. Blood rate of thyroid hormones was normal. Full blood count outlined a normocytic normochromic anaemia at 9.6g/dl. A large hypoechoic nodule of the whole right lobe classified as TIRADS4. Thyroid cytology showed a category V (Bethesda, 2022). A thyroidectomy was performed. Macroscopic examination revealed a right totolobar nodule measuring 4 cm, generally well limited. The rest of the thyroid was diffusely colloid. Microscopic examination showed a poorly differentiated infiltrating tumour proliferation. The tumour cells were medium to large, with enlarged nuclei, salt-and-pepper chromatin and abnormal mitosis. The immunohistochemical study showed positive markers for CD45, CD20, CD10 and BCL6, and an absence of expression of anti-CK, anti-TTF1, anti-Calcitonin, anti-MelanA and anti-CD3 with a Ki67 proliferation index at 70%.

Discussion & Conclusion: Primary thyroid lymphoma is a very rare tumour. Fine needle aspiration is increasingly used, but a surgical biopsy is still necessary to confirm and clarify the diagnosis. Among thyroid lymphomas, the most common histological subtype is diffuse large B-cell lymphoma, which accounts for 60% to 85% of cases, followed by MALT-type lymphoma, which accounts for 6% to 27% of cases. Anaplastic carcinoma remains the most common differential diagnosis, followed by medullary thyroid carcinoma. The management of primary thyroid lymphoma is not yet well codified. It is based on radiotherapy, chemotherapy or a combination of the two.

73. Cervical adenocarcinoma on endocervical polyp : about an observation and review of the literature

M.El Ouazzani, O.Ait Ouhssain, H.Oussehal, H.Rachidi, H.Rais

Service D'anatomie Pathologique, Hôpital Errazi, Chu Mohamed Vi Marrakech

Introduction: Cervical adenocarcinoma is a glandular tumor with stromal invasion and/or exophytic expansile-type invasion, associated with high-risk HPV infection (WHO2020). We report the observation of a 70-year-old woman.

Observation: We report a case of a 70-year-old woman with metrorrhagia. Clinical examination showed, a friable exophytic mass developing in the endocervical canal. Pap smear result was atrophic without sign of malignancy according to the Bethesda 2015 classification. The ultrasound exam found a endocervical polypoid lesion. A total hysterectomy without preservation of the adnexa was performed. Grossly, we found a polypoid mass measuring 1.2cm. On histological examination, we observed an infiltrating epithelial proliferation of glandular associated to HPV with moderate cytonuclear atypia with no lymphovascular invasion. The basis of the polyp was marked by an in situ adenocarcinoma extented on 5mm. The tumor was classified pT1b1NxMx (TNM ; 8th edition).

Discussion And Conclusion: Cervical adenocarcinoma on endocervical polyp is rare. The symptoms are commun with benign lesion. The hysterectomy or a large exeresis was performed choice for this patient to exam the infiltration on the basis of the polyp. The histologic differential diagnosis includes benign glandular lesions ; the endometrial adenocarcinoma as well as secondary adenocarcinoma metastatic to the cervix. The association with HPV is necessary to classify, to guide the choice of treatment, thus improving the prognosis.

74. Phytochemical Analysis and Evaluation of the Antioxidant and Anticancer Effects of Globularia alypum (L.) Leaves

Sahar Nouir1, Amal Dbeibia2, Rim Bouhajeb3, Houda Haddad1,4, Amani Khélifa1,4, Mariem Ghardalou5, Amira Zaïri1

1. Laboratory of Biochemistry, Faculty of Medicine of Sousse, University of Sousse, Sousse 4002, Tunisia
2. Laboratory of Analysis, Treatment and Valorization of Environmental Pollutants and Products, Faculty of Pharmacy of Monastir, University of Monastir, Monastir 5000, Tunisia
3. Laboratory of Bioactive Natural Substances and Biotechnology Research, Faculty of Dental Medicine of Monastir, University of Monastir, Monastir 5000, Tunisia
4. High Institute of Biotechnology of Monastir, University of Monastir, Monastir 5000, Tunisia
5. Department of Community Medicine, Faculty of Medicine of Sousse, University of Sousse, Sousse 4002, Tunisia

Globularia alypum L. (GA) is a Mediterranean plant of the Globulariaceae family which is widely used in traditional Tunisian medicine. The main goal of this study was to evaluate the phytochemical composition, antioxidant and anticancer potential of different extracts of this plant. The identification and the quantification of the different constituents of extracts were determined using gas chromatography–mass spectrometry (GC-MS). The antioxidant activities were evaluated using spectrophotometric methods and chemical tests. While, the anticancer study was based on the use of colorectal cancer SW620 cells. All extracts presented several components, mainly sesquiterpenes, hydrocarbon, and oxygenated monoterpenes. The results revealed that the maceration extract had the most important antioxidant effect (IC50 = 0.04 and 0.15 mg/mL), followed by the sonication extract (IC50 = 0.18 and 0.28 mg/mL). However, the sonication extract demonstrated significant anticancer effect (IC50 = 20 µg/mL. The results achieved confirm the important role of this plant as a source of therapeutic activities.

Keywords: Globularia alypum (L.); phenolic compounds; antioxidant activity; anticancer activity.

75. Prognostic significance of B-Catenin expression in gastric cancer

Yasmine Ben Romdhane1, Sarra Ben Rejeb1,2, Marwa Lakhal2, Khadija Bellil 2
1: Pathology Department, Security Forces Hospital, Tunisia
2: Research unity, epithelial to mesenchymal transition(UR17ES17), faculty of medicine of tunis

Introduction: Gastric cancer(GC) is the 2n most common cause of death due to malignancies worldwide. Studies provided evidence of the critical role of B-catenin in Wnt-signaling pathway and the epithelial-to mesenchymal transition(EMT) process in many cancers. We aimed to assess B-catenin expression in gastric cancer and describe its prognostic significance.
Methods: We have retrospectively collected cases of GC diagnosed in the pathology departments of the Security Forces and Rabta's hospitals during a period of 10 years (2009-2019). Tissue micro-array paraffin blocks were produced and then tested with B-Catenin antibody(LEICA 17C2) using immunohistochemistry(automate LEICA-Bond-MAX).B-Catenin staining was assessed positive when it was membranous, cytoplasmic or nuclear. The percentage of positive cells was scored and categorized: score1 :<10%;score2 :[10-% 50 [and score3 >=50%. Only cases with score3 were considered overexpressed. Statistical analysis was performed using SPSS21.
Results: 44cases have been included in the study. Mean age of patients was 61.15 years-old with male to female ratio of 1.28.B-catenin expression was found in 68.18%.The mean percentage of positive cells was 63.18%(5-100%).B-catenin was over-expressed in 80%of cases. The mean age of these patients was 62.5 years-old, the mean tumor size was 6.64cm.58.3% of cases were tubular histological subtype. B-catenin overexpression was significantly associated to tumor differentiation (p<0.001).Vascular invasion was found in 75% (p=0.28) and peri-neural invasion in 50% (p=0.44). 91.7% of cases were pT3-pT4(p=0.49) with positive lymph node (p=0.82). In cases with B-Catenin overexpression, recurrence was observed in 37.5%(p=0.6) and distant metastasis occurred in 50%(p=0.58).
Conclusion: B-catenin overexpression was found in 80%of cases which may indicate dysregulation of the Wnt signaling pathway. B-catenin overexpression was significantly associated to differentiation which is consistent with the concept of EMT process regulated by B-catenin. Interestingly, the high level of B-catenin expression raises the need to focus on this protein as a potential target for treatment.

76. Immunohistochemical analysis of E-Cadherin expression in gastric cancer

Yasmine Ben Romdhane 1, Sarra Ben Rejeb 1,2, Marwa Lakhal 2, Khadija Bellil 2
1 : Pathology Department, Security Forces Hospital, Tunisia
2 : Research unity, epithelial to mesenchymal transition(UR17ES17), faculty of medicine of tunis

Introduction: E-cadherin is a transmembrane glycoprotein which displays a key role in cell to cell adhesion. It also modulates various signaling pathways regulating cell polarity, cell survival, carcinogenesis, invasion, and migration in many cancers especially in gastric carcinoma(GC).We aimed to assess E-Cadherin expression in gastric cancer and describe its prognostic significance.
Methods: In this retrospective, multi-center cross-sectional study, we collected cases of GC diagnosed in the pathology departments of the Security Forces and Rabta's hospitals during a period of 10 years(2009-2019).Tissue micro-array paraffin blocks were produced and then tested with B-Catenin antibody(LEICA 36B5) using immunohistochemistry(automate LEICA-Bond-MAX). E-Cadherin staining was categorized: score0:no staining,score1:low cytoplasmic staining, score2: moderate cytoplasmic/membranous staining and score3: marked membranous staining. Only score 0-1 and 2 was considered abnormal.
Results: 32 cases have been included. Mean age of patients was 59.28years old with male to female ratio:1.46. E-Cadherin expression was found in 68.75% with a mean percentage of positive cells 49% (5-100%).Aberrant expression was found in 62.5%.Mean tumor size in these cases was 5.11cm.50% of cases were poorly cohesive cells (p=0.93),60% were poorly differentiated (p=0.19), 45% diffuse subtype (p=0.012). 80% of cases were pT3-pT4 (p=0.16) and 75% had lymph node invasion (p=0.13).Vascular invasion was found in 70% (p=0.19) and peri-neural invasion in 50% (p=0.65). Tumor recurrence occurred in 30%(p=0.05) and distant metastasis in 50% of cases (p=0.71). No statistically significant association was found between E-cadherin expression and the studied clinic-pathological factors.
Conclusion: Aberrant E-Cadherin expression was found in 68.75%of patients with GC which is consistent with the previously reported role of E-Cadherin in gastric carcinogenesis. Our findings also raises the potential clinical application of E-cadherin either as an early diagnosis marker or a promising and potential target for precise therapy in gastric cancer

77. Tumor budding assessment in pancreatic carcinoma: a comparative study of manual versus semi-automated method

Yasmine Ben Romdhane1, Sarra Ben Rejeb1, Jasser Yacoubi2, Rim Bahloul2, Adnen Chouchen2
1: Pathology department, Security forces hospital, Marsa, Tunisia
2: Surgery department, Security forces hospital, Marsa, Tunisia

Introduction: Tumor Budding(TB) has been recognized as a an emerging marker of aggressiveness in patients with pancreatic carcinoma(PC). However, it is still not systematically reported by pathologists because of ill-defined recommendations and time-consuming methods. We aimed to assess the tumor budding (TB) score using artificial intelligence and to compare it to conventional counting approach

Methods: In this retrospective multi-centre study, we have collected cases of PC(2008-2022).TB was assed using 2methods: manuel(1st) and semi-automated(2nd) using QUPATH software. The selected slide for each case has been digitalized using NIS software connected to the microscope NIKON (Eclipse Ni-U).The pathological images were then incorporated to QUPATH. The budds counting was performed using cell count functionality based on the nucleus size and pixels variability. We compared the results of both methods.

Results: 25 cases were included; mean age of patients was 62.3years-old with male to female ratio of 2.57.Using the 1st method, TB was found in 100% of cases, it was assess BUDD1(0-4) in 52%of cases, BUDD2(5-9) in 16% of cases and BUDD3 (≥10) in 32%. It was considered high (BUDD2-3) in 48% of cases. The median TB score was 8.04(1-37).Using the 2nd method, TB was found in 84% of cases, it was assess BUDD1(0-4) in 44%of cases, BUDD2(5-9) in 44% of cases and BUDD3 (≥10) in 12%.It was considered high (BUDD2-3) in 56% of cases. The median TB score using digitized method was 5.92 (0- 19). Comparison of the two methods didn't revealed a statistically significant difference (p=0.589).

Conclusion: QUPATH software could be a promising and accessible tool for pathologists to evaluate TB and integrate it in their pathology reports in order to improve risk stratification in patients with PC.

78. Adenoid Cystic Carcinoma

Braham R, Elmokh W, Zahmoul A, Methnani A, Dhaha M, Jbali S, Dhambri S, Kedous S.

Carcinologic ENT Department Salah Azaeiz Institute-Tunisia

Introduction: Adenoid cystic carcinoma (ACC) is a rare cancer that originates generally in the salivary glands but can occurs where as well. This slow-growing tumor exhibits a distinctive histopathological pattern, combining cribriform, tubular, and solid growth structures. ACC is notable for its propensity to invade along the nerve pathway, which poses challenges for complete surgical resection and increases the local recurrence.

Aim: This aim of our study is to highlight a rare location of this type of tumor and specify the optimal treatment for it.

Observation: A 43-year-old patient with no past medical history was referred to our department with the main symptoms of cough, hemoptysis, and exertional dyspnea. No weight loss or deterioration of general condition were noted.

CT Scan and tracheal MRI showed a bulging tissular mass originating from the cervical trachea, causing an 80% reduction in tracheal surface area, extending beyond the trachea to the right lobe of the thyroid. Endoscopic exam revealed a budding tracheal tumor, biopsy of which revealed an ACC. The patient underwent surgical tumor resection, right thyroid lobectomy with tracheal resection and crico-tracheal anastomosis.

The right recurrent nerve was invaded and was sacrificed in the surgical process with healthy nerve margin. The final pathological examination confirmed the diagnosis with clear resection margins. The patient received adjuvant radiotherapy following the surgery due to the extra-tracheal invasion.

Conclusion: Adenoid cystic carcinomas are characterized by their gradual growth, frequently detected at an advanced stage. Clinical manifestations are generally well-tolerated over an extended period. The most effective approach is surgical intervention, with radiotherapy recommended in cases of incomplete or impossible resection or following local recurrence.

79. Subcutaneous cavernous hemangioma suggestive of a malignant tumor

Braham R, Selmi M, Methnani A, Dhaha M, Jbali S, Dhambri S, Kedous S

ENT department Of Salah Azaiez Institute, Tunis- Tunisia

Introduction: Hemangiomas are an abnormal accumulation or growth of blood vessels in the internal organs or skin, also known as cavernoma. It's a benign tumor of the blood vessels that increases rapidly over a period of time and does not usually reduce in size, which may evoke clinically and also radiologically a differential diagnosis of malignant tumor such as liposarcoma.

Aim: We will discuss the diagnosis of a subcutaneous cavernous hemangioma that clinically and radiologically resembled a liposarcoma in a patient hospitalized in Salah Azaiez ENT department.

Results: A 70 year old man with a non painful subcutaneous pedicle mass in the right cervical submandibular region. This mass is non compressive, 3 cm in size, firm and mobile with a healthy skin in front of it, which has been evolving for 3 months.

We completed by a cervical echorgraphy which showed a subcutaneous tumoral mass of the right submandibular area of 3 cm richly vascular which can evoke a liposarcoma.

The cervical MRI evoked a suspicious tumor mass with T2 hypersignal and T1 iso signal. We mention the absence of cervical adenopathy and the normality of the submaxillary and mandibular glands. A surgical excision by cervical way was performed.

Histological examination showed a benign proliferation of dilated vessels with flattened and regular surface. According to these findings, the cervical mass was interpreted as a cavernous hemangioma.

The post-operative period was without incident.

Conclusion: Cavernous hemangiomas are benign tumors that may clinically or radiologically resemble more serious malignant tumors, only histopathological examination can confirm the diagnosis and lead to subsequent management.

80. Papillary thyroid carcinoma coexisting with squamous cell carcinoma of the larynx: 10 cases

Braham R, Selmi M, Methnani A, Dhaha M, Jbali S, Dhambri S, Kedous S

ENT department Of Salah Azaeiz Institute-Tunis

Introduction: Thyroid cancer is a common ENT disease, the diagnosis and management of which are well established. However, the discovery of thyroid cancer during surgery for another malignant pathology of the upper aerodigestive tract remains rare.

Aim: To investigate an unusual finding of synchronous thyroid cancer during thyroidectomy in the setting of total laryngectomy for laryngeal neoplasm.

Materials and methods: A retrospective descriptive study collecting ten patients with a combination of larynx squamous cell carcinoma and papillary thyroid carcinoma diagnosed and treated at our department during a 19-year period (2003 to 2021).

Results: The mean age of our patients was 67.7 years with sex ratio of 9:1, all smokers, who were treated for larynx squamous cell carcinoma classified at leastT3 (TNM UICC 2017 classification). Thyroidectomy was indicated in patients with endoscopic and scannographic extension either subglottic extension [3 cases], extension to the laryngeal cartilages [2 cases], or both subglottic and cartilaginous extension [5 cases].

All patients underwent total laryngectomy associated with bilateral functional lymphadectomy and total thyroidectomy with bilateral central lymphadenectomy. Jugulo-carotid lymph node dissection was positive in all cases: Eight patients with lymph node metastases from laryngeal carcinoma and two patients from papillary thyroid carcinoma. The central sector was affected in seven cases, with a laryngeal origin in two patients. Therapeutic management was completed by Iratherapy according to the Amercian Thyroid Association (ATA) for the thyroid cancer and adjuvant radiotherapy for the laryngeal carcinoma.

Conclusion: There is no well-codified treatment regimen for combined thyroid and laryngeal cancer, hence the need for more studies to optimise the therapeutic management of these patients.

81. Evaluation of breast cancer knowledge and awareness among Tunisian women: A hospital based cross-sectional study

Emna Mziou*, Salma Mohsen, Hyem Khiari

Epidemiology, Statistics and Medical Informatics Department, Institut Salah Aziaez, Tunis

Introduction: Breast cancer remains the most frequent malignancy in women worldwide and in Tunisia. Knowledge and awareness are crucial to reduce its mortality and morbidity. This study aimed to assess the level of breast cancer knowledge and awareness in Tunisian females, and identify their socio-demographic determinants

Methods: This was a hospital-based cross-sectional study among Tunisian women diagnosed with breast cancer consulting at Salah Azaiez Institute of Tunis from March to June 2023. Data were collected using a paper-form questionnaire (22questions) including parts about symptoms knowledge, risk factors, and awareness of the curability and early detection. Questions scaled from 1 (strongly disagree) to 5 (strongly agree). Their sum leaded to knowledge and awareness scores. The calculation of the adjusted Odds Ratios using linear regression was performed to measure the association of the studied factors with breast cancer knowledge and awareness.

Results: A total of 115 women diagnosed with breast cancer were included. The mean overall score for knowledge and awareness of breast cancer was 68.67±16.51%. The mean score for symptoms knowledge was 49.83±10.50%. It was 73.11±14,02% for risk factors knowledge and 83.97±13.77% for breast cancer awareness of the curability and early detection.

After linear regression, the factors independently associated with a high knowledge score about breast cancer symptoms, risk factors, and early detection awareness were urban residence (OR=2.91[95%CI 2.04-7.86], p=0.049), higher educational level (OR=15.05 [95% CI 9.42 – 20.68], p=0.043), having a family history of breast cancer (OR=6.674 [95% CI 2.61 – 10.74], p<10-3) and number of years since diagnosis (OR= 2.976 [95%CI 2.11 – 3.84], p<10-3).

Conclusion: Although our study concerned women diagnosed with breast cancer consulting regularly for their disease, knowledge about warning signs/symptoms, was relatively poor. This highlights the importance of increasing awareness among cancer patients.

82. Cancer perception among women diagnosed with breast cancer, Tunisia: A cross-sectional survey

Emna Mziou*, Salma Mohsen, Hyem Khiari

Epidemiology, Statistics and Medical Informatics Department, Institut Salah Aziaez, Tunis

Introduction: Breast cancer constitutes a major public health concern worldwide and in Tunisia. Studying patient's perception can help their ability to cope with the disease and its treatment. This study aimed to assess the perception of breast cancer patients in Tunisian women.

Methods: A cross-sectional survey was conducted from March to June 2023 in Salah Aziaez Institute of Tunis. We included women diagnosed with breast cancer. The minimum sample size was 87 patients. Data were collected using a paper-form questionnaire (20questions) including parts about perceived susceptibility, barriers, severity, threat, and outcome expectation. Questions scaled from 1 (strongly disagree) to 5 (strongly agree). Higher score meant a worse perception of the disease. The calculation of the adjusted Odds Ratios using linear regression was performed to measure the association of the studied factors with perception scores.

Results: A total of 115 women diagnosed with breast cancer were included. Their mean age was 52,51±10,42 years. The mean overall perception score of the disease was 56.31± 12.36%. It consisted of scores for perceived susceptibility (14.82 ± 3.56/20), perceived barriers (14.88 ± 5.02/25), perceived severity of the illness (8.81 ± 3.05/15), perceived threat (6.86 ±3.37/15) and the perceived outcome expectation (10.95 ± 5.90/25). After linear regression, the factors independently associated with a poor perception of breast cancer disease (higher overall score) were a low educational level (p<10-3, OR=12.12 [95%CI 8.09-16.148]) and not having a family history of breast cancer (p=0.005, OR=5.78 [95%CI 1.80-9.76].

Conclusion: It would be recommended to promote Tunisian patient's knowledge about breast cancer to improve their perceptions and facilitate their treatment.

83. Computational mRNA targets prediction and durg interaction of aberrantly expressed miRNAs in urinary bladder cancer

Nouha Setti Boubaker 1,2,3 , Aymone Gurtner 1 , Nesrine Trabelsi 5 , Ahmed Saadi 2 , Haroun Ayed 2 , Ahlem Blel 4 , Linda Bel Haj Kacem 4 , Zeineb Naimi 6 , Khedija Meddeb 6 , Soumaya Rammeh 3,4 , Mohamed Riadh Ben Slama 2 , Slah Ouerhani 5 & Giulia Piaggio 1

1. UOSD SAFU Unit, Department of Research, Diagnosis and Innovative Technologies, IRCCS-Regina Elena National Cancer Institute, 00144 Rome, Italy
2. Urology Department, Charles Nicolle Hospital, Faculty of Medicine, University Tunis El Manar, Boulevard 9 Avril 1938, 1006-Tunis, Tunisia
3. Theranostic Biomarkers, LR23ES02, Faculty of Medicine of Tunis, University Tunis El Manar, Tunis, Tunisia
4. Pathology Department, Charles Nicolle Hospital, Faculty of Medicine, University Tunis El Manar, 1006-Tunis, Tunisia
5. Laboratory of proteins engineering and bioactive molecules (LIP-MB), Biology Engineering department, National Institute of applied Sciences and Technology (INSAT), University of Tunis Carthage, 1080-Tunis, Tunisia
6. Medical Oncology Department, Salah Azaiez Institute, Faculty of Medicine, University Tunis El Manar, 1006-Tunis, Tunisia

Identifying and validating miRNA-mRNA interactions is a critical step for defining the regulatory miRNA role in the complex networks regulating biological processes. Herein, we aimed to investigate the targeted mRNAs of miR-9, miR-182, miR-205, miR-27a-3p, miR-369, Let-7c and let-7g in urinary bladder cancer (BCa). Accordingly, predicted and/or validated target mRNAs were retrieved using CSmiRTar database. Signaling pathway enrichment analysis was performed using DAVID gene annotation tool. Furthermore, we searched among miRNAs-mRNAs targets those which may be important for drug function through the drug-gene interaction database (DGIdb). As a result, Let-7c/g, miR-9 and miR-182, which were identified as potential oncomiRs in our prior publications, target a set of tumor suppressor genes such as CDKN1a, MAP2k7, TP53, GATA3, and GSTM1 reported to be involved in BCa progression and/or recurrence.

On the other side, potential tumor suppressor miR-27a, miR-205, miR-143, and miR-369 arise to target a set of oncogenes such as DAPK1, DNMT1, ERBB2 and PIK3CA reputed to be associated to cell migration, poor prognosis or response to treatment in BCa. miRNA-mRNA hub construction revealed a set of common mRNA targets mainly MAP2K7, DNMT1, TP53 and LMNA.

Besides, Pathway enrichment analysis pinpointed several single and common pathways essentially the PI3K./Akt./mTOR signaling pathway, a well-reported driver of the muscle-invasive phenotype of BCa. Finally, eight FDA approved drugs mainly Gemcitabine and Cisplatin interacted with a total of nine mRNAs targeted genes of which DAPK, MTR and ATR. Interestingly, we noticed that FGFR1, a common target of miR-9 and miR-205, interacted with Erdafitinib and Pemigatinib which have been both tested in clinical trials. Hence, In silico computational prediction of potential targets and their putative target pathways may provide an initial comprehension of the regulatory mechanisms and allow initial selection of target sites to be experimentally validated where experimental investigation can be a laborious and costly approach.

84. Stage-specific treatment costs for cervical cancer in a public health institute in Tunisia

Emna Mziou*, Hyem Khiari
Epidemiology, Statistics and Medical Informatics Department, Institute Salah Aziaez, Tunis

Introduction: Cervical cancer is the 3rd most common gynecological cancer in Tunisian women. While the association between earlier diagnosis stages and better survival chances is now almost unquestionable, it is still unclear how detection stages affect the amount of resources needed for financial management.

Aim: Our objectives were to estimate the stage-specific diagnosis and medical care costs associated with cervical cancer in the first 5 years after diagnosis in Tunisia in a public healthcare center.

Methods: Our study was conducted at Salah Azaiez Institute in March 2023. This institute is a public healthcare establishment and the national reference center for the surveillance, diagnosis, and treatment of cancers. Our study consisted of two parts. The first one was collecting data about needed check-ups in every cervical cancer stage (laboratory, radiological, medical needs, and medicine used). These data were based on the cervical cancer therapeutic approach elaborated guidelines of Salah Azaiez Institute. The second part was estimating the financial cost of each procedure in the hospital's finance unit.

Results: The cost of cervical cancer diagnosis and treatment at Salah Aziaez Institute ranged from 532 to 2603 US$ depending on the cancer stage and treatment involved. An initial checkup of cervical cancer (including gynecological examination, biopsy, MRI, and laboratory checkups) costed 350$. The diagnosis and treatments costed 550$ for the IA stage and 585$ for IB1 and IB2 stages. Their cost was significantly lower than stages IB3, II, IIIA, IIIB, and IVA (2603$). The diagnosis and treatment costs were 1800$ for stage IIIC and 750$ for stage IVB.

Conclusion: Prior to the introduction of any cancer-related vaccination or the implementation of a screening program in Tunisia for cervical cancer, our study would act as an interim measure to examine the economic gains and sanitary values. It would highlight the initiation of a nationwide vaccination or screening program.

85. Nursing Role In Mobilizing Hope In Women With Breast Cancer

RADHIA CHAEIB: Higher Institute of Nursing Sciences of Sousse

Introduction: Breast cancer is the most common type in women. This pathology is favored by several risk factors such as age > 35 years, family history of CS as well as obesity. This disease requires a total management collaboration; physical and psychological to ensure a better quality of life for patients.

Materials and Methods: This is a quantitative, descriptive, cross-sectional study with the objective of identifying the nursing role in mobilizing hope in women with breast cancer, made with 80 nurses working in the gynecology-obstetrics and oncology departments in CHU Fattouma Bourguiba- Monastir, CHU Farhat Hached- Sousse and CHU Taher Sfar-Mahdia, Salah Azaeiz-Tunis Institute, Msaken Regional Hospital.

Results: According to the results obtained, 95% of respondents said that breast cancer is the 1st cancer in women in Tunisia. Thus, the study showed that the major effect of CS on sick women is mainly psychic (95%) such as fear, depression and suicide attempt. 65% of nurses said that hope is like a belief in a better future. In this sense, 60% of the population interviewed confirmed that the psychological support of a patient with CS is mandatory. In fact, 68% of respondents announced that care requires the presence of a psychologist with the nurse.

Conclusion: Breast cancer remains the most common cancer in women in Tunisia and requires comprehensive care to ensure the improvement of the quality of life of women with cancer.

86. Cancer patients' knowledge and attitudes about nutrition and cancer

RADHIA CHAEIB: Higher Institute of Nursing Sciences of Sousse

The assessment of the nutritional status of the cancer patient throughout the care pathway is essential. It is an integral part of therapeutic management in oncology and weight concerns control, also the physical activity and dietary monitoring. The involvement of the entire health care team is necessary to identify nutritional situations at risk.

The aim of the study is to deal with cancer patients' knowledge and attitudes about nutrition and cancer.

This is a quantitative cross-sectional descriptive study with a sample of 99 cancer patients recruited in the departments of Carcinology, ENT pulmonology, Hematology, Radiotherapy, Gynecology of the Farhat Hached University Hospital and the Nephrology, Urology, Gentrology departments of the Sahloul University Hospital. Data collection was carried out from 20 January to 20 March 2023 using a questionnaire translated into Arabic.

Our study showed that 30.3% of patients had breast cancer, cancer is localized in 81.8% of cases, 54.5% did not have a nutritional evaluation, 67.7% have anorexia, 65.7% lost weight on average of 10.5±10.5 kg for an average duration of 4.8±4.5 months.

Almost half of the respondents (49.5%) feel the need for supportive treatment for undernutrition, 66.7% have not had information about undernutrition, one in three patients (32.3%) has dietary restrictions, 84.8% have not seen a nutritionist, nutritional management has not been explained by the caregiver according to 68.7% of respondents, 53.5% had weight monitoring during treatment and 67.7% did not have hygiene-dietary advice from their caregiver. Rigorous nutritional management could improve the quality and life expectancy of these frail patients and reduce the incidence of possible treatment-related complications.

87. Management of cancer drugs leftovers in a centralized preparation unit: cost study

Olfa Karoui, Raafa Ben Saada, Isleme Ben Regaya , Yassine Daoulatli, Nader Harrabi, Med Ali Yousfi

Faculty Of Pharmacy Of Monastir , Principal Military Hospital Of Tunis

Introduction: Centralizing the preparation of cancer drugs in hospitals ensures their safe circulation, saves money and reduces environmental impact. The aim of this study, carried out at the centralized cytotoxic preparation unit(CCPU) of the principal military hospital of Tunis (HMPIT), was to assess the direct cost of centralization on the management of cytotoxic leftovers.

Material and methods: this is a descriptive study carried out at the CCPU of the HMPIT over a 3-month period (from 01/03/2023 to 30/05/2023). It concerned all injectable anticancer drugs reconstituted in our unit. Gain in cancer drugs, achieved through optimized management of leftovers, was given by the difference between anticancer drug consumption in a decentralized system and consumption in our centralized unit.

Results: During the 3 months of the study, we produced 2212 preparations, 72% of which were prescribed by the oncology department. The budgetary impact, achieved thanks to optimized management of leftovers, was 45442.061 DT (≈13434 €) over the 3 months of the study, corresponding to a 9% saving on the anticancer budget. 69.5% of the budgetary gain was generated by monoclonal antibodies.

Conclusion: The centralization of preparations in our hospital has made it possible to minimize residual losses and limit the resulting increase in expenditure. Other strategies are still possible to consolidate this measure and limit losses.

88. Studies on anti-colon cancer potential of nanoformulations of curcumin and succinylated curcumin in mannosylated chitosan

Sourour Idoudi a*, Takwa Bedhiafi a, Fairooz Sahir b, Yousef Hijji c, Shahab Uddin d, Maysaloun Merhi e, Said Dermime e, Nashiru Billa a*

a) Department of Pharmaceutical Sciences, College of Pharmacy, QU Health, Qatar University, Doha, Qatar

b) Flow Cytometry Core, Translational Research Institute, Academic Health System, Hamad Medical Corporation, Doha, Qatar

c) Department of Chemistry, Howard University, Washington DC 20069, USA

d) Translational Research Institute and Dermatology Institute, Academic Health System, Hamad Medical Corporation, Doha, Qatar

e) Translational Cancer Research Facility, (NCCCR), Hamad Medical Corporation, Doha, Qatar

Background: Colon cancer (CRC) is the second leading cause of death and the third most diagnosed cancer worldwide. Curcumin (CUR) from Curcuma longa has potent anti CRC activity. However, its use is limited by its low solubility, bioavailability, and its instability. We addressed some of these limitations through synthetic derivatization and nano-formulation.

Methods: Our study aimed to conjugate CUR to succinic anhydride (SA) and to optimize this conjugate (CUR.SA) in loaded mannose-functionalized chitosan nanoparticles (CUR.SA-CMNPs). Physical and structural characteristics of the formulated nanoparticles are investigated. The anti-tumor activity of these nanoparticles was assessed in vitro using two CRC human cell-lines (HCT116 and SW480) and one non-malignant CRC human cell-line (CCD841 CoN cells).

Results: physical and chemical characteristics analysis using FTIR, NMR spectra and XRD confirmed the formation of the CUR.SA conjugate and assembly of CUR.SA-CMNPs. Size analysis disclosed relatively higher size (268 ± 6 nm) of CUR.SA-CMNPs and of CUR-CMNPs (342 ± 4 nm) compared to unloaded nanoparticles (CMNPs) (110 ± 2 nm). Storage and stability studies in colonic conditions confirmed the stability of CUR-CMNPs and CUR.SA-CMNPs over 28 days. Cytotoxicity studies using CCK-8 assay indicated that both CUR-CMNPs and CUR.SA-CMNPs have a dose and time-dependent toxicity towards malignant CRC human cell-lines (HCT116 and SW480), and are more cytotoxic compared to free CUR or CUR-SA. Further, Western blotting analyses confirmed the induction of apoptosis through activation of Caspase signaling in treated cells. No cytotoxic effect was observed on non-malignant CRC human cell-lines (CCD841 CoN cells), upon treatment with CUR-CMNPs and CUR.SA-CMNPs. Our results illustrate the safe profile of CUR-CMNPs and CUR.SA-CMNPs and their potential application for cancer therapy.

Conclusion: Based on our findings, we may conclude that our Curcumin nanoparticle formulations hold a promising anti-tumor effect in CRC., Further investigations are needed to confirm the anti-tumor potential of these nanoparticles in CRC and to better understand their mechanism of action.

Keywords: Curcumin, Succinic Anhydride, Mannose, Chitosan, nanoparticles, Colorectal Cancer.

89. Tunisian women's knowledge of familial breast cancer

Slama I 1 , Dorval M 2

1- Imen Slama: paramedical professor (ISSISo) PhD in Health Science (FMSo).

2- Michel Dorval: Ph.D. Full Professor, Faculty of Pharmacy, Laval University. CHU de Québec Research Centre. Deschênes-Fabia Breast Disease center, Saint-Sacrement hospital.

Introduction: Breast cancer is the most common cancer among women. It is essentially a multifactorial disease resulting from a combination of environmental and genetic factors. Over the past fifteen years, much attention has been paid to breast cancer susceptibility genes, whose mutations lead to a high risk of developing this disease. Indeed, the majority of women who inherit mutations in these genes will develop breast and/or ovarian cancer.

Objectives: Describe the knowledge of Tunisian women regarding familial breast cancer. Evaluate to what extent this knowledge is linked to the characteristics of these women, explore their beliefs and their interest in genetic testing.

Material & Methods: This is a quantitative descriptive cross-sectional study, carried out among 125 Tunisian women. The data for this study were collected using a self-administered questionnaire. Breast cancer knowledge was assessed using an adaptation of the breast cancer susceptibility gene knowledge scale developed by Lerman et al in 1996.

Results: The average age of the participants is 40 years old. More than half of women have a higher level of education. The majority of women surveyed work, and almost a third have a family history of breast cancer. The average score for correct answers on knowledge relating to familial breast cancer is 6.1/13, or less than 50% correct answers. The characteristics of women associated with the knowledge score are educational level, occupation and perception of breast cancer risk. Concerning beliefs about the possible causes of breast cancer, heredity seems to be perceived more by women who work in the medical field and by those who are more educated. Women over the age of 40 are more likely to attribute stress as the probable cause of this cancer and the "God test" belief is more commonly perceived by those without a family history. Only a few women unhealthy attributed lifestyle as a factor responsible for the occurrence of this cancer. Finally, women showed great interest in genetic testing for breast cancer despite a low level of knowledge regarding the genes responsible for this cancer.

Conclusion: Despite the low level of knowledge relating to familial breast cancer observed in this study, there are promising avenues for a better understanding of this disease. The establishment of an education strategy relating to familial breast cancer for women as well as raising awareness of health professionals on the issues of genetic screening would be relevant.

90. Medication Compliance for Premedication In Cancer Patients Treated With Taxanes

Olfa Karoui (1,Mayssa Guefrech (1),)Dorra Ben Nejma (1), Wiem Ben Ayed (1,2,Azza Ben Said (1,2), Imen Toukebri (1,2), Youssef Ben Rhouma (1), Imen Limayem (1,2)
Institute of salah azaiz, Tunis
faculty of pharmacy, Monastir

Introduction: Hypersensitivity reactions represent a challenge in the management of cancer pathologies in patients treated with taxanes. Therefore, taking premedication based on corticosteroids and antihistamines is essential to prevent complications. The aim of this study was to assess compliance with premedication in cancer patients treated with taxanes.

Materials and methods: This was a prospective study conducted at the centralized cytotoxic preparation unit of the Salah Azaiz Institute over a 2-week period from 15/02/2023 to 28/02/2023. Patients treated with taxane-based chemotherapy were included. Data were collected using the data collection form. Compliance was assessed using a standard Girerd questionnaire.

Results: This study involved 61 patients. The average age of the patients was 55,. Fifteen. The most common cancer sites were breast (53%), cavum (12%) and colon (7%). A total of 80% of patients were treated with docetaxel and 20% with paclitaxel. According to responses to the Grired questionnaire, 69% had good compliance, while 31% had difficulty taking their premedication, of whom 27% had minimal problems and 3% were poor observers. The causes of poor compliance were: loss of autonomy and motivation (37%), poor knowledge of how to take the medication (32%), adverse effects (21%) and forgetfulness (10%). Statistical analysis showed that smoking habits (p= 0.038) and the type of taxane administered (docetaxel or paclitaxel) (p=0.011) were significantly different between the two groups.

Conclusion: Forgetting to take the premedication can lead to a delay in the chemotherapy course, as well as a risk of hypersensitivity reactions, hence the need for therapeutic education for patients with poor compliance.

91. Brain metastasis of breast carcinoma: Clinicopathological features and immunophenotype

Mestiri S, Moussa S, Majdoub W, Belkacem O, Hmissa S.

Pathology department, Sahloul hospital, Tunisia

Introduction: 5 to 15% of patients with breast cancer have brain metastasis. Their incidence varies according to the molecular subtype of breast cancer. The aim of this study is to report the clinicopathological features of the invasive breast carcinomas (IBC) and the immunophenotype of brain metastasis.

Material and methods: We collected cases of brain metastasis of invasive breast carcinoma (IBC), diagnosed at the Central cancer registry in Sousse, during a 5-year period, from January 2018 to June 2023.

Results: 14 patients diagnosed with brain IBC metastasis; they were aged between 29 and 58 years old. They were all treated by surgery, radiotherapy and chemotherapy. 6 of them were grade 3 tumors, with positive lymph node in 7 cases. At immunohistochemistry, 2 patients were Her 2+, 2 were of luminal type, and 4 tumors were triple negative.

Interval time to brain metastasis onset after initial diagnosis of the primary varied from 2 years to 5 years.

A brain biopsy was performed in all cases, showing invasion by a carcinomatous proliferation displaying glandular differentiation. At immunohistochemistry, one tumor was of luminal type, 2 tumors were Her2 positive and 5 tumors were triple negative.

Conclusion: Most of women with brain metastasis from breast cancer had a higher proportion of triple negative tumors, with a minimal change in Her2 and hormone receptors status betwenn initial tumor and its metastasis for the other patients. These findings are important since they condition treatment decisions.

92. Adenocarcinomas on inflammatory bowel disease: Clinicopathological features and prognosis

Mestiri S, Lajmi Z, Majdoub W, Belkacem O, Bdioui A, Hmissa S.

Pathology department, Sahloul hospital, Tunisia.

Introduction: Small intestine tumors are rare. Their incidence increases with age. They are often discovered incidentally on surgical resection specimens. It is favored by certain pre-existing pathological states, such as inflammatory bowel disease (IBD). The aim of our study was to clarify the clinicopathological characteristics of intestinal adenocarcinomas, in particular those associated with Crohn's disease.

Material and methods: We have listed the cases of adenocarcinoma developed on IBD during the period from January 2020 to June 2023, at the pathology department of the CHU Sahloul hospital.

Results: 5 patients were diagnosed with intestinal adenocarcinoma raised on IBD. There were 4 men and one woman; They were aged between 28 years and 53 years, with a mean of years. 4 patients were known carriers of IBD (Ulcerative colitis in 2 cases and Crohn disease in 2 cases). Clinically? They presented with (sub)occlusive syndrome in 3 cases; and the remaining 2 cases were diagnosed during the follow-up. They underwent an ileal resection in 3 cases and a sub-total colectomy in 2 cases. Histopathological examination revealed a well-differentiated adenocarcinomatous proliferation located in the ileum in 3 cases, and in the colon in 2 cases. IBD was diagnosed post-operatively in one case. All tumors were diagnosed at an advanced stage.

Conclusion: Adenocarcinoma developing on IBD affects usually young adults. Its diagnosis is difficult, often made per- or post-operatively, revealing a cancer at an already advanced stage, leading to an increased risk of mortality.

93. Ampullary adenocarcinomas, clinicopathological features and prognosis

Mestiri S, Moussa S, Majdoub W, Belkacem O, Hmissa S.

Pathology department, Sahloul hospital, Sousse.

Introduction: Ampulla tumors are malignant in majority of cases, represented mainly by adenocarcinomas, which are often diagnosed at an advanced stage.

Objectives: The aim of this work is to specify the clinico-pathological characteristics of ampullary adenocarcinomas, but also the contribution of per-endoscopic biopsy in their diagnosis.

Material and methods: We collected the cases of ampullar adenocarcinoma, diagnosed in the pathology department of Sahloul hospital, during a period from January 2020 to June 2023.

Results: 11 patients were diagnosed with ampullar adenocarcinoma, during the period running from January 2020 to June 2023; They were aged between 30 and 70, with an average age of 36 years. The symptoms were variable: cholestatic jaundice in all cases, deterioration of general condition in 2 cases and incidental finding at endoscopy in one case. The diagnosis was suspected on imaging in 8 cases. Diagnosis confirmation was made by duodenoscopy with biopsy in 8 cases, that showed an enlarged papilla in 3 cases, and an ulcero-bulging lesion in 5 cases. All patients underwent a cephalic pancreaticoduodenectomy with lymph node dissection. The gross appearance was that of a large swollen papilla with an infiltrating whitish appearance, indurated in its endocanal portion, in 4 cases; and an ulcero-fungating, indurated and infiltrating lesion in 7 cases.

The histopathological examination concluded to an infiltrating ampullary adenocarcinoma, which was of the pancreatico-biliary type in 7 cases and of the intestinal type in 4 cases.

Conclusion: In ampullary adenocarcinomas, biopsies can sometimes be difficult to analyse, due to their superficial nature or the endocanal location of the lesion, hence the importance of new histological sections, or repeating biopsies.

94. Malignant transformation of Intraductal papillary mucinous neoplasm (IPMN) of the pancreas

Mestiri S, Moussa S, Majdoub W, Belkacem O, Hmissa S.

Pathology department, Sahloul hospital, Sousse.

Introduction: Cystic lesions of the pancreas include a wide variety of lesions, neoplastic or not, increasingly diagnosed due to advances in imaging. Whatever the circumstance of their discovery, they sometimes represent a diagnosis challenge for the pathologist. Among these pancreatic cystic tumors: The intraductal papillary mucinous neoplasm (IPMN) is a grossly visible non invasive mucinous epithelial neoplasm arising from main pancreatic duct or branch. Most IPMN tend to be symptomatic. The aim of this work is to specify the clinicopathological characteristics and the main differential diagnoses of this lesion.

Material and methods: We collected cases of IPMN, diagnosed in the Pathology department of Sahloul hospital, between January 2020 and June 2023.

Results: The 3 patients diagnosed with IPMN were all women, with history of diabetes a mean age of 54 years. They all presented with abdominal pain and in one patient. Imaging found 2 patients underwent a cephalic duodenopancreatectomy, and a left splenopancreatectomy in one case. On gross examination, we found a cystic distension of the main pancreatic duct in 2 cases and a multilocular cystic lesion in one case, with in the latter case a whitish ill-limited nodule of 1,5 cm. At histopathological examination, an invasive adenocarcinoma of exocrine type, was found, developed on High grade lesions of IPMN.

Conclusion: IPMN of the pancreas, especially those with high grade dysplasia lesions, are at high risk for malignant transformation. Gross examination of this type of lesion must be rigorous, in particular the sampling, in order to eliminate areas of malignant transformation.

95. Neuroendocrine tumors of the appendix: about 10 cases

Mestiri S, Dhouibi Y, Majdoub W, Belkacem O, Bdioui A, Hmissa S.

Introduction: Appendicular neuroendocrine tumors (ANET) are uncommon neoplasms that are relatively indolent in most cases. They are typically diagnosed in young patients and are often an incidental finding on appendectomy specimens.

Objective: To describe the clinicopathological characteristics of ANET.

Methods: This is a retrospective study including patients with ANT collected at the pathology department of Sahloul hospital over a period from January 2020 to June 2023. Diagnosis was made on surgical specimens.

Results: 10 patients were diagnosed with ANET. They aged from 19 to 93 years. There was a male predominance (8M/2F). 8 patients presented with an appendicular syndrome. 2 patients were surgically treated for stenosing Crohn disease and severe acute colitis due to ulcerative colitis had a history of ANET was diagnosed At gross examination, the tumor was localized at the tip in 5 cases. A whitish ill-defined nodule was found in 5 cases.

Histologically, the tumor measured between 0,5 cm and 1,5 cm. All tumors were classified according to the 2019 WHO classification into: Well differentiated tumor of grade 1 in 7 cases, grade 2 in 3 cases.

According to the TNM staging system, wall invasion was pT1 (one case), pT2 (one case), pT3 (5 cases) and pT4 (3 cases).

Conclusion: ANET are mostly asymptomatic. They are mostly incidentally identified in patients surgically treated with acute appendicitis. Symptoms are mostly related to tumor size and distant metastases. Clinical behavior can be predicted by tumor size. For tumors whose diameter is less than 1 cm, simple appendectomy alone is sufficient.

96. Circumstances of discovery of cancers in an internal medicine department

Bouzidi M (1), Tounsi H (1), Chaabène I (1), Skouri W (1), Ben Ahmed I (2), Ouali J (3), Abid N (1),Lajmi M (1), Dghaies S (1), Bachrouch S (1), Jbir I (4), Chaabène A (5), Chelbi E (5), Alaya Z (1), Amri R (1).

1. Internal Medicine Department. Mohamed Tahar Maamouri Hospital. Nabeul.
2. Diabetology and nutrition consultation service. Regional hospital. Ben Arous.
3. Hemodialysis service. Mohamed Tahar Maamouri Hospital. Nabeul.
4. Surgery department. Mohamed Tahar Maamouri Hospital. Nabeul.
5. Pathology department. Mohamed Tahar Maamouri Hospital. Nabeul.

Introduction: The incidence of neoplasia increases with aging. The objective of our study was to describe the circumstances of discovery of cancer diagnosed in the elderly.

Methods: A retrospective study carried out in the Internal Medicine department of Mohamed Tahar Maamouri hospital in Nabeul for a period of 18 months. Patients aged at least 65 years and in whom the diagnosis of cancer was established were included. Patients with previously known neoplasia were not included.

Result: The diagnosis of cancer was established in 30 patients. The average age was 68.5 years. The sex ratio was 1.5 with a male predominance. The deterioration of the general condition was the predominant mode of revelation (60%) followed by prolonged fever and bone pain which was each reported in 27% of cases. The main associated biological abnormalities were biological inflammatory syndrome (60%) and hypercalcemia (17%). The neoplasms discovered were mainly: hemopathy (33%) and bronchopulmonary or digestive cancer (26% each). The primary tumor was unknown in 3% of the patients. The number of investigations necessary to establish a positive diagnosis was reduced in the presence of a call point (mean number of investigations of 1). However, when no leads were found at the end of the interrogation, examination and routine biological examinations, the number of necessary investigations was raised to an average of five ones.

Discussion: The discovery of cancer in the elderly is common in internal medicine. In fact, deterioration in general condition, prolonged fever, biological inflammatory syndrome and hypercalcemia, which are the main signs that reveal neoplasia, are classic reasons for follow-up in Internal Medicine. A methodological etiological approach makes it possible to limit the number of necessary investigations.

Conclusion: This work highlights the contribution of the internist in the diagnosis of cancers.

97. Young woman in remission from breast cancer: determinants of work capacity

Saidi I[1], Khechine W[1],Hmad A[1], Zoukar O[2], Mahfoudh A[3], Daldoul A[1],Zaied S[1]

1 Medical oncology unit at CHUFattouma Bourguiba, Monastir,

2 Gynecology and obstetrics department at the Monastir maternity and neonatology center,

3 Occupational medicine department at CHU Taher Sfar, Mahdia.

Introduction: A significant proportion of breast cancer survivors return to work after remission. The object of our study was to identify factors interfering with the work capacity of these patients.

Materials and methods: Analytical cross-sectional study of 75 working-age breast cancer patients who had been working prior to diagnosis and who returned to work after remission. Clinical data were collected from medical records, the socio-professional survey was based on a pre-established form and the assessment of work capacity was based on the Work Ability Index (WAI) score.

Results: In the univariate study, work capacity was found to be significantly more impaired in patients with comorbidities, mainly neurosensory, or exposed to mechanical constraints, and more preserved in female teachers. The WAI score was positively correlated with physical, executive, emotional, cognitive and social functioning scores and the future outlook score, and negatively correlated with fatigue, pain, dyspnea, treatment-specific side effects and brachial symptoms. However, the multivariate study failed to identify any independent factors predictive of work capacity.

Conclusion: Return to work is a sign of victory for survivors. Detection and management of factors likely to impair their work capacity would be of great help in resuming an active life.

98. Breast cancer in remission: work capacity after return to work

Saidi I[1], Khechine W[1],Hmad A[1], Zoukar O[2], Mahfoudh A[3], Daldoul A[1],Zaied S[1]

1 Medical oncology unit at CHUFattouma Bourguiba, Monastir,

2 Gynecology and obstetrics department at the Monastir maternity and neonatology center,
3 Occupational medicine department at CHU Taher Sfar, Mahdia.

Introduction: Socio-professional reintegration of breast cancer survivors has become a priority. The aim of our study was to assess patients' work capacity after returning to their professional activities.

Materials and methods: Cross-sectional descriptive study conducted among patients followed for breast cancer at the medical oncology unit of Monastir University Hospital, in remission, who had resumed professional activity. Epidemiological and clinical data were collected from the medical record, the occupational survey was carried out using a pre-established form and the assessment of work capacity was based on the standardized Work Ability Index (WAI) questionnaire.

Results: Our study included 75 patients. The disease was discovered at a clinical stage II in 56% of participants, and a molecular profile in 84% of cases. Of these patients, 26.7% worked in the textile and clothing sector, 22.7% in the teaching sector and 21.3% were craftswomen. More than half (56%) of the participants had tenure. The average work capacity score was 35.6 ± 6.88, corresponding to moderate work capacity. Of these participants, 13% had poor work capacity, 37.7% had moderate capacity, 40.3% had good capacity and 9.1% had excellent capacity.

Conclusion: Although the rate of return to work is high in our study population, the work capacity of survivors remains worrying and requires special attention.

99. Professional life after breast cancer

Saidi I[1], Hmad A[1], Khechine W[1], Zoukar O[2], Mahfoudh A[3], Daldoul A[1],Zaied S[1]

1Medical oncology unit at CHUFattouma Bourguiba, Monastir, 2Gynecology and obstetrics department at the Monastir maternity and neonatology center,
3 Occupational medicine department at CHU Taher Sfar, Mahdia.

Introduction: Breast cancer is increasingly becoming a chronic disease, and it has become necessary to study its socio-economic impact. The main aim of this study was to assess the occupational impact of the disease.

Materials and methods: Descriptive cross-sectional study of 100 patients of working age followed for breast cancer, in remission and working prior to diagnosis. Clinical data were collected from medical records and the socio-professional survey was based on a pre-established form.

Results: Thirty-seven patients worked in factories (machine operators or other), 18% worked in the education sector, 17% were craftswomen, 10% worked in the tertiary sector, 7% were housekeepers. The median time since diagnosis was 33.16 ± 33.18 months [4.67 - 97.47 months]. At the time of the study, 75% of patients were returning to work. The majority (52 patients) retained the same position in the same company, 10% were on sick leave, 10% stopped working voluntarily and 5% took early retirement. Of the women who returned to work, only 8 (10.66%) benefited from a modified workstation and 9 (12%) had a professional reclassification.

Conclusion: The rate of return to work is relatively high, but the adaptation of the workplace is not optimal. A multidisciplinary platform based on collaboration between the occupational physician and the treating physician could help to improve the reintegration and return to work and job retention of patients after breast cancer.

100. Breast cancer in young women: Determinants of long-term quality of life

Saidi I[1], Hmad A[1], Khechine W[1], Ben Ayed S[1], Zoukar O[2], Mahfoudh A[3], Daldoul A[1], Zaied S[1]

1Medical oncology unit at CHUFattouma Bourguiba, Monastir, 2Gynecology and obstetrics department at the Monastir maternity and neonatology center,
3 Occupational medicine department at CHU Taher Sfar, Mahdia.

Introduction: The impact of breast cancer on quality of life remains an under-evaluated topic in practice. The aim of this study was to identify the determinants of quality of life in survivors at a distance from diagnosis.

Materials and methods: This is an analytical cross-sectional study of 100 patients followed at the medical oncology unit of Monastir University Hospital for histologically confirmed breast cancer. Sociodemographic and clinical data were collected from the medical records. Quality of life and global health (QL) and the various specific domains of the disease and its treatment were assessed by the QLQ-C30 and BR23 questionnaires.

Results: In the univariate study, the QL score was not associated with any socio-demographic factor except the husband's level of education. No clinical or therapeutic data were significantly associated with QL. Quality of life was positively correlated with good physical, social, executive, social and cognitive functioning, a high future outlook score, and preserved body image. On the other hand, LQ was negatively correlated with scores for sexual pleasure, fatigue, nausea and vomiting, pain, dyspnea, insomnia, financial difficulties, residual treatment-related adverse effects and brachial symptoms. In the multivariate study, pain and social functioning were independent predictors of QOL.

Conclusion: At a distance from the active phase of treatment, quality of life depended above all on the various functional, symptomatic, physical and psychosocial sequelae secondary to the disease and its treatment. Detection and treatment of any alterations in these different domains would considerably improve the management of our patients.

101. Unusual primary location of T-cell lymphoblastic lymphoma in the uterine body: a case report and review of literature

Nouha Ben Abdeljelil, Ikram Bahri, Ahlem Belallah, Bahaeddine Lahbecha, Sirine Ben Tekaya , Seifeddine Ben Hammouda, Abdelfattah Zakhama, Manel Njima

Objective and background: Primary non-Hodgkin's malignant lymphomas of the uterine body are extremely rare localization since only eleven cases have been reported in the literature. This case stresses the value of histology in the diagnosis of primary lymphoma of the uterus and reviews the relevant literature.

Case presentation: A 55-year-old patient, with no personnel or family history of cancer, consulted for pelvic pains evolving for 8 months. Pelvic ultrasound and magnetic resonance imaging (MRI) revealed an enlarged uterus with the presence of a heterogeneous corporal-ischemic region mass measuring 20.6 ×14cm that may be related to a large sub mucosal myoma. The patient underwent a hysterectomy with annexectomy.

Results: In the gross examination, the uterine corpus measured 28x16x6 cm. On the section, the uterine body is unrecognizable by a yellow mass with hemorrhagic and necrotic changes. Microscopic study revealed a lymphomatous proliferation made by dyscohesive, monomorphic, small size cells with numerous mitosis, mixed with macrophages and apoptotic bodies. The tumor infiltrated all layers of the uterus, parameters, and annexes. Immunohistochemically, tumor cells were positive for CD3, CD4, CD5, CD7 and Tdt and they were negative with CD20, Myeloperoxydase, granzym B,ALK, and cytokeratin. The proliferation index was 90%. A biopsy of bone marrow was negative.

Discussion and conclusion: TLL is a highly aggressive tumor. Most patients are adolescents who present with mediastinal mass and bone marrow localization. However, its occurrence as a primary tumor of the uterus is very rare. The criteria to assess the primitivity of TLL establish that diagnosis correct only if the disease is confined to the organ and no signs of leukemia are present at diagnosis or develop during follow-up.

102. Cystic Partially Differentiated Nephroblastoma: Two Case Studies

Seifeddine Ben Hammouda, Ikram Bahri, Sirine Ben Tekaya, Baha Lahbacha, Ahlem Bellalah, Rim Hadhri

Department of Pathology, Fattouma Bourguiba University Hospital, Monastir, 5000, Tunisia

Objective and background: Cystic partially differentiated nephroblastoma (CPDN) is a rare children's renal tumor. It has no specific clinical and radiological presentation. Only a pathological examination of the surgical specimen can ensure the diagnosis. This work aims to analyze this rare entity's epidemiological and pathological characteristics.

Methods: Two cases were diagnosed as CPDN in our department over a period of 10 years. Their epidemiological and pathological characteristics were retrospectively reviewed.

Results: There were two boys, aged 2 years old and 18 months old, without pathological history. They presented to our hospital with chronic abdominal pain. A CT scan examination showed a left cystic renal tumor with a mean size of 6.5 cm in both cases. The therapeutic decision was nephrectomy. The gross examination showed a multilocular, encapsulated, cystic masse with an average size of 6 cm with no solid or expansile areas. Microscopically, the tumors were composed entirely of cysts separated by septa. The cysts were lined with flattened or hobnail epithelium. The septa were variably cellular and contained islands of blastema and epithelial elements such as immature tubules. An immunohistochemical study showed that immature epithelium structures between cysts were positive for WT1. Based on the above features, a diagnosis of CPDN was given.

Discussion and conclusion: CPDN is a rare cystic renal tumor. It occurs more commonly in boys under 24 months of age. Its clinical presentation is non-specific. Pathological examination is crucial for the diagnosis. This rare tumor has a good prognosis after surgical treatment by nephrectomy. It should not be confused with other aggressive renal tumors of such as Wilms tumor. However, because of the presence of blastemal cells in septa, CPDN may show aggressive behavior and has a tendency for recurrence following surgery despite its usual benign course.

103. Gastric leiomyoma: a case report of a rare mesenchymal tumor

Seifeddine Ben Hammouda, Ikram Bahri, Baha Lahbacha, Sirine Ben Tekaya, Manel Njima, Leila Njim

Department of Pathology, Fattouma Bourguiba University Hospital, Monastir, 5000, Tunisia

Objective and background: Leiomyoma affects rarely the digestive tract. It occurs frequently in the esophagus, but rarely in the stomach. It has non-specific clinical, radiological, and endoscopic presentations. Pathological examination is essential for diagnosis. The aim of this work is to report a case of gastric leiomyoma (GL) and to analyze its epidemiological and histopathological features.

Case presentation: A 61-year-old man, presented with localized epigastric pain. Digestive endoscopy revealed a 5 cm submucosal mass on the large gastric tuberosity suggesting the diagnosis of gastrointestinal stromal tumor (GIST). A biopsy of this mass was made and concluded to inflammatory fibroid polyp. The therapeutic decision was a tumorectomy with pathological examination. The gross examination showed a 5.5 x 3 cm submucosal mass with a lobulated and white appearance at the cut section. Microscopically, this nodule was composed of spindle cells arranged in intersecting fascicles. These cells had an eosinophilic cytoplasm and cigar-shaped nuclei without atypia and mitoses. Immunohistochemically, tumor cells were positive for smooth muscle actin, H-Caldesmon, and desmine and negative for CD117, Dog-1, CD34, and PS100.

Discussion and conclusion: Gastric leiomyoma is a very rare mesenchymal gastric tumor and generally has a good prognosis. It mainly affects adults in the sixth decade. Clinically, it is often asymptomatic and incidentally discovered. Histological examination and immunohistochemical study are crucial to confirm the diagnosis and eliminate other differential diagnoses. Their main differential diagnosis is GIST and poses a diagnostic problem preoperatively given the similarity of endoscopic, radiological, and even macroscopic and morphological histological aspects. The immunohistochemical study thus remains the gold standard for diagnostic confirmation in this case.

104. Angiomyolipoma of the Kidney: The Experience at the Department of Pathology of Monastir

Seifeddine Ben Hammouda, Ikram Bahri, Dorsaf Beltaifa, Ahlem Bellalah, Nouha Ben Abdeljalil, Rim Hadhri
Department of Pathology, Fattouma Bourguiba University Hospital, Monastir, 5000, Tunisia

Objective and background: Renal angiomyolipomas (RAML) are rare benign mesenchymal tumors. They represent 1 to 3% of renal tumors. They can be sporadic, or syndromic, particularly in the context of tuberous sclerosis of Bourneville. The aim of this work is to study the epidemiological and histopathological characteristics of this entity in the Monastir Department of Pathology.
Methods: A retrospective study of all cases of RAML diagnosed in our department between 2018 and 2022.
Results: Eight cases of RAML were documented in our department over five years. They were two men and six women with a mean age of 56 years (37-75 years). Two patients were followed for tuberous sclerosis of Bourneville. All tumors were unilateral. Four patients underwent a total nephrectomy, three patients a simple tumorectomy, and only one case was incidentally discovered in autopsy. The tumor was multifocal in two. It was associated with clear cell carcinoma (one case). The average tumor size was 6.5 cm. The macroscopic examination showed in all cases a well-demarcated and non-encapsulated tumor. The color varies from yellow to pinkish tan, depending on the proportions of the various tissue components. Histologically, these tumors were made by mesenchymal proliferation with variable proportions of three components: adipose, vascular, and smooth muscle. Nuclear atypia and mitotic activity were absent. In one case, the smooth muscle component presented an epithelioid appearance with nuclear pleomorphism and numerous mitoses.
Discussion and conclusion: RAMLs are rare mesenchymal tumors (less than 3% of all renal tumors). They have non-specific clinical presentations. They can occur sporadically or in patients with tuberous sclerosis. In patients with tuberous sclerosis, RAML is found in the third decades of life, whereas sporadic cases tend to occur in older patients. Generally, they have a good prognosis but exceptionally are invasive in the context of epithelioid angiomyolipoma.

105. Synchronous intestinal and subcutaneous epithelioid angiosarcoma: A case report

Ikram. Bahri, Emna Chelbi, Salwa Nechi, Abir Chaabane, Amel Douggaz, Mohamed Karim Mfarrej

Department of Pathology, Taher Maamouri, University Hospital, Nabeul, Tunisisa

Objective and background: Epithelioid angiosarcomas are a rare subtype of sarcoma which represented 1%. It can develop at any age and in any part of the body. It rarely affected the Gastrointestinal tract which can be primary or metastatic. It presents with no specific sign. The diagnosis is confirmed by histological and immunohistochemical study.

Case presentation: It is a 66-year-old man presented to the emergency with melena, dyspnea, and subcutaneous masses on the right and left flanks. The patient underwent a gastroduodenoscopy which showed multiple purpuric and hemorrhagic polyps of the ampullary and duodenal region, with a middle size of 7 mm. Colonoscopy and CT-scan were normal.

Results: The anatomopathological study of the biopsies of the ampullary formation showed the presence of an infiltrating tumor with solid, pseudo-glandular and vascular architecture. The tumoral cells have abundant eosinophilic cytoplasm, vesicular nuclei, and prominent nucleoli. These cells expressed ERG, vimentin, and focally for CD117. The tumor cells was negative to CD31, CD34, TFE3, AE1AE3, CD45, MelanA, HMB45, Dog-1, CD138, PS100, actin, desmin and HHV8. The biopsy of subcutaneous nodules revealed a hypodermic tumor with the same pathological features. There, the diagnosis of multifocal epithelioid angiosarcoma was made.

Conclusion: This is the first African case of small intestine associated with synchronous subcutaneous epithelioid angiosarcoma. The particular morphology of this tumor, resembling the more frequent melanoma or carcinoma, may be misleading. Thus, the immunohistochemical staining (IHC) with ERG is of great help especially when CD34 or CD31 are negative. When a molecular study can't be performed, the absence of diffuse nuclear TFE3 expression on IHC help to distinguish epithelioid angiosarcoma from the newly identified epithelioid hemangioendothelioma with YAP1-TFE3 fusion.

106. Kaposi sarcoma: An epidemiological and histopathological study in the Tunisian cap bon region

Ikram. Bahri, Salwa Nechi, Abir Chaabane, Amel Douggaz, Mohamed Karim Mfarrej, Emna Chelbi

Department of Pathology, Taher Maamouri, University Hospital, Nabeul, Tunisisa

Objective and background: Kaposi sarcoma (KS) is a rare vascular tumor caused by human herpes virus 8 (HHV8). There are 4 forms depending on the clinical context. The aim of this work is to analyze his epidemiological and histopathological characteristics.

Methods: Five cases were identified as KS at our institution over a period of 5 years (from 2017 to 2021). Their demographical, pathological characteristics, and differential diagnosis were retrospectively reviewed.

Results: The average age of our patients was 65,66 (ranged between 51 and 76). Sex ratio M / F=2(4men/2women). The parts of the body affected are cutaneous (5 cases), visceral (1 case). A patient presents with multiple tumor locations. The average tumor size was 2cm. The etiological investigation showed that all our patients were immunocompetent, HIV (-), not coming from an endemic area. The histopathological study reveled in all cases a proliferation of atypical spindle-shaped cells which are dissociated by vascular slits filled. The immunohistochemical study showed a positivity for HHV-8, CD34 and CD31. All patients were treated surgically with total remission.

Conclusion: KS is a vascular tumor caused by HHV8 with no specific symptomatology. There are 4 clinical forms (classic, endemic, post organ transplantation and AIDS-related). It can occur in almost any part of the body but visceral involvement is the seriousness of the disease. The diagnosis is confirmed by histological and immunohistochemical study. HHV8 is the most specific marker allowing to distinguish KS from its differential diagnoses such as angiosarcoma, multinucleated angiohistiocytoma and acquired elastotic hemangioma.

107. Intracholecystic papillary neoplasm: a case report and review of the literature

Manel. Njima, Ikram. Bahri, Nouha. Ben Abdeljelil, Ahlem. Bellalah, Seifeddine. Ben Hammouda, Leila. Njim, Abdelfattah. Zakhama, Rym. Hadhri
Department of Pathology, Fattouma Bourguiba, University Hospital

Objective and background: Intracholecystic papillary neoplasm (ICPN) is a very rare non-invasive epithelial neoplasm arising in the mucosa of the gallbladder. It is found in 0.4% of cholecystectomies. We report a case of ICPN and analyze his epidemiological and histopathological characteristics.

Case presentation: A 60-year-old patient presented with pain in the right hypochondrium. The ultrasound examination showed a 3x2.5 cm solid mass at the gallbladder fundus. The tumor markers such as ACE, CA-19-9, and α-foetoprotein were normal. The therapeutic decision was a cholecystectomy.

Results: The gross examination showed a 12x13 cm gallbladder. In the section, it was 2 exophytic, yellow masses. The mean tumor size was 2 cm. The tumor's mucosal surface was smooth, and its form was similar to that of a submucosal tumor. Histopathological findings showed intraluminal growth of back-to-back tubes and papillary formation. The epithelial cells were cuboid with clear nuclear stratification and evident nucleoli. Mitosis was numerous. There was no invasion into the stromal tissue.

These findings demonstrated ICPN with low-grade dysplasia. Immunohistochemically: tumor cells were positive for CK7, CK20, and CDX2.

Discussion and conclusion: ICPN is a preinvasive neoplasm of the biliary tract characterized by papillary growth in the gallbladder. ICPNs are twice as common in females as in males. The mean age was mean 60 years. Almost patients presented with right hypochondrium pain, but the lesion can be detected incidentally. Four histological subtypes exist biliary type, gastric type, intestinal type, and oncocytic type. ICPN shows various degrees of dysplasia from low to high grade and finally to invasive carcinoma. This variation of dysplasia degree demonstrates the adenoma-carcinoma sequence while papillary adenocarcinoma is assumed to arise from novo carcinogenesis. Therefore, it is important to distinguish these entities for selecting an appropriate treatment strategy. The prognosis for ICPN is typically much better than gallbladder adenocarcinoma.

108. Correlation between serum vitamin D and interleukin-1β expression: Transcriptional study in breast cancer

Hana. Khenine 1/2 , M. Jrad 1/2 , A.Triki 3 , A. Chelbi 4 , H. Belfkih, I. Jbir 3 , I. Dhaifa 4 , I. Sassi 1 , S. Aouini 1 , Y. Gorgi 1 , I. Sfar 1

1. Immunology Research Laboratory of Renal Transplantation and Immunopathology (LR03SP01)
University of Tunis El Manar, Charles Nicolle Hospital, Tunis.
2. Laboratory Services, Mohammad Taher Maamouri Hospital. Nabeul.
3. General Surgery Service, Mohammad Taher Maamouri Hospital. Nabeul.
4. Anatomopathology Service, Mohammad Taher Maamouri Hospital. Nabeul.
5. Chemotherapy Service, Mohammad Taher Maamouri Hospital. Nabeul.

Introduction: L'interleukine-1β (IL-1β) is a pro-inflammatory cytokine known for its pro-metastatic value in breast cancer. Its function is regulated by its natural inhibitor, the interleukin-1 receptor antagonist (IL-1Ra). Recent data suggest that vitamin D may influence the gene expression of these cytokines.
Aims: The aim of this study was to investigate the correlation between variations in serum vitamin D levels and the relative expression of IL-1β and IL-1Ra in the tumor microenvironment and in the adjacent healthy tissue in patients with breast cancer.
Methods: Fourteen breast cancer patients were analyzed for serum vitamin D levels (ELFA; VIDAS® VITD). Patients were quantified for IL-1β, and IL-1Ra mRNA expression in tumor and adjacent normal tissues using real-time PCR using a specific probe (Applied biosystems®).
Results: breast cancer patients had significantly lower vitamin D levels (p=0.026) and low vitamin D levels were associated with overexpression of HER2 (p=0,03). Negative correlation was found between vitamin D levels and IL-1Ra expression in tumor tissue (r=-0,62; p=0,02) and IL-1β expression in healthy tissues. High IL-1β expression was associated with high histological grade (0,05), vascular emboli (0,02) and HER2overexpression (p=0,14)
Conclusion: The study suggests that vitamin D indirectly enhances the expression of IL-1β at the tumor site while directly reducing its transcription in healthy tissues and regulates HER2 receptor expression. The prognostic and pro-metastatic value of IL-1β should be investigated.
Key worlds: Vitamin D, Interleukin-1beta, Interleukin-1 receptor antagonist, breast cancer, genetic transcription

109. Study of the Association Between Radiological Expression and the Inflammatory State of Breast Lesions

Hana. Khenine1/2, M. Jrad1/2, A.Triki 3, A. Chelbi4, H. Belfkih, I. Jbir3, I. Dhaifa 4, I. Sassi1, S. Aouini1, Y. Gorgi1, I. Sfar1

1. Immunology Research Laboratory of Renal Transplantation and Immunopathology (LR03SP01) University of Tunis El Manar, Charles Nicolle Hospital, Tunis.
2. Laboratory Services, Mohammad Taher Maamouri Hospital. Nabeul.
3. General Surgery Service, Mohammad Taher Maamouri Hospital. Nabeul.
4. Anatomopathology Service, Mohammad Taher Maamouri Hospital. Nabeul.
5. Chemotherapy Service, Mohammad Taher Maamouri Hospital. Nabeul.

Introduction: Inflammation sets the stage for cancer development. Breast lesions classified as ACR 3 and 4 are suspicious for malignancy. The objective of this study was to investigate the serum level of tumor necrosis factorα (TNFα) and in situ lesion expression of the TNFα and interleukine-1B (IL-1β) pro-inflammatory cytokines in patients with non-tumoral breast nodules of mammographic types ACR 3 and 4.
Methods: Patients who presented with radiologically classified breast nodules as ACR 3 and 4 were recruited from surgery Department of Mohammad Taher Maamouri Hospital. They underwent blood sample collection for TNFα quantification. their Biopsies were obtained from the pathology department, and patients with tumor lesions were excluded. The control group consisted of 14 blood donors without any breast pathology for serological analysis, and 14 healthy breast tissue biopsies were collected from the pathology department for molecular analysis. Serum TNFα levels were measured using the ELISA technique (R and D), and relative in situ expression in the nodules and healthy biopsies of TNFα and (IL-1β) was determined using RT PCR (Applied Bio-system).
Results: Five female patients were included in the study, with an average age of 30 years (range 18-38 years). They had no history of gynecological cancers. Three (60%) had an early onset of menstruation before the age of 12. Three (60%) had breastfed their children for more than 6 months. None of the patients received hormone replacement therapy. All studied breast lesions were of the adenofibroma type. The mean serum levels of TNFα were similar between the controls and the patients (2,29±1ug/ml vs 3,7±1,9 UG/ml) (p= 0,8). No significant difference in the median relative in situ expression of TNFα and IL-1β between the nodular tissue and healthy tissue was observed; median expression (patient/control) of TNFα and IL-1β respectively was (0,00099 vs 0,00697) (p=0,72) and (0,000091/0,0015) (p=0,46)
Conclusion: The radiological image of breast nodules does not appear to be correlated with the inflammatory state of the lesion.

110. The Role of IL-1B in Breast Cancer: Molecular and Clinical Study

Hana. Khenine1/2, M. Jrad1/2, A.Triki 3, A. Chelbi4, H. Belfkih, I. Jbir3, I. Dhaifa 4, I. Sassi1, S. Aouini1, Y. Gorgi1, I. Sfar1

1. Immunology Research Laboratory of Renal Transplantation and Immunopathology (LR03SP01) University of Tunis El Manar, Charles Nicolle Hospital, Tunis.
2. Laboratory Services, Mohammad Taher Maamouri Hospital. Nabeul.
3. General Surgery Service, Mohammad Taher Maamouri Hospital. Nabeul.
4. Anatomopathology Service, Mohammad Taher Maamouri Hospital. Nabeul.
5. Chemotherapy Service, Mohammad Taher Maamouri Hospital. Nabeul.

Introduction: IL-1β is a pro-inflammatory cytokine that influences tumor progression. The aim of this study was to investigate the association between in situ tumor IL-1β expression and the clinical and histological characteristics of patients, to deduce a potential prognostic value of this cytokine as a biological marker.

Materials and Methods: Patients who underwent surgery for breast cancer at Mohammad Taher Maaouri Hospital in Nabeul between January and June 2023, without prior neoadjuvant treatment, were included in this study. Tumor tissue biopsies and adjacent healthy tissue samples were obtained from the hospital's pathology department and were used for molecular analysis via real-time PCR (RT PCR) (Applied Biosystem®). Clinical records of the patients were reviewed.

Results: Fourteen patients were included, with an average age of 58±10 years. Nine (64%) of them were in early stages (1 and 2). Histologically, 80% had ductal carcinoma, and 43% (6) had a high SBR grade. Vascular emboli were present in 20% (3) of patients, and HER2 overexpression was observed in 14% (2). Increased IL-1β expression was statistically associated with high histological grade (p=0.05), the presence of emboli (p=0.02), and HER2 overexpression (p=0.07).

Conclusion: IL-1β appears to have prognostic value in breast cancer. These findings warrant confirmation through larger cohorts.

111. The Diagnostic and Prognostic Value of TNFα in Breast Cancer: A Molecular and Clinical Study

Hana. Khenine 1/2 , M. Jrad 1/2 , A.Triki 3 , A. Chelbi 4 , H. Belfkih, I. Jbir 3 , I. Dhaifa 4 , I. Sassi 1 , S. Aouini 1 , Y. Gorgi 1 , I. Sfar 1

1. Immunology Research Laboratory of Renal Transplantation and Immunopathology
2. (LR03SP01) University of Tunis El Manar, Charles Nicolle Hospital, Tunis.
3. Laboratory Services, Mohammad Taher Maamouri Hospital. Nabeul.
4. General Surgery Service, Mohammad Taher Maamouri Hospital. Nabeul.
5. Anatomopathology Service, Mohammad Taher Maamouri Hospital. Nabeul.
6. Chemotherapy Service, Mohammad Taher Maamouri Hospital. Nabeul.

Abstract: TNFα plays a significant role in the physiology of breast cancer. The aim of this study was to evaluate the diagnostic and prognostic value of this cytokine as a novel biological marker.

Materials and Methods: Patients with breast cancer who were treated and operated on between January and June 2022 without prior neoadjuvant therapy underwent preoperative blood sampling for serum TNFα measurement (ELISA). Breast biopsies from these patients were used for molecular analysis of TNFα via RT PCR (Applied Biosystem). The control group consisted of 14 blood donors who also underwent serum TNFα measurement.

Results: Fourteen patients were enrolled, with an average age of 58±10 years. Nine (64%) of them were in early stages (1 and 2), 43% (6) had a high SBR grade, and 20% (3) had vascular emboli. The mean serum levels of TNFα were higher in patients compared to controls (71.78 ± 113 pg/l vs. 2.29 ± 1.09 pg/ml) (p=0.04). ROC analysis demonstrated that, with a threshold of 4 pg/ml, the maximum sensitivity of this assay for diagnosing breast cancer was 70%, with a specificity of 100% (AUC=0.83) (p=0.04). No significant association was found between serum and in situ TNFα levels and the clinical characteristics of the patients.

Conclusion: This study highlights the diagnostic value of TNFα, which warrants confirmation in larger cohorts.

112. Pleural invasive mesothelioma: A single-institution experience in Northern Tunisia

Rahma Ayadi (1, 2), Ichrak Hadhri (1), Emna Brahem (1), Rahma Yaich (1), Olfa Ismail (1), Aida Ayadi (1, 2)

1. Pathology Department; Abderrahmen Mami Hospital; Ariana, Tunisia
2. Faculty of medicine of Tunis, El Manar University

Introduction: Malignant pleural mesothelioma (MPM) is a rare neoplasm that represents only 2% of all pleural tumours. Exposure to asbestos is the main risk factor. MPM is suspected in the presence of clinical and radiological signs, but the diagnosis requires histological and immunohistochemical confirmation.

Methods: We report a descriptive retrospective study of 86 cases of MPM diagnosed in our department over the period between January 2004 and July 2023.

Results: There were 72 men and 14 women aged between 36 and 95 years old with an average age of 64. The notion of exposure to asbestos was found in 18 cases. The most common reason for consultation was chest pain. The radiological explorations had shown water-toned pleural opacity in 26 cases, pleural thickening in 16 cases, tissue mass in 7 cases and pneumothorax in one case. The diagnosis was made on transparietal biopsy (n=28), surgical pleural biopsy (n=48), lymph node biopsy (n=2), brionchial biopsy (n=1), and surgical excision specimen (n=10). The extemporaneous examination was performed in 45 patients and confirmed the malignancy in 32 cases. Histologically, there were 69 cases of epithelioid mesotheliomas, 5 sarcomatoid mesotheliomas and 12 biphasic mesotheliomas. Immunohistochemically, cytokeratin, EMA, calretinin were diffusely expressed in all cases and TTF-1 was negative in all cases. CK5/6 and vimentin were used in 35 and 45 cases respectively. They were positive respectively in 25 and 33 cases.

Conclusion: MPM is a real challenge both in terms of diagnosis and treatment. Histological and immunohistochemical study is widely used to confirm the diagnosis as well as to rule out differential diagnosis.

113. PDL1 expression and molecular profile in non small cell lung cancer: Report of an institutional experience in Northern Tunisia

Rahma Ayadi (1, 2), Ichrak Hadhri (1), Emna Brahem (1), Farah Loued (1), Olfa Ismail (1), Yoldez Houcine (2, 3), Aida Ayadi (1, 2)

1. Pathology Department; Abderrahmen Mami Hospital; Ariana, Tunisia
2. Faculty of medicine of Tunis, El Manar University
3. Pathology Department; Salah Azaiz Institute, Tunis, Tunisia

Introduction: Treatment of lung cancer has been increasingly successful in recent years with the advent of immunotherapy and targeted treatments. However, the prognosis is still bad. The expressions of molecular biomarkers and PD-L1 are the most important factors to select the treatment strategy for patients with lung cancer. We performed this study to evaluate the prevalence of molecular biomarkers and the PDL1 expression among a large series of Tunisian patients with advanced stage of non small cell lung carcinoma (NSCLC).

Methods: This observational study included all patients with a pathologically confirmed diagnosis of NSCLC treated between 2019 and 2021.

Results: The absence of molecular genotyping was observed in 36.9% of the cases. The most frequent genotyping mutation was observed with the EGFR (28.6%), followed by the KRAS (5.73%), followed by ALK gene rearrangement (3.8%), followed by BRAF (1.2%), MET (0.6%) and HER (0.6%), while ROS1 rearrangement was not present at all in this series. The other gene abnormalities showed no significant differences across the histologic subtype. For molecular profile, we noticed the presence of significant differences between EGFR and gender, HER and age and KRAS and Biopsy tissue origin. For tested cases with PD-L1, 6 cases achieved the cut off (>= 50%), 7 cases (4,4%) were lesser than 1% in 68 cases (43.3%) and were between 1 and 49%. PD-L1 positivity was more likely observed in solid type (1.9%) than acinar or papillary (0%) adenocarcinoma. PD-L1 expression showed no significant differences across clinical and demographic parameters. High PD-L1 expression and molecular abnormalities overlapped EGFR (1 case), BRAF (1case) and KRAS (3cases). All the other specimens harboring abnormalities had a PD-L1

Conclusion: To the best of our knowledge, this is one of the largest studies from the country describing a large panel of biomarkers and their clinicopathologic/histopathologic associations in lung cancers.

114. Work-related bone marrow aplasia: a case report

Chebbi S, Bel Haj N., Rassas I., Dahri O., Kheder A., Omrane A., khalfallah T, Mahfoudh

Department of Occupational Medicine and Ergonomics Faculty of Medicine of Monastir

Introduction: We report a case of occupational medullary aplasia seen at the occupational medicine department at the university hospital of Mahdia.

Observation: Mr. B.S, aged 40years old with no notable pathological antecedents, non-smoker and non-alcoholic, consulted for purpuric lesions that appeared following an anti-tetanus sero-vaccination with gingivorrhagia and extension of the lesions to the whole body. The workup showed pancytopenia and poor bone marrow with a few lymphocytes on bone marrow aspiration. Bone marrow biopsy confirmed the diagnosis of bone marrow aplasia.

As part of the etiological work-up, the patient's medical history revealed no history of medication or exposure to radiation; viral serologies (Hepatitis B, Hepatitis C, EBV, CMV and HIV) were negative.

Professional questioning revealed that this carpenter had been in the trade for 24 years, and had handled chemicals such as paints, varnishes and neoprene glue on a daily basis. The safety data sheets for the varnishes and paints used confirmed the presence of 18% toluene, so the aplasia was considered to be of occupational toxic origin, and was declared as an occupational disease.

Discussion: Toluene is a superior homologue of benzene, widely used as a solvent. The toxic effect of toluene on humans is well documented. Its hematotoxic effect is limited to changes in leukocyte morphologies and variations in leukocyte and lymphocyte enzyme concentrations for occupational exposures above 50 ppm. The aplastic effect of toluene is due to the presence of benzene as an impurity in its formula, which is the cause of the bone marrow aplasia in our observation.

115. Occupational bronchopulmonary cancer: a case report

Dahri O., Bel Haj N., Rassas I., Chebbi S, Kheder A., Omrane A., khalfallah T, Mahfoudh A

Department of Occupational Medicine and Ergonomics Faculty of Medicine of Monastir

Introduction: Through a case of bronchopulmonary cancer observed in the occupational medicine department of the Taher Sfar Mahdia University Hospital, we discuss the diagnostic difficulty of occupational cancers.

Observation: Patient XY, 44 years old, diabetic, hypertensive, non-smoker, working as a boiler operator in a soap factory for 25 years, consulted following the fortuitous discovery of two right and left supra-clavicular adenopathies. Lymph node biopsy revealed metastasis of a poorly differentiated adenocarcinoma with extensive necrosis. A cervico-thoracic CT scan was ordered and showed diffuse upper cervical and mediastinal lymph node involvement with a centimetric solitary intra-parenchymal pulmonary nodule in the left upper lobe. The diagnosis of bronchopulmonary cancer was accepted and the tumor was classified as stage 4 (T1N3M1).

Occupational questioning revealed that this patient was frequently exposed to asbestos fibers, used as thermal insulation for boiler doors. He was also occupationally exposed to tar coal. Exposure was direct, without the use of personal protective equipment, and affected several employees.

Given the notion of occupational exposure to carcinogens, Mr XY was declared an occupational disease under table n°37 entitled "coal tar". Two years later, the patient died, and his wife continued the compensation procedure.

Comments: The low proportion of declared occupational cancers is partly due to a lack of awareness on the part of doctors, who often fail to ask patients about their work history, and insufficient information on the part of the workers themselves. Occupational physicians, who are best placed to recognize occupational exposure, have an essential role to play in preventing occupational cancers.

116. Pediatric Diffuse Glioma with loss of expression of ATRX and MSH6: A case report

Lobna Bouzidi, Ons Belhaj, Wafa Ghribi, Lobna Ayedi, Nawrez Gouiaa, Tahya Sellami-Boudawara, Saadia Makni

Department of Pathology, Habib Bourguiba Hospital, Sfax, Tunisia

Introduction: Pediatric diffuse gliomas are much rarer than their counterparts in adult. Pediatric diffuse gliomas are underpinned by different tumorigenesis pathways. We report a case report of Pediatric Diffuse Glioma with loss of expression of ATRX and MSH6.

Patient and method: It was a case report collected from our pathology department at Habib Bourguiba Hospital in Sfax, Tunisia.

Results: It was a thirteen-year-old boy, who consulted for a syndrome of intracranial hypertension. Her sister died in 2013 from frontal glioblastoma. MRI showed an intraaxial left parietal tumor with necrotic content. The pathological examination, after excision of the lesion, showed glial proliferation of high cell density, with significant cytonuclear atypia. Mitoses are numerous. Large foci of necrosis was noted. Absence of sarcomatous contingent. Immunohistochemistry showed diffuse negativity of IDH1, ATRX and MSH6 (80% of cells). Tumor cells were intensely staining for p53 and Olig2. Ki65 was evaluated as 30%. Molecular sequencing showed alteration of MMR genes. Final diagnosis was malignant diffuse glioma Grade 4 with loss of ATRX gene and MMR (mismatch repair) defeciency.

Discussion: Pediatric diffuse gliomas are underpinned by different tumorigenesis pathways. Many childhood diffuse gliomas do not have IDH mutations and their pathophysiogenesis is unknown. Recently, rare cases of pediatric glioblastoma have been described in the context of a syndrome of constitutional deficiency of the MMR system. This is a new pathway of gliomagenesis that is still little explored.

Conclusion: Pediatric gliomas showed many and various pathway of tumorigenesis. Many researchers are in aim to explore those different pathways.

117. KIT and PDGFRA mutations of a Tunisian series of gastrointestinal stromal tumors

Ahmed H'mayada1, Mariem ben rekaya1,2, Linda belhaj1,2 Yasmine ben taher1, Mariem ksentini1,2, Raoudha Aloui2,, Baligh Miladi2, Emna Hamdeni1, Ahlem Blel1,2, Soummaya rammeh1,2

1 Theranostic Biomarkers, LR23ES02, Faculty of Medicine of Tunis, University Tunis El Manar

2 Pathology department, Charles Nicolle Hospital, Tunis, Tunisia

Introduction: Gastrointestinal stromal tumors (GISTs) represent 1% of gastrointestinal neoplasms. Up to 90% of GISTs are driven by activating mutations in tyrosine kinase KIT or PDGFRA genes, and their understanding is becoming increasingly important, because they affect response to treatment with tyrosine kinase inhibitors. The aim of of the present study was to investigate mutation status of the KIT gene and PDGFRA in a Tunisian series with gastrointestinal stromal tumors.

Materiels and methods: Tumor DNA was extracted from 45 GISTs' samples. Polymerase chain reaction amplification and gene sequencing were used to detect the sequences of exons 9 and 11 in KIT, 12 and 18 in PDGFRA.

Results & discussion: In results, KIT mutations were detected in 35 cases, of which exon 11 mutations were detected in 31 cases and four cases were shown to have a mutation in exon 9. PDGFRA mutations were detected in five cases. Mutations varied from simple substitutions to large deletions (some with nucleotide insertions) resulting in missense mutations. The most common mutation in exon 11 was a deletion (W557-K558del), which accounted for 14,2% (5/35) of the cases, followed by D579del and point mutation V560D observed in 11,4% (4/35) of the cases. Eighteen mutations were heterozygous, with only two homozygous mutations. Pairs of different mutations in the same exon of KIT, or KIT mutations coupled with pairs of mutations in PDGFRA were detected in three patients. The incidence of mutations in KIT exon 11 and PDGFRα exon 18 is consistent with the literature; however, the low incidence of KIT exon 9 mutations detected was unexpected.

Conclusion: The present study contributes to the molecular understanding of GISTs in the Tunisian population. Thus, gene mutation genotyping may provide inspiration and guidance for imatinib-based targeted cancer therapy.

Keywords: Gastrointestinal stromal tumors, Activating mutations, KIT, PDGFRA, Sequencing

118. MMR profile of colorectal cancers: Interest of the HSP110 marker

Emna Hamdeni, Mariem Ben Rekaya, Linda Bel Haj Kacem, Yasmine Ben Taher, Ahmed Hmaidia, Baligh Miladi, Meriem Ksentini, Raoudha Aloui, Ahlem Blel, Soumaya Rammeh

1 Theranostic Biomarkers, LR23ES02, Faculty of Medicine of Tunis, University Tunis El Manar

2 Pathology department, Charles Nicolle Hospital, Tunis, Tunisia

Introduction: Two approaches are used to assess the MMR profile: immunohistochemistry (IHC) of MMR proteins and the pentaplex molecular microsatellite instability (MSI) assay. The microsatellite HSP110 (HT17) was recently reported as a diagnostic marker of the MSI phenotype.

Goals: The objective of this work is to study the interest of the HSP110 marker in the study of the MMR profile of colorectal cancers (CRC).

Material and methods: The series included 87 CRCs diagnosed in the pathological anatomy and cytology department of the Charles Nicolle hospital. The study of MMR proteins (MSH2, MSH6, MLH1 and PMS2) was carried out by IHC (Ventana automate). Pentaplex and HSP110 markers were amplified by PCR. The amplified products were separated by capillary electrophoresis to determine the size of the alleles and infer whether the markers are altered or not using GeneMarker® software. The gold standard is the Pentaplex molecular technique.

Results: For the 87 CRCs, the IHC results were inconclusive in 17% of cases (15/87) because at least one MMR protein was completely negative (absence of expression from internal controls). IHC showed loss of expression of at least one of the MMR proteins in 12 of 72 (17%) (d-MMR). The remaining 60 (83%) had a competent MMR system (p-MMR).

Among the 87 CRCs, IHC and molecular technique were concordant in 82 cases and discordant in 5 cases. By taking the molecular technique as the gold standard. The HSP110 had 2 false positives and 0 false negatives. Thus, it showed a sensitivity of 100% and a specificity of 97%.

Conclusion: HSP110 is a sensitive, specific marker, less expensive than Pentaplex and easier to interpret. It could be of interest in microsatellite analysis, particularly in discordant cases between IHC and Pentaplex.

119. Predictive factors of malnutrition in patients with Lung Cancer

Lobna Loued, Meriem Ayadi, Ahmed Ben Saad, Rania Kaddoussi, Aya Zaara, Souhir Ksissa, Asma Ghourabi, Samah Joobeur, Saoussen Cheikh Mhamed, Naceur Rouatbi

Pneumology Department, Fattouma Bourguiba Hospital, Monastir, Tunisia

Introduction: Malnutrition is very common in patients with lung cancer. It is generally responsible for multiple clinical complications such as poor treatment tolerance, physical dysfunction and reduced survival. Despite its impact on the prognosis of patients, screening malnutrition remains generally ignored by clinicians. The aim of this study was to describe the prevalence and predictive factors of malnutrition in patients with lung cancer.

Methods: This is a cross-sectional descriptive and comparative study, conducted among 68 cancer patients in the Pneumology Department of Fattouma Bourghiba Hospital. Data collection was carried out by the MNA tool for nutritional assessment and a self-administered questionnaire to identify the factors associated with nutritional disorders. We opted for convenience sampling to recruit participants. Data analysis were performed using SPSS software.

Results: We observed a male predominance in our population (97.1%). The average age of the participants was estimated at 59.14 ± 9.3 years. Regarding the nutritional status, we found that 58.8% of the participants had a poor nutritional status, 35.3% had a risk of poor nutrition while only 5.9% patients presented normal nutritional status. The majority of patients surveyed (79.4%) frequently received medical assessment regarding their nutritional status. Gastro-intestinal disorders that limited their food intake were reported by 76.5% of surveyed patients and poor dental condition was reported by 35.3% of respondents. Malnutrition was more prevalent in elder patients ($p=0.005$), patients with low outcome ($p<0.001$), and those with stage four tumors ($p<0.001$).

Conclusion: Our study had revealed a high prevalence of nutritional disorders in patients with Lung Cancer. This reveals the need for close collaboration between nutrition experts and clinicians to promote nutritional assessment and develop reasonable and personalized nutritional support for cancer patients.

120. The Prevalence of Chemotherapy-Induced Peripheral Neuropathy in Cancer Patients at Salah Azaïz Institute

Zina Haj Belgacem 1, Abdelhamid Hamza 1, Nesrine Skima 1, Wiem Ben Ayed 1, Azza Ben Said 1, Imen Limayem

1 Department of Pharmacy, Salah Azaiez Institute, Tunis, Tunisia

Introduction: Chemotherapy-induced peripheral neuropathy (CIPN) is a common adverse effect of antineoplastic agents that can alter patients' quality of life even after treatment cessation.
The aim of this study is to determine the frequency of CIPN in cancer patients.

Methods: This is a prospective study that included patients undergoing neurotoxic chemotherapies (oxaliplatin, taxanes, and vincristine) at Salah Azaïz Institute between April 22, 2023, and June 12, 2023. Data were collected using the Asclepios software, and patients were categorized based on the causative agent of CIPN. Prevalence, grade, number of cycles, and mean cumulative doses were determined for each agent.

Results: A total of 648 patients were included, with a sex ratio of 1.19 male-to-female and an average age of 60 years. The overall prevalence of CIPN was 8.8%, with specific prevalences of 20.9%, 5%, 1.3%, and 2.7% for oxaliplatin, paclitaxel, docetaxel, and vincristine, respectively. CIPN was mostly of grade 2 for the majority of agents. The average number of cycles inducing neuropathy was 5 for oxaliplatin, 4 for docetaxel and paclitaxel, and 3 for vincristine. The mean cumulative doses were 6 mg, 449.08 mg, 757.60 mg, and 778.65 mg for vincristine, docetaxel, oxaliplatin, and paclitaxel, respectively. A 25% dose reduction was implemented for grades 1-2 CIPN, and treatment discontinuation for grades 3-4.

Discussion/Conclusion: Despite the high prevalence of CIPN due to oxaliplatin, docetaxel induced its onset earlier, with a lower toxic dose. Dose reduction was practiced to prevent complications, which could be potentially depriving patients of optimal treatment.
Hence, the necessity of thorough patient therapeutic education regarding the management of this adverse effect arises, along with the exploration of avenues to proactively identify individuals at risk of developing CIPN.

121. 18FDG-PET in the initial staging of breast cancer

Ben Fekih N.*, Chaltout F., Ben Ahmed K., Ben Nasr M., Bentmouhamed T., Maaloul M., Chtourou K., Guermazi F.

Habib Bourguiba Hospital, Sfax, Tunisia

Introduction: Breast cancer is the first cause of death by cancer in women worldwide. FDG-PET/CT has demonstrated its additional value in diverse situations, including initial staging. The aim of this study is to detect the value of PET/CT in breast cancer patients; comparing PET/CT performance with that of CT in initial staging.

Materials and methods: This is a retrospective study carried out at the authors' institution, from January 2021 to July 2023. It included patients with pathologically proven breast cancer. All patients had undergone thoraco-abdomino-pelvic CT examination prior to PET/CT as part of an initial exploration and staging of the disease.

Results: The study included 27 patients 26 women and one man, median age was 52 years ± 12.42, range [29–67 years]. All of them presented with ductal invasive carcinoma but one had lobular carcinoma.

No contralateral breast affection was detected but sites of distant metastasis was seen on PET/CT vs CT respectively included : bone (n = 5) vs (n=2), axillary lymph nodes (n = 13) vs (n=13), mammary chain lymph nodes (n = 3) vs (n=4), distal lymph nodes (n=2) vs (n=2), lung (n = 1) vs (n=0), and other visceral sites (n = 2) in PET.

PET-CT ruled out bone metastasis in eight out of 10 equivocal cases in CT and confirmed one, excluded seven out of nine pulmonary lesions while confirming one, and ruled out hepatic metastasis in six patients, along with one unclear adrenal gland lesion.

Additionally, PET/CT depicted additional lesions like a mediastinal pleura lesion in one patient and bone metastases in two patients that weren't visible on CT alone.

Conclusion: This study supports the findings of previous studies, highlighting the valuable contribution of PET/CT in the initial staging of patients with breast cancer.

122. Chronic myeloid leukemia: epidemiological, clinical and therapeutic aspects

H. Masrour, W. Rhandour, R. Hanini, S.Bouchnafati, A. Oudghiri, M. Bouzayd, N. Al Sadiq, L. Abarkan, L. Lerhrib, Y. Chekkori, F. Tohir, N. Oubelkacem, N. Alami Drideb, M. Ouazzani, Z. Khammar, R. Berrady

Internal Medicine and Oncohaematology department; Hassan II University Hospital of Fes, Morocco.

Introduction: Chronic myeloid leukemia is s an uncommon type of cancer of the bone marrow; it results from a well-known genetic abnormality; the translocation t(9;22). It usually occurs in elders and is associated with a good prognosis thanks to targeted therapies.

Patients and methods: a retrospective study, descriptive and analytical, about 172 patients with chronic myeloid leukemia, followed in an internal and oncohematological department between January 2012 and December 2022.

Results: Our study included 172 patients, with a mean age of 47.59 years [17-90], consisting of 80 men and 92 women, with an F/M sex ratio of 1.15. The median diagnostic delay was 4.5 months. Splenomegaly was found in 88.37% of our patients, and 28.48% had a perfomans status of III or IV. The complete blood count (CBC) revealed anemia in 117 patients (68%), leukocytosis with myelemia on blood smear in all our patients, with major hyperleukocytosis (greater than 100,000/mm) in 52.9% of our patients. Tumor lysis syndrome was observed in 60 patients (34.88%). The myelogram classified the disease into chronic phase in 136 patients (79.09%) and accelerated phase in 36 patients. Karyotype revealed the Philadephia chromosome in 148 patients (94.81%) reflecting translocation t(9;22). The resulting transcript BCR-ABL was detected in all patients. 97 patients (64.66%) were treated with Hydroxyurea prior to initiation of tyrosine kinase inhibitors. All our patients were put on Imatinib, 13.46% required an escalation to Nilotinib, and only three patients were treated with Dasatinib. The 5-year survival rate for our patients is 86.6%. We lost 23 patients during follow-up, 11 of whom developed acute myeloid leukemia, while the remainder died of other causes.

Conclusion: this pathology is a successful model for targeted therapies, but also a way of learning more about targets diversity and inter-individual variability in non-responders.

123. Hodgkin and chronic myeloid leukemia: a case report

H. Masrour, S.Bouchnafati , R. Hanini , W. Rhandour, A. Oudghiri, M. Bouzayd, N. Al Sadiq, L. Abarkan, L. Lerhrib, Y. Chekkori, F. Tohir, N. Oubelkacem, N. Alami Drideb, M. Ouazzani, Z. Khammar, R. Berrady

Internal Medicine and Oncohaematology department; Hassan II University Hospital of Fes, Morocco.

Introduction: Chronic myeloid leukemia and Hodgkin Lymphoma derive from different progenitors: Common myeloid and lymphoid progenitors respectively. Their occurrence in the same patient is very rare.

Observation: A 32-year-old woman with no previous medical history consulted an otolaryngologist for the appearance of cervical lymph nodes that had been evolving for 6 months. A cervicotomy was performed and pathological examinations concluded that the patient had scleronodular Hodgkin's lymphoma.

The lymphoma was classified as IIB according to the Ann Arbor classification system. Osteomedullary biopsy showed no bone marrow infiltration. The patient was put on an ABVD regimen, with a poor response after 4 cycles (<50%). She was then given the combination of BEACOPPr (2 cycles) and radiotherapy (36 Gray), which resulted in complete remission. Six years later, she started complaining of abdominal pain, the body scan showed the appearance of a 21 cm splenomegaly, and the blood count revealed a high white blood cell count of 209,790/mm3, with neutrophils of 106,993/mm3, lymphocytes of 12,587/mm3. The blood smear showed the presence of myeloid precursors: promyelocytes: 4%, myelocytes: 16%, metamyelocytes: 14%, and blasts: 2%. Myelogram was consistent with the diagnosis of chronic myeloid leukemia. Philadelphia chromosome was observed on the central karyotype and BCR-ABL was detected in 43%. The Sokal score was 1.28 (high risk) and the Hasford score was 1129 (intermediate risk). She was placed first on hydroxyurea to reduce cellularity, and then on Imatinib. She had mild neutropenia after the initiation of treatment, which resolved on its own. After one year of treatment, her blood count is normal, she presents no splenomegaly and her BCR-ABL level has fallen to 0.65%.

Conclusion: Secondary malignancies are relatively common following both chemotherapy and radiotherapy. But the incidence of chronic myeloid leukemias after Hodgkin lymphoma is scant.

124. Epidemiological, clinical and prognostic profile of patients followed for Hodgkin lymphoma at a onco hematology center in Morocco

S.Bouchnafati, H. Masrour, M. Bouzayd , R. Hanini , W. Rhandour, A. Oudghiri, N. Al Sadiq, L. Abarkan, L. Lerhrib, Y. Chekkori, F. Tohir, N. Oubelkacem, N. Alami Drideb, M. Ouazzani, Z. Khammar, R. Berrady

Internal Medicine and Oncohaematology department; Hassan II University Hospital of Fes, Morocco.

Introduction: Hodgkin's lymphoma is a well distinct anatomopathological entity whose incidence, like all cancers, is increasing. This disease remains one of the best-prognosis cancers, affecting mainly young people.

Patients and methods: This is a retrospective descriptive study of patients with Hodgkin's lymphoma followed up in the department of internal medicine and onco haematology in Fez from January 2017 to December 2022, with the aim of describing the epidemiological, clinical, biological, therapeutic and prognostic profile.

Results: We collected 323 patients in total. There were 158 women and 164 men, with an M/F sex of 1,03. The average time to diagnosis was 8,9 months, 180 of patients i.e (55%) complained of general symptoms, and 310 patients (96%) had a tumor syndrome, with Bulky in 83 (25,6%).

Hodgkin Lymphoma was localized (Stage I and II) in 127 patients (39,3%) and 194 patients had an advanced stage (III and IV) i.e. (60%). Extranodal involvement was present in 148 patients i.e (45%) with the most to least frequent locations: 69 patients had a lung localisation (21%), 25 liver (7,7%), 3 bone marrow (0,9%), 3 digestive tract (0,9%), 3 skin (0,9%), 3 breast (0,9%) 1 tonsils (0,3%), 1 adrenal (0,3%), 1 cavum (0,3%), the subtypes of classical Hodgkin lymphoma described in our population: 266 patients nodular sclerosis classical Hodgkin lymphoma i.e (82,3%), 49 mixed cellularity (15,2%). 8 patients had a lymphocyte-rich classical Hodgkin lymphoma i.e. (2,5%).

A High IPS score (score 4 and higher) was described in 18,5% of patients. chemotherapy was adapted to the patient's stage and age; first-line treatment was ABVD or BEACOPP.

Complete remission after 1st line therapy was observed in 262 patients (81,1%).

Conclusion: Hodgkin's lymphoma is considered a cancer with a good prognosis, but delayed diagnosis can lead to late-stage patients, which can be a therapeutic challenge.

125. The quality of life following allogeneic hematopoietic stem cell transplantation

T. Ahmed (1); L. Achour (2, 1) ; I. FAZAA (2, 1) ; C. Khalil (1); S. Ben Hassine (2) ; C. Drira (2, 1)

(1) Pharmacie, Faculté de pharmacie de Monastir, Monastir, Tunisie;

(2) Service pharmacie, Centre national de greffe de moelle osseuse, Tunis, Tunisie

Objective: This study delves into the health-related quality of life (HRQoL) experiences of Tunisian patients following hematopoietic stem cell transplantation (HSCT) using the EuroQol-5 dimensions (EQ-5D) instrument. The investigation spans the year post-HSCT.

Methods: A survey-based exploration encompassed patients who had undergone HSCT. The EQ-5D instrument was employed for HRQoL assessment, scrutinizing five dimensions: problems in walking, problems in washing or dressing, problems performing usual activities, pain or discomfort, and anxiety and/or depression.

Results: During the year post HSCT period, participants reported varying HRQoL experiences across different dimensions. In terms of problems in walking, 54.54% reported no problems, and 27.27% indicated light difficulties. With respect to problems in washing or dressing, 63.63% reported no problems, while 18.18% faced light challenges. In terms of problems performing usual activities, 36.36% faced no difficulties, whereas 18.18% encountered moderate challenges. In the realm of pain or discomfort, 45.45% reported no problems, with 27.27% experiencing moderate discomfort. In regard to anxiety and/or depression, 54.54% reported no problems, and 18.18% indicated moderate instances.

Conclusion: This comprehensive exploration underscores the intricate and evolving nature of health-related quality of life challenges faced by patients in Tunisia. These insights into evolving challenges call for targeted interventions to enhance the well-being of patients post HSCT.

126. Febrile neutropenia: Evaluation of the antibiotic prescription in oncohematology

M.Meftah1,2, L.Achour1,2, I.Fazaa1,2, I.Ben Sheikha1, 2, W.Jdidi2, L.Debbouba1, C.Drira1,2

(1) Pharmacy Department, Bone Marrow Transplant Center, Tunis, Tunisie

(2) Faculty of Pharmacy, Monastir, Tunisia

Introduction: Febrile Neutropenia (FN) is the most serious hematological complication in patients receiving chemotherapy. It is associated with a high-risk of mortality. Since FN is a medical emergency the prescription of empirical antibiotic treatment is necessary.
Objective: Evaluate the appropriateness and compliance of antibiotic prescriptions in patients with febrile neutropenia and study the factors that may influence them.
Methods: This is a prospective cross-sectional study of all prescriptions for patients hospitalized in the pediatric onco-hematology department of the National Bone Marrow Transplant Center (NBGC) diagnosed with febrile neutropenia during three months (April, May and June 2023). A data form was developed in the pharmacy department to collect information about patient and treatment: weight, age, pathology, biological documentation, medication, route of administration, dosage, duration of treatment. The guidelines used were the recommendations of learned institutions.
Result: During the study period, 523 prescriptions were analyzed for 17 patients with febrile neutropenia. The mean age of the patients identified was 6 years. The majority of prescriptions (53%) were for triple therapy (beta-lactam, glycopeptide and aminoglycoside). The most commonly prescribed antibiotics were piperacillin/tazobactam (26%), Vancomycin (16%), Imipenem-cilastatin (14%), amikacin (11.8%) and levofloxacin (9.8%). Fever was documented in 28% of cases (clinically: 11%, microbiologically: 17%). Prescriptions were relevant in 65% of cases, justified but irrelevant in 17%. %. The dominant reasons for non-compliance were inadequate treatment duration and dosage. The profile of immunodepression patients hospitalized in the NBGC was the main factor influencing the appropriateness of prescriptions.
Discussion/Conclusion: Given the particularities of oncohematology patients, the implementation of an antibiotic therapy protocol becomes essential to improve prescription quality.

127. Infectious complications after allogeneic hematopoietic stem cell transplantation: frequency and cost

L.Achour 1,2, M.Meftah2, I.Fazaa1,2, I.BenCheikha2, S.S. Ben Hassine1 , I.Fradi2, C.Drira1,2
(1) Pharmacy Department, Bone Marrow Transplant Center, Tunis, Tunisie
(2) Faculty of Pharmacy, Monastir, Tunisia

Introduction: Allogeneic Hematopoietic Stem Cell (HSC) transplantation is a complex procedure that carries a significant risk of complications with high risk of mortality and morbidity. Infections are the most common complication which are associated with increased expenditure, especially following the introduction of new molecules that are more effective with fewer side effects, but increasingly expensive. The aim of this study is to describe infectious complications during the 1st year post-HSC allograft, and to estimate drug costs for each complication.
Methods: This is a retrospective pharmaco-economic study including adult allograft patients in 2021 at the Bone Marrow Transplant Center of Tunis. For each patient, data on post-transplant complications were obtained from medical records and drug costs were calculated using drug management software. Data analysis was performed using Excel.
Results: Of 18 adult patients who received a HSC allograft during the year 2021, 14 patients received a peripheral stem cell allograft versus 4 bone marrow allograft patients. This population had an average age of 32 years. Of these patients, 22% had no complications during the 1st post-transplant year, 22% had one complication, 17% 2 complications and 39% more than 2 complications. Among infectious complications, CMV disease represented the most frequent complication observed in 38% of patients, with an average drug management cost of 28470DT (min 1500DT;max 103 000DT), followed by febrile neutropenia (33%) with an average cost of 16809DT (min 700DT, max 95000DT) and fungal infection observed in 1 patient with a cost of 24899DT. CMV disease therefore represents the most frequent and costly complication, which can be explained by the use of expensive molecules and an average treatment duration of 30 days.
Conclusion: The predominance of CMV viral infections, which are quite costly for hospitals, has prompted us to consider new recommendations for prophylactic treatment.

128. Oncofertility: juridical aspects on gamete cryopreservation in Tunisia

Z. Jabeur, A. Ben Daly, K. Annabi, C. Makni, I. Aini, O. Bouzid, M. Ben Dhiab

Department of Forensic Medicine, Farhat Hached University Hospital -Sousse

Introduction: Anti-cancer treatments are extremely invasive and affect the body, notably the reproductive functions, compromising the patient's fertility either temporarily or permanently. In these cases, fertility preservation techniques can be used. The most promising method for overcoming secondary infertility is gamete cryopreservation. Across the world, strict laws are applied in these cases. We aim to discuss the conditions under which self-cryopreservation is carried out in the Tunisian jurisdiction.

Methods: Review of current Tunisian regulations on gamete cryopreservation in cancerous patients.

Results: The main element of the legislative and regulatory framework concerning gamete cryopreservation was enacted by law no. 2001-93 of August 7, 2001, on reproductive medicine, supplemented by decree no. 2003-1027 of April 28, 2003, setting out the activities and procedures involved. The particularity of the Tunisian jurisdiction concerns unmarried patients. As a matter of fact, unmarried persons undergoing treatment or preparing to undergo a procedure that can affect their ability to procreate may, in exceptional circumstances, have their gametes frozen for a maximum period not exceeding five years, renewable for the same period. These frozen elements can only be used for the therapeutic purposes of medically assisted procreation within a married couple and in compliance with the precise conditions laid down by the law.

Conclusions: Tunisian law imposes stringent conditions on the activity of gamete cryopreservation, which is not always rational. However, the current major problem lies in the lack of clear information and the difficulty of patient accessibility to this method of fertility preservation, thus compromising the principle of access to equitable quality care for all.

129. T Cells Distribution in Colorectal Carcinoma Microenvironment: Impact of Immune Contexture

Amira Hmidi*, Imen Helal, Fatma Khanchel, Raja Jouini, Ehsene Ben Brahim, Ashraf Chadli Debbiche

Pathology Department, Habib Thameur Hospital, Tunis, Tunsia

Introduction and objective: The tumor microenvironment is a dynamic environment where immune cell density, composition, function, and distribution collectively form the « immune contexture ». Within this context, the distribution of immune cells in both the tumor center (TC) and its invasive margin (IM) is of particular interest, providing valuable insights into the prognosis of solid cancers, including colorectal carcinomas (CRC). Our study aimed to explore the distribution of T lymphocytes (TL) within TC and IM of CRC and its link to patient survival.

Methods: We conducted a retrospective descriptive study over a three-year period, excluding cases that had undergone neoadjuvant chemoradiotherapy, as it could potentially alter the tumor's immune response. The average follow-up duration was 40.29 months. We utilized immunohistochemical analysis (anti-CD3) to evaluate T lymphocyte (TL) distribution in 'Hot Spot' regions of lymphocytic infiltration.

Two groups emerged based on TL distribution : 'homogeneous distribution,' characterized by uniform CD3+TL distribution in TC and IM, and 'heterogeneous distribution,' where CD3+TL predominantly occupied one of the two regions (TC or IM). We further analyzed patient survival in relation to these groups and the two regions (TC and IM) in 'heterogeneous distribution' cases.

Results: We found no significant difference in survival between 'heterogeneous' and 'homogeneous' TL distribution (p=0.357). However, in 'heterogeneous distribution' cases, a predominance of TL in IM correlated with extended survival (p=0.004).

Conclusion: Our study underscores the variable infiltration of TL in CRC, characterized by a heterogeneous distribution in TC and IM. This distribution is not arbitrary but linked to chemotactic and adhesive processes. Importantly, a higher TL density within the tumor, particularly at the invasive front, significantly improves patient survival. Understanding these immune dynamics within the tumor microenvironment could offer valuable insights for personalized treatment strategies in CRC.

130. Immunoscore: Paving the Way for Personalized Therapy in Stage II Colorectal Carcinomas

Amira Hmidi, Imen Helal, Fatma Khanchel, Raja Jouini, Ehsene Ben Brahim, Ashraf Chadli Debbiche

Pathology Department, Habib Thameur Hospital, Tunis, Tunsia

Introduction: In stage II colorectal carcinomas (CRC), adjuvant therapy is not well-standardized, primarily reserved for high-risk patients with a potential for tumor recurrence. Unfortunately, no reliable marker predicts this risk. The novel prognostic biomarker 'Immunoscore' (IS), assessing the immune response in the tumor microenvironment, may improve risk identification and treatment decisions in stage II CRC.

Materials and Methods: This retrospective study focused on stage II CRC cases diagnosed in our department over a three-year period with a 40.29-month average follow-up. We excluded middle and lower rectal carcinomas that received neoadjuvant chemoradiotherapy due to its potential impact on the tumor's immune response. Immunohistochemical analysis (anti-CD3, anti-CD8) using Tissue Microarray (TMA) assessed lymphocytic infiltration in 'Hot Spot' areas of the tumor center (TC) and invasive margin (IM). Markers were assigned percentages, and density was classified as 'high' or 'low' based on a median threshold. IS calculation followed the method by Galon et al., with one point per 'high' marker in both TC and IM. Patients were categorized as having a low IS (IS 0, 1, or 2) or a high IS (IS 3 or 4), and their survival was analyzed accordingly.

Results: Our study included 46 cases of stage II CRC. The average patient age was 59.41 years (range: 31-89) with a sex ratio of 1.19. IS was low in 63% (n=29) and high in 37% (n=17). Our study demonstrated that a low IS was associated with shorter survival, while a high IS correlated with prolonged survival ($p<0.002$).

Discussion / Conclusion: IS offers a simple and reproducible method to identify high-risk patients (those with a low IS) who could benefit from adjuvant chemotherapy while avoiding overtreatment in the low-risk recurrence group (those with a high IS).

131. Advancing Thyroid Cytology: Continuous Improvement of Diagnostic Performance at the Military Hospital

Amira Hmidi, Nada Mansouri, Issam Msakni, Fathi Bougrine
Pathology Department, Military Hospital, Tunis, Tunisia

Introduction and objective: The evaluation of thyroid cytology is based on the Bethesda Classification System which defines six different diagnostic categories, each, with an estimated percentage of expected cases. The variation in Bethesda category rates within our Pathology Department (from a 2020 retrospective study) compared to literature norms prompted the initiation of continuous training for pathologists to enhance accuracy. The aim of his study was to assess the efficacy of our continuous training in thyroid cytology.

Methods: We reviewed thyroid cytology reports conducted in the Pathology Department of the Military Hospital over a 12-month period (2021), precisely one year following the initiation of the continuous training program that specifically emphasizes thyroid cytology. In order to evaluate the efficacy of this training initiative, we juxtaposed these findings with those obtained from the retrospective analysis of 2020.

Results: We reviewed 57 thyroid cytology reports. The mean age was 47.9 years with a female predominance (sex ratio = 0.07). The distribution of cases across Bethesda categories was as follows: 'non-diagnostic' 60%, 'benign' 23.2%, 'atypia of undetermined significance' 0%, 'follicular neoplasm' 0%, 'suspicious for malignancy' 7%, and 'malignant' 3%.
Comparing with 2020, we observed an increase in the "non-diagnostic" category to 60% (from 28%), while the "Benign" category decreased to 23.2% (from 72%). Additionally, new categories emerged in 2021 (“suspicious for malignancy” and “malignant”), indicating a modest improvement in diagnostic performance.

Conclusion: Despite the increase in the "non-diagnosis" category, which is operator-dependent rather than pathologist-based, a modest improvement in results compared to 2020 was observed. Further endeavors are necessary to ameliorate diagnostic accuracy through continuous training, multidisciplinary collaboration, and standardized reporting. Finally, it is noteworthy that the major limitations affecting our results are the small sample size and the short time frame between the initiation of the program training and the evaluation.

132. Exploring CD8+ T Cell Distribution in the Tumor Microenvironment of Colorectal Carcinomas: Implications for prognosis

Amira Hmidi*, Fatma Khanchel*, Imen Helal*, Raja Jouini*, Ehsene Ben Brahim*, Chadli Ashraf*
* Habib Thameur Hospital, Pathology Department, Tunis, Tunisia

Introduction: Exploring the spacial distribution of immune cells, in particular, cytotoxic T cells (TCD8+) in the tumor microenvironment provides relevant information for the prognosis of colorectal carcinomas (CRCs). This study aimed to examine the distribution of TCD8+ in the center of tumor (CT) and invasive margin (IM) of CRCs, and assessing its correlation with patient survival.
Material and methods: This is a retrospective descriptive study, involving 104 cases of CRCs, collected over a period of three years. We excluded cases who received neoadjuvant treatment which could influence the immune response within the tumour. An immunohistochemical study (anti-CD8) by the Tissue Microarray technique was carried out in the areas of "Hot Spot" in CT and IM. According to the distribution of TCD8+ in the tumor microenvironment, two groups have been identified: group with “homogeneous” distribution and group with “heterogeneous” distribution. Finally, we studied the survival of the patients according to these two groups.
Results: The distribution of TCD8+ was “homogeneous” in 58.7% (n=61), “heterogeneous” in 41.3% (n=43) with a predominance in the CT in 22.1% (n=23) and in the IM in 19.2% (n=20). Our study revealed that there is no significant survival difference between a "heterogeneous" and "homogeneous" distribution of TCD8+ in both CT and IM. Nevertheless, survival was notably extended in the "homogeneous" group with a high density of TCD8+ in both the CT and IM (p=0.001).
Discussion / Conclusion: Our findings emphasize the diverse distribution of TCD8+ within the tumor microenvironment, a phenomenon associated with chemo-attraction and adhesion processes. This observation sheds light on the intricate interplay between immune responses and tumor progression. A high density of TCD8+ in both CT and IM correlates with enhanced prognosis and extended patient survival. Ongoing research in this domain holds the potential to refine prognostic stratifications and tailor immunotherapeutic approaches accordingly.

133. Fibro-epithelial tumors of the breast: diagnostic challenges on microbiopsy

Amira Hmidi, Yoldez Houcine, Salma Kamoun, Maha Driss

Pathology Department, Salah Azaiz Institute, Tunis, Tunisia

Introduction and objective: Fibroepithelial tumors (FET) of the breast are a heterogeneous group of tumors that range from benign to malignant, each of which exhibits variable degrees of epithelial and stromal proliferation. FET are sometimes challenging, especially, on limited samples such as core needle biopsies. Precise distinction often imposes formidable demands on a pathologist’s skills. The aim of this study was to assess, in our experience, the reliability of biopsy in the diagnosis of FET of the breast.

Methods: This is a retrospective descriptive study, involving cases of breast FET, collected in the Pathology Department of Salah-Azaiz Institute over a period of 6 years (2017-2022). We selected cases whose preoperative microbiopsy diagnosis was difficult and uncertain, leading to nuanced conclusions. The efficiency of the biopsy in the diagnosis of FET was determined based on the diagnosis of the resection specimen as the gold standard.

Results: We collected 32 cases of FET in patients with a mean age of 33.3 years. The main diagnostic difficulty was the distinction between adenofibroma and grade1 phyllode tumor (PT). The preoperative diagnosis was in favor of an adenofibroma in 18 cases, in favor of a PT in one case and «uncertain» in 13 cases. The diagnosis was uncertain in 13 cases and concluded to an adenofibroma in 9 cases, PT in 2 cases, and infiltrating carcinoma in 2 cases. The diagnosis was concordant in all the remained cases.

Discussion / Conclusion: In our series, the main diagnostic difficulty was the distinction between adenofibroma and PT which was challenging in 13 cases. In our experience, a gray zone PT exhibits histologic features insufficient for an outright diagnosis of malignancy. The World Health Organization Working Group has recognized the difficulty pathologists face in accurate classification of these lesions, and recommended in cases of histologic ambiguity, to previgilate a diagnosis of fibroadenoma to avoid overtreatment.

134. Uncommon Ovarian Malignancy During Pregnancy: A Case Report

Omar Mnif[1], Abir Chaabane[1], Salwa Nechi[1], Baya Chelly[1], Salah Houda[2], Karim Mfarrej[1], Amel Douggaz[1], Asma Mahmoudi[1], Chawki Mrezgiya[2], Emna Chelbi[1]

[1]Department of Pathology, Taher Maamouri Hospital, Nabeul, Tunisia

[2]Department of Obstetrics and Gynecology, Mohamed Tlatli Hospital, Nabeul, Tunisia

Introduction: The 2014 WHO Classification of Tumors of Female Reproductive Organs classified borderline seromucinous tumors as a distinct entity with a microscopic appearance of papillary architecture and an admixture of a variety of Mullerian-type epithelium. Typically associated with endometriosis, their occurrence during pregnancy is exceptionally uncommon, presenting unique challenges in diagnosis and management.

Case Presentation: We present the case of a 31-year-old pregnant woman in her second trimester who was incidentally diagnosed with an ovarian cyst showing papillary projections during routine prenatal ultrasound imaging. The patient had no prior history of ovarian pathology or related symptoms. Considering the inherent risk of malignancy, adnexectomy during pregnancy was decided, followed by completion of surgery after delivery. Gross examination of the resected mass showed a unilocular cystic tumor measuring 10 cm with a smooth external surface, containing viscid fluid, and 4 cm friable papillary excrescences on the inner surface of the cyst. Histologic examination showed a branching papillary architecture with a fibrovascular core. The epithelium lining the papillae was stratified and composed predominantly of ciliated serous epithelium, followed by endocervical-type mucinous epithelium, with some areas of endometrioid lining and cell-rich connective tissue underneath. Epithelial cells demonstrated nuclear pleomorphism and hyperchromatic irregular nuclear contours without mitotic figures. No tumor necrosis or stromal invasion was seen. Alcian blue special stain showed cytoplasmic mucin within areas of endocervical cells. Immunohistochemistry staining demonstrated strong positivity for PAX8 and PR. The tumor cells exhibited a wild-type pattern of expression for P53 and were negative for ER and WT1.

Discussion: Adnexal masses are frequently encountered during pregnancy, but malignancy, on the other hand, is considerably rare. They are mostly non-epithelial tumors (germ-cell and sex-cord tumors), followed by borderline epithelial tumors (serous, mucinous), and epithelial ovarian cancers. This case report sheds light on an even rarer and intriguing entity that occurred within the context of pregnancy, emphasizing the need for a deeper comprehension of its pathogenesis.

135. Supratentorial ependymoma with ZFTA/RELA fusion: a case report

N. ELLOUZE (1), W. GHRIBI (1), F. KOLSI (2), S. CHARFI (1), T. BOUDAWARA (1), L. AYADI (1)

1. Department of Pathology and Research Laboratory LR18SP10, Habib Bourguiba University Hospital, Sfax, Tunisia
2. Department of Neurosurgery, Habib Bourguiba University Hospital, Sfax, Tunisia

Background: Ependymal neoplasms are a heterogenous group of neoplasms arising from the progenitors of the cells lining the ventricular system and the spinal central canal. During the last few years, significant novel data concerning oncogenesis, molecular characteristics and clinical correlations of these tumours have been collected. We reported a case of supratentorial ependymoma with ZFTA/RELA fusion.

Case Presentation: The case involved a 5-year-old girl, followed for intracranial hypertension syndrome and seizure episodes. A cerebral MRI was performed, revealing a right frontal lesion with cystic and fleshy component enhanced after Gadolinium injection. The lesion was biopsied locally, and the diagnosis of PNET was made. Due to tumor progression, a second biopsy was performed. Histologically, the tumor was well circumscribed, composed of monomorphic cells characterized by oval nuclei. Some anisocaryosis was present with increased mitotic activity (37 mitoses/10 high-power fields). Tumor proliferation sometimes encroached upon clear acellular spaces, creating a pseudo-rosette appearance. Vascularity was abundant, with focal necrosis present. Immunohistochemical analysis revealed that the tumor cells were positive for GFAP and negative for IDH1, ATRX2, and synaptophysin. The proliferation index (ki67) was estimated at 30%. An additional IHC study conducted abroad, showed a Focal OLIG2 expression, P53 expression, an absence of loss of INI1 BAF47 expression, EMA expression and NF-KAPPAB expression. Therefore, the diagnosis of a supratentorial ependymoma with ZFTA/RELA fusion was confirmed, due to the nuclear expression of NF-KAPPAB within the tumor cell population.

Discussion, Conclusion: ZFTA gene rearrangements, usually with the RELA gene, are the most common molecular alteration within supratentorial ependymomas, occurring in 20-58% of these tumors among adults and 66-84% in children. Available data show that it had the poorest outcome. Ependymal tumours are a heterogenous group of neoplasms with different molecular characteristics which are being identified. This effort will help improve the prognostic relevance of the different diagnostic entities.

136. Chromophobe renal cell carcinoma with extensive osteosarcomatous differentiation: A case report and literature review

Nermine Ellouze 1, Slim Charfi 1,2, Saadia Makni 1,2, Mohamed Amine Mseddi 2,3, Mourad Haj Slimene 2,3, Lobna Ayadi 1,2, Tahya Sellami Boudawara 1,2

1. Department of Pathology and Research Laboratory LR18SP10, Habib Bourguiba University Hospital, Sfax, Tunisia
2. Medical School of Sfax, University of Sfax, Tunisia
3. Department of urology, Habib Bourguiba University Hospital, Sfax, Tunisia

Background: Chromophobe renal cell carcinoma (ChRCC) is an unfrequent subtype of renal cell carcinoma (RCC). It can undergo sarcomatoid differentiation, but heterologous differentiation in sarcomatoid area is very rare. We report a case of a 79-year-old woman having a large sarcomatoid ChRCC with an extensive osteosarcomatous differentiation.

Case Presentation: A 79-year old woman was referred to the department of urology with a palpable mass in the lower left abdomen. A contrast-enhanced scan revealed a heterogeneous upper polar renal enhanced tumor with a central calcified area, invading the adrenal gland. Grossly, a solid tumor measuring 19.5 cm in the greatest dimension. It occupated almost all the kidney, with hemorrhagic areas and extensive areas of ossification.

Histologically, it was a biphasic tumor associating epithelial component (5%) and a predominantly sarcomatoid component (95%). Epithelial tumor cells are arranged in lobules, cords and solid clusters separated by fibrovascular septa. Tumor cells were round to polygonal with a perinuclear clear halo, pale or eosinophilic cytoplasm. The neulei is irregular with irregular nuclear membrane and small nucleoli. Tumor cells were immunoreactive for keratin 7 and C-kit and immunonegative for CD10 and Vimentin. The Sarcomatoid component was formed by heterologous osteosarcomatous differentiation, mixed with spindle cells and multinucleate giant cells. Large area of hemorrhage and tumor necrosis were present.

Discussion: ChRCC is an unfrequent subtype of RCC, representing about 5-7% of total RCCs. It was first described by Thoenes et al. in 1985. Sarcomatoid differentiation occurs in 2% to 9% of all ChRCC and it is associated with a worse prognosis and high risk of metastasis. Only 9 cases of sarcomatoid ChRCC with osteosarcoma differentiation have been reported. The prognosis is poor and the most common sites for distant metastasis are the lungs, bone, lymph nodes, liver and brain.

Conclusion: Chromophobe renal cell carcinoma with osteosarcomatous differentiation is an extremely rare tumor with a very poor prognosis.

137. Prognostic Value of Tumor-Infiltrating Lymphocytes in Breast Cancer Tissues

Lobna Bouzidi (1,2), Nermine Ellouze (1), Hana Triki (3), Slim Charfi (1,2), Wala Ben Kridis (2,4), Mohamed Derbel (2,5), Lobna Ayadi (1,2), Tahya Sellami-Boudawara (1,2), Boutheina Cherif (3)

1. Department of Pathology and Research Laboratory LR18SP10, University Hospital Habib Bourguiba, Sfax, Tunisia
2. Medical School of Sfax, University of Sfax, Sfax, Tunisia
3. Laboratory of Molecular and Cellular Screening Processes LR15CBS07, Centre de Biotechnologie de Sfax, University of Sfax, Sfax, Tunisia
4. Department of Medical Oncology, University Hospital Habib Bourguiba, Sfax, Tunisia
5. Department of Gynecology and Obstetrics, University Hospital Hedi Chaker, Sfax, Tunisia

Background: The impact of immune environment has been widely described in various solid tumors. The prognostic impact of tumor-infiltrating lymphocyte cells (TILs) is still limited in the literature. The goal of our study is to assess its prognostic value in breast cancer.

Materials: It was a retrospective cohort study of 120 female patients diagnosed with breast carcinoma excluding those who had received neoadjuvant chemotherapy or radiation before surgical resection. TILs evaluation was performed using the criteria mentioned by the TILs Working Group.

Results: TILs ranged from 1% to 90% with a mean percentage of 24.11% (median = 23.64%). TILs grading showed that low grade was the most frequent (48.3%) followed by medium and high grade (30% and 21.7%, respectively). Lymphocyte predominant breast cancer (LPBC) was confirmed in 20% of cases. Although, patients with lymphocyte-predominant breast cancer (LPBC) showed a markedly longer overall survival (OS) and disease-free survival (DFS) compared with those with non-LPBC (P = .002 and P = .008, respectively).

Discussion: The Tumor-infiltrating lymphocytes (TILs) are involved in the cellular antitumor immune response. This immune population is composed of T lymphocytes, B lymphocytes, natural killer (NK) cells, and macrophages. Actually, the presence of high TILs has been shown to have significant prognostic relevance for female breast cancer, which is in line with our results. This impact on survival was confirmed especially in HER2 + and TNBC subtypes both in neoadjuvant and adjuvant settings.

Conclusion: TILs have the potential role to evaluate prognosis in both adjuvant and neoadjuvant settings, and also predict therapeutic response to different treatments.

138. Colorectal Cancer Screening of UAE Nationals in Primary Healthcare Centers in Dubai Health Authorities

Lateefa Mohamed AlMarzooqi*, Mouza AlMehairi, Ola Aldafrawy, Laleh Seddigh, Abdulla AlAbdulla, Alia Alfalasi, Alanood Alfarasi, Ziba Farhadian, Laila Alkaabi, Marwan Zidan

Dubai Health Authority

Background: Colorectal cancer (CRC) is a significant global health concern with high morbidity and mortality rates. Early detection through effective screening programs plays a crucial role in reducing the burden of this disease. However, challenges such as low adherence and disparities in access to screening exist regionally and globally.

Objectives: To evaluate the prevalence of colorectal cancer screening among UAE citizens aged 40 to 75 years who were at average risk for the disease and sought care at ambulatory healthcare facilities in the Emirate of Dubai between January 2019 and January 2020 and determine the prevalence of positive screening results and explore potential risk factors associated with positive screenings. Lastly, to investigate whether individuals with positive screening tests underwent subsequent diagnostic tests to confirm or rule out colorectal cancer.

Methods: The present study was a retrospective cross-sectional analysis targeting individuals who fulfilled predefined inclusion criteria. Results: Out of a total of 36,126 eligible individuals for Colorectal Screening, 3145 (9 %) underwent screening using FIT/gFOBT during the study period. Among the screened individuals, 364 (11.6 %) had positive FIT/gFOBT results. However, only a fraction of them, specifically 111 (30.5 %), were referred to gastroenterology for a colonoscopy. Of the referred individuals, 61 (54.9 %) proceeded with a colonoscopy. Among the participants who underwent colonoscopy, 8 individuals (13.1 %) were diagnosed with colorectal cancer.

Conclusion: Given the vital role of colorectal cancer screening in early detection, our study's findings of a low 9 % participation rate highlight the need to enhance public awareness, streamline screening processes, and address barriers to improve screening rates. Keywords: Colon, cancer, screening, prevalence, FOBT, United Arab Emirates, Dubai.

139. The prevalence of high-risk human papillomaviruses in bladder cancer in a cohort from a Syrian population

Anju Surendranath1, Semir Vranic1, Hamda, Al-Thawadi1, Nizar Akil2 & Ala-Eddin Al Moustafa1,3

1Basic Medical Science Department, College of Medicine, QU Health, Qatar University, P. O. Box 2713, Doha, Qatar

2Pathology Department, Faculty of Medicine, University of Aleppo, Aleppo, Syria

3Oncology Department, Faculty of Medicine, McGill University, Montreal, QC, Canada

High-risk human papillomaviruses (HPVs) are important risk factors for the development and prognosis of numerous cancers, including cervical, anal, vulvar, vaginal, colorectal, ovarian, oral, and bladder. High-risk HPVs could be a predominant risk factor for bladder carcinogenesis and metastasis. However, the role of high-risk HPVs in developing bladder cancer has not been fully elucidated yet. In the present study, we explored the presence of high-risk HPVs in bladder cancer from a Syrian population. We examined high-risk HPV subtypes, including HPV 16, 18, 31, 33, 35, 39, 45, 51, 52, 58, 59, 66 and 68 using polymerase chain reaction (PCR) based genotyping with specific primers in a cohort of 103 bladder cancer patients. We found that 44.6% of the samples are positive for one high-risk HPVs. Specifically, HPV types 45, 52 and 58 which are present in 24.3%, 17.5% and 16.5% of the samples, respectively. Among these, 14 samples (13.6%) are co-infected with multiple HPV types. Interestingly, our cohort was found to be negative of the most common HPV types 16, 18 and 31. Our data suggest the possibility of specific types of HPV infections as risk factors for developing bladder cancer in the Syrian population.

Keywords: Bladder cancer; Human papillomaviruses; PCR; Syrian population.

140. The Sidra Medicine pediatric cancer precision oncology program

Shimaa Sherif, Wouter Hendrickx

Sidra Medicine, Doha, Qatar

Sidra Medicine is the primary pediatric cancer care facility in Qatar since opening the oncology clinic in May 2018. In parallel with the opening of the oncology clinic, the Sidra Pediatric Cancer Registry was established. Cancer patients presenting at Sidra consist of mainly Arab and Asian ancestry, representing 70 and 25 percent of our patients, respectively. 39 percent of these patients are diagnosed with Leukemia, 14 percent have a diagnosis of a Central Nervous System malignancy, other common diagnoses in descending order of incidence are Lymphoma, Germ cell tumors, Neuroblastoma and Sarcomas. The Sidra Pediatric Cancer Biorepository program (SPCB) was established soon after. In this project, we collect materials no longer needed for diagnosis from consented patients and blood samples along the trajectory of their treatment at Sidra Medicine. Since 2022 the repository also collects stool samples where possible to study the microbiome of our patients.

For all patients enrolled in SPCB protocol, we profile the bulk tumor using 90X/30X WGS for the tumor and blood sample respectively. We collect tumor methylation and transcriptomic profiles using the EPIC array and RNAseq 50M reads. Clinicians are provided with a Personal Cancer Genomics Report, a Cancer Predisposition Sequencing Report, a fusion gene report and in the case of a CNS tumor a methylation-based classification report. Clinical data is extracted from the medical record and stored and re-identified together with the multi-omics data for various research projects. As part of setting up this registry and repository the Personalized Research Information Management Platform (PRIME) was established. This platform captures all information of study participants from consent to sample collection, to lab and bioinformatic processing, and clinical data annotation. It has now scaled from pediatric cancer to other areas of Sidra Medicine's research programs like IBD and rare genetic disorder projects.

We have received 360 patients of which 142 were enrolled in our precision oncology program. The major types of cancer in the Sidra registry are Leukemia (119/32 consented) CNS (75/57), Lymphomas (38/10), Neuroblastoma (22/11), Germ cell tumors (21/17), Soft tissue sarcomas (19/10), and Renal tumors (16/12). We reported a case, of a 3-year-old male child who was diagnosed at Sidra Medicine with embryonal rhabdomyosarcoma (ERMS) of the neck, which is a rare and aggressive childhood cancer. Initial stage-based chemotherapy resulted in tumor progression. Unexpectedly, we identified somatic mutations in two genes of the RAS/MAPK pathway (BRAF and HRAS), which are classically mutually exclusive. The identified BRAF mutation (N581I) is a non-classical (Class III) hot-spot mutation, that has not been previously reported in ERMS.

A comprehensive nationwide cancer registry and a high-quality biorepository of an understudied population are of foundational value to the cancer research effort in the region. With the lowering cost of NGS technology bulk sequencing of pediatric tumors is quickly becoming in reach of many health care facilities.

141. Epigenetic Indicator for Methylation-based Assessment of Neoplasia in CRC survival

Eiman Ahmed, Wouter Hendrickx

Sidra Medicine, Doha, Qatar

Background: Colorectal cancer (CRC) is one of the leading causes for cancer-related death worldwide. CRC development occurs due to both genetic and epigenetic alterations in normal epithelial cells. DNA methylation: a type of epigenetic modification, has a major role in cancer progression. DNA methylation involves the addition of a methyl group to the promoter region which can silence or enhance the gene expression.

Methods: In this study, we are adding a layer of omics data to our publicly available AC-ICAM cohort, making it the first cohort that has RNAseq, WES, Microbiome and Epigenetic data, along with comprehensive clinical annotations. We have performed Infinium Methylation EPIC array on 182 colon samples and 76 adjacent paired normal samples. Differentially methylated probes (DMP) analysis was performed to evaluate the methylation profile difference between normal and tumor samples. Univariate cox regression analysis for overall survival was performed to identify prognostic CpGs.

Results: In the present study, we have identified 4,566 differentially methylated probes (DMP) between tumor (n = 182) and normal samples (n = 76) (FDR < 0.01) with at least 10% methylation change. The methylation-derived genes (MDG) from those DMPs were mostly mapped to immune-related pathways. We have identified a signature of 22 CpGs located in the promoter site that are both DMP between tumor and normal and significantly associated with survival. This signature can predict patients' overall survival based on risk score classification into low-risk and high-risk groups. The Kaplan–Meier survival curve showed an association of low-risk group with better prognosis (p-value = 3.72e-05, HR = 0.26 (0.29 - 0.59)). The signature was also validated in TCGA-COAD cohort (p-value = 0.017, HR = 0.53 (0.33 - 0.87)). In multivariate analysis, risk score was the most significant for predicting overall survival in AC-ICAM cohort (p-value = 0.000104, HR = 1.71 (1.30 - 2.23)). Moreover, risk score groups were able to stratify ICR based, immune-hot and immune-cold patients in both AC-ICAM and TCGA-COAD cohorts.

142. Follicular Thyroid Carcinoma Presenting as a Chest Wall Tumor 8 Years Following Thyroidectomy

Dorsaf Beltaifa,Sarra Mestiri, Wiem Majdoub, Oussama Belkacem, Sihem Hmissa

Pathology Department, University Hospital Sahloul,4053, Tunisia

Background & objective: Follicular thyroid carcinoma (FTC) represents around 10% of all thyroid cancers and is known to have a tendency to metastasize, with rates ranging from 6% to 20%. However, metastasis to the chest wall after a long-term follow-up post-surgery is extremely rare. In this report, we present a case of a patient who developed chest wall metastasis of FTC eight years after thyroidectomy.

Methods: We present the case of a 65-year-old woman with a history of total thyroidectomy 8 years prior who presented with dyspnea and intermittent back pain. A computed tomography (CT) revealed a 4.8×5-cm heterogeneous mass centered within the posterior aspect of the ninth rib. The patient underwent a chest wall resection including the right eighth to tenth ribs. Anatomopathological examination confirmed the diagnosis of metastatic FTC, with diffuse positive staining for thyroglobulin antibodies on immunohistochemistry.

Discussion and Conclusion: FTC is a subtype of thyroid cancer that is considered more aggressive than papillary carcinoma. Despite being a relatively indolent differentiated thyroid cancer, distant metastasis may occur in 5% to 19% of patients due to its tendency to invade blood vessels and metastasize hematogenously to distant sites, as seen in our patient.

The most common sites of metastases are the bones and lungs, but other unusual sites such as the parotid gland, skin, and brain have also been reported.

CT can be used to determine the biopsy site and other possible metastases of primary cancer.

In this case, it is essential to differentiate the histological subtypes of thyroid cancer for treatment strategies and prognosis determination when a metastatic lesion is observed.

143. Epidermoid Cyst of the spleen. A Report of Two Cases

Seifeddine Ben Hammouda, Dorsaf Beltaifa, Ikram Bahri, Baha Lahbacha, Nouha Ben Abdeljalil, Rim Hadhri
Department of Pathology, Fattouma Bourguiba University Hospital, Monastir, 5000, Tunisia

Background and Objective: Epidermoid cysts (EC) of the spleen are rare; they belong to the primary nonparasitic splenic cysts group. Usually, epidermoid cysts occur in children and young females. Our objective is to describe the clinical features of the epidermoid cyst of the spleen, with a focus on the role of the pathology to improve diagnostic accuracy.

Methods: We retrospectively analyzed two cases of epidermoid cysts of the spleen documented at the Department of Pathology of Fattouma Bourguiba University Hospital in Monastir, between January 2016 and June 2023.

Results: In our series, epidermoid cysts occurred in one man and one woman, aged 18 and 12 years old, respectively. A painless mass in the left hypochondriac region was the main presentation in both cases. The preoperative diagnosis of primary splenic cysts was ascertained through ultrasonography and computed tomography. Both patients underwent subtotal splenectomy due to suspicion of a hydatid cyst in one case and suspicion of a complicated EC in the other case. The gross examination of the specimens showed a 10 cm multilocular cyst with greenish content and a thick wall. Histological examination revealed that the cyst was lined with stratified squamous epithelium with a thick fibrous wall, confirming the diagnosis of an EC. In one case, after 2 years, the cyst recurred with a size of 7 cm, leading to a total splenectomy. The other case had an uneventful postoperative course.

Discussion and Conclusion: The EC is the most common type of non-parasitic cysts of the spleen. It is typically discovered incidentally during imaging studies or routine surgical procedures. This lack of distinctive clinical presentation is due to their frequent asymptomatic nature. The surgical strategy has been undergoing significant changes toward more conservative treatments, especially in young patients, with the goal of preserving the spleen for immunological purposes.

144. Breast cancer in women aged over 65 years: a series of 135 cases

Dorsaf Beltaifa (1), Sarra Mestiri (1), Badra Bannour (2), Nour Ktita (2), Oussema Belkacem(1), Atika Baccouche (1), Ahlem Bdioui(1), Sihem Hmissa(1)

1. Pathology department, University Hospital Sahloul,, Tunisia
2. Department of Gynecology-Obstetrics, Farhat Hached University Hospital, 4000, Sousse, Tunisia

Introduction: Breast cancer is a common and serious condition, representing the leading cause of cancer-related mortality and morbidity among women of all age groups. Our study was conducted with the aim of describing the epidemiological, anatomoclinical, and therapeutic characteristics of breast cancer in women aged over 65 years.

Methods: This is a retrospective, descriptive, and analytical study conducted over a period of 5 years from January 2009 to December 2013. During this period, we collected data from 135 patients aged 65 years and older. The study included all patients aged over 65 years with histologically confirmed unilateral or bilateral primary breast cancer.

Results: The mean age of our patients was 72 years. The most frequent reason for consultation was a palpable lump, with an average lump size of 3.7 cm upon examination. Stage T2 was the most common (55 patients, 40.7% of cases). Histopathological examination revealed that the predominant histological type was non-specific infiltrating carcinoma, found in 83% of patients. Hormone receptor assays were positive in 67% of cases. Surgical intervention was dominated by radical treatment: Patey procedure in 68.14% of cases. As of the update date, 41 patients had deceased (30.4%). The overall survival at 2 years, 5 years, and 10 years was 87.4%, 70.9%, and 63%, respectively.

Conclusion: Although breast cancer in elderly women appears to be less aggressive than in younger women and carries a better prognosis, the diagnosis is often made at an advanced stage, including metastatic stages.

145. Ovarian Borderline Tumors: Clinical-Pathological Aspects and Prognostic Factors; A Retrospective Study of 62 Cases

Sarra Mestiri (1), Dorsaf Beltaifa (1), Badra Bannour (2), Salma Mlaika (2), Oussema Belkacem(1), Wiem Majdoub(1), Ahlem Bdioui(1), Sihem Hmissa(1)

1. Pathology department, University Hospital Sahloul,4053, Tunisia
2. Department of Gynecology-Obstetrics, University Hospital Farhat Hached, 4000, Sousse, Tunisia

Introduction: Ovarian borderline tumors constitute 10 to 20% of all epithelial ovarian tumors. The significance attributed to these epithelial tumors is justified by their age of occurrence, which is generally about 10 years earlier than invasive ovarian tumors. As a result, managing this type of pathology entails not only preventing recurrence but also preserving the fertility of often young patients with desires for future pregnancies.

Methods: This study is a retrospective descriptive analysis spanning a 10-year period, involving 62 cases of ovarian borderline tumors. Clinical, radiological, and histopathological data were gathered from medical records.

Results: The mean age of our patients was 41 years, ranging from 22 to 73 years. The frequency of nulliparous patients was 45.2%. Eight patients were pregnant at the time of diagnosis, accounting for 12.8%. The concordance between Frozen Section Examination and Final Histopathological Examination was estimated at 88.2%.

Among the 62 patients, 55 were classified as stage 1 (41 at stage Ia, 3 at stage Ib, and 11 at stage Ic), 6 patients were classified as stage III (2 at stage IIIa, 1 at stage IIIb, and 3 at stage IIIc), and 1 patient was classified as stage IV. No patient was classified as stage IIIa. The average survival of the studied population was 42 months, ranging from 1 to 96 months. Fourteen cases of recurrence, accounting for 22.6%, were observed.

After fertility-preserving surgery, most women resumed their initial menstrual function.

Discussion and Conclusion: Consistent with the literature, the majority of patients were at stage I. Conservative treatment should be proposed whenever possible due to their favorable prognosis and their occurrence in young patients desiring pregnancies. A larger sample size and longer follow-up are necessary for better understanding of this specific entity.

146. An unusual case of plasmablastic lymphoma complicating a crohn's disease

Nouha Ben Abdeljelil, Dorsaf Beltaifa, Syrine Ben Tekaya, Seifeddine Ben Hamouda, Ikram Bahri, Ahlem Bellalah, Rim Hadhri, Abdelfattah Zakhama

Pathology Department, University Hospital Fattouma Bourguiba, Monastir, Tunisia

Introduction: Plasmablastic Lymphoma (PBL) is a rare and highly aggressive form of lymphoma initially identified as a distinct clinicopathologic condition observed within the oral cavity of HIV-positive individuals. However, over time, PBL can manifest in lymph nodes and, less frequently, within the gastrointestinal (GI) tract. Our objective is to highlight the clinical and pathological characteristics of PBL in patient with a history of Crohn's disease.

Methods: We present the case of a 41-year-old male, with a history of crohn's disease complicated with a colonic stenosis and enterocutaneous fistula. The patient had a left colectomy with cutaneous excision.

Results: In macroscopic examination, the colectomy specimen revealed a 7 cm-long stenosis extending toward one of the lateral margins. Microscopically, the area of stenosis and cutaneous fragment shows a malignant proliferation formed by sheets of large atypical lymphoid cells which had eccentric round nuclei with eosinophilic cytoplasm. The tumor cells stained positive for CD138, MUM-1 and weakly positive for CD79a. There was negative for CD3, CD20, PAX5, cytokeratin, CD10, BCL6, CD30, EMA and ALK. Ki-67 showed a proliferation index of 90%.

Discussion and conclusion: The occurrence of PBL in the clinical setting of inflammatory bowel disease (IBD) has been rarely reported in literature and the pathogenetic link is still an issue.

IBD patients have a risk of developing lymphomas more than the general population. Nevertheless it is difficult to understand if IBD alone is a risk factor for lymphoma or if the increased occurrence of lymphomas in IBD patients is mainly related to the use the medications causing iatrogenic immunosuppression.

147. Dysplastic Ichthyosis Uteri: A Case Report and Review of the Literature

Seifeddine Ben Hammouda, Bahaeddine Lahbacha, Ikram Bahri, Sirine Ben Tekaya, Manel Njima, Rim Hadhri

Department of Pathology, Fattouma Bourguiba University Hospital, Monastir, 5000, Tunisia

Introduction: Ichthyosis Uteri (IU) is a condition in which the surface endometrium is replaced by stratified squamous epithelium (SE). This condition is exceedingly rare with few cases reported in the literature. Herein, we report a rare case of IU associated with cervix squamous cell carcinoma (SCC).

Case report: A 60-year-old woman presented with complaints of post-menopausal metrorrhagia. Pelvic MRI showed an intracavitary tumor limited to the uterine mucosa and classified FIGO1. A total hysterectomy with bilateral salpingo-oophorectomy was then performed. At the cut section, the uterine cavity contained a yellowish material reaching the isthmus. The cervix and the adnexa were free of suspected lesions. Histological examination revealed two foci of SCC infiltrating the cervix, each measuring 1x1mm. The cervical mucosa contained high-grade squamous intraepithelial lesions (HSIL). The surface endometrium was extensively replaced by mature, keratinizing, parakeratotic SE, which showed areas of high-grade dysplasia (HGD) and without an underlying invasive component. Based on the above features, the diagnosis of IU associated with bifocal cervix SCC was made.

Discussion: Extensive plaque-like keratinizing squamous change of the endometrium is uncommon and is known as Ichthyosis Uteri. The term was first coined by Zeller in 1885 to describe the extensive keratinization of the endometrium seen following the intrauterine application of caustic substances, such as formalin or iodine. IU has been described in association with tuberculous endometritis, puerperal endometritis, endometrial polyps, and pyometra. Despite its benignity, cases with dysplasia or associated malignancies have been reported.

Conclusion: Ichthyosis uteri is an extremely rare condition. Although IU is benign, cases with associated cancer/dysplasia have been reported. Therefore, caution must be required when IU is seen on endometrial curettage.

148. Secondary peripheral chondrosarcoma arising in hereditary multiple exostoses: report of 2 cases and review of the literature

Nouha Ben Abdeljelil, Bahaeddine Lahbacha, Ahlem Bellalah, Seifeddine Ben Hammouda, Sirine Ben Tekaya, Leila Njim, Abdelfatteh Zakhama, Manel Njima
Department of Pathology, Fattouma Bourguiba University Hospital, Monastir, 5000, Tunisia

Introduction: Hereditary multiple exostoses (HME) is a rare genetic disorder characterized by multiple osteochondromas arising near the growth plated of bones. Malignant transformation of HME into secondary peripheral chondrosarcoma (SPC) is rarely seen.
Herein, we present two cases of SPC diagnosed in 2021 at the pathology department of Fattouma Bourguiba University Hospital of Monastir.
Case presentation: A 32-year-old man and a 66-year-old man, both with history of HME, presented with hip pain and motion restriction. Radiological examination showed exostoses of the right ilium and the pubic bone, measuring 10cm and 17cm, respectively. Suspicious radiological features were present in both cases. Histological analysis of the resected masses showed an irregular cartilaginous cap formed by cellular cartilaginous lobules with mild atypia. The tumor infiltrated bone and striated muscle. The diagnosis of grade 1 SPC was then made in both cases.
Discussion: Secondary chondrosarcomas are rare and may arise in osteochondromas (solitary or multiple), as well as in multiple chondromas (Ollier's disease or Maffucci's syndrome). The most common sites of SPC include the pelvis, the trunk, and the proximal femur. Most cases of secondary chondrosarcoma are low to intermediate grade. EXT-mutations are involved in the pathogenesis of grade 1 secondary chondrosarcoma. A permeative growth pattern is considered as the best criterion for confirming the diagnosis. Surgical resection with wide margins is the gold standard of treatment. The prognosis is good and distant metastasis is uncommon. Nevertheless, recurrence remains a significant problem especially in pelvic cases.
Conclusion: Secondary chondrosarcomas are rare. Diagnosis may be difficult and assessment of the histological grade is primordial because it correlates with survival. The prognosis seems to be better than primary chondrosarcoma. Late recurrence require long-term follow-up.

150. Squamous Cell Carcinoma Arising In Long-Standing Spina Bifida: A Case Report And Review Of The Literature

Manel Njima, Bahaeddine Lahbacha, Seifeddine Ben Hammouda, Ahlem Bellalah, Syrine Ben Tekaya, Dorsaf Belltaifa, Nouha Ben Abdeljelil, Abdelfatteh Zakhama, Rym Hadhri

Department of Pathology, Fattouma Bourguiba University Hospital, Monastir, 5000, Tunisia

Introduction: Spina Bifida (SB) is a birth defect that results from failure of fusion of the caudal neural tube. Adult SB are rarely seen because most SB are surgically repaired during the new-born period. The development of malignancy in long-standing SB is uncommon with only a handful of cases reported in the literature. Herein, we present the case of 19-year-old patient with squamous cell carcinoma (SCC) occurring at the site of SB.

Case presentation: A 19-year-old young man, with a history of neglected Spina Bifida (SB), presented with a 15 cm fungating cauliflower-like swelling on his lower back around the SB site. A tumor biopsy was then performed. Histological analysis revealed infiltrative carcinomatous proliferation with areas of necrosis. The tumor cells were squamous and showed marked nuclear atypia. The diagnosis of an invasive moderately differentiated non-keratinizing SCC arising at the site of SB was therefore made.

Discussion: SCC may occur as a complication of scars, chronic burns, and ulcers. Nevertheless, SCC originating in SB site is an extremely rare event. It has been hypothesized that malignancy originating at these sites may result from chronic irritation, continuous exposure of skin to cerebrospinal fluid, non-healing ulcers (Marjolin ulcer), and repeated bacterial infection.

Conclusion: SB should be treated as soon as diagnosed. Malignant degeneration at the SB site is a rarity and should be kept in mind in long-standing neglected cases.

151. Kidney renomedullary interstitial cell tumor: Report of three cases and review of the literature

Bahaeddine Lahbacha, Rym Hadhri, Ahlem Bellalah, Seifeddine Ben Hammouda, Nouha Ben Abdeljelil, Leila Njim, Manel Njima, Abdelfatteh Zakhama.

Department of Pathology, Fattouma Bourguiba University Hospital, Monastir, 5000, Tunisia

Introduction: Renomedullary interstitial cell tumor(RMICT)is a benign distinct entity usually incidentally identified upon resection of the kidney for other reasons. Little is known about its pathology and pathogenesis.
Herein, we report three cases of RMICT diagnosed at the pathology department of Fattouma Bourguiba University Hospital of Monastir(2012-2023).

Cases Presentation: RMICT occurred in two men and one woman, aged 79, 74, and 68 years old. The size varied between 2 and 5mm. Histologically, the tumor cells were monomorphous, stellate, and spindle shaped embedded in a loose (n=1) or a collagenous stroma(n=2). Immunohistochemistry was performed in one case in which cells exhibited weak staining for SMA. Coexistent neoplasms include papillary adenoma and multifocal clear cell papillary renal tumor(n=1), non-invasive low-grade papillary urothelial carcinoma(n=1), and invasive high-grade urothelial carcinoma of the ureter(n=1).

Discussion: RMICT is a rare tumor arising in the renal medulla, composed of cells with the ultrastructural features of renomedullary interstitial cells. These cells produce vasoactive anti-hypertensive substances such as prostaglandin. Therefore, it has been proposed that these lesions develop in response to hypertension but no correlation has been demonstrated. RMICT are small, solid, white, and well-circumscribed nodules. Microscopically, it consists of stellate and spindle shaped cells with bland nuclei. Entrapped renal tubules are common. It has been hypothesized that as the size increases, cellularity decreases, ropey eosinophilic amyloid-like material is deposited, and tubules disappear. The immunohistochemical findings are non-specific with weak-to-moderate staining with SMA and calponin, weak positive staining for ER and PR, and negative staining for desmin and S100. Differential diagnoses are limited but may include mixed epithelial and stromal tumor, leiomyoma, and solitary fibrous tumor.

Conclusion: The diagnosis of RMICT is typically straightforward owing to the distinct morphology, medullary location, and small size. Pathologists must know this entity to avoid misdiagnosis.

152. Profile of women with breast cancer and their sexuality

ALOULOU Meriem1, ALOULOU Samir2, BADER Sondes1, TRABELSI Yosra1, TRIGUI Hela1, ABBES Wafa1
1.Department of psychiatry, Gabes universitary hospital, Tunisia.
2.Department of medical oncology, Gabes universitary hospital, Tunisia.

Introduction: As a gynecologic cancer, patients having breast cancer can be affected in their sexual life by the cancer or its treatment.
Objectives: Our study aimed to describe the profile of women with breast cancer and to assess their sexual function.
Methods: We conducted a cross-sectional, descriptive and analytical study, between April and June 2021, among 50 women with breast cancer who were followed-up in the oncology department of the universitary hospital of Gabes, Tunisia. We collected sociodemographic and clinical data of patients and used the Female Sexual Function Index (FSFI) to assess their sexual dysfunction.
Results: The mean age of patients was 46.24 years±9.2, 22.6% stopped working after the discovery of the cancer and the socio-economic level was average in 77.3%. The majority (91.7%) had children, and 38% used contraception. A rate of 20% had another chronic disease than breast cancer. The majority (70.8%) received adjuvant chemotherapy, 47.9% radiotherapy and 27.1% hormone therapy. Patients had sexual intercourse at a mean frequency of 1 time per week ±0.5. The mean FSFI score was 19,93±8.38, and 74% of the patients presented a sexual dysfunction. The mean time of onset of sexual disorders was 4.4 months±9 after the announcement of the diagnosis.
Among our patients, 38.1% think their illness has limited their sexual activity and 6.5% do not take treatment for fear of negative effects on their sexual life. In our study, the factors significantly associated with sexual dysfunction were: personal medical history (OR=0.7[0.6-0.8];p=0.03), personal surgical history (OR=0.73[0.6-0.88];p= 0.044), the existence of a sterility problem (OR=10[0.9-109];p= 0.02), the use of a contraceptive method (OR=0.2[0.04-1];p= 0.01), the intrauterine device (OR=0.5[0.3-0.7];p= 0.013) and hormone therapy (OR=5[1.3-22];p= 0.01)
Conclusion: Our study showed the importance of sexual dysfunction in women with breast cancer, therefore as physicians we should consider our patients' sexual life as important as the treatment.

153. Li-Fraumeni Syndrome: A Study of Five Tunisian Cases

R.Gereisha1, S.Gabteni1, R.Meddeb1, A.Mokrani2, A.Gabsi, K.Meddeb, M.Ayedi, M.Trabelsi , K.Rahali A.Mezlini, H.Raies N.Belguith1, R.Mrad1
1: Department of Congenital and Hereditary Diseases, Charles Nicolle Hospital, Tunis 2: Medical Oncology Department, Salah Azaiez Institute, Tunis
3: Carcinological Surgery Department, Salah Azaiez Institute, Tunis

Li-Fraumeni Syndrome (LFS) is an autosomal dominant disorder characterized by an increased predisposition to various cancers, including adrenocortical carcinomas, breast cancer, central nervous system tumors, osteosarcomas, and soft-tissue sarcomas. It is primarily attributed to germline mutations in the TP53 gene, which encodes the tumor suppressor protein p53. Our research delves into clinical, genetic, and management aspects of Li-Fraumeni syndrome, emphasizing the importance of TP53 genetic screening for families meeting LFS criteria. Our retrospective descriptive study included five patients averaging 30,4 from four families, three of whom were referred to our oncogenetic consultation due to suspected Li-Fraumeni syndrome. They underwent genetic investigation, clinical assessment, and molecular analysis, specifically targeting the TP53 gene's most frequently mutated exonic regions.
Family 1: This patient had bilateral breast cancer. Her family history included osteosarcoma and glioblastoma occurrences. Molecular analysis identified a pathogenic frameshift mutation in exon 7. Subsequent targeted presymptomatic testing in her sister confirmed the same mutation, prompting proactive preventive measures.
Family 2: The proband had a family history of prostate and breast cancer. He developed orbital rhabdomyosarcoma and a secondary undifferentiated sarcoma following radiation, attributed to a pathogenic frameshift mutation in exon 5.
Family 3: This patient, with a family history of breast cancer, was diagnosed with breast cancer, osteosarcoma, and esophageal squamous cell carcinoma. Genetic analysis identified a pathogenic nonsense mutation within exon 4. Family 4: This patient, with a family history of breast cancer, brain cancer, sarcoma, and hematological malignancy, was diagnosed with bilateral breast cancer. Subsequent analysis of the TP53 gene unveiled a missense mutation in Exon 7. In conclusion, Li-Fraumeni Syndrome exhibits a diverse spectrum of malignancies with established genotype-phenotype correlations. This underscores the significance of molecular confirmation of LFS within families, as it facilitates genetic counseling, early cancer detection, and comprehensive management for affected individuals and their families.

155. A report of seven cases with inflammatory bowel disease-associated malignancies

Khsiba Amal, Chtioui Sahar, Mahmoudi Moufida, Medhioub Mouna , Ben Mohamed Asma, Yaakoubi Manel, Hamzaoui Lamine, Azouz Mohamed Mousaddek

Gastro-entérologie, Hôpital Taher Maamouri Nabeul, Tunisie

Background: In patients with inflammatory bowel disease (IBD), chronic inflammation is a major risk factor for the development of gastrointestinal malignancies. Cancers as a result of chronic intestinal inflammation include colorectal cancer, small bowel adenocarcinoma and intestinal lymphoma.

We report 7 cases of patients with tumor complicating IBD: 5 patients with crohn's disease (CD) and 2 patients with ulcerative colitis (UC). Mean patient age was 49 years (range, 31–68 years), and four patients (57%) were female. Three patients had been diagnosed with IBD at < 30 years old, and disease duration ranged from 2 to 25 years. . In 2 cases, the adenocarcinoma was discovered in the first attack of enteritis. Medical treatment including steroids and immunomodulators was administered in 2 patients and salicylates in 3 patients. Biological therapy with tumor necrosis factor antagonist (AntiTNF) was administered in only one patient.

Two patients had no clinical symptoms, and neoplasia was only detected on screening colonoscopy. The remaining 5 patients experienced clinical symptoms including abdominal pain, chronic diarrhea and alteration of the general state. A total of 6 patients underwent surgery at our hospital: ileocaecal resection in 3 cases, right hemicolectomy in 2 cases and colectomy in 1 case. Only one patient was treated with Chemotherapy without surgery. Histopathological examination diagnosed small cell B lymphoma of MALT type in two patients, moderately differentiated adenocarcinoma in 3 patients and well-differentiated carcinoma in only one patient. The histological examination of the surgical specimen showed in one patient, who underwent to colectomy for a medical refractory disease, the typical findings of Kaposi's sarcoma together with the HHV-8 positivity. In the 4 patients with adenocarcinoma, the final stage was pT1N0, pT4aN0, pT4N1b and pT3N2 respectively. Postoperative adjuvant chemotherapy was administered in 5 patients. And chemotherapy based on Rituximab and Chlorambucil has been administrated in patients with small cell B lymphoma of MALT type. The mean follow-up time was 14 months (range, 12–36 months). Six patients experienced no recurrence. However, one patient developed multiple liver metastases with peritoneal carcinomatosis and died 14 months postoperatively.

Conclusion: IBD patients are at particular risk for intestinal cancers, and preoperative diagnosis continues to present challenges. The implementation of surveillance strategies allowed a decrease in morbidity and mortality associated with this cancer.

154. Spinal metastases revealing unusual vesicular thyroid carcinoma: A case report

Ayed K., Ezzine A., Boudrigua H., Dardouri T., Mensi S., Bettaieb A., Nouira M., Ben Fredj M., Chatti K.

Department of nuclear medicine, Sahloul hospital, Sousse-Tunisia

Introduction: Vesicular thyroid carcinomas constitute 10% of thyroid cancers and are occasionally diagnosed with distant metastases. Typically, the lungs and bones are the primary sites of metastasis. This case report highlights an atypical presentation of vesicular thyroid carcinoma with spinal metastases.

Case Report: A 59-year-old patient sought medical attention for debilitating lower back pain persisting for a year. An MRI revealed multiple secondary bone lesions in the thoracic and lumbar spine, accompanied by posterior metastatic epiduritis at the D6-D7 level. Subsequently, a CT scan explored other regions for the primary tumor, uncovering secondary tissue masses in the pituitary, mediastinum, left adrenal gland, and various bones (notably large osteolytic masses in the skeleton).

Solid nodules were also detected throughout both lung fields, giving a balloon-like appearance. A bronchoscopic examination ruled out a primary lung tumor, prompting a biopsy of a lytic scapular mass, which confirmed a secondary localization of vesicular thyroid carcinoma. The patient underwent a total thyroidectomy, with pathology confirming a multifocal vesicular variant of papillary carcinoma in the left thyroid lobe, initially staged as pT1bm N1b M1. Radioactive iodine-131 treatment was administered, followed by a whole-body scan revealing intense uptake in various cervical, thoracic, abdominal, and skeletal sites. Further examination using 18FDG PET-CT showed significant hypermetabolism at known metastatic sites and adjacent to two hypodense liver lesions, consistent with secondary locations based on MRI findings.

Conclusion: While differentiated thyroid carcinomas primarily spread locally, distant metastasis, particularly to the lungs and bones, can occur. Unusual sites of metastasis, seen in less than 2% of cases, are more common in papillary carcinomas with a vesicular pattern. Although infrequent, it is crucial to investigate such secondary locations thoroughly upon diagnosis. This approach provides valuable insights into prognosis and facilitates appropriate management.

156. Breast Cancer in Men: which dilemmas

Asma SGHAIER, Mohamed Amine ELGHALI, Khaireddine dhouioui, Mohamed Hédi MRAIDHA, Mariem HARROUM, Fehmi HAMILA, Sabri YOUSSEF

General surgery department-Farhat Sousse Hospital

Faculty of Medicine of Sousse-University of Sousse

INTRODUCTION: Male breast cancer is a rare occurrence, which represents less than 1% of male cancer pathology. The most prevalent histological type is invasive ductal carcinoma.

Although management is derived from that applied to female breast cancer, the male form has its particular features. Multiple risk factors, including those with genetic and environmental origins, affect the likelihood of men receiving a breast cancer diagnosis. This article discusses types of MBC, risk factors, treatment options, and ethical concerns men encounter after they receive a breast cancer diagnosis.

OBSERVATIONS: We report two cases managed in our department.

The first: 69 years old, hypertensive, followed for non-metastatic invasive ductal carcinoma of the left breast of 3 cm for which the patient underwent a Patey type mastectomy with axillary curage and adjuvant chemotherapy.

The course of the disease was marked by the appearance of diffuse bone metastases discovered on a follow-up bone scan.

Case 2: 45-year-old man with no previous history of invasive ductal carcinoma of the left breast measuring 1.5 cm, non-metastatic, for which he underwent a lumpectomy plus adjuvant radiotherapy with a good outcome.

CONCLUSIONS: Male breast cancer has its own characteristics and cannot be considered comparable to female breast cancer. We believe that raising awareness on male breast cancer in the community, genetic testing and screening mammography in high-risk patients will be useful in early diagnosis of the disease and improvement of its prognosis.

157. Synchronous primary location of GIST and adenocarcinoma of the colon: unusual occurrence

Asma SGHAIER, Mohamed Amine EL GHALI, Amal LETAIEF, Khaireddine DHOUIOUI, Mohamed Hédi MRAIDHA, Fehmi HAMILA, Sabri YOUSSEF

Hospital of Farhat Hached of Sousse

Faculty of Medicine of Sousse -university of Sousse Department of general surgery

Background: We have little knowledges about the synchronous occurrence of gastrointestinal stromal tumors (GISTs) and other types of histologic tumors. This association is very rare.

Case presentation: We described a case of synchronous stromal tumor and adenocarcinoma of left side colonic localization. Immunohistochemistry identified c-Kit expression. The discovery of colonic adenocarcinoma was on operative specimen after histologic examination.

Discussion: Clinical implications of the association between these two neoplasms are not clearly described. Treatment depends on the dominance of one histologic type. Knowledge of the genetic data of this association offers opportunity of treatment with the new targeted-therapy molecules. Surgical resection, may remain the curative treatment.

Conclusions: Synchronous adenocarcinoma and GIST has been more commonly described in the stomach. The pathogeneses of tumorigenesis may be not be the same for the two tumors. More studies seem be necessary to clarify a potential role of different genes in the development of adenocarcinomas. And therefore, above all their therapeutic implications.

158. Abdominal wall mass mimicking uterine fibroid discovered during cesarean section!

Zaydi A, Khadhraoui G, Sdiri O, Wathene A, Armi S, Mathlouthi N, Slimeni O
Department of gynecology A Charles nicolle hospital

Introduction: Desmoid tumors are benign tumors characterized by a proliferation of myofibroblastic cells. They have a low metastatic potential, but a high capacity for local invasion and aggressive recurrent behavior, their most common presentation is in the abdomen.
Materials and methods: We present the case of a 32-year-old female patient with a 3-month history of abdominopelvic pain, in whom an intra-abdominal desmoid tumor of sporadic appearance was documented and underwent surgery.
Results: Patient S.A aged 32, no previous history, G2P2, 1 vaginal delivery, admitted for caesarean section programming for a placenta previa without signs of accretion, the pregnancy was complicated by gestational diabetes on diet, and the patient was known to be carrying a 6 cm anterior uterine fibroid, complicated during pregnancy by abdominopelvic pain that was attached to aseptic necrobiosis of the fibroid. The Caesarean section was scheduled outside any emergency context. During exploration, a 4 cm subfascial mass was found. On the advice of the surgeons, biopsies were taken and the mass was respected. The patient was referred to the surgical department for follow-up.
Pathological examination revealed a proliferation of spindle-shaped cells, the morphological appearance of which initially suggested fibromatosis: a desmoid tumor. An extension study revealed a 7*8 cm right anterolateral parietal tissue mass associated with the desmoid tumor, developing at the level of the right oblique and transverse muscles, pushing back the rectus muscle without invading it, and developing exo phytically within the abdominal cavity, coming into contact with the ileal ansae, without any other secondary involvement.
And the patient was operated on by laparotomy with excision of the mass, no locoregional recurrence had been objectified up to that point.
Conclusion: Suspicion and identification of intra-abdominal desmoid tumors enable rapid and accurate management of a pathology which, although rare, has a locally aggressive behavior.

159. Breast cancer and pregnancy

Zaydi A,Sdiri O, Wathène A, Khadraoui G,Ben salah G

Departement of gynecology ,Ben Arous hospital

Introduction: Pregnancy-related breast cancer represents 3% of all breast cancers, with an incidence of 10-40 per 100,000 pregnancies; it is the second most frequent cancer occurring during pregnancy after cervical cancer. It is becoming an increasingly frequent problem faced by a multidisciplinary team comprising surgeons, oncologists, gynecologists and obstetricians.

Observation: Patient A.M, 37 years old, no family history of neoplasia, G4P4, 4AVB, breast-feeding for 6 months, pregnant at 34SA, admitted for left breast nodule.

On examination: general condition preserved, breast examination: 4cm nodule at QSE level of left breast mobile in relation to 2plane, irregular contour, no axillary adenopathy.

Ultrasound: a spiculated mass classified ACR5.

She underwent microbiopsy, which revealed an infiltrating ductal carcinoma, grade SBRII, Luminal B.

Locoregional and distant extension studies were negative.

The patient underwent surgery at 35SA: left mastectomy with axillary curage, with a simple postoperative course.

Pregnancy was uncomplicated and the patient delivered at full term without incident. She was subsequently referred to an oncology center for further management. Conclusion:

Pregnancy-related breast cancer remains a controversial subject. Diagnosis can be difficult due to physiological changes in breast structure during pregnancy. Management requires a multidisciplinary team. Close cooperation between all disciplines is essential to achieve an optimal treatment strategy for the patient and her unborn child.

160. Breast schwanoma: a case report

Zaydi A, Sdiri O, Wathene A, Khadraoui G, Boudhraa D, Ben salah G

Department of Gynecology and Obstetrics A EPS Charles Nicolle

INTRODUCTION: Schwannomas, formerly known as neurilemomas or neurinomas, are benign tumors of the peripheral cranial or spinal nerves corresponding to a proliferation of Schwann cells. Localization of this tumor in the breast is very rare.

OBSERVATION: In the following case report, we describe a benign schwannoma in a 26-year-old female patient with no previous pathological history. She consulted us after autopalpation revealed a left breast nodule that had been evolving for 6 months. Clinical examination revealed a nodule measuring 1cm in long axis, painless, of firm consistency, well limited with a regular contour at the UQS of the left breast, mobile in relation to the superficial plane (the skin) and the deep plane (the thorax). Mammography showed an oval, well-limited, homogeneous opacity with clear, regular contours at the UQS of the left breast, measuring 15 mm in long axis, with no associated micro-calcifications or adenopathies. Ultrasound revealed a hypoechoic, homogeneous tissue nodule with clean, regular contours and no posterior enhancement. This clinico radiological appearance was consistent with adenofibroma. A breast microbiopsy was performed but was inconclusive. Surgical excision was performed. Histological examination showed a morphological appearance consistent with the diagnosis of schwannoma. After three months, the patient was presented to the outpatient clinic and bilateral breast examination was without abnormalities.

Conclusion: Schwannoma of the breast is a benign tumour. The diagnosis is often not suspected preoperatively, due to the rarity of the breast localization and the absence of a typical clinical and radiological presentation. These tumors have no recurrence potential after surgical excision, due to their benign, non-aggressive nature and, above all, the presence of a capsule delimiting the tumor.

161. Recurrent ovarian tumors: a case report

Zaydi A, Khadraoui G, Sdiri O, Wathène A, Ben Salah G, Chlagou M, Boudhraa D, Garci M, Mathlouthi N, Slimeni O

Department of Gynecology and Obstetrics A EPS Charles Nicolle

Introduction: Mucinous tumors are the second most common epithelial tumor of the ovary, accounting for approximately 8-10% of all ovarian tumors. Recurrence of mucinous cystadenoma is very rare after complete excision. Few cases have been reported.

Observation: Patient B.M, aged 22, with no family history of neoplasia, underwent surgery in 2017 for torsion of an ovarian cyst, and in 2021 for recurrence of an ovarian cyst on the left. On anatomopathological examination, she presented with a mucinous cystadenoma of the ovary with no histological signs of malignancy. She consulted for pelvic pain with, on examination: painless abdominal curvature mobile in relation to the deep and superficial plane, reaching as far as the umbilicus.

Ultrasound: irregularly contoured 13*10cm cystic image with an echogenic content. On MRI: a voluminous multilocular cystic mass in the left ovary in favor of tumor recurrence, in favor of a benign or borderline mucinous epithelial tumors, ORADS 4. Tumor markers were added: normal CEA, normal CA125, normal CA19-9. The patient underwent surgery: right adnexectomy with appendectomy. Pathological examination showed a 14 cm borderline mucinous tumor of the ovary classified pT1a, the appendix was without abnormalities, with mesenteric adenopathy free of tumor proliferation.

Conclusion: Mucinous tumors are generally benign, and most are multilocular; management of young patients is difficult, especially in the event of recurrence. Ultrasound currently appears to be the most effective diagnostic tool for monitoring young patients treated by cystectomy for borderline mucinous cystadenomas. Total hysterectomy and bilateral salpingo-oophorectomy are recommended once the patient has reached childbearing potential.

162. Risk factors and management of vulvar cancer in pregnancy

Zaydi A, Wathène A, Laarayedh R, Abdelhedi O, Ben Atitallah M, Chaabene K

Department of Gynecology and Obstetrics CHU Hedi Chaker Sfax

Introduction: Carcinoma of the vulva is generally considered a disease of postmenopausal women, its incidence in pregnancy is unknown due to its rarity; The cancer complicates 1 in 1000 pregnancies. Management requires a multidisciplinary consensus including gynecological oncology, pathology, neonatology, radiology, anesthesiology, maternal-fetal medicine.

Observation: This is a 35-year-old female patient with a history of operated vulvar cancer followed by chemotherapy, G3P2, admitted at 27SA for local recurrence of vulvar cancer.

Risk factors for vulvar cancer in this patient were multiple partners and HPV infection.

Pregnancy was achieved without dysgravidia.

After multidisciplinary consultation between gynecological oncology, neonatology and anesthesiology, the decision was made to cesareanize the patient at a term of 28 weeks' gestation to begin oncological treatment.

The caesarean section passed without incident and the patient was referred to an oncology center.

Conclusion: The presence of vulvar cancer during pregnancy creates a difficult conflict between maternal care and fetal well-being. Oncology treatment must be individualized, with emphasis on optimal maternal care and adherence to protocols. A multidisciplinary approach should be used in all cases.

163. MGUS and abnormal serum protein rates prevalence in blood donors: for improved transfusion safety

Hajar ANIBAT [1, 2], Marwan BENZOUARHIA [1, 2, 4], Bouchra EL MALIKI [1, 2], Asmaa MORJAN [4], Nabiha KAMAL [4], Khadija HAJOUT [5], Abdellatif ZAHIR [6], Norddine HABTI [1, 2, 3].

1. Laboratory of hematology, genetic and cellular engineering-Faculty of Medicine and Pharmacy- Hassan II University – Casablanca-Morocco.
2. Laboratory of Inflammatory, Degenerative, Oncological Cellular and Molecular Pathophysiology-Faculty of Medicine and Pharmacy- Hassan II University – Casablanca-Morocco.
3. National Center for Blood Transfusion and Hematology – Rabat-Morocco.
4. Laboratory of biochemistry, CHU Ibn Rochd of Casablanca - Faculty of Medicine and Pharmacy, Hassan II University-Casablanca-Morocco.
5. Regional Center for Blood Transfusion-Rabat- Morocco.
6. Regional Center for Blood Transfusion-El Jadida- Morocco.

Introduction: Protein abnormalities include monoclonal gammopathies of undetermined significance (MGUS) and malignant lymphoplasmacytic tumors such as multiple myeloma, Waldenström macroglobulinemia, and amyloid light chain amyloidosis. MGUS prevalence increases with age, especially in individuals over 50. MGUS progress to various lymphoplasmacytic diseases, including smoldering multiple myeloma and multiple myeloma. Almost all blood donors are asymptomatic but some of them could present protein abnormalities. Our objective is to determine the prevalence of protein abnormalities and monoclonal gammopathies in blood donors over the age of 40 in Morocco, in order to examine their potential impact on transfusion safety.

Methods: 281 serum samples were collected from blood donors aged over 40 years old. Total serum proteins measurement and protein electrophoresis were performed using the Architect CI8200 and Capillarys-2-Piercing automated systems, respectively. Immunofixation was conducted using Hydrasys.

Results: Protein rates ranged between 59 and 87 g/L (average =71.69 ± 4.96 g/L). Our results showed 195 (69.39%) normal profiles, 6 (2.13%) monoclonal gammopathies, 14 (4.98%) heterogeneous restriction of γ-globulins and 66 other abnormalities (23.48%) regarding the levels of albumin and proteins from alpha and beta fractions.

Conclusion: Our preliminary results appeal to blood transfusion professionals regarding ethical considerations and transfusion safety. We suggest blood donors with abnormal protein levels should benefit systematically from diagnostic tests and therapies.

164. Contribution of MRI in locoregional extension assessment and follow-up of rectal cancer

R. Drira, A. Daadoucha, MS Khouja, M. Abed, A. Aissa

Radiology Department - IBN JAZZAR KAIROUAN Hospital

Objectives:

- Recall the appropriate protocol for better lesion characterization.

- To guide therapeutic management by specifying locoregional extension.

General concept: MRI is the most accurate tool for local staging of rectal cancer, and a powerful tool for selecting appropriate treatment.

Local MRI staging is performed to determine the best surgical strategy and the need for neoadjuvant therapy.

Procedure and results: The management of rectal cancer has evolved considerably with the advent of preoperative imaging, which now plays a major role in therapeutic decision-making. It can be used to determine the degree of tumor invasion of the rectal wall and mesorectum (T), the number of invaded lymph nodes (N) and the lateral resection margin (LRM). Low-risk T1, T2 and, in several countries, also early-stage T3ab tumors without evidence of lymph node metastases will generally be considered low-risk and may not require neoadjuvant therapy.

High-risk or locally advanced T3-4 tumors that invade the mesorectal fascia or adjacent organs, or tumors with numerous suspicious nodes (N2), are generally considered locally advanced. These patients generally receive a long course of combined chemoradiotherapy aimed at inducing a reduction in the number of nodes involved.

MRI can also be used to identify lymph node involvement by exploring regional and non-regional lymphatic chains. After chemoradiotherapy, rectal tumors generally decrease in size and undergo fibrous transformation. A restaging MRI report should begin with a general description of the degree of response.

Conclusion: MRI of the rectum plays a fundamental role in the diagnosis of tumour location, tumour stage, particularly parietal and lymph node, and the indication for neoadjuvant treatment. It also provides a tool for post-treatment assessment.

165. Place of breast MRI in the diagnosis of breast cancer

M. KAMOUN , A. DAADOUCHA, Y. KHOUNI, N. MOALLA, A. AISSA

Ibn El Jazzar Hospital, Kairouan, TUNISIA

Introduction: Breast cancer is a real public health problem due to its frequency (1/12 women) and severity (1st cause of cancer mortality in women). MRI is the most sensitive technique for assessing the local extension of breast cancer in the

pre-therapeutic phase. However, its performance is hampered by low specificity. It therefore remains a complementary examination to clinical and echomammographic data.

Objective: To highlight the place of breast MRI in the diagnosis of breast cancer.

Material and method: Retrospective study of breast MRIs collected in the radiology department of Ibn El Jazzar Hospital, Kairouan University Hospital (1.5T MRI).

Results: This work is intended for educational purposes, involving MRI examinations accompanied by commented iconographic illustrations.

Breast MRI is an essential examination that has proved its worth in detecting breast cancer in cases of clinico-echo-mammographic discordance, multi-focality and multi-centricity of breast carcinomas, as well as in infiltrating lobar breast carcinomas.

It also enabled a precise assessment to be made of local extension, in order to establish a management strategy.

166. Contribution of multimodal MRI in the diagnosis and follow-up of truncerebral gliomas: About 5 cases

F. AGUIR, A.DAADOUCHA, Y.KHOUNI, B.GHAIEB , A.AISSA

Ibn El Jazzar Hospital, Kairouan, Tunisia.

Introduction: Brainstem gliomas account for 25% of posterior fossa tumors in children and often have a poor prognosis (survival <10% at 2 years). Their severity and frequency require early diagnosis and management. Multimodal MRI plays a vital role in the diagnosis and follow-up of these tumors.

Objective: The aim of this study is to clarify the contribution of multimodal MRI in the initial assessment and follow-up of trunk gliomas, using cases collected in the Medical Imaging Department at CHU Ibn ElJazzar, Kairouan.

Materials and methods: 5 cases collected at the IBN Al Jazzar radiology department, who underwent MRI for diagnostic or follow-up purposes of a brainstem glioma.

Results: The MRI study combined a dual three-dimensional morphological and metabolic MRS study. Morphological sequences confirm the diagnosis of szndrome de masse and specify its extension and impact on the ventricular system. MRS helps to orient the diagnosis by showing a significant rise in choline and myoinositol peaks, associated with a marked drop in NAA .

167. Contribution of imaging to the diagnosis of breast masses in men

Khouni Y, Daadoucha A, Kamoun M , Aguir F, Allani M, Aissa A

Medical Imaging Department, CHU Ibn El Jazzar de Kairouan

Learning objective: To clarify the contribution of imaging in the etiological diagnosis of male breast masses and in therapeutic management.

Detail the different breast pathologies encountered in men and their radiological semiologies.

Background: Although breast tumours are much less common in men than in women, and are dominated by benign lesions, breast masses are a source of anxiety that sometimes requires imaging.

Reasons for consultation include breast enlargement, mastodynia and breast swelling. The predominant etiological diagnosis is gynecomastia.

Clinical findings are usually sufficient to differentiate benign from malignant lesions.

Mammography-ultrasound is a valuable tool in doubtful cases and in the presence of risk factors or malignant criteria.

Result: Through a series of patients consulting the gynecology department and explored in the medical imaging department at CHU Ibn El Jazzar in Kairouanby echo mammography, we propose this pedagogical work aimed at demonstrating the place of imaging in the diagnosis of male breast masses.

The radiological semiology of different breast pathologies will be detailed.

Conclusion: Male breast cancer is rare, accounting for just 1% of all cancers. Imaging is not systematically performed in the presence of a breast mass in men. The main etiological diagnosis is gynecomastia.

Imaging plays an essential role in characterizing these masses, enabling us to distinguish between benign and malignant lesions.

168. Dermatofibrosarcoma of the Thigh: A Case Report

M.Abed, A.Daadoucha,R.Drira,W.Bokri,A.Aissa

Medical imaging department Ibn El Jazzar Hospital, Kairouan

Objectives: Darier-Ferrand dermatofibrosarcoma (DFSP) is a low- to intermediate-grade soft-tissue sarcoma arising from the dermis of the skin. We propose to illustrate a case of DFSP and emphasize the contribution of cross-sectional imaging.

Materials and methods: a patient with no pathological history of note, consulted for the appearance of a swelling on the lower limb. A standard radiological workup, soft tissue ultrasound and MRI of the right thigh were performed.

Results: Standard radiographs were without abnormalities. Ultrasound of the soft tissue showed a tissue-like mass. MRI of the right thigh showed a mass embedded in the subcutaneous cellulograft tissue of the anterolateral region of the right thigh in T1 iso signal, frank T2 hypersignal and intensely enhanced after gadolinium injection. There was no locoregional extension. The patient underwent surgery, and anatolopathological examination of the excisional specimen was in favor of dermatifibrosarcoma.

Conclusion: cross-sectional imaging is of vital importance. Ultrasound, which is not very specific in terms of tumor type, enables a positive diagnosis to be made. MRI can evoke the diagnosis thanks to the frank T2 hypersignal within a soft-tissue mass, and also enables a precise extension assessment.

169. Ultrasound Birads: Predictive Signs of Malignancy

W. Bokri, A. Daadoucha, M. Abed, M. Salem, A. Aissa

Medical imaging services Ibn El Jazzar Hospital, Kairouan

Objectives: The aim of our work is to illustrate the ultrasound signs predictive of malignancy, with reference to the ultrasound classification of the "breast imaging reporting and data system".

Materials and methods: Retrospective descriptive series of patients who underwent breast ultrasonography in the radiology department of Ibn Jazzar Hospital, Kairouan. Reasons for consultation were diverse: screening, breast nodule, mastodynia, breast discharge.

Results: The predictive signs of malignancy found were:

1/ For cystic masses: septum, mural nodule, parietal microlobulation and intra-lesional vascularization.

2/ For solid masses: long axis not parallel to the skin, spiculated, angular or micro-lobulated contours, hyperechoic peripheral corona (reaction stroma), posterior attenuation and alteration of adjacent tissues.

Conclusion: Perfect knowledge of these various signs is essential to guide the management and characterization of cystic and solid masses of the breast.

170. The contribution of imaging in the study of the ovarian teratoma

N. MOALLA, A. DAADOUCHA, K.MARIEM, ABED.M,A.AISSA.

Medical Imaging Department -CHU IBN JAZZAR KAIROUAN

Introduction: Ovarian teratomas, which account for 95% of germ cell tumors of the ovary, have a wide histological variety and are mainly composed of adipose tissue, muscle and ectodermal derivatives such as teeth and hair. Accurate radiological assessment is crucial for the diagnosis and treatment planning of these tumors.

Objective: The aim of this study is to illustrate the essential contribution of imaging in the exploration of ovarian teratomas, while describing their radiological features, including those observed on ultrasonography, computed tomography (CT) and magnetic resonance imaging (MRI).

Materials and Methods: This study, for educational purposes, is based on radiological examinations accompanied by annotated iconographic illustrations. The cases examined come from the database of our medical imaging department at Ibn Jazzar Hospital, Kairouan. The imaging modalities used for evaluation of teratomas are ultrasound, CT and MRI, each with specific advantages in characterizing these tumors.

Results: Typical radiological signs of ovarian teratomas encountered are:

- Ultrasound: a heterogeneous echostructure with hyperechoic and hypoechoic areas.

- On CT scan: a mass with an almost constant fatty component; calcium, fluid and fleshy components are usual.

- MRI: An oval formation presenting a heterogeneous signal with T1 enhypersignal, T2 hypersignal and no contrast after injection.

Conclusion: In conclusion, medical imaging plays an essential role in the diagnosis and characterization of ovarian teratomas. It provides crucial information for the diagnosis, surgical planning and follow-up of these tumors. By helping clinicians to make informed decisions and design optimal management for patients, imaging significantly improves the management of ovarian teratomas.

171. Contribution of imaging in laryngeal cancer

N. Moalla, A. Daadoucha, A. Ben Jeddou, M. Salem, D. Aissa.

Medical Imaging Department -CHU IBN JAZZAR KAIROUAN

Introduction: Laryngeal cancer, a malignant pathology affecting the upper respiratory tract, represents a major challenge in terms of diagnosis, staging and treatment.

Objective: This poster aims to highlight the crucial importance of medical imaging in the overall management of laryngeal cancer. We will demonstrate how computed tomography contributes significantly to better disease staging, optimal therapeutic planning and accurate post-therapeutic follow-up.

Materials and Methods: This pedagogical work is based on the analysis of CT examinations accompanied by commented iconographic illustrations. The cases illustrated come from the database of our medical imaging department at Ibn Jazzar Hospital in Kairouan.

Results: Patients underwent biphasic contrast-enhanced CT scans, accompanied by phonation and valsalva maneuvers.

Lesions found in laryngeal cancers may be localized at the glottic, subglottic or subglottic level.

Locoregional extension mainly concerns the para-glottic fatty space, the HTE lodge, the ary-epiglottic folds and the anterior commissure.

Cartilage and lymph node involvement is not exceptional.

Conclusion: Medical imaging represents a fundamental pillar in the management of laryngeal cancer, offering essential information for the diagnosis, staging and follow-up of this pathology.

It plays an important role in determining the extent of the disease and in guiding therapeutic choices, thus helping to improve the quality of care and quality of life of laryngeal cancer patients.

172. Oncolytic viruses are attractive options for treatment of lung cancer

Hanie Sakhi 1, Mohadeseh Arabi1, Amir Ghaemi2, Abolfazl Movafagh3, Mojgan Sheikhpour1&4*

1Department of Mycobacteriology and Pulmonary Research, Pasteur Institute of Iran, Tehran, Iran.
2 Department of Virology, Pasteur Institute of Iran, Tehran, Iran.
3Department of Medical Genetics, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
4Microbiology Research Center, Pasteur Institute of Iran, Tehran, Iran.

Lung cancer is the second most common cancer among men and women, and this affects many people every year, so it requires more effective treatment. A new form of treatment called virotherapy has proven effective when combined with chemotherapy, radiotherapy, and biological/immunological therapy. In virotherapy are used oncolytic viruses (OVs) which include Adeno (Ad), Coxsackie (CV), Herpes Simplex (HSV), Measles (MV), Newcastle disease (NDV), Vesicular Stomatitis (VSV). As well as, Semiliki Forest (SFV), Myxoma (MYXV), Vaccinia (VV), Influenza (IAV), Parapox (ORFV), Seneca Valley (SVV), Pox, and Reo viruses. A major reason for their popularity as vectors is their high transfer and proliferation rates, as well as their easy genetic manipulation without their genome merging into host chromosomes and encoding oncogenes. Likewise, OVs cause lysis, apoptosis, necrosis, metastasis, mitophagy, and autophagy of tumor cells. In addition, stimulate the host immune system such as CD8+, CD4+, NK, IFN, IL, T-cell, lymphocytes, neutrophils, macrophages, and caspases. Consequently, these oncolytic activities inhibit the growth of tumor cells and kill tumor cells by suppressing the S phase and stopping

OVs that promote anti-tumor immunity are attractive treatment options due to the fact that they are self-amplifying, kill by multiple mechanisms; stimulate the body's own immune response.

Keywords: oncolytic virus, lung cancer, treatment

173. Neuromyosistis revealing breast carcinoma

Bouzidi M (1), Tounsi H (1), Chaabène I (1), Skouri W (1), Ben Ahmed I (2), Ouali J (3), Abid N (1), Lajmi M (1), Dghaies S (1), Bachrouch S (1), Jbir I (4), Chaabène A (5), Chelbi E (5), Alaya Z (1), Amri R (1).

1. Internal Medicine Department. Mohamed Tahar Maamouri Hospital. Nabeul.
2. Diabetology and nutrition consultation service. Regional hospital. Ben Arous.
3. Hemodialysis service. Mohamed Tahar Maamouri Hospital. Nabeul.
4. Surgery department. Mohamed Tahar Maamouri Hospital. Nabeul.
5. Pathology department. Mohamed Tahar Maamouri Hospital. Nabeul.

Introduction: Neuromyositis (NM) is a rare entity that associates an autoimmune myopathy with peripheral neuropathy without a detectable cause. We report a new observation of NM that revealed breast carcinoma.

Observation: Patient 54 years old, with no medical history, admitted for diffuse myalgia and polyarthralgia for 3 months. She had a muscular deficit of the pelvic girdle and a 4 cm left lymphadenopathy. Laboratory evaluation revealed a biological inflammatory syndrome with no other abnormality. Antinuclear antibodies were positive at 1/640 with anti-Ku positive. Myogenic damage was confirmed by electromyogram and muscle biopsy. However, there was also a neurogenic atrophy on the same histological sample. The diagnosis of NM was maintained. Echomammography showed a nodule in the left axillary extension and suspiciously looking left adenomegaly. The immunohistochemical study was consistent with the lymph node location of a breast carcinoma. High-dose corticosteroid therapy was started for paraneoplastic NM. A left mastectomy with lymph node dissection was performed. Histological study on a mammectomy sample revealed an infiltrating nonspecific type mammary carcinoma, grade I, measuring 0.6 cm. Chemotherapy was performed and followed by adjuvant radiation therapy. The evolution was marked by a progressive improvement on the muscular level. Currently, the patient is in total remission with a follow-up of 5 years.

Discussion: Correlation between autoimmune myopathies especially dermatomyositis, and cancer. The discovery of this can be concomitant with the diagnosis of myopathy, precede it, or complicate the evolutionary course of the latter. Our observation is original in that it was neuromyositis.

Conclusion: In light of this observation, we suggest the systematic search for underlying neoplasia prior to neuromyositis.

174. Occlusion of a retinal vein revealing a multiple myeloma

Bouzidi M (1), Tounsi H (1), Chaabène I (1), Skouri W (1), Ben Ahmed I (2), Ouali J (4) (3), Abid N (1), Lajmi M (1), Dghaies S (1), Bachrouch S (1), Ikbel G (4), Kaabar Y (4), Bachalli A (4), Alaya Z (1), Amri R (1).

1. Internal Medicine Department. Mohamed Tahar Maamouri Hospital. Nabeul.
2. Diabetology and nutrition consultation service. Regional hospital. Ben Arous.
3. Hemodialysis service. Mohamed Tahar Maamouri Hospital. Nabeul.
4. Surgery department. Mohamed Tahar Maamouri Hospital. Nabeul.

Introduction: Multiple myeloma is associated with an increased risk of a thromboembolic events. However, the occlusion of a retinal vein is rare during this hemopathy. We report a novel observation.

Observation: This was a 70-year-old patient, with medical history of diabetes and hypertension, who consulted for a bilateral decrease in visual acuity. Ophthalmologic examination showed bilateral retinal vein occlusion. Laboratory abnormalities noted were : blood sugar at 7 mmol/l, ESR at 135 mm, normocytic anemia at 7.7 g/dl, hypogammaglobulinemia at 39.36 g/l with the presence of a monoclonal peak. In blood immunoelectrophoresis, it was a monoclonal gammopathy of the IgG Kappa type with a decrease in other types of immunoglobulins. Multiple die-cut geodes were objectified on the skull X-ray. Plasma cell infiltration at 12% with dystrophy was objectified on the myelogram. The diagnosis of stage III multiple myeloma was maintained. A treatment combining melphalan and prednisone was started. The evolution was marked by a stabilization of the clinical state.

Discussion: It is well established that the risk of cancer-associated thromboembolic disease increases compared to the general population. This risk is very heterogeneous depending on the type and site of neoplasia: solid cancers of the pancreas, hepatobiliary and stomach are in the first place, followed by multiple myeloma. Recommendations for the preventive and curative management of cancer-associated thromboembolic disease are available.

Conclusion: Myeloproliferative disorders represent a potential but rare cause of retinal vein occlusion that should not be overlooked.

175. Department of Pneumology:case report about "Superior vena cava syndrome"

Dr Baraa BEN BDIRA, medical students: Oumayma LAROUSSI, Lamia MCHIRGUI.

Introduction: Superior Vena Cava syndrome is a collection of clinical signs and symptoms resulting from either partial or complete obstruction is most commonly a result of thrombus formation or tumor proliferation of the vessel wall. Today this syndrome is most commonly seen secondary to malignancy.

Observation: A 65 year old patient with history of COPD. A smoker 30 pack-year.He presents swelling of the superior extremities especially the left one , in the neck and the orbits. He also presents collateral venous circulation, bilateral turgescence of the jugular veins associated to hemoptysis and shortness of breath.

Chest CT-scan revealed:

*Bulky medio-pulmonary mass with

plural effection

*Superior vena cava syndrome with

broncho-vascular contact

Anatomopathology exam through transthoracic biopsy revealed:

*Adenocarcinoma (primary lung cancer)

Treatment: The patient received decompressive thoracic radiotherapy and chemotherapy.

Conclusion: Superior vena cava syndrome is an emergency and malignancy is the first cause mainly primary lung cancer.

176. Religion and spirituality as a coping mechanism in Tunisian cancer patients

Hadhemi Ayadi, Nesrine Mejri, Mariem Saadi, Haifa Rachdi, Yosra Berrazega, Hamouda Boussen

Background: Recent research has found that religious and spiritual beliefs are associated with active coping strategies in cancer patients. We aimed to examine the factors influencing religious beliefs and the role of religious coping with cancer to decrease stress.

Materials and Methods: Few conducted a questionnaire-based cross-sectional study between January-April 2023, on 156 cancer patients receiving chemotherapy regardless of disease site or stage. We assessed religious beliefs, hope of cure and evaluated correlated factors. Psychological distress was evaluated using the STAI_Y1 scale: high stress when scores>55 and low if ≤55. Both the Pearson and Spearman tests were used to measure the correlations.

Results: Median age was 53 years (26-78), 79% were females and 80% were treated with curative intent (73% were undergoing their first chemotherapy session). Eighty-two percent were married and 31% had a university-level education. Eighty-nine per cent were living in an urban area, 71% were employed with 22% percent of patients considered with high salary (exceeding 2000 dt=597 euros, 4 times min wage). All patients were Muslims, and 89% reported being active practising believers. After cancer diagnosis, 82% of patients believed that they would be cured and 96% of patients reported that their religious beliefs became stronger. Ninety-six patients believed that cancer was a divine test. Thirty-five per cent reported feeling stressed (STAY-Y1 score>55). Eighty-five per cent said that praying helped alleviate psychological pain and reduce stress. Patients with more financial difficulties tended to be more commonly religious(p=0.02) with lower STAY-Y1 scores. Scores were significantly higher in non-practising patients(p=0.01), high-salary patients (p=0.005), higher education(p=0.001), and patients undergoing their first chemotherapy session(p=0.0013).

Conclusion: We observed a significant contribution of religiosity and spiritual practices to psychosocial coping and stress relief. Patients with higher educational levels and better economic situations probably need more attention to help them relieve psychological distress.

177. Radiotherapy of intracranial meningiomas: Survival analysis and prognostic factors

AYADI.H1, NOUBBIGH.F1, Nasr.C1

1. Salah Azaiez Institute, Radiation Therapy Department, Tunis

Background: Radiation therapy (RT) of intracranial meningiomas although it ensures a progression-free survival (PFS) at 3 years of more than 70%, its indication was not always consensual. The primary endpoint was to estimate OS and PFS. The secondary endpoint was to determine the prognostic factors predicting survival and toxicity.

Methods: A total of 55 patients with intracranial meningioma were treated at the Salah Azaiez Institute between 01/01/2000 and 31/12/2019, according to a retrospective study.

Results: The mean age was 50, with a preponderance in the fifth decade. Women represented 62%. Twenty-three patients had a history of intracranial meningioma. Ten patients had a grade I meningioma, 20 had a grade II and 25 had a grade III. Tumour resection was macroscopically complete in 25 patients and incomplete in 30 patients. For grade I meningiomas, the average dose was 52 GY [45-56 GY] in 28 fractions. The average dose for grade II meningiomas with complete resection was 56 GY [54-60GY] in 29 fractions, while for grade II meningiomas with incomplete resection; the average dose was 54 GY [50.4-60GY] in 28 fractions. For grade III, the average dose was 56 GY [54-64 GY] in 29 fractions. Twenty patients complained of a headache during treatment. Thirty-four patients (62%) reported late post-treatment toxicity. The 3-year OS was 79 % and the 3-year PFS was 69%. In a multivariate study, no prognostic factor was correlated with OS. For PFS, the prognostic factors that correlated with OS were tumour size (p=0.016), quality of resection (p=0.042) and heterogeneous enhancement (p=0.037).

Conclusion: This study evaluated radiotherapy practices; it would be even more interesting to carry out a larger-scale study including studying the neurocognitive impact of the various therapies.

178. Diabetic Mastopathy: A Case Report and Literature Review

(1) C. BENALLAL, (1)H.RACHIDI,D.COULIBALY (2), H.ASMOUKY(2),H.RAIS(1)

1. Department of Anatomic Pathology, Mohamed VI University Hospital, Marrakech, Morocco.
2. Department of Obstetrics and Gynecology, Mohamed VI University Hospital, Marrakech, Morocco.

Diabetic Mastopathy (MD) is a recently described benign pathological entity that is rare, representing less than 1% of all benign breast lesions; this rate rises to 13% when limited to type I diabetic patients with degenerative complications or autoimmune diseases. Its pathophysiology remains unknown. Clinically, it mimics breast cancer. Radiological examinations are of limited informativeness. A definite diagnosis is histological. The objective of this work is to detail the clinical, radiological, and histopathological aspects of this condition.

This concerns a 44-year-old unmarried patient with no family history of breast cancer, followed for 10 years for poorly controlled type I diabetes with degenerative complications under insulin therapy. She presented with a left breast nodule classified as ACR 4. A biopsy of the nodule was performed. The initial diagnosis suggested fibrocystic mastopathy without signs of malignancy. A tumorectomy procedure was performed.

We received a left tumorectomy specimen weighing 25 grams and measuring 4x3x2 cm. On sectioning, it is whitish in color, firm in consistency, with areas of hemorrhagic changes. No visible macroscopic neoplasms were seen. It was entirely included. Microscopic examination reveals the presence of mammary parenchyma with dense fibrosis surrounding the lactiferous ducts and acini. The latter are dilated and atrophic, lined by a regular cubo-cylindrical epithelium with a ubiquitous myoepithelial layer. Additionally, a moderate inflammatory infiltrate, predominantly lymphoplasmacytic, was observed, mainly perilobular and perivascular.

This condition was recently discovered, and its course is primarily influenced by the risk of recurrence. After ruling out neoplastic pathology through biopsy, its management is limited to simple surveillance.

179. An anatomopathological observation of a follicular lymphoma not expressing the markers BCL2 and CD10 in immunohistochemistry

C.BENALLAL1 , H. KHADRAOUI1 , H.AZAL2 , H.RACHIDI1 , Y. MSOUGAR2, H.RAIS1

1. Department of pathology, CHU Mohamed VI Marrakech - DRH, Marrakech, Morocco.
2. Department of thoracic surgery, CHU Mohamed VI Marrakech - DRH, Marrakech, Morocco.

Introduction: Follicular lymphoma (FL) is a neoplasm characterized by the presence of B cells originating from the follicular center of both centrocytes and centroblasts/large, transformed cells. This type of lymphoma usually presents with a partial follicular pattern. However, rarely a fully diffuse pattern can be seen, which can also be included in this category (WHO 2017). Here we report the case of a follicular lymphoma not expressing Bcl-2 and CD10 markers on immunohistochemistry, initially diagnosed as reactive lymphadenitis.

Observation: The patient was 51 years old with no previous pathological history and had presented with respiratory distress for 3 months. An abdomino-pelvic computed tomography scan revealed subpleural ground-glass areas in the anterior segment of the LSD associated with splenomegaly and multiple mediastinal, lumbo-aortic and coelio-mesenteric adenopathies. Macroscopic examination of the specimen revealed a tissue fragment weighing 1g and measuring 1.5cm x 1cm x 0.3cm. It was beige in colour and firm in consistency.

Microscopic examination found fibroadiputic tissue, the site of a nodularly organized tumor proliferation. The tumor cells are large, with a high nucleo-cytoplasmic ratio, the nuclei are anisokaryotic, usually centroblastic and the site of numerous mitoses, sometimes abnormal, estimated at 10 mitoses per mm2.

The cytoplasm is reduced basophilic. This centroblastic population is estimated at more than 15 centroblasts per field at magnification 40. This tumor cell population is mixed with a few centrocytes and rare reactive lymphoid cells. No diffuse contingent or tumor necrosis was seen. The immunohistochemical study showed diffuse tumor cell membrane expression of the anti-CD20 antibody, diffuse nuclear expression of the anti-Bcl6 antibody, moderate nuclear expression of the anti-KI67 antibody, and absence of tumour cell expression of the anti-CD5, anti-CD10, anti-cyclin D1, anti-Bcl2 and anti-CD23 antibodies with a positive internal control. The molecular study showed the presence of the translocation t(14;18). The diagnosis of grade 3a follicular lymphoma was accepted.

Discussion and conclusion: The variable immuno-architectural profiles of LF can be difficult to distinguish. Immunohistochemical studies, namely CD10, BCL2 and BCL6, as well as cytogenetic and molecular studies to detect the presence of the t(14;18) translocation, show great variability, making diagnosis more complex.

180. A Rare Case of Osteo-Nevus of Nanta

C.BENALLAL,(1)H. KHADRAOUI,(1)H. RACHIDI (1) H.RAIS1

(1) Pathological Anatomy and Cytology Department, CHU Mohamed VI Marrakech - DRH, Marrakech, Morocco.

Osteonevus of Nanta is a rare skin lesion in which foci of secondary ossification are observed in the dermal component of a benign melanocytic nevus. This ossification can also be observed in other types of lesions, such as acne, melanocytic nevi and epidermal cysts. The aim of this study is to detail the anatomopathological features of this condition.

In this case, a 56-year-old female patient had a dermal nevus since childhood. Over the past 2 months, the lesion had increased in size and had been subject to episodes of local infection. The lesion was surgically excised and histological examination confirmed the presence of an osteoneurysis of Nante after complete excision. The patient recovered uncomplicatedly after surgery.

Secondary ossification associated with dermal nevi, as in this case, is considered a rare occurrence. It is characterized by the presence of calcifications or bone formations adjacent to or interposed with melanocytic cells. Clinical presentations of these lesions may vary, but it is important to note that there is a potential for malignancy, although this is rare.

181. EGFR and BRAF Mutations in Tunisian Patients with Non-Small Cell Lung Carcinoma

Rania Abdelmaksoud-Dammak1, Nihel Ammous-Boukhris1, Amèna Saadallah Kallel1, Slim Charfi2, Souhir Khemiri3, Rim Khemakhem4, Nesrine kallel4, Wala Ben Kridis3, Tahya Sallemi-Boudawara2, Afef Khanfir3, Ilhem Yangui4, Jamel Daoud5and Raja Mokdad Gargouri1

1. Center of Biotechnology of Sfax, Laboratory of Eucaryotes Molecular Biotechnology. University of Sfax, Tunisia.
2. Department of Anatomopathology, Habib Bourguiba Hospital, Sfax, Tunisia.
3. Department of Medical Oncology, Habib Bourguiba Hospital, Sfax, Tunisia
4. Department of pneumology, Hedi Chaker Hospital, Sfax, Tunisia.
5. Department of Radiotherapy, Habib Bourguiba Hospital, Sfax, Tunisia

Objectives: Several new cancer therapies targeting signaling pathways involved in the growth and progression of cancer cells were developed as personalized medicine. Our study aimed to identify epidermal growth factor receptor (EGFR) mutations for TKI treatment in non-small cell lung cancer (NSCLC) Tunisian patients.

Methods: Analysis of the TKI sensitivity mutations in exons 18 to 21 of the EGFR gene and exon 15 of the BRAF gene was performed in 79 formalin fixed paraffin embedded (FFPE) NSCLC samples using pyrosequencing.

Results: EGFR mutations were detected in 34 cases among 79 (43%), with the predominance of the L861Q in ex-on 21 found in 35.3% of the cases (12 out of 34). Deletions in exon 19 were found in 8 cases (23.5%), and only one young male patient had the T790M mutation. Three patients harbored composite EGFR mutations (p.E746_A750del/ p.L861R, p.E746_S752>V/p.S768I, and p.G719A/p.L861Q). Furthermore, the EGFR mutated status was significantly more frequent in female patients (p=0.019), in non-smoker patients (p=0.008), and in patients with metastasis (p=0.044). Moreover, the BRAF V600E was identified in 5 EGFR negative patients among 39 analyzed samples (13.15%).

Conclusion: The p.L861Q localized in exon 21 of the EGFR gene was the most common mutation identified in our patients (35.3%), whereas, the “classic” EGFR mutations such as Del19 and p.L858R were found in 23.5% and 11.7% of the cases, respectively. Three patients carried composite mutations while only one patient harbored the p.T790M known as conferring resistance to the first-generation EGFR TKIs. Altogether, our findings suggest a particular distribution of the EGFR-TKIs sensitivity mutations in Tunisian NSCLC patients.

182. Early anastomotic recurrence of rectal cancer despite optimal surgery: Is tumor cell loss a reality? About two cases

Harroum M, Elghali MA, Sghaier A, Letaief A,Youssef S

Service de Chirurgie Générale et Digestive ; CHU Farhat Hached Sousse

Introduction: Local recurrence rates of rectal cancer after prior resection have decreased significantly since the advent of neoadjuvant therapy and MTE Distal and circumferential margins are recognized risk factors after curative surgery.

Anastomotic recurrence, a form of local recurrence, is uncertain when margins are healthy.

Observation: These are both male patients:

The first patient aged 56 years in whom a tumor of the middle rectum T2 N+ was diagnosed thus indicating a neoadjuvant treatment according to the protocol RAPIDO colorectal with anapath: pT1bN0, R0 without indication of adjuvant treatment.

The second patient was 49 years old, an upper rectal tumor 11cm from the anal margin was diagnosed, surgery was offered right away Both patients had anterior resection of the rectum coelio assisted, the surgical suite did not include the occurrence of anastomotic fistula. Tumors were classified as pT1b N0 and pT3 N0, respectively, and margins were healthy in both patients. Adjuvant therapy has not been indicated.

Follow up CT TAP at 6 months postoperatively suspected anastomotic recurrence, rectoscopy, and histologic examination confirmed the diagnosis in both patients. Chemotherapy alone followed by surgery was proposed in the first patient and TNT followed by surgery in the second patient.

Conclusion: Viable cancer cells may be excreted into the rectal lumen during surgical resection, but their impact on anastomotic recurrence remains uncertain. Washing the rectal stump poses little or no danger to patients and appears acceptable as a routine procedure to reduce risk of recurrence.

183. Conservative management of young women with complex atypical endometrial hyperplasia

Azza Laouini

Introduction: Primary surgery is effective in atypical hyperplasia and low-risk endometrial cancer (EC). However, in young women, this approach compromises fertility. Therefore, fertility-preserving management of atypical endometrial hyperplasia or Grade 1 CE limited to the endometrium may be considered.

Results: Oral therapy with medroxyprogesterone acetate and megestrol acetate is recommended based on extensive experience, although there is no consensus on dosages and duration of treatment. The pooled complete response rate, recurrence rate, and pregnancy rate of EC were 76.3%, 30.7%, and 52.1%, respectively. Endometrial hyperplasia was associated with better outcomes. In a randomized controlled trial, megestrol acetate plus In a randomized controlled trial, megestrol acetate plus metformin ensured an earlier complete response rate than megestrol acetate alone for endometrial hyperplasia. Hysteroscopic resection followed by progestin is associated with a higher complete response rate, a higher live birth rate and a lower recurrence rate than oral progestins. than oral progestins alone. In our study from January 2018 to December 2021, we reported a single case of a patient 24 years old, with a family history of endometrial neoplasia in her mother, married for 3 years, who for 3 years, who consults for desire of pregnancy, a hysteroscopy was performed objectifying a complex atypical hyperplasia of the endometrium, the patient received 3 months of oral progestins with regression of the lesions, with a control hysteroscopy: a hyperplasia of the endometrium without atypia endometrium.

Conclusions: Fertility preservation seems feasible in young patients with grade 1 EC limited to the endometrium or atypical endometrial hyperplasia. Progestins are the mainstay of this management. The addition of metformin and hysteroscopic resection seems to bring some improvement. some improvement. However, fertility preservation is not the standard approach to staging and treatment, which may worsen oncologic outcomes.

184. Atypical endometrial hyperplasia

Azza Laouini

Introduction: Endometrial carcinoma, the most common malignancy of the female genital tract, and complex atypical hyperplasia, its precursor lesion, most often affect peri- and post-menopausal women. The incidence increases with age, with a global estimate of 133 per 100,000 female years.

Results: In our study from January 2018 to December 2021, we reported 12 cases of patients who have atypical endometrial hyperplasia. The mean age was 59 years, ranging from 52 years to 72 years ,with 2 young patients of 24 years and 42 years. A family history of endometrial cancer was reported in 2 patients, the personal history was dominated by diabetes mellitus, hypertension and obesity.

The mode of discovery was abnormal uterine bleeding of the mnemonic type. Ultrasound data concluded that the endometrium was thick, with irregular boundaries, sometimes heterogeneous and suspicious. Hysteroscopy was performed in all patients, showing in most cases a hypertrophy of the endometrium, and in 2 cases, an intra-cavity process suspicious of malignancy. Histology concluded to atypical endometrial hyperplasia and in 3 cases, complex atypical hyperplasia. 10 patients underwent total hysterectomy with bilateral adnexectomy, and in 5 of these patients endometrial adenocarcinoma grade 1 was associated with the hyperplasia.

The other 2 patients, who are young and wish to become pregnant, were treated with progestins for 6 months after informed consent, with the exception of the two women who were not pregnant. The other two patients, who are young and wish to become pregnant, were treated with progestogen for 6 months after informed consent, with disappearance of the atypical cells at the control hysteroscopy.

Conclusion: Hyperplasia with atypia of the endometrium are real pre-cancerous lesions, the reference treatment remains hysterectomy because of their natural history and the carcinological risk, conservative treatments can only be proposed in certain patients according to very precise criteria.

185. Benign Breast Shwannoma

Azza Laouini

Introduction Schwannomas, formerly known as neurilemomas or neurinomas, are benign benign tumors of the peripheral cranial or spinal nerves, corresponding to a proliferation of Schwann cells. The tumor is rarely found in the breast.

Observation: In the following case report, we present a benign schwannoma in a 26-year-old female patient. on auto-palpation of a left breast nodule that had been evolving for evolving for 6 months. Clinical examination revealed a nodule measuring 1cm long, painless, of firm consistency with a regular contour at the UQS of the left breast, mobile in relation to the superficial plane to the superficial (skin) and deep (thorax) planes. Mammography showed an oval, well-limited, homogeneous opacity with sharp of the left breast measuring 15 mm in long axis, with no microcalcifications or calcifications or associated adenopathies. Ultrasound revealed a hypoechoic, homogeneous tissue nodule with clean regular contours with no posterior enhancement. This clinico radiological appearance was consistent with an adenofibroma. A breast microbiopsy was performed, but was inconclusive. Surgical excision was performed.

Macroscopically, it was an oval nodule of soft consistency, measuring 15 mm in long axis, well limited and beigeish in cross-section. Histological examination: morphological aspects consistent with the diagnosis of schwannomas.

After three months, the patient presented to the outpatient clinic. breast examination was without abnormalities.

Conclusion: Schwannoma of the breast is a benign tumour. The diagnosis is often not suspected preoperatively, due to the rarity of breast localization and the absence the absence of a typical clinical and radiological presentation. These tumours have no recurrence potential after surgical excision, due to their benign and non-aggressive nature and, above all, the presence of a capsule delimiting the tumor.

186. A rare yet a must-known entity: A series of Desmoplastic small round cell tumors

A. KHEMIR1,2, G. SAHRAOUI1,2, N. BOUJELBENE1,2, Z. ABDELKEFI1, I. NASRI1, R. MCHIRI1, Dh. KACEM1, R. DOGHRI1,2, L. CHARFI1,2, K. MRAD1,2
1Salah Azaiez Institute
2Faculty of Medicine of Tunis, University of Tunis El Manar

Introduction: Desmoplastic small round cell tumor (DSRCT) is a rare malignant tumor with characteristic reciprocal translocation(11,22). Etiology is still controversial.

Objective and Methods: In order to let, especially, young pathologists know about main clinicopathologic features of DSRCT, cases were gathered over 21 years (2002-2023) in Salah Azaiez Institute.

Results: Fourteen cases of DSRCT were gathered (6 females,8 males; sex ratio: 1.3). Mean age was 16.6 year-old (6-40 year-old). Patients presented with abdominal masses (12 cases), ovarian masses (1 case) and lymphadenopathies (1 case). Diagnosis was made on peritoneal specimens (12 cases), lymphadenectomy (1 case) and liver biopsy(1 case). Tumors' mean size was 66.5mm(12-120mm). Tumors were yellowish-white (9 cases) or grayish (1 case). Frozen section examination was made in 6 cases. Malignancy was diagnosed in 3 cases and DSRCT was suspected in 1 case. Final microscopic examination showed infiltrative margins proliferations made of small round cells with hyperchromatic nuclei and reduced cytoplasm. Stroma was fibro-myxoid moderately abundant. Tumor cells stained positively to cytokeratin (11/12 cases), desmin(9/9 cases) with dot-like perinuclear staining and vimentin(4/4 cases). Tumors cells stained negatively to neuroendocrine markers (6/6 cases), inhibin (4/4 cases), CD117(3/3 cases) and CD99(1/2 cases). Three patients relapsed after chemotherapy.

Discussion: DSRCT are usually intra-abdominal affecting peritoneum in adolescent and young adults with a male predilection. Tumors may reach 40cm in largest diameter with whitish or grayish cut-surface. Our findings match these data. In two cases patients had uncommon presentations (ovarian masses and lymphadenopathies). Diagnosis of DSRCT may be challenging especially on small specimens. On H&E-stained sections Ewing sarcoma and Wilms tumors are main differential diagnoses. Immunohistochemistry is helpful in such situations as in our series. PCR analysis is not compulsory to confirm DSRCT. Remarkably, frozen-section examination was made in 6 cases of our series. Its main contribution was to eliminate another malignant tumors necessitating further surgical resections. DSRCTs remain chemo-resistant with poor prognosis.

187. Squamous Cell Carcinoma of the Iliosacral Region - A Case Report

T. Rguez , Dr M. belkhedher , Z. El Messioui , M. Taghouti ,Dr M. Chaieb ,Dr N. Mahdhi
The plastic, reconstructive , Aesthetic surgery and burn department of sahloul university hospital

Introduction: Spinocellular carcinomas (SCCs) or cutaneous squamous cell carcinomas (SCCs) are malignant tumors that develop from keratinocytes. They represent the second most common skin cancer after basal cell carcinoma among fair-skinned populations.

Clinical case: This concerns a 67-year-old patient with a medical history of hypertension, coronary artery disease, who has been followed for several years for chronic pilonidal disease of the sacral region that progressed to squamous cell carcinoma. Initially, it was treated with radiotherapy, followed by surgical excision with a complete remission confirmed by histopathological analysis. The patient has a residual tissue defect that had no tendency for spontaneous healing for about 7 year. After many sessions of unsuccessful Vacuum assisted therapy we decided to cover the tissue loss with two advancement gluteal flaps. The main challenge during the surgery was to advance an inflammatory irradiated tissue to cover a large tissue-loss of the sacral area. The wound healing was delayed because of the bad vascularity of the flaps, needing VAC therapy for wound dehiscence. Eventually, about a month later, all wounds healed and the patient regained normal everyday life.

Conclusion: Surgery is the treatment of choice for squamous cell carcinomas. It can be combined with the use of flaps or skin graft. In cases where surgery is not feasible, radiotherapy is an effective alternative. For advanced forms (especially those with metastases), chemotherapy or targeted therapies can be combined with these treatments. In all situations, close monitoring is important. Lastly, patients should be advised to protect themselves from the sun and to watch for any lesions that may transform into squamous cell carcinoma later on, such as HPV and lichen, in particular.

188. Heterogeneity of Tumor-Infiltrating Lymphocytes In Breast Carcinoma

Nadia BEN OTHMAN, Yoldez HOUCINE, Sirine ELFEKIH, Salma KAMOUN, Maha DRISS

Pathology Department, Salah Azaiez Institute

Introduction: Tumor-infiltrating lymphocytes (TILs) are a major prognostic factor and a predictor of treatment response in triple-negative (TN) and HER2-amplified breast cancer. The aim of our study is to evaluate the different cellular subpopulations comprising TILs.

Methods: A descriptive retrospective study was conducted on 40 patients diagnosed with infiltrating triple-negative and HER2-amplified breast carcinoma, collected at the Pathology Department at Salah Azaiez Institute over a 3-year period (2017-2019). We performed an immunohistochemistry staining using anti-CD3 and anti-CD4 antibodies. We evaluated overall survival (OS) and progression-free survival (PFS) in these two molecular categories.

Results: TILs ranged from 0 to 80%. TILs were denser in triple-negative breast carcinomas (TNBC) than in HER2-amplified carcinomas. TILs mainly consisted of CD8+ lymphocytes. In fact, CD4/CD8≤1 in 87.5% of cases, which is 35 patients, with 19 and 16 cases corresponding to HER2-amplified and TNBC, respectively. The CD8 population was more abundant in 5 patients (4 triple-negative, 1 HER2-amplified). This variation in different subpopulations constituting TILs in these studied molecular subtypes of breast cancer was significant (p=0.02). OS for the triple-negative category was 95%, while it was 88.9% for HER2-amplified carcinomas. It was better when CD8+ lymphocytes were more abundant than CD4+. However, there was no significant difference in terms of OS and PFS between the two molecular types studied and the heterogeneity of TILs (p=0.20, p=0.037).

Discussion: Breast cancers exhibit a certain heterogeneity. The significant heterogeneity of TILs in different molecular subcategories of breast cancer, particularly high-grade ones, may explain the differences in prognosis among these various tumors. Although TIL heterogeneity was not statistically correlated with PFS and OS, it tends to have better survival in cases of significant CD8-rich TILS. The breakdown of the tumor microenvironment has not only physiopathological relevance but also potential therapeutic implications. The identification of TILs subgroups could lead to the discovery of new therapeutic targets.

Conclusion: Our model for categorizing TILs through immunohistochemistry did not reveal a prognostic impact in this retrospective series of 40 breast cancer patients. However, it allowed for the identification of TIL subpopulations that may help better characterize the tumor microenvironment in breast cancer.

189. Cervical cytological screening results of 537 cases in Tunisia

Nadia Ben Othman (1), Salma Kamoun (1), Yoldez Houcine (1), Sirine El Fekih (1), Sakhri Saida (2), Ines Houissa (2), Khadija Hamza (1), Naoufel Aloui (1), Basma Abdouli (1), Sihem Rahmouni (1), Maha Driss (1)

Background and objective: Cervical cancer is the fourth most common cancer among females in Tunisia. Cervical smear is a routine screening test used for the detection of cervical abnormalities and cervical infections. The aim of this study is to analyse cervical smear results in order to determine most frequent abnormality of women in the greater metropolitan area of Tunis.

Methods: In a retrospective study design, 537 cervical cytology cases were examined at the Pathology Department of Salah Azaiez Institute, Tunis, extending from January 2019 to March 2019 were investigated.

Results: Our rate of cytological abnormality was 1.12% (Ascus: 1, AGUS:2, HSIL:1, LSIL:2) The most common diagnosis was found to be benign cytology (57 %, 304 out of 537), and the least was squamous epithelial abnormalities 1.1% (6 out of 537). No case of cervical carcinoma was found. Vaginal Candidiasis (5.5%) was the most frequent infectious finding detected on the smears. Cervical dysplastic changes were found in 16.2% (87) and inflammation in 10.6% (57) of total smears. Changes probably due to endocervical polyp were seen in 3.35% (18) of total cases. Twenty smears (3,7%) were non-contributory.

Conclusion: Regular cervical smear tests are one of the most important strategies in cervical cancer screening. The prevalence of dysplasia and cervical cancer was low for our participants. A study on a larger population would be necessary to a better evaluation of dysplasia prevalence in Tunisia.

190. Preoperative endocrine therapy in upfront operable breast cancer: a prospective study

Margli I2, Kamoun S1, Bouaziz H2 , Ben Othman N1, Houcine Y1, Beltaief S2, Loukil Y1, Chaabeni Y1, Mhalli S1, Driss M1
1pathology department, Salah Azaiez Institute Tunisia
2surgical oncology department Salah Azaiez Institute

Introduction: Clinical trials on neoadjuvant endocrine therapy (NET) in HR+ breast cancers remain limited with a small sample size. Although for HR+ breast cancers, clinical and radiological response rates after NET, as well as the reduction in Ki67, were substantial, no clear consensus has been established for its use in this indication. Objective: To investigate the effect of short-term NET in upfront operable luminal breast cancers.

Methods: We conducted a prospective, cross-sectional, descriptive study at the Salah Azaiez Institute in Tunis from November 2014 to September 2016, evaluating the effect of NET therapy in 68 patients with HR+, non-metastatic, and upfront operable breast cancer.

Results: The median age of our patients was 50 years, with 37 patients in menopause. The average clinical tumor size was 27.18 mm. All our patients had HR+ breast carcinoma. Forty-one patients received preoperative hormone therapy with tamoxifen, and 27 with anastrozole. The average duration of hormone therapy was 45.59 days. Clinical partial tumor response was achieved in 7 patients, and radiologic response in 28 patients. Forty-two patients underwent conservative treatment. Histologically, a therapeutic effect on the tumor was observed in 41 patients (60.3%). This effect was superior than 50% in 15 patients. Reduction in Ki67 was observed in 34 patients (50%). The mean reduction in Ki67 was 7.41% with a range from 7 to 23%. When comparing tamoxifen and anastrozole, patients who received anastrozole had significantly five times higher chances of seeing their Ki67 decrease (RR=5.5, p=0.001).

Conclusion: In our study, the therapeutic effect and the reduction in Ki67 under preoperative hormone therapy were consistent with the literature, unlike the clinical and ultrasound response. This encourages us to conduct further randomized studies, including a larger sample of well-selected patients and for a longer duration.

191. Terebrant Basal Cell Carcinoma: Cases we should no longer see

NEI. ouni (1), A. Aounallah (1), M. Belkahla (1), M. Lahouel (1), S.Mokni(1),N.Fitoui Ghariani(1), B.Sriha(2), N.Ghariani(1), M.Denguezli(1)
Dermatology, Hospital Farhat Hached, Sousse, Tunisie
Anatomopathology, Hospital Farhat Hached, Sousse, Tunisie

Terbrant Basal Cell Carcinoma (TBCC) is a rare subtype of BCC with local invasive potential. Through a hospital-based series of TBCC cases, we report the therapeutic challenges associated with this tumor. We conducted a retrospective study between January 2017 and November 2019. We included all cases of TBCC diagnosed in our department between January 2017 and November 2019.

We collected 7 cases of TBCC with an increasing incidence: 1 case in 2017, 2 cases in 2018, and 4 cases diagnosed in 2019. The sex ratio was 2.5. The average age of our patients was 71 years. All our patients were living in precarious conditions. The average size of the lesions was 6 cm. The average duration of progression was 9 years. TBCC was located in the peri-orbital area in 2 cases, the nose in 2 cases, the upper lip, pre-tragal region, and the scalp in 1 case each. A history of childhood radiation therapy for tinea capitis was found in only one patient. An aggressive histological type was found in 3 cases (42.8%), with one case being of metatypical BCC and two cases showing infiltrative characteristics. Local-regional extension was noted in the form of bone involvement in 28.6% of cases, intra-orbital involvement in 28.6% of cases, and complete destruction of the earlobe in one case. Nodal and distant metastases were absent. Surgical management, performed in 5 cases, was disfiguring. No recurrences were observed. Two patients (28.6%) were inoperable, and therefore, they were candidates for Vismodegib.

BCC is known for its relatively good prognosis. However, certain forms, particularly the infiltrating form, in high-risk areas such as the naso-orbital region, can quickly become disfiguring, and mutilating leading to aesthetic and functional impairments and difficulties in management, as seen in our patients. Our series highlights the risk factors for IBCC, including patient ignorance, neglect, and diagnostic errors leading to delays in treatment. Through our series, we emphasize the importance of awareness and patient education campaigns regarding the significance of photoprotection, early consultation, and screening for this tumor by knowledgeable dermatologists.

192. Dermatofibrosarcoma Protuberans: About 47 cases

Zmorda EL MESSIOUI, Meriem Ben Khedher, Ines Sboui, Talel Rguez, Meriem Chaieb, Nidhal Mahdhi.
"Ibn Jazzar" Faculty of Medicine, the Plastic Surgery Department of Sahloul University Hospital, Sousse, Tunisia.

Introduction: Dermatofibrosarcoma protuberans (DFSP) is a rare type of skin cancer. DFSP is an intermediate-grade malignancy with a low likelihood of metastasis but a high local recurrence rate. Given its propensity for a subclinical extension, the optimal treatment modality for DFSP is Mohs micrographic surgery (MMS), a surgical technique that allows complete margin assessment and tissue preservation.

Material and methods: A retrospective descriptive study was conducted in the Plastic Surgery department of Sahloul Hospital from January 2000 to August 2023. Forty-seven patients who had DFSP excision were included. Magnetic resonance imaging was systematic before surgery to determine the deep tumor extension. Surgical margins were determined according to the recommendations in effect at the time of surgery. Factors studied were the localization, the recurrence rate, re-excision and finally the healing method needed.

Results: Mean age was 38 years. No sex predominance was noted. First consult delay was 7 years. Patients consulted for a slowly-growing firm plaque of the soft-tissue of the trunk and limb girdles in 37 cases, of the limbs in 9 cases and of the neck in one. All patients underwent surgery. Thirty patients had a 5-cm margin excision, 17 patients had 3-cm margins. Deep margin included the first macroscopically healthy layer. DFS recurrence was noted in 1 case and re-excision for invaded margins was necessary in 8 cases. Delayed flap reconstruction was needed in 11 cases, skin graft in 19 cases, primary healing in 9 and secondary healing in 8 cases.

Conclusion: The DFSP prognosis depends on the excisional margins. The standard margins are 3-cm surface margin and the first intact deep anatomical barrier in the excision.

193. Mycosis fungoides and atopic dermatitis: what's the link?

Lahouel M; Ouni Nour; Sriha B; Bel Kahla M; Ghariani Fetoui N; Aounallah A; Mokni S; Ghariani N; Belajouza C; Denguezli M

Introduction: The risk of cutaneous lymphoma in patients with severe atopic dermatitis (AD) is still debated. Herein, we report the case of folliculotropic mycosis fungoides (FMF) in a patient with a long history of severe AD.

Observation: A 47-year-old man presented with a 20-year history of recurrent generalized pruritic eczematous lesions. He had been diagnosed with severe AD and reported a history of allergic conjunctivitis. He was lost to follow-up for two years. Recently, he was admitted to our department with generalized infiltrated nodules and plaques evolving for 7 months associated with axillary and inguinal lymphadenopathy. Physical examination revealed generalized infiltrated plaques and erosive nodules associated with alopecic patches on the face and a leonine facial appearance. The laboratory results revealed peripheral blood eosinophilia (2.6 109 /L) and elevated serum immunoglobulin E level (11700 IU/mL). There was no Sezary cells in the peripheral blood. Biopsy confirmed the diagnosis of FMF with follicular mucinosis. An immunohistochemical analysis revealed neoplastic infiltrate strongly positive for CD3, CD4 and negative for CD8. Rare cells (<10%) were positive for CD30. The thoraco-abdomino-pelvic CT scan showed axillary, mediastinal and hilar lymphadenopathy. No evidence of bone marrow or lymph node involvement was documented. We diagnosed FMF stage T3N1M0B0, clinical stage IIB. He was treated with chemotherapy according to the protocol CHOEP (cyclophosphamide, doxorubicin, vincristine, etoposide and prednisone).

Discussion: FMF is a rare variant of MF (the most common type of cutaneous T-cell lymphoma) with distinct clinical and histological findings. Cases of associated cutaneous lymphomas and AD have been increasingly reported in these recent years. The mechanism of this association has not been elucidated. Factors common to both diseases include the crucial role of CD4+ T cells, the background of cytokines, the potential role of anti-immunoglobulin E antibodies and the staphylococcal superantigens. Recently, it has been demonstrated that Interleukin 31 (IL-31), which play a pathogenic role in atopic dermatitis and allergic asthma, is also involved in the pathogenesis of cutaneous T cell lymphoma. It has been shown that malignant T-cell populations from cutaneous T-cell lymphoma produced IL-31, with increased serum levels of the cytokine correlating to itch. According to some studies, there is an increased risk of cutaneous lymphoma in patients with AD. It is probably related to the chronic lymphocyte stimulation which ultimately leads to a dominant clone or the use of immunosuppressants.

To our knowledge, only three cases of FMF associated with AD have been documented.

194. Epitheloid sarcoma of the hand : about two cases

Zmorda EL Messioui, Meriem Ben Khedher, Achraf Saoudi, Mohamed Taghouti, Meriem Chaieb, Nidhal Mahdhi.
"Ibn Jazzar" Faculty of Medicine, the Plastic, Reconstructive, Aesthetic Surgery and Burn Department of Sahloul University Hospital, Sousse, Tunisia.

Introduction: Epithelioid sarcoma (ES) is a malignancy of the young adults. The classic type presents as a subcutaneous or deep dermal neoplasm in distal portions of the limbs. With high recurrence and mortality rates, radical resection is the treatment of choice for the localized disease. However, no specific guidelines are set especially for anatomically complicated areas like the hand.

Case 1: A 21 year-old female complained of a post-traumatic painful scar of the left hand. Echography showed signs of tenosynovitis. She underwent a scar excision. 18 months later, the patient presented with a firm, bluish, tender, well-circumscribed ulcerated lesion over the old scar. Histopathology showed epithelioid sarcoma. MRI showed an infiltrating tumour of the dermis and the underlying soft-tissue. No distal metastasis was noted. Excision included 2-cm lateral margins, superficial layers of the thenar muscles, and underlying nerve, tendon and vessel sheaths. Pathology showed uninvolved margins. The tissue loss was covered with a dorsal ulnar artery flap. At 7 years follow-up the patient was recurrence free.

Case 2: A 36 year-old male presented with a 2x 0.5 cm firm violate-blue lesion of the first left-hand web, that has been slowly growing for 7 years. Biopsy was in favour of epitheloid sarcoma. Excision following 1.5 cm lateral margins and including the superficial layers of the thenar muscles and the median nerve sheath was preferred. Final pathology confirmed healthy lateral and deep margins. The patient underwent skin graft after two weeks before receiving adjuvant radiotherapy. On his 2 year-follow-up, he had no signs of recurrence.

Both patients had regained a satisfactory hand function.

Conclusion: Amputation did not prove to be superior to compartmental surgery followed by chemotherapy and/or radiotherapy in the classic type of ES in the hand.

195. Breast Cancer Screening Specificities

Chelly Souhir, Omri Nihel, Ammar Asma, Ezzi Olfa, Njah Mansour, Mahjoub Mohamed
Hospital hygiene department- University Hospital of Farhat Hached, Sousse, Tunisia

Introduction: There is empirical evidence indicating that the occurrence of breast cancer escalates with age, particularly beyond the age of 60. Consequently, the approach to breast cancer screening in older women must be tailored according to their life expectancy. Unfortunately, there is a paucity of research encompassing women aged 65 and older.

Objective: The primary aim of this study was to evaluate the utility of breast cancer screening in elderly women.

Methods: This research presented an overview of cancer screening methods applicable to elderly women and subsequently deliberated on the significance or lack thereof of such screening by conducting an extensive literature review, with the central inquiry being, "At what age should screening cease?"

Results: The modalities for screening breast cancer in elderly women are generally similar to those employed for younger counterparts, albeit with reduced emphasis on breast ultrasound and waning patient interest in self-examination. Arguments in favor of screening women over 65 years of age include the deceleration of cancer cell kinetics, the increased sensitivity and specificity of certain radiological examinations with advancing age, and its efficacy in reducing mortality, as substantiated by select studies. Counterarguments against screening encompass the presence of comorbidities, psychological distress, low participation rates in screening initiatives, the cost-effectiveness of mass mammography screening beyond a certain age, and the potential risk of cancers induced by radiological screening.

Conclusion: Diverse perspectives exist on the appropriate age to discontinue breast cancer screening, with some authors contending that there is insufficient rationale for extending screening beyond the age of 75, while others advocate for an absence of age limits. The majority of recommendations for breast cancer screening in elderly women endorse mammography every 1 to 2 years, coupled with physical examinations and self-examination.

196. Screening for Endometrial Cancer

Chelly Souhir, Omri Nihel, Ammar Asma, Ezzi Olfa, Njah Mansour, Mahjoub Mohamed

Hospital hygiene department- University Hospital of Farhat Hached, Sousse, Tunisia

Introduction: Endometrial cancer (EC) stands as the most prevalent gynecologic malignancy, and its incidence is on the rise. It is imperative to conduct studies on screening methods, particularly for older women.

Objective: The primary goal was to identify screening methods for endometrial cancer in populations, assess their practicality, and outline the limitations of such screening.

Methods: This study examined various endometrial cancer screening methods based on a literature review. It also explored the debates surrounding their cost-effectiveness in early detection and survival rates.

Results: Gynecological examinations are generally inadequate, and cyto-histological samples are both invasive and relatively ineffective. Endovaginal ultrasound (EU) appears to be a straightforward way to detect thickened endometrial lining. Many experts view it as a dependable screening tool. Nevertheless, some argue that this screening might be superfluous given the frequent early-stage diagnosis and the relatively lower prevalence and aggressiveness of endometrial cancer compared to other gynecological cancers. Additionally, EU's value, according to some, lies mainly in its 100% negative predictive value when the endometrial thickness is less than 5mm.

Conclusion: No studies have demonstrated the effectiveness of any screening test in reducing endometrial cancer mortality.

197. Epidemiological Profile and Screening of vulvar Cancer

Chelly Souhir, Omri Nihel, Ammar Asma, Ezzi Olfa, Njah Mansour, Mahjoub Mohamed

Hospital hygiene department- University Hospital of Farhat Hached, Sousse, Tunisia

Introduction: Vulvar cancer, though infrequent, accounts for 3 to 5% of genital cancers in older women. However, its prevalence is on the rise due to increasing life expectancy.

Objective: The aim of this study was to examine the unique epidemiological characteristics and screening considerations related to vulvar cancer in older women.

Methods: This research conducted a comprehensive review of literature encompassing publications concerning the epidemiology and screening of vulvar cancer in the elderly female population.

Results: Vulvar cancer primarily affects women in their sixth decade, with an average age ranging from 65 to 70 years. Squamous cell carcinoma accounts for over 90% of cases. Predominant anatomical sites of occurrence include the labia minora (25%), labia majora (10%), the sub-meatus area (9%), and the meatus (4%). Precancerous lesions are observed in 50 to 72% of vulvar cancer cases, often manifesting as leukoclastic dystrophies of the lichen sclerosus type. A debate exists regarding the role of human papillomavirus (HPV) as a risk factor, with an association rate of 15% reported after age 65. Other risk factors, such as obesity, diabetes, and extended periods of estrogen deficiency, have also been documented. However, the literature does not establish a clear link between active or passive smoking and vulvar cancer.

Conclusion: Vulvar cancer is characterized by delayed diagnosis, attributed partly to patient reluctance (often due to shame) and physicians frequently misinterpreting the main symptom, vulvar pruritus, as a sign of infection rather than cancer. The rarity of this neoplasm does not warrant a standardized approach to vulvar cancer screening in elderly women.

198. Epidemiology, symptoms and screening of vaginal cancer

Rouis Sourour, Chelly Souhir, Ezzi Olfa, Ammar Asma, Soua Asma, Fitouri Sami, Njah Mansour, Mahjoub Mohamed
Service d'hygiène hospitalière CHU Farhat Hached de Sousse-Tunisie

Background: Vaginal cancer is very rare, it represents less than 1% of gynecological cancers in elderly women. The majority of VCs are secondary to extensions of nearby cancers (cervix, vulva). The incidence of vaginal cancer worldwide is estimated at 0.3/100,000 to 1/100,000. Mortality from vaginal cancer is 0.25/100000. The objective of this study was to analyse the epidemiological and screening features of vaginal cancer.

Methods: We conducted a literature review of publications related epidemiology, risk factors, symptoms and screening of vaginal cancer.

Results: Vaginal cancer affects women in the 6th decade. It is a squamous cell carcinoma in more than 95% of cases (peak frequency between 70 and 80 years). Adenocarcinomas are rare (less than 4%) and develop from the müllerian ducts. The most reported risk factors are pelvic irradiation (RR= 14), chronic irritation (pessary use), hysterectomy, endometriosis, smoking (RR=9) and infections (Human Papilloma Virus (RR=23) and HIV (RR= 21)). Vaginal cancer is revealed by metrorrhagia (95% of cases), purulent leucorrhoea (97%) and pain (93%). The predominant location of vaginal cancer is in the upper 1/3 and on the posterior wall.

Conclusion: The renewed attention to vaginal cancer is due to the fact that they have almost the same risk factors as cervical cancer (mainly infection). Breakthrough bleeding, purulent leucorrhoea and pain remain the presenting signs reported by women that should prompt the diagnosis of vaginal cancer, especially in the presence of risk factors. There is no screening test for vaginal cancer. In fact, the rarity of these neoplasia does not justify a standardised approach to screening for vaginal cancer.

199. Nurse Approach in Managing Stress Among Parents of Leukemic Children

Chelly Souhir, Omri Nihel, Ammar Asma, Ezzi Olfa, Njah Mansour, Mahjoub Mohamed

Hospital hygiene department- University Hospital of Farhat Hached, Sousse, Tunisia

Introduction: Families with children diagnosed with cancer often face critical situations and frequently suffer from psychological issues, such as stress. The objective of this study was to describe the knowledge and practices of clinical hematology nurses in managing the stress of parents with a child diagnosed with leukemia.

Methods: This study was conducted in March 2020 to assess the knowledge and practices of clinical hematology nurses in managing parental stress in cases of child leukemia diagnosis. The study also aimed to analyze the application of the caring nursing approach based on Swanson's theory among these parents.

Results: A total of 38 nurses responded to the questionnaire. Nurses provide support to parents through active listening, emotional support, and instilling hope, with percentages of 81.6%, 71.1%, and 65.8%, respectively. They are expected to understand and comprehend parents' concerns (86.8%), emotionally connect with them (73.7%), establish a relationship of understanding and support (86.8%). Effective stress management for parents is achieved through efficient communication (68.4%) and active listening (78.9%).

Conclusion: Nurses demonstrated a solid understanding of the needs of parents with children diagnosed with leukemia. However, improvements in communication skills are necessary for more effective stress management. Continuous training can contribute to enhancing these essential skills, thereby improving the support provided to families facing this challenging ordeal.

200. Nurse's role with the parents of a neoplastic child

Chelly Souhir, Omri Nihel, Ammar Asma, Ezzi Olfa, Njah Mansour, Mahjoub Mohamed

Hospital hygiene department- University Hospital of Farhat Hached, Sousse, Tunisia

Introduction: Cancer is a public health problem in Tunisia and throughout the world. An increase in the risk of this disease is expected in the future. It affects all age groups, especially children. This scourge also has harmful repercussions on children's physical health of children and their families. The aim is to describe the nursing role when dealing with the parents of a child with cancer.

Methods: This cross-sectional descriptive study was carried out among nurses working in the Pediatrics, Hematology and Pediatric Surgery departments of CHU Fattouma Bourguiba, and the Sahloul pediatrics department, using a self-administered questionnaire. a self-administered questionnaire during the months of February and March 2022.

Results: A total of 60 nurses responded to the questionnaire. Only 53.3% stated that they had received training in the support and assistance of parents, the majority (80%) reporting that they had received training in the support and assistance of parents. The majority (95%) affirm that parents are always present with their sick children. Parents' reactions to their child's illness and hospitalization are grief according to 91% of nurses, anger according to 80%, shock and denial according to 85%, and expectation and apprehension according to 58.3%.

Conclusion: This study highlights the essential role of nurses in the care of parents of children with cancer in Tunisia. Although the majority of nurses have received training, it is important to emphasize that understanding of cancer can be improved. Parents' reactions underline the need for an empathetic and supportive approach on the part of nurses to help families cope with this difficult ordeal.

201. Role of the nurse in the care of children hospitalized in onco-hematology

Chelly Souhir, Omri Nihel, Ammar Asma, Ezzi Olfa, Njah Mansour, Mahjoub Mohamed

Hospital hygiene department- University Hospital of Farhat Hached, Sousse, Tunisia

Introduction: The care of children hospitalized in onco-hematology is a demanding medical discipline. The aim was to identify the perceptions, attitudes and behavior of the nurse in the care of children hospitalized in onco-hematology.

Methods: This was a descriptive study of nurses working in the hematology and pediatrics departments at CHU Taher Sfar Mahdia, Pediatrics at CHU Fattouma Bourguiba Monastir, Carcinology and Hematology at CHU Farhat Hached and Pediatrics CHU Sahloul de Sousse during the months January to March 2019.

Results: A total of 50 nurses were included. A minority (14.3%) benefited from continuing professional training. Three quarters of the nurses thought that the child should not know about his or her illness. Almost half (52%) are rarely, if ever, available to finish providing information to the patient and family. The anguish of the patient's family represents the major difficulty for most nurses (88.9%). Nearly 2/3 of nurses (62%) mention that there is psychological care for patients in their departments, and almost all (98%) think that children should continue to attend school in hospital.

Conclusion: At the end of this study, we came to the conclusion that the management of children onco-haematology hospitalized child calls for versatile skills and a supportive relationship with the child and a helping relationship with the child to guarantee the maximum success of therapeutic projects.

202. The great epiploon, a rare location of teratomas, About a case

Letaief A, Ben Saad M, Maraach W, Sindi S, Feidi B , Krichen J , Abedlkefi S

Department of General and Digestive Surgery, Alaghalba Kairouan Hospital

Mature teratomas are among the most common ovarian tumors, however, the teratomas of the epiploon and mesentery are extremely rare. The etiology of these teratomas is not well understood. They are more common in women, suggesting a possible association with female reproductive organs.

We describe the case of a woman with teratoma of the great epiploon associated with ovarian localization.

A 70-year-old woman was hospitalized for exploration of periumbilical abdominal pain evolving for 3 months.

Examination = uncomplicated umbilical hernia, pain on palpation of FIDTE and hypogastrium, apyretic. Biology = no biological inflammatory syndrome, tumor markers = negative. Abdominal CT coupled with echo = intraperitoneal mass with fat content with calcified wall evoking a dermoid cyst of the mesentery and a left uterine latero mass evoking a teratoma.

In intraoperative, 8 cm cystic lesion with calcified wall of epiploic location without contact with digestive structures with the presence of a left ovarian cyst of 13 cm=> Closed cyst monobloc ablation of the epiploic cyst, left ovariectomy carrying the ovarian cyst. The opening in the room of cysts objective the presence of hair and gelatin and cartilaginous tissue evoking a teratoma.

Anapath examination = calcified cystic teratoma of the epiploon + ovarian mature teratoma. The operation was simple, the patient recovered well.

203. Acute intestinal invagination secondary to gastrointestinal stromal tumour (GIST)

Letaief A, Ben Saad M, Ben Amor A,Zaidi B , Feidi B, Ben Salah K

Department of General and Digestive Surgery, Alaghalba Kairouan Hospital

We present the case of a 60-year-old patient treated for intestinal obstruction by ileal intestinal invagination. The anatomopathological study shows that it is a gastrointestinal stromal tumor (GIST).

60-year-old woman, History= anemia under martial treatment, consulted for

abdominal pain and transit disorders evolving for 1 week, accentuated since yesterday with cessation of materials and gases and vomiting.

Examination: stable hemodynamic state, distended tympanic bloated abdomen. Biology= nothing to report

Abdomen without preparation: severe intestine distension

Abdominal CT: mechanical occlusive syndrome, probable intestinal invagination

Surgical intervention in emergency = significant distension of the proximal hail, upstream of an invagination of hail secondary to a tumor-like lesion of 6*5 cm, located 120 cm from the 1st loop, with multiple lymph nodes => Resection and mechanical anastomosis.

The postoperative period was without particularities.

Anatomopathological study of the room = stromal tumor (GIST) of the small intestine of 5.5 cm long axis, without capsular rupture, no lymph node metastases, pT3N0.

The patient was referred to carcino for follow-up and management (treatment with anti tyrosine kinase)

204. Appendicular Oxyurosis; About 20 Cases

Letaief A, Ben Abdeslem A, Tlili M, Ben Amor A, Elghali MA, Youssef S

DEPARTMENT OF GENERAL SURGERY, FARHAT HACHED UHC, SOUSSE

Introduction: Pinworm disease is caused by a nemathelminth; Enterobius vermicularis. It is a cosmopolitan digestive parasitosis. It is a colonic parasitosis, because the adult pinworms live in the cecum. The aim of our work is to evaluate the frequency of this parasitosis in the surgical environment, where it can lead to an appendectomy by excess.

Material And Methods: Our study concerns 20 cases of appendicular oxyurosis collected on the basis of anatomopathological data of patients operated in emergency in a picture of acute appendicitis in the department of general surgery of Farhat Hached Hospital Sousse over a period of 08 years (2012-2020).

Results: The average age of our patients was 09 years with extremes ranging from 7 to 15 years. Clinical symptomatology was variable, dominated by localized abdominal pain of the right iliac fossa, vomiting and diarrhea were found in 14 children, right iliac fossa tenderness with fever at 38°C in 15 children, hyperleukocytosis greater than 12,000 elements/mm3 and CRP dosage greater than 10 mg/l in 15 patients. No patient had extradigestive signs or anal pruritus.Abdominal ultrasound showed an appearance in favor of acute appendicitis in 22 cases, normal in 8 cases, but whose clinical picture was strongly suggestive of acute appendicitis requiring surgical intervention.

Discussion: Pinworm disease is often asymptomatic. The essential sign, if it is symptomatic, is anal pruritus, especially in the evening and at night. It may take on the appearance of the classic appendicular crisis. Since pinworms have been found in the lumen of the appendix, their role in triggering the inflammatory phenomena responsible for appendicitis has been raised, however the majority of authors exonerate the parasite.

The localization of adult worms in the terminal ileum and cecum (irritative action) could explain the digestive symptomatology or appendicitis. We believe that their presence in appendectomy specimens implies their responsibility in the genesis of clinical symptoms simulating appendicitis. Apart from surgical emergencies, a complete parasitic examination with repeated scotch-tests is indicated which allows the reduction of the number of unnecessary surgical interventions.

Conclusions: The clinical signs of pinworm disease may be reminiscent of an appendicular syndrome leading to excessive surgical intervention. This leads us to insist that, apart from surgical emergencies, a complete parasitic examination with repeated scotch-tests is indicated.

205. Acute intestinal invagination following colic lipoma, about a case

Letaief A, Maraach W, Ben Saad M , Zaydi B, Feidi B, Ben Salah K

Department of General and Digestive Surgery, Alaghalba Kairouan Hospital

Acute intestinal invagination is a pathology of infants and small children. Its occurrence in adults is very unusual. It is of diverse etiology. In the vast majority of cases, it is secondary to a tumor that can be benign or malignant. Intestinal invagination on lipoma is exceptional. We report a case of colonic intestinal invagination on lipoma.

Patient aged 50 years, History = delivery by cesarean section by median route under umbilical, transit disorders with constipation type for 1 year unexplored, hospitalized for diffuse abdominal pain with notion of cessation of materials and gases and vomiting

Examination = distended abdomen with percussion tympanism, slightly sensitive, without palpable mass, free hernial orifices, no fever, normal TR. Biology = no anemia, no biological inflammatory syndrome.

AWP= hydro-aeric levels type colic.

Abdominal CT = Sandwich aspect of the transverse colon in relation to an invagination collar without true upstream colic distension, endoluminal mass of the left colic angle of fat density seat of thin walls of 40 mm long axis evoking a lipoma, minimal pelvic fluid effusion.

Per operative= colonic colo invagination on tumor of the right third of the transverse colon with presence of adenomatous, serous effusion of low abundance=> Hemi carcinological right colectomy with mechanical ileocolic anastomosis.

The anatomopathological study is in favor of a 5 cm submucosal lipoma. The surgical follow-ups were simple and the patient left the hospital on the 4th day of her hospitalization.

206. Leiomyoma of the wall of a superficial vein of the axillary hallow: rare pathology and localization

Letaief A, Sghaier A, Harroum M, Dhouioui K, Elghali M A, Youssef S
Department of General Surgery, UHC Farhat Hached , Sousse

Introduction: Leiomyoma is a non-cancerous tumor, slow progression and good prognosis. It can theoretically develop on all types of smooth muscle. A vascular leiomyome typically sits on the lower limb. We report an unusual case sitting on the wall of a superficial vein of the axillary hollow.

Observation: This is a 17-year-old patient, with no significant history of pathology, who consulted for a right axillary mass that appeared 2 months before, stable in size, mobile compared to the deep and superficial plane, without other associated signs (including local inflammatory signs). On ultrasound of the small parts, we objectified: an ovary mass, well limited of 34 * 18 mm hypoechogenic with inflammatory hyperhemia to Doppler in connection with probable adenopathy. The patient was referred to us by infectiologists for lymph node biopsy. Operated under local anesthesia with total removal of the mass: a nodule with smooth surface of about 3 cm of long axis. Pathological examination: This is a proliferation of fusiform cells positive for smooth muscle actin wrapping around a venous light without signs of malignancy. This description is in favor of vascular leiomyoma.

Discussion: Axillary lymphadenopathy forms a frequent reason for consultation. The aetiology leiomyoma, case of our observation, is exceptional. Ultrasound, eliminates differential diagnoses but not specify the etiological diagnosis. This cannot be established only by surgical resection and pathological study.

Conclusion: Vascular leiomyoma in the axillary cavity: an infrequent or rare diagnosis in an unusual location. The anatomopathological study necessary for diagnostic confirmation should be supplemented by an immunohistochemical study.

207. Histo-clinical characteristics of 8 tumors of the small intestine

Letaief A, Maraach W, Ben Saad M, Feidi B, Krichen J, Ben Salah K

Department of General and Digestive Surgery, Alaghalba Kairouan Hospital

This is a descriptive study of interest 8 cases of small tumors operated, collected at the department of general surgery at the Alaghalba hospital in kairouan over a period of 5 years.

5 male and 3 female subjects were retained with a sex ratio of 1.6. The average age of our patients was 54 years. All our patients were symptomatic: acute intestinal occlusion table in 7 patients (3 of whom had acute intestinal invagination) and one case of acute peritonitis by perforation.

The average tumor size was 2.8 cm with extremes ranging from 1 to 6.5 cm.

Histology showed infiltrating adenocarcinoma (1 case), low-grade neuroendocrine tumour (1 case), GIST stromal tumour (1 case), inflammatory fibroid polyp (1 case), Hodgkin lymphoma expressing CD 30 and CD 15 (1 case) which constitutes an exceptional location and a hailic endometriosis (1 case).

Hail was a secondary localization in 2 cases (squamous cell carcinoma of bronchial origin and urothelial carcinoma of bladder origin).

Lymph node invasion was found in one case and the presence of vascular emboli in 2 cases. A perinervous blockage was observed in one case. Surgical limits were healthy in all cases.

Treatment consisted of tumor resection with terminal anastomosis (5 cases), tumor resection and double stoma (3 cases).

The prognosis was unfavorable in 4 patients.

208. Submucosal leiomyoma: rare cause of acute intestinal invagination

Letaief A, Mraidha MH, Sghaier A, Dhouioui K, ElGhali M A, Youssef S

Department of General Surgery, UHC Farhat Hached , Sousse

Introduction: AII, pathology of the infant and small child, its occurrence in older children is unusual. In the majority of cases, it is secondary to a tumor. The leiomyomas of the hail being rare benign tumors, their diagnosis difficult and the rarity of this association motivated this clinical case.

Observation: This is a 15-year-old patient with no notable medical history who consulted for intense right iliac fossa pain associated with vomiting, whose exploration concluded an ileal invagination

Operated by laparotomy: a distended loop upstream of a purplish invagination collar dotted with petechiae located 140 cm from the ileocecal valve with the presence of multiple nodes. We opted for a small intestine resection. Pathological examination: an AII on a submucosal leiomyoma

Discussion: The AII determines an occlusive array, severe due to the risk of ischemia. The disease of the big child, as in our case, is rare. It often occurs during a benign pathology and does not require, most of the time, surgical intervention. The aetiology leiomyoma, case of our observation, is exceptional. CT scan more efficient than ultrasound, allows to establish the positive diagnosis of AII and etiology at the same time as the impact. But, diagnostic confirmation is done by imaging associated with exploratory surgery and pathology.

Conclusion: AII secondary to leiomyoma is rare and directly related to the size of this tumor. The anatomopathological study necessary for diagnostic confirmation should be supplemented by an immunohistochemical study.

209. Childhood Retroperitoneal Teratomas: About Three Cases

Boukhrissa N, Kechiche N, Beji MO, Lamiri R, Chabchoub I*, Ksiaa A, Mekki M, Belguirh M, Sahnoun L
Department of Pediatric Surgery, Fattouma Bourguiba Hospital, Tunisia
(*) Department of Medical Carcinology, Farhat Hached Hospital, Tunisia

Introduction: Retroperitoneal teratomas are uncommon peadiatric tumour, constituting about 5% of teratomas occurring in children.

Methods: This retrospective study included cases of retroperitoneal teratomas admitted to the department of paediatric surgery from 2010 to 2019.

Results: Over a period of 9 years, three girls with retroperitoneal teratomas were operated and finally diagnosed as teratoma histopathologically. The age ranged from 28 days to 2 months. The mode of presentation was abdominal distention with palpable abdominal mass. One patient was operated on emergency basis because she presented respiratory distress due to diaphragmatic splinting. Pre-operative serum a-fetoprotein levels was within normal limits. In all of the cases, complete surgical excision through a transperitoneal approach was planned. The tumours were closely approximated to the kidneys, pancreas and vascular structures such as renal vessels, aorta, portal vein and inferior vena cava. In two cases, the tumour was fully encapsulated and excised completely without any damage to the surrounding organs. In the other case, right nephrectomy has been required during excision because the renal vessels were found stretched over the mass. On gross examination, they were lobulated masses, and on serial sectioning revealed presence of hair, teeth, bone and small cysts filled with clear to mucinous material. Microscopy showed mature teratoma in all cases. The postoperative period was uneventful and all the girls were followed-up.

Conclusion: Primary retroperitoneal teratomas are rare and they are mostly benign. Malignancy occurs in 15% of cases. Surgical resection constitutes the main stay of therapy. However, the resection of these tumors can be in some cases difficult.

210. An Unusual Case Of Bilateral Multilocular Cystic Nephroma

Beji Mariem, Kechiche Nahla, Boukhrissa Nouha, Lamiri Rachida, Chanchoub Imène*, Sfar Sami, Ksiaa Amine, Mekki Mongi, Belguirh Mohsen, Sahnoun Lassaad
Department of Pediatric Surgery, Fattouma Bourguiba Hospital, Tunisia
(*) Department of Medical Carcinology, Farhat Hached Hospital, Tunisia

Introduction: Cystic nephroma also called multilocular cystic nephroma is an uncommon benign renal neoplasm. It represents less than 1% of all renal tumors and is predominant in adult women. Bilateral cystic nephromas are very rare with five cases described in the English literature.

Methods: We present a case of bilateral cystic nephroma in a twelve-month-old boy.

Results: A 12-month-old male child presented with a right flank mass that was progressively increasing for 3 months. Examination revealed a soft, cystic, mobile, non-tender and palpable mass in the right lumbar region. The left flank was normal. Ultrasonography and computed tomography revealed two well-circumscribed multilocular non-communicating cystic lesions, the larger one arising from the middle and upper pole of the right kidney, and smaller one from the upper pole of the left kidney. The patient underwent bilateral partial cystectomy. Histolopathologic analysis revealed it bilateral cystic nephroma. Post-surgery, the infant was well for 6 months, after which a follow-up scan revealed recurrent cystic mass in the right kidney.The infant underwent right nephrectomy .No postoperative complication was encountered and the patient was discharged uneventfully 4 days after the surgical procedure.

Conclusion: Cystic nephroma is a rare, benign renal tumor. This entity still scientifically debated and researched since 1982 until today. Neither clinical signs nor radiological findings can obtain a pre-operative diagnosis of cystic adenoma. Surgical intervention and histopathologic examination are necessary for the final diagnosis.

211. Intussusception Due To Burkitt Lymphoma In Children

Boukhrissa Nouha, Mani Salma, Kechiche Nahla, Beji MO, Lamiri Rachida , Chabchoub Imène*, Sfar Sami, Ksiaa Amine, Mekki Mongi, Belguirh Mohsen, Sahnoun Lassaad
Department of Pediatric Surgery, Fattouma Bourguiba Hospital, Tunisia
(*) Department of Medical Carcinology, Farhat Hached Hospital, Tunisia

Introduction: Intussusception is one of the most common emergencies in children that require the attention of a paediatric surgeon. Intussusception caused by Burkitt lymphoma is rare. Symptoms are non-specific, making the diagnosis difficult. Herein, we report cases of secondary intussusception, in which conservative treatment was failed and surgery was performed. They were later diagnosed to be Burkitt's lymphoma on hitopathology.

Methods: We retrospectively collected patients who were treated in the paediatric surgery's department for intussusception caused by Burkitt lymphoma from January 1986 to January 2019. We analysed preoperative diagnosis, ultrasound data and intra operative findings.

Results: Thirteen children who presented with secondary intussusception were described. The mean age at presentation was 6.8 years. All children were presented with abdominal pain. Abdominal ultrasound confirmed the diagnosis of intussusception in all patients.

It revealed suspicious images suggesting the possibility of a secondary intussusception in four cases. They were operated upon after failure of hydrostatic reduction. An intestinal resection with an end to end anastomosis was done for all patients. Histopathological diagnosis was Burkitt's lymphoma. Chemotherapy was done. Three of them died during therapy.

Conclusion: Intussusception is one of the most common paediatric surgical emergency which requires prompt diagnosis and appropriate non-operative or operative intervention. Children with Burkitt lymphoma have an excellent prognosis with contemporary treatment regardless of disease stage.

212. Abdominal Desmoplastic Small Round Cell Tumor in Children: a Case Report

Boukhrissa N, Kechiche N, Beji MO, Laamiri R, Chabchoub I*, Ksia A, Mekki M, Belghith M, Sahnoun L
Department of Pediatic Surgery, Monastir
(*) Department of Medical Carcinology, Sousse

Background and aims: Desmoplastic small round cell tumor is a rare and highly aggressive mesenchymal tumor. It mainly develops in adolescent and young adults with a strong male predominance. It has very bad prognosis, which can evolve on the metastatic mode. Its diagnosis is anatomopathological.

Methods: We report a case of desmoplastic small round cell tumor occurring in a 10-year-old young boy.

Results: It was a 10-year-old child, who consulted for acute abdominal pain and vomiting. The initial examination showed a sensitive abdomen with no palpable mass. Abdominal ultrasound showed two abdomino-pelvic tissue masses with massive ascites. On subsequent abdominal and pelvic CT, a 13 x 12 x 8 cm, well-defined, solid cystic tumor was discovered in the abdominal cavity. A 12 x11x10 cm soft tissue mass located on the left side of the pelvic cavity near the rectum was also found. CT-guided biopsy was performed and resultant biopsy revealed an intra-abdominal desmoplastic tumor with small round cells. The patient underwent resection of the abdominal mass, which were found to have arisen from the greater peritoneum. However, the second tumor was adherent to the adjoining viscera and vessels which making dissection extremely difficult. After surgery, the patient commenced palliative chemotherapy. He only survived for 4 months after initial presentation.

Conclusion: Despite its rare incidence, the diagnosis of desmoplastic small round cell tumor must be considered in a young child presenting an abdominal mass. The prognosis remains bleak and evolution is usually done to death, despite a heavy therapeutic care including surgery, high-dose chemotherapy and sometimes radiotherapy.

213. Place of Surgery in The Management of Pulmonary Metastases in Children

Beji MO, Kechiche N, Boukhrissa N, Lamiri R, Chabchoub I*, Ksiaa A , Mekki M, Belguirh M, Sahnoun L
Department of Pediatic Surgery, Monastir
(*) Department of Medical Carcinology, Sousse

Introduction: The role of surgery in the treatment of pulmonary metastatic solid tumors, given its disseminated nature, is not intuitive, yet there are circumstances in which surgical resection of metastatic disease can potentially be curative.

Methods: This is a retrospective study spanning from 2002 to 2022 concerning 9 cases of pulmonary metastases operated on our department.

Results: Our study included four boys and five girls. The average age was 8 years. These pulmonary metastases are secondary to nephroblastoma in five cases, to rabdomysarcoma in two cases, to Ewing's sarcoma in one case and to embryonic carcinoma in one case. Eight patients out of nine were operated on for their primary cancer. Pulmonary metastases were present in all of our patients at the time of diagnosis. The diagnosis was established by a thoracic scan in all cases. Metastatic lesions were localized in the right lung in 75% of cases. The first approach was a posterolateral thoracotomy for eight patients, while the thoracoscopic approach was performed in a single patient. Excision was performed by wedge resection in eight of our patients (87.5%), and lobectomy with wedge resection in one patient. The histology was similar to that of the primary tumor in all cases. The outcome was favorable in all our patients.

Conclusion: Although management of metastatic disease relies heavily on systemic therapies, surgery plays an important role in the treatment of several pediatric metastatic solid tumors. In some cases, the surgery is therapeutic, and in some, it plays a diagnostic role and guides further systemic treatment.

214. Syringocystadenoma papilliferum : Two case reports

A. Bani*, S. Nechi, A. Chaabène, A. Douggaz, B. Chelly, A. Mahmoudi, O. Mnif, K. MFarrej, E. Chelbi
Taher Maamouri University Hospital, Pathology Department, Nabeul, Tunisia.

Introduction: Syringocystadenoma papilliferum (SCAP) is a rare and benign adnexal tumor of apocrine or eccrine glands. The diagnosis is histological. Its transformation to malignancy is rare. The Treatment consists of surgical excision. Our aim is to report two cases of SCAP diagnosed at our department.

Cases Presentation: We report two cases of SCAP. The first occurred in a 54-year-old man who presented with a congenital nodule on the scalp which was gradually increasing in size. Clinical examination revealed a painless rough naevic lesion on the scalp measuring 2.5 cm. The second occurred in a 13-year-old girl who consult for earache. Clinical examination and Computed Tomography scan found a Fleshy Polyp of the External Auditory Canal (EAC). After a surgical excision, histological examination found, in the two cases, cystic lesions which were covered by a bistratified cubo-columnar epithelium. The cyst's walls were fibrous and inflammatory.

Discussion: SCAP is an extremely rare hamartomatous adnexal tumor presents at birth or during puberty like the two patients. It appears mainly in the head and neck region as the first case, but rarely in EAC as the second case. Only 14 cases were reported in the littérature. The clinical presentation is non-specific and depends on the site. The diagnosis is made by a histological examination. SCAP is characterized by an epithelial proliferation of deep cystic appearance invaginated into the dermis and coming to the surface. It is lined by an acanthotic epidermis and formed of tubular and papillary structures covered by a bistratified cubo-columnar epithelium. SCAP develops, one out of two cases, on a sebaceous hamartoma. It can be associated with a basal cell carcinoma in 10% of cases and more rarely other carcinomas. Due to the risk of malignant degeneration, a complete surgical excision is advised. However, recurrences are common.

Conclusion: SCAP is a rare tumor and EAC is an unusual location. The anatomopathological study is essential allowing the definitive diagnosis, the elimination of malignant transformation and the differential diagnoses.

215. Peritoneal metastatic lesions of unknown origin: Diagnostic approach

A. Bani*, S. Nechi, A. Chaabène, A. Douggaz, A. Mahmoudi, K. MFarrej, E. Chelbi
Taher Maamouri University Hospital, Pathology Department, Nabeul, Tunisia.

Introduction: Identification of the primary tumor in patients with peritoneal metastases of unknown primary constitutes a challenge for the clinician and the pathologist because it conditions the therapeutic approach and potentially the prognosis of the patient. The aim of our work is to determine the anatomopathological approach in front of peritoneal metastases with unknown origin.
Methods: Our study focused on a series of 18 carcinomatosis nodules of unknown origin collected in the pathological anatomy and cytology department of Nabeul for 4 years (2017-2020).
Results: Our study included 4 men (22%) and 14 women (78%), aged on average 55 years (37-79). Clinical examination and radiological explorations were able to suspect 12 primary sites of peritoneal metastases (17%) which were subsequently confirmed by histological examination. However, other primitive origins have been confirmed by pathological study only. The histological types described in our study were adenocarcinomas in 16 cases (89%), poorly or undifferentiated carcinomas in 2 cases (11%). The use of immunohistochemical study was noted in all the cases (100%). The most frequently used antibodies were CK7, CK20, WT1, PAX8, CDX2 and Calretinin. The tumor origin was detected in all cases (100%). Primary tumors were ovarian in 9 cases (50%), digestive in 4 cases (22%)%, pancreatico-biliary in 3 cases (17%) and mammary in 2 cases (11%)
Discussion: Carcinosis nodules are common metastatic sites and they can sometimes appear before the primary tumor itself. The diagnostic approach consists of a careful clinical examination associated with guided radiological examinations and a pathological examination which is the Gold standard. Histologically, the morphological appearance may be suggestive of an origin. Thus, the use of immunohistochemistry can be of great help and enable a definitive diagnosis to be made. However, there are no specific markers, hence the need for a combination of markers to predict the primitive.
Conclusion: Our study illustrates that histopathological examination is of great use in determining the unknown origin of a peritoneal metastasis. Recently, published studies highlight the importance of artificial intelligence in pathology to help pathologists detect lesions, particularly in metastases of unknown or unconfirmed origin.

216. Evaluation of Antifungal Prescriptions in a Pediatric Oncohematology department

M.Meftah1,2, L.Achour1,2, I.Fazaa1,2, I.Ben Sheikha1,2, S.Ben Hassine1, M.Akremi2, L.Debbouba1, C.Drira1,2
(1) Pharmacy Department, Bone Marrow Transplant Center, Tunis, Tunisie
(2) Faculty of Pharmacy, Monastir, Tunisia

Introduction: Fungal infections represent one of the major complications in transplant patients or those treated with immunosuppressants. In the majority of cases, antifungal therapy is unavoidable, whether as prophylaxis, empiric therapy or curative treatment.

Objective: To evaluate antifungal prescriptions in the pediatric oncohaematology department of the National Bone Marrow Center of Tunis (NBMCT) and to investigate factors that may influence them.

Methods: This was a prospective cross-sectional analysis of prescriptions for patients hospitalized in the pediatric onco-hematology department of NBMCT between March 1rst and June the 30th, 2023. A survey form was drawn up in the pharmacy department to collect data on weight, age, pathology, biological documentation, drug, indication, route of administration, dosage and duration of treatment.

The guidelines used were those of the European Conference on Infections in Leukemia (ECIL) and the French Infectious Diseases Society (SPILF).

Results: The population evaluated consisted of 16 patients, 12 of whom had received a transplant. Over a four-month period, 747 antifungal prescriptions were analyzed. The mean age of the study population was 6 years. The most commonly prescribed molecules were fluconazole (70.4%), voriconazole (16.12%), caspofungin (11.1%), and liposomal amphotericin B (1.6%). 93,75% of the study population received antifungal prophylaxis with fluconazole, 25% received empirical treatment and 18.75 % curative treatment. Prescriptions were relevant in 88% of cases. The main causes of irrelevance were incorrect dosage and the molecule choice.

Discussion/Conclusion: The monitoring of antifungal treatments is essential to avoid the emergence of resistance and to ensure patient safety throughout the course of treatment.

217. Reconstructive surgery in aggressive breast cancer local recurrence: a series of ten patients

Ines sboui, Meriem ben khedhr, Zmorda messioui, Meriem chaeib, Nidhal Mahdhi
University of Sousse, Tunisia.
Faculty of medicine "Ibn Jazzar"
Department of plastic, reconstructive and aesthetic surgery. Sahloul hospital.

Introduction: Breast cancer is the most common neoplasia worldwide. The local recurrence rate is 9.8%. This series studies the interest of reconstructive surgery in advanced stage breast cancer with local recurrence.

Methods: A descriptive study of ten female patients had palliative surgery at our department between 2019 and 2023. The average age was 44 years old. The patients presented local recurrence of tumors with an average size of 10*15 cm nine of them had stage IV tumor and one had stage III C tumor. eight tumors were infected. They all had mastectomy and reconstructive surgery. eight of them had a reconstruction with a Latissimus Dorsi Muscle Flap, one had a laterothoracic IC rotation flap, and one had a skin graft. all patients had an abdominal advancement flap and in two-thirds of cases a Halstead-type procedure was performed.

Results: All infection were controlled, the eight patients who had Latissimus Dorsi Muscle Flap had no short-term complications and they were redressed to their referring doctor. One patient had partial take of the skin graft and required an additional graft. Another patient had partial necrosis of the flap managed by excision then the patient developed metastasis on the flap.

Discussion: Palliative surgery purpose to relieve pain, reduce the tumor, control the infection leading to enhancing patients' life quality. Moreover, it helps instore adjuvant treatment sooner if indicated. Some studies showed extension of life expectancy.

Conclusion: Neoplasia management is multidisciplinary. Reconstructive surgery is possible when indicated as soon as local recurrence occurs, it is a controlled surgery that do not delay the time required for chemotherapy.

218. Retrospective Study of Pharmaceutical Interventions on Anticancer Drugs In Oncohematology In A Tunisian University Hospital

BERRIRI Sarra 1, ALLANI Farah 1, BETTAIEB Haythem 1, GLOULOU Olfa 1

1: Internal Pharmacy, UHC Farhat Hached, Tunisia

Introduction: The oncohaematology department of Farhat Hached University Hospital has had a pharmacy intern for several years now. The presence of a pharmacist within the department enables problem detection and assessment at any stage of the anticancer drugs circuit, from prescription to post-administration. A number of pharmaceutical interventions (PI) are carried out every day to ensure the safety of inpatient treatment. This paper presents a summary of the PIs carried out in this department.

Materials and methods: This is a retrospective descriptive monocentric study, recording the various PIs linked to prescription deviations and erroneous practices in the preparation and administration of anticancer drugs in the oncohaematology department. The PIs were recorded on the "Act-IP" platform and then listed in an Excel® file to facilitate analysis.

Results: 94 PIs were analyzed, 93.6% of which were accepted by the medical team. These PIs were communicated either orally in the clinical department or by telephone. The most frequent reason for PI was inadequate dosage (49%) of cases. "Dosage adjustement" accounted for 54.26% of the cases and it was the most frequent PI. The two therapeutic classes most intervened on were antimetabolites (27 PIs) and alkylating agents (25 PIs). The drugs most concerned were "cyclophosphamide" and "methotrexate".

Conclusion: Checking every chemotherapy prescription is a time-consuming task for the pharmaceutical team, but it helps to ensure treatment safety by preventing avoidable deviations. Pharmaceutical analysis thus plays a crucial role in improving drug management for cancer patients. We believe that digitalizing the chemotherapy prescription process in the future could help reduce the number of such PIs.

Key words: Oncology; pharmaceutical intervention (PI); anticancer drugs.

219. Renal Cell Tumors: About 32 Tunisian Cases

Abir Rais [1], Fatma Khanchel [1], Imen Helal [1], Oueslati Mohamed Amine [2], Raweh Hedhli [1], Ehssen Ben Brahim [1], Raja Jouini [1], Aschraf Chadli Debbiche [1]

(1) Pathology department of Habib Thameur hospital Tunisia

(2) Department of urology Habib Thameur hospital Tunisia

Introduction: Renal cell carcinoma is an insidious neoplasm that accounts for 2% of global cancer diagnoses and deaths. Its incidence is increasing, due to the incidental detection of renal masses by abdominal imaging. The aim of this study was to describe the epidemiological and histological characteristics of this cancer.

Methods: This was a retrospective study of 32 cases of renal cell carcinoma collected in the pathology department of Habib Thameur hospital Tunisia during the period from January 2020 to December 2022.

Results and discussion: Thirty-two cases of renal cell carcinoma were collected. These includes 18 men and 14 women. The average age was 58 years with extremes of 10 and 90 years. Gross examination showed that tumor size ranged from 2 to 14 cm with an average of 6 cm. Microscopic study supplemented by immunohistochemical study used in 14 case revealed: 16 cases of clear cell carcinoma (50%), followed by 8 cases of chromophobe renal cell carcinoma (25%), 6 cases of papillary renal carcinoma (18%) and t 9 wo cases of oncocytoma (6%).

Commentary: In our series, we found results similar to those reported in the literature, except for chromophobe renal cell carcinoma, representing between 5 and 8% of tumors, which accounted for 25% cases in our series. This higher frequency may be a particularity of our series, or related to the lack of specificity of morphological criteria and immunohistochemical data provided by anti-CK7, CD10, vimentin and CD117 antibodies. A further immunohistochemical study using the anti-carbonic anhydrase IX should be carried out to eliminate the diagnosis of clear cell renal cell carcinoma the first differential of chromophobe carcinoma. This will improve the patient's prognosis because chromophobe cell carcinoma has a favorable prognosis compared with clear cell renal cell carcinoma , with a 5-year survival rate of 78-100%.

220. Pigmented Paget's disease of the male breast: a diagnostic challenge

Afli D, Ghariani Fetoui N, Gafsi Z, Ben Kahla M, Saad S, Lahouel M, Ben Rjeb M, Aounallah A, Zinelabidine Ghariani N, Mokni S, Denguezli M.
Dermatology department, Farhat Hached University Hospital Sousse

Introduction: Mammary Paget's disease (PD) is rare and often associated with intraductal cancer. It is more prevalent in postmenopausal women and rarely affects male patients. Pigmented PD is an uncommon variant which clinically and histologically mimics melanoma.

Observation: An 85-year-old man presented with an asymptomatic lesion located on his left breast, that has been growing over the last year. Physical examination revealed a pigmented and ulcerated plaque in the areola with nipple retraction. Dermoscopy of the lesion showed central ulceration, irregular black blotches, **blue**-white veil, pseudopodes, eccentric peripheral globules with negative network and shiny white areas. There was no palpable mass in the underlying breast parenchyma or axillary lymph node enlargement. Histological examination of a skin biopsy revealed numerous atypical cells throughout the epidermis of the nipple and areola. In the dermis, there was an invasive proliferation of tumor cells with significant pigment discharge. Immunohistochemistry was carried out and showed strong membrane positivity of tumor cells for cytokeratin 7 while immunostaining with anti-Melan A was negative. The diagnosis of Paget's disease of nipple was retained.

Discussion: PD is rare, resulting from the spreading to the epidermis of a ductal adenocarcinoma of the breast. Common clinical manifestations include eczematous and psoriatic plaque of the nipple. Pigmented PD is a uncommon variant, causing a clinical diagnostic dilemma with melanoma. The rare cases reported in the literature show a male predilection, as in our case. The diagnosis of PD is based on histopathological examination and mainly on immunohistochemical findings. The characteristic pigmentation is mostly related to the presence of scattered melanocytes within the tumor and melanophages in the stroma.

Conclusion: We presented a rare case of pigmented mammary Paget's disease in a male patient, which clinically and dermoscopically simulates cutaneous melanoma. Immunohistochemical examination is necessary to establish the diagnosis.

221. Biomedical Experimentation in Oncology: Legal And Ethical Aspects

S.BEN ABDERRAHIM1*, E. TURKI1, N. HOUAS1, R.GHZEL2

1: Forensic Medicine Department, Ibn El Jazzar University Hospital, Les Aghlabites Surgical Unit, Kairouan

2: Emergencies Department, Ibn El Jazzar University Hospital, Les Aghlabites Surgical Unit, Kairouan

Introduction: Biomedical experimentation in oncology is of vital importance in the development of therapeutic procedures for cancer patients. However, it is subject to specific legal rules that must be respected in order to guarantee patients' rights.

Objective: To study the Tunisian legal context of biomedical experimentation in oncology, with an enumeration of the missions of the various protective ethical institutions.

Methods: We reviewed the legal texts governing biomedical experimentation, in particular the medical code of ethics and Decree n 2014-3657 of October 3, 2014, setting the terms and conditions for medical or scientific experimentation on drugs intended for human medicine.

Results and discussion: Decree no. 2014-3657 of October 3, 2014, sets out the terms and conditions for medical or scientific experimentation on drugs intended for human medicine and only allows experimentation on adults who are mentally competent and legally capable. It prohibits it in pregnant and breastfeeding women and allows it on minors and the mentally deficient only if it is for therapeutic purposes related to their illness or deficiency. The same decree insists on certain principles of experimentation: it must be free of charge; sufficient prior experimentation on animals must have been carried out; the expected benefit must outweigh the risk incurred; and the participant must have given his or her free, informed, and written consent. From an ethical point of view, Title 6 of the Code of Medical Ethics is devoted to the ethical principles that must be respected during experimentation (art. 99 to 111).

Conclusion: Clinical research in oncology gives patients access to innovative treatments adapted to their pathologies. It must be carried out in compliance with the principles of the International Convention on Human Rights, legal and ethical rules, and protective ethical bodies.

222. Patient Information and Consent in Oncology: Legal and Ethical Aspects

S.BEN ABDERRAHIM1*, E. TURKI1, N. HOUAS1, R.GHZEL2

1 Forensic Medicine Department, Ibn El Jazzar University Hospital, Les Aghlabites Surgical Unit, Kairouan

2 Emergencies Department, Ibn El Jazzar University Hospital, Les Aghlabites Surgical Unit, Kairouan

Introduction: Informed patient consent is a legal requirement for all medical treatment, particularly for oncology patients. However, the information and consent of patients suffering from a pathology with a poor prognosis often raises numerous ethical and legal questions.

Aims: To study the legal aspects of patient consent in the oncology field and discuss the main ethical issues involved.

Methods: We reviewed the legal texts and ethical guidelines governing patient consent and information in oncology.

Results: In Tunisia, information and consent are governed by the patient charter and Decree no. 81-1634 of November 30, 1981, on the general internal regulations of hospitals. The patient charter clearly defines the doctor's duty to inform the patient about the diagnosis of the disease, the purpose and risks of the proposed investigations, the expected benefits and possible side effects of treatment, and the monitoring procedures. Informed consent requires that information should be clear, fair, and appropriate. From a deontological point of view, a critical prognosis may be withheld for the patient's own good, while his or her next of kin needs to be informed. Informing and ensuring the consent of patients suffering from neoplasia is the key to respecting fundamental ethical principles. But can we really speak of free consent in the case of patients distressed by their illnesses, sometimes forced to opt for aggressive treatment? Should we respect the autonomy of a patient at the end of life who takes refuge in social and relational denial? Should we respect the refusal of care by a patient already weakened by cancer?

Conclusion: Consent to care for cancer patients is a fundamental right of the patient and a duty of the oncologist. Legal and ethical principles must be respected, especially in the case of cancer patients who may be at the end of their lives.

223. Medical Liability Regarding an Algic Patient in Carcinology

S.BEN ABDERRAHIM1*, E. TURKI1, N. HOUAS1, R.GHZEL2

1: Forensic Medicine Department, Ibn El Jazzar University Hospital, Les Aghlabites Surgical Unit, Kairouan

2: Emergencies Department, Ibn El Jazzar University Hospital, Les Aghlabites Surgical Unit, Kairouan

Introduction: Pain is the most frequently observed symptom in oncology, making it one of the clinician's main areas of focus. The incidence of pain varies according to the type and stage of cancer. It is encountered in 30% to 45% of patients at diagnosis or in the early stages of the disease and in 60% to 90% of patients in the advanced stages. Although pain treatment is a fundamental right of all patients suffering from algae, the laws governing pain management in Tunisia recognize a legal void, which may engage the responsibility of the doctor treating and prescribing pain.

Objectives: Discuss the patient's rights to pain relief in the oncology field.

Methods: We reviewed and analyzed national legal texts on patients' rights to pain management in Tunisia

Results: Given the shortage of specialized pain treatment centers and the legal void governing the prescription and management of pain, legislative references are essentially limited to the Code of Medical Ethics (CDM), laws regulating poisonous substances, and hospital internal regulations. These texts state that, according to hospital internal regulations, there is an obligation to provide treatment without specification, including pain management, and a prohibition on discrimination, (i.e. refusal to treat patients suffering from pain). The CDM, for its part, is not specific to pain treatment but calls for the observance of certain deontological principles concerning algic patients, including respect for life and the human person. Any deviation from these legal texts, or failure to comply with legal and ethical rules, would incur the doctor's medical liability.

Conclusion: Although the need to treat pain is becoming more and more pressing, several legal and practical deficiencies make it difficult to deal with. As a result, it's time to consider pain as a real physical entity in the eyes of Tunisian law.

224. Pancoast tumors: a report of an emergent country series

Kaouther ben Amara, Rim Essid, Siwar Hamdi, Mohamed Sadok Boudaya

University of Tunis El Manar, Faculty of Medicine of Tunis, Charles Nicolle University Hospital, General Surgery Department A, Tunis, Tunisia.

Introduction: Pancoast tumors (PT) are lung cancers invading at least the parietal pleura in the apex of the thorax.

Surgical treatment is a challenging procedure because of the invasion of adjacent structures. We herein describe the varieties of PT as well as their surgical treatment and prognosis.

Methods: We reviewed retrospectively 11 cases of PT operated in a Tunisian thoracic surgery department between January 2018 and January 2022.

Results: The median age was 61 years (range of 44 to 76). All patients were men and had a smoking habit. Chest pain (9 patients) and pain in shoulder (5 patients) were the most frequent complaints. The thoracic CT-scan showed an apical poorly limited mass, with rib invasion (7 patients) and vessel invasion (3 patients). The preoperative diagnosis was retained in 3 patients, and one had neoadjuvant chemotherapy. The approaches were a hemiclamshell approach (n=4), a Shaw-Paulson thoracotomy (n=6) and a cervico-thoracic approach (n=1). Surgical procedures were lobectomy (n=9), pneumonectomy (n=1) and segmentectomy (n=1). The combined resections were ribs (n=7), parietal pleural alone (n=3) and brachial plexus (n=4). Artery reconstruction was performed in 2 patients. Reconstruction of the chest wall was performed using polypropylene mesh in 6 patients. The postoperative course was uneventful for 3 patients. Major complications included chylothorax (n=2) and pneumopathy (n=4). Two cases of death have been noted. The lymph node metastasis was pathologically diagnosed as N0 (n=10) and N1 (n=1). 6 patients received adjuvant chemotherapy.

Conclusion: Radical en bloc resection is the surgical standard approach of PT. Multidisciplinary care is imperative to minimize postoperative morbidity.

225. Video-Assisted Thoracoscopic pericardial window for malignant pericardial effusion

Ben Amara K 1, Abdelkbir A 1, Bessrour H 1, Abdennadher M 1, Sassi Ch 2, Zairi S 1, Zribi H 1, Fitouhi N 2, Ouerghi S2, Marghli A 1.
1 Thoracic Surgery Department
2 Department of Anaesthesiology
Abderrahmen Mami University Hospital - Ariana (Tunisia)

Introduction: Malignant pericardial effusion(MPE) is a serious life-threatening complication of malignant tumors. It has a particularly poor prognosis due to advanced disease requiring palliative treatment. Pericardial window (PW) has a double interest: a pericardial lifesaving drainage vis-à-vis a tamponade; and performing biopsies as part of the etiological assessment of pericardial effusions. In this work, we aimed to study the surgical management particularities of MPE.

Methods: A retrospective series of 13 cases of MPE operated on at the thoracic surgery department of Abderrahmen Mami Ariana Hospital over a period of 16 years.

Results: The average age was 45 years with sex ratio of 0.4. The main symptom was thoracic pain(n=8). We included patients with echocardiographically documented MPE requiring further diagnosis (n=7) or relief of tamponade symptoms(n=7), or patients with persistent or recurrent effusions after percutaneous drainage (n=3). None of the patients was hemodynamically compromised. The perioperative risk depended on the generally altered condition of the patient and the hemodynamic tolerance of the MPE after installation of the patient.

The approach was a video-assisted mini-thoracotomy(n=4) and an exclusive video-thoracoscopy(n=9). The procedure consisted on evacuation of the pleural effusion with creation of a PW with careful protection of the phrenic nerve. A pericardial and pleural biopsy followed by applying talc under direct vision avoiding the mediastinal part of the chest cavity. One case of post-operative death by cardiorespiratory arrest was noted. At the 3-month postoperative follow-up, symptoms were alleviated in all surviving patients. Echocardiography showed no recurrent pericardial effusion.

Conclusion: Performing a PW is increasingly proving its interest in the management of MPE. However, a good assessment of the perioperative risk in these patients with an altered condition is mandatory to minimize the perioperative morbi-mortality.

226. Thoracic neuroblastoma: peculiarities of management

K. Ben Amara1, S. Zairi1, S. Louhaichi2, M. Abdennadher1, E. Braham3, H. Zribi1, T. Mestiri4, A. Marghli1
1Thoracic Surgery Department
2B Pneumology Department
3Department of Patholog
4Department of Anaesthesiology
Abderrahmen Mami University Hospital - ariana (Tunisia)

Introduction: Neuroblastoma (NB) is a highly malignant tumor, occurring most frequently in children. It originates from the peripheral sympathetic nervous system and adrenal glands. It is often seated in the abdomen and chest localization is rare. In this work, we aimed to study the management peculiarities of NB in its thoracic location.

Methods: Between 1997 and 2022, 3 patients were managed for a thoracic NB, with curative intent, in the thoracic surgery department of Abderrahmen Mami hospital, Ariana, in Tunisia.

Results: There were 3 children. The discovery was fortuitous. Chest computed tomography revealed an extra-pleural tissue mass occupying the costovertebral groove. The mean size was 80 mm. The spinal canal was involved in 1 case. Preoperative diagnosis was achieved in all cases, using either a CT-scan guided (2 cases) or a surgical biopsy (1 case).

Surgery was performed after neoadjuvant chemotherapy in all cases.

The patients had complete resection of the tumor. Laminectomy with extraction of the spinal canal tumor portion were performed in 1 case. Definitive pathological examination confirmed the diagnosis of matured NB with complete resection.

The postoperative course was uneventful in 2 cases. One patient developed a cerebrospinal fluid leak. Adjuvant chemotherapy and radiotherapy were performed afterwards.

The average survival was 24 months.

Conclusion: Thoracic NB remains a tumor with a poor prognosis. Because of its rarity, a multidisciplinary approach in a specialized center is necessary, in order to ensure adequate care and a rigorous follow-up.

227. Primary Ewing sarcoma in a rare location: the pleura

K. Ben Amara1 , S. Zairi1 , H. Rejeb2 , M. Abdennadher1 , E. Braham3 , H. Zribi1 , T. Mestiri4 , A. Marghli1

1Thoracic Surgery Department
2 1 Pneumology Department
3Department of Pathology
4Department of Anaesthesiology
Abderrahmen Mami University Hospital - Ariana (Tunisia)

Introduction: Thoracic Ewing sarcoma (ES) is a rare tumor, which originates most frequently from the rib, or the scapula. Primary extra-skeletal (ES) of the pleura is extremely rare. This study aims to describe the features and management of primary pleural ES.

Methods: Between 1997 and 2022, two patients were managed in our thoracic surgical department for a primary ES of the pleura.

Results: There were two women aged 54 and 17 years old.

The main symptoms were chest pain and poor general condition.

Chest CT-scan had shown an oval mass with a mean size of 13 cm, which compresses the lung, associated with pleural effusion. Pleural fluid cytology was negative for neoplastic cells. Thoracic ultrasound (1 case) showed a large extra-parenchymal, hypoechoic, heterogeneous, vascularized mass containing areas of necrosis in favor of a pleural origin. In one patient, a transthoracic biopsy achieved the diagnosis. The patient received neoadjuvant chemotherapy, with a good tumor response estimated at 93%.

Pleurectomy and decortication were performed in both cases, through postero-lateral thoracotomy. Pathological examination concluded to pleural ES. The response to chemotherapy was almost complete (1 case). The postoperative course was simple in both cases. Despite complete resection, both cases presented metastatic progression later on.

Conclusion: Although complete resection of primary pleural ES may be achieved with clear margins after neoadjuvant treatment, prognosis remains poor. Surgery combined with adjuvant chemo-radiotherapy may delay metastatic progression.

228. Management of primary malignant bone tumors of the chest wall

K. Ben Amara1 , A. Abdelkebir1 , M Abdennadher1, H Bessrour1, H. Zribi1 , N.Fitouhi2 , S.Ouerghi2, S Maazaoui3, A. Marghli1

1 Thoracic Surgery Department
2 Department of Anaesthesiology
3 Pneumology department II
Abderrahmen Mami University Hospital - Ariana (Tunisia)

Introduction: Thoracic bone wall tumors are rare, accounting for less than 5% of all bone tumors. They are most often found on the ribs and more rarely on the sternum or clavicle. Surgery plays a key role in their therapeutic management through parietal resection.
Aim: To study the medical and surgical management of primary malignant bone tumours of the chest wall.
Materials: We report a retrospective study about 19 cases of primary malignant bone tumors of the chest wall collected in the thoracic surgery department of Abderrahman Mami Hospital in Ariana over a period from January 1995 to December 2022.
Results: The mean age was 37.2 years, with a with a sex ratio of 0.72. Parietal swelling (n=8) and chest pain (n=13) were the most common symptoms. All cases were unilateral. The tumors were located on the left (n=9) and on the right(n=10). Involvement was unicostal in 14 cases, in 2 ribs in 3 cases and in 3 ribs in 2 cases. Histological types were Chondrosarcoma (n=13), Ewing's sarcoma (n=10), plasmacytoma (n=5), malignant lymphoma(n=2), and malignant histiocytofibroma(n=1). Neoadjuvant chemotherapy was offered in 5 patients with Ewing's sarcoma.
All patients were operated on. Surgical procedures were a rib resection removing the tumor (n=16) and surgical biopsy(n=3). Adjuvant chemotherapy was indicated in 3 patients with Ewing's sarcoma, 2 patients with chondrosarcoma and one case of lymphoma. Radiotherapy was adjuvant to surgery in 4 patients. Postoperative occurrences were noted in 3 cases. The mean time to recurrence in our series was 13.6 months {2 , 29 months}.
Conclusion: Primary malignant bone tumors are dominated by chondrosarcomas, Ewing's sarcomas, and plasmacytomas. A multidisciplinary management is required involving the thoracic surgeon, the plastic surgeon and the radio and chemo therapist.

229. Management of locoregional recurrence of thymomas after surgical treatment

R.Essid(1), I.Bouassida(1), A.Abdelkbir(1), M.Abdennadher(1), H.Zribi(1), S.Zairi(1), S.Ouerghi(2), A.Marghli

1: Department of thoracic surgery of Abderrahmen Mami hospital

2: Department of anesthesiology of Abderrahmen MAMI hospital

Introduction: thymomas are slowly growing epithelial tumors. Recurrences usually occur within 5 years of diagnosis, and nearly 75% of recurrences occur at the pleural level.

Methods: This is a retrospective study of the files of patients operated on for thymoma and who had a recurrence in the thoracic surgery department of Abderrahmen Mami hospital between 2010 and 2020.

Results: Eighty patients were operated on for thymoma during the study period. Six patients had a locoregional recurrence.Four patients had a pleural recurrence, with an average onset of 20 months. Two of them were operated and had a resection of the pleural mass. The other 2 had chemotherapy. Two patients had a distant pulmonary and diaphragmatic recurrence, with an average onset of 24 months. Both patients had chemotherapy.The histological type was B 2 thymoma in 4 cases and B 3 in 2 cases. Five patients had III Masaoka stage and one patient had a IIB Masaoka stage. Four patients had R1 resection limits and 2 patients had R0 resection limits.

Conclusion: Recurrences are frequently observed in cases of advanced tumor at diagnosis, incomplete surgical resection, or non operated patients. A new complete resection of the recurrent lesion represent the most significant prognostic factor.

230. Surgery for thymomas invading neighboring organs: A monocentric experience

R.Essid(1), I.Bouassida(1), M.Abdennadher(1), A.Abdelkbir(1), H.Zribi(1), S.Zairi(1), N.Fitouhi(2), A.Marghli

1: Department of thoracic surgery of Abderrahmen Mami hospital

2: Department of anesthesiology of Abderrahmen MAMI hospital

Introduction: Thymomas are malignant tumors of the anterior mediastinum with potential local invasion, distant metastases and recurrence. In case of tumor locally advanced, primary chemotherapy may be proposed in order to obtain a tumor response allowing secondary surgical resection.

Methods: We conducted a retrospective descriptive study of 34 patients operated for thymoma invading surrounding structures in the surgery department thoracic of Abderrahmen mami hospital between January 2010 and May 2022.

Results: They were 15 women and 19 men. The average age was 43 years old. The injected chest scan was a systematic examination. It made it possible to suspect the diagnosis of thymoma, locate the lesion, and appreciate its appearance and its relationship with the organs neighbors. The mean tumor size was 73 mm ±32.7mm [55-190mm]. There tumor was lateralized to the right in 18 cases and to the left in 16 cases. The lung (N=14), phrenic nerve (N=12), pericardium (N=12), pleura (N=3), SVC (N=1), TVBC (N=2) and the diaphragm (N=1) were the organs invaded by thymoma in our patients. Ten patients had a neoadjuvant chemotherapy. The gesture consisted of extended thymectomy to the mediastinal fat and surrounding organs. There approach was stereotomy (N=22), clamshell approach (N=1), lateral thoracotomy (N=6) and VATS (N= 8). The postoperative course was complicated by arrhythmia (N=2), pneumopathy (N=1), and hemothorax (N=1), myasthenic crisis (N=1). The resection margins were healthy in all cases. The indication of an adjuvant treatment was discussed in multidisciplinary consultation meeting for all our patients. Postoperative radiation therapy was indicated in all cases according to stage and histological type. The mean duration of follow-up was 64 month. Four patients had a pleural recurrence, and one patient had a recurrence lung disease with an average onset of 20 months.

Conclusion: Therapeutic modalities for thymomas are discussed in multidisciplinary consultation meeting. Surgical resection is the treatment of choice when possible adjuvant therapy may be needed Prolonged oncological follow-up of patients is essential.

231. FMECA Tool for Enhancing the Safety of Injectable Chemotherapy Preparation

K. Mettichi1,2; R. Ben Saada1,2; A. Nahali1,2; N. Harrabi1,2; Y. Daoulati1,2; I. Ben Regaya1; MA. Yousfi1,2

1 Pharmacy, Pharmacology, and Hospital Pharmacotechny Department, Military Hospital of Tunis, Montfleury, Tunis 1001, Tunisia.

2 Faculty of Pharmacy, Ibn Sina Street, Monastir 5000, Tunisia.

Introduction: Risk management within a centralized cytotoxic drug preparation unit plays a crucial role in ensuring the safety and quality of treatment. The objective of this study was to establish a risk mapping for the preparation of injectable chemotherapies and subsequently develop a plan for preventive actions.

Materials and Methods: This was a risk assessment conducted within the Cytotoxic Drug Preparation Unit (CDPU) at the military hospital in Tunis. A working group conducted Failure Modes, Effects and Criticality Analysis (FMECA) on the processes of chemotherapy preparation and dispensing. Severity (S), frequency (F), and detectability (D) were rated on a scale of 1 to 3. The Criticality Index (CI) was calculated using the formula CI = S * F * D. The CI threshold was set at 9 for both processes.

Results: The FMECA identified 82 failure modes (FM), including 30 FM of major criticality (36.58%), 32 FM of moderate criticality (39.02%), and 20 FM of low criticality (24.39%). Failure modes of major criticality mainly pertained to the preparation process (36.6%) and labeling (16.6%). A prioritized action plan was developed.

Conclusion: This study not only identified and classified failure modes related to the processes of chemotherapy preparation and dispensing at the CDPU but also implemented improvement plans. An evaluation of the impact of these actions will be necessary.

232. Taxane-induced adverse reactions in cancers patients

Mayssa Guefrech (1), Olfa Karoui (1), Dorra Ben Nejma (1), Wiem Ben Ayed (1,2), Azza Ben Said (1,2), Imen Toukebri (1,2), Chaima Aounaes (1), Imen Limayem (1,2)

1. Institute of salah azaiz, Tunis
2. faculty of pharmacy, Monastir

Introduction: To halt cancer progression, paclitaxel and docetaxel induce cell cycle arrest in the G2/M phase, but they have several adverse effects. In this context, the aim of our study was to evaluate these effects in cancer patients.

Material and methods: A prospective study was conducted in February 2023 at the centralized cytotoxic preparation unit of the Salah Azaiz Institute. It concerned patients treated with taxane-based chemotherapy. Data were collected using a data collection form. Demographic and clinical data were collected using clinical records and Asclépios® software. Data analysis was performed using SPSS and Excel software.

Results and discussion: A sample of 68 patients was selected, including 53 (78%) treated with docetaxel and 14 (21%) with paclitaxel. The mean age of the patients was 55 ± 12 years with a sex ratio (male/female) of 0.41. Nineteen percent of patients were smokers. Taxanes were administered to treat breast (50%), cavum (12%), prostate (6%) and lung (5%) cancer. In our study, 70% of patients developed at least one adverse effect. The most common adverse effects were: nausea and vomiting (51%), skin toxicity (35%), digestive toxicities (33%), mucositis (18%), peripheral neuropathy (10%), hypersensitivity reactions (10%) and liver toxicities (3%). For digestive toxicity: patients experienced symptoms of constipation (13%) and diarrhea (24%). Taxane doses were reduced by 20-25% in 16% of cases. According to the results of the univariate statistical analysis, age (p= 0.012) and cancer location (p= 0.05) were significantly different between the two groups.

Conclusion: Taxane-induced adverse events are very common. A careful assessment of these side effects allows appropriate management to be established to minimize the negative impact on patients' quality of life while maintaining the effectiveness of the treatment.

233. Cost-effectiveness study of targated therapy in the treatment of metastatic colorectal cancers

S.BEKOUACI, F.SMAILI, A.BOUNEDJAR

Department of medical oncology, Anti-Cancer Center BLIDA - ALGERIA

Introduction: The fight against metastatic colorectal cancer (CCRM) has progressed in recent years, thanks to the addition to chemotherapy, targeted therapies against angiogenesis factors (bevacizumab) or tumor growth factor receptors (cetuximab and panitumumab). If these targeted therapies have proven their effectiveness on SG and PFS, they are nevertheless expensive molecules; their high cost prompted us to carry out a cost-effectiveness medico-economic study.

Objectives: The objective of this work is to evaluate the cost of these first-line treatments in patients with CCRM, their effectiveness and to establish the ICER incremental cost-effectiveness ratio.

Patients and methods: A cost-effectiveness, prospective observational, medico-economic descriptive study was carried out at the medical oncology department of the CAC de Blida between July 2016 and December 2018. The patients included all had CCRM with status. performance ≤ 02, RAS status available and receiving first-line treatment combining a targeted therapy molecule + chemotherapy.

Results: 87 patients meeting the inclusion criteria were included in the study: 49 patients with mutated RAS status received the bevacizumab-FOLFOX4 protocol, the average of cures was 11 cures with extremes of 06 and 20 cures, the% of OR was 48.9%,% of tumor control was 73.4%,% of progression was 26.5%, the protocol was overall well tolerated with no deterioration in quality of life, the medians of PFS and OS were respectively from 10 and 19 months, the direct medical cost / cure was 152,591.69DA, the median of the cost of the 1st line was 1,831,100DA with extremes of 915,550 and 3051820DA, the ICER ratio was 1597,908DA /0.23 years of life gained.

38 patients with non-mutated (wild-type) RAS status received the cetuximab-FOLFIRI protocol, the mean of cures was 10.2 cures with extremes of 06 and 21 cures, the% of OR was 52.6%, the% of tumor control was of 71%, the% of progression was 28.9%, the protocol was overall well tolerated but having transiently impaired the quality of life of some patients, the medians of PFS and OS were respectively 09 and 19 months, the medical cost direct / cure was 317407.31DA, the median of the cost of the 1st line was 3808887DA with extremes of 1904443 and 6665547DA, the ICER ratio was 3539313DA / 0.13 years of life gained.

Conclusion: The use of targeted therapies in the treatment of CCRM has generated significant costs at the cost of prolonging survival by a few months, due to the lack of data on the threshold of acceptability in Algeria concerning expensive molecules, we was difficult to draw a conclusion on the ICER result found.

Keywords: metastatic colorectal cancer (CCRM), targeted therapy, cost-effectiveness study, incremental cost-effectiveness ratio (ICER)

234. Intestinal T lymphoma revealing an enteropathy: A case report

TLILI.K, MALLEK.I, GARGOURI.F, LAABIDI.B, MANSOURI.N, MASAKNI.I
Pathology department, military hospital of Tunis

Introduction: A rare but worrying complication of celiac disease is enteropathy-associated intestinal T lymphoma (EATL). Its diagnosis is often difficult and may precede or follow that of celiac disease. The probability of survival is low, at no more than 20% after 5 years. We report a case of EATL revealing a celiac disease.
Methods: We report a case of EATL diagnosed on our department.
Results: Mr BMA, aged 66, with no personal or family history of enteropathy, consulted for an altered general condition and vomiting. He had an abdominal sack examination, which showed distal jejunal stenosis. On jejunoscopy, he had an ulcerated jejunal stenosing process, jejunal and gastric ulcerations, and a sunken appearance of the duodenal and jejunal folds.
Pathological examination revealed a widely ulcerated intestinal mucosa replaced by a fibrinoleukocytic coating. Elsewhere, Lieberkühn's crypts are regular. The chorion is congestive, with a sparse polymorphic inflammatory infiltrate consisting mainly of small, squashed lymphocytes. Brunner's glands are of normal morphology. In places, jejunal biopsy revealed an intestinal mucosa with a reduced height of the villous relief (with a crypt/villus ratio<1). Intraepithelial lymphocytes were not increased. Lvmohangiectasia is absent. Lieberkihn's crypts are hyperplastic; Brunner's glands are clear and mucosecretory. Biopsies of the jejunal tumor stenosis revealed a widely ulcerated jejunal mucosa with a lymphocytic infiltrate. A single fragment shows a tumor proliferation of medium to large lymphocytes positive for CD3, CD30, Granzyme and perforin. They are negative for CD4 and CD8, and CD20 marks some reactional lymphoid follicles. And we concluded from the staged jejunal biopsies that this was a subtotal villous atrophy of the jejunal mucosa compatible with celiac disease with Marsh stage 3B. This is consistent with an intestinal T lymphoma associated with an enteropathy that is celiac disease.
Conclusion: Despite therapeutic advances in this field, intestinal T-cell lymphoma remains a formidable complication of celiac disease, with a worrying prognosis.

235. Nursing interventions in the management of sleep disorders in oncology patients

Trabelsi Foued ; Ben haj Fedi, Ben ahmed Asma, Laatiri Imed

Faculty of Medicine, University of Monastir, Monastir, Tunisia

Introduction: Sleep disorders are problems that can affect the quality and quantity of a person's sleep. They can include difficulty falling asleep, frequent night-time awakenings, nightmares, excessive daytime sleepiness and other symptoms. In cancer patients, sleep disturbances are common and can be caused by a variety of factors, including treatment side effects, disease symptoms, pain, anxiety and depression. The aim of this study is to identify the nursing role in the management of sleep disorders in oncology.

Material and methods: This is a descriptive research using the quantitative approach, carried out among 70 nurses practicing in the gynecology, ENT, carcinology departments of the Farhat Hached University Hospital, in the radiotherapy, surgery carcinology, nuclear medicine departments of the Salah Azaiez Institute, by means of an anonymous and pretested questionnaire over a period of 2 months: March, April 2023. Ethical considerations were respected.

Results: Our results show that sleep disorders remain among the complications of cancer and affect the quality and quantity of sleep in patients according to 94% of participants. Acute and chronic insomnia, with 58.6% and 57.1% respectively, were the most common types observed. Moreover, management was pharmacological, mainly through analgesics with 83%, and at the same time non-pharmacological through physical activity, cognitive-behavioral therapy (CBT) and the use of Valerian with 57.1%, 55.7% and 51.4% respectively.

Conclusion: Adequate training in medicinal and non-pharmacological means and nursing theories will help to improve and optimize the management of sleep disorders after cancer patients.

236. Evaluation of immunotherapy prescription in the treatment of cancer patient in Tunisia

Dorra Ben Nejma (1), Azza Ben Said (1,2), Wiem Ben Ayed (1,2), Mayssa Guefrech (1), Olfa Karoui (1), Imen Toukebri (1,2), Imen Limayem (1,2)

1. Institute of salah azaiz, Tunis
2. faculty of pharmacy, Monastir

Introduction: Immunotherapy has become a powerful clinical strategy for treating cancer and the number of immunotherapy drug approvals has been increasing. The aim of this work is to evaluate the prescription of immunotherapies at the Salah Azaiez Institute and their procurement lead time.

Material and methods: This is a retrospective study conducted at the centralized cytotoxic preparation unit of the Salah Azaiez Institute from 01/01/2020 to 01/09/2023. All patients treated with immunotherapy molecules were included. Information on patients and their treatment was collected using Asclepios® software, medical prescriptions and support agreement approved by the national health insurance fund (CNAM).

Results: During the study period, 32 patients were treated with immunotherapy, 20 of them with Nivolumab four of whom in combination with ipililumab, seven with pembrolizumab and five with Atezolizumab. The average age of patients was 56, with extremes ranging from 34 to 77 years old, and the sex-ratio (male-female) was calculated at 1.7. The indications for which these therapies were prescribed were mainly melanoma, lung cancer and bladder cancer. Nivolumab was prescribed as 1st-line treatment in 15 out of 20 patients, including the four who benefited from the Nivolumab-Ipililumab combination. Pembrolizumab and atezolizumab were mostly prescribed in 2nd line (six out of seven and three out of five patients respectively). The waiting time between prescription and receipt of a favorable opinion from the CNAM was calculated at 45 days (+/- 25 days), while the waiting time between receipt of a favorable opinion and drug reception at the hospital pharmacy was estimated at 51 days (+/-20 days).

Conclusion: Immunotherapy treatments have revolutionized the prognosis of certain cancers since they were first marketed. However, they are expensive drugs. In Tunisia, the delay from prescription and approval to receipt of the drug is relatively long, which can affect patient care.

237. Trastuzumab emtansine (Kadcyla®) for the treatment of breast cancer in Tunisia

Dorra Ben Nejma (1), Wiem Ben Ayed (1,2), Azza Ben Said (1,2), Olfa Karoui (1), Mayssa Guefrech (1), Imen Toukebri (1,2), Imen Limayem (1,2)

1. Institute of salah azaiz, Tunis
2. faculty of pharmacy, Monastir

Introduction: Trastuzumab emtansine (Kadcyla®) is a conjugated monoclonal antibody that incorporates the antitumor properties of HER2-targeted trastuzumab with the cytotoxic activity of the microtubule inhibitor DM1. It is indicated as monotherapy in the treatment of HER2-positive metastatic or locally advanced breast cancer, and administered with a 21-day inter-cure interval. The aim of this study was to assess trends in the use of Kadcyla® in Tunisia over the past three years.

Methods: This was a retrospective study conducted at the centralized cytotoxic preparation unit of the Salah Azaïz Institute, Tunis, over the period of 01/01/21 to 01/08/23. All breast cancer patients who used Kadcyla® were included in the study. Patient data and treatment lines were collected using Ascelpios® software.

Results: A total of 22 patients were included in the study, with the number increasing from one patient in 2021 to 18 in 2023. The average age of patients was 50 years old, with extremes ranging from 33 to 70 years old. Kadcyla® was used as 4th line treatment in 42% of patients, 3rd line in 24% and 5th line in the remaining 24%. This treatment is administered at a dosage of 3.6 mg/kg. The average dose in our population was 254mg, equivalent to an average cost of €4630, with a minimum dose of 162mg and a maximum dose of 360mg costing €2608 and €653 respectively. Kadcyla® has no marketing authorization in Tunisia, and requires prior agreement from the CNAM, with an average delay of 45 days (+/- 18 days).

Discussion and conclusion: Thanks to its efficacy and safety, Kadcyla® has considerably improved the prognosis of breast cancer patients. In Tunisia, few patients can benefit from it, as it is a relatively expensive drug requiring prior approval.

238. Generation of a new nanobody recognizing the Tenascin-W tumor biomarker

Sayda Dhaouadi 1, Sameh Njahi1, Maroua Manai2, Rahma Ben Abderrazek1, Karima Mrad3, 4,5, Raoudha Doghri3, 4,5, Balkiss Bouhaouala-Zahar 1, 5

1. Laboratoire des Biomolécules, Venins et Applications Théranostiques, Institut Pasteur de Tunis, Université Tunis El Manar, Tunis, Tunisia ;
2. Laboratory of Transmission, Control and Immunobiology of Infections - LR16IPT02, Pasteur Institute of Tunis, University of Tunis, El Manar, Tunis, Tunisia
3. Research Laboratory of Precision Medicine/Personalized Medicine and Oncology Investigation (LR21SP01), Tunis, Tunisia
4. Department of Pathology, Salah Azaiez Institute, Tunis, Tunisia
5. Faculté de Médecine de Tunis, Université Tunis el Manar, Tunis, Tunisia

Background and Aims: Tumor microenvironment (TME) proteins are considered as potential biomarkers for reliable diagnosis and tumor progression assessment. Among TME proteins, Tenascin-W (TNW) is an hexameric multifunctional glycoprotein which is recently investigated due to its close association to tumoral pathogenesis. On a histological scale, immuno-labelling of native TNW in situ with disposable conventional antibodies was unsatisfactory. Based on this fact, the challenge was to develop new single domain antibody fragments (Nanobodies, Nb) derived from dromedary offering the capacity to stain TNW in situ for a better tumor progression assessment.

Material and Methods: a biotechnological approach was started by the construction of immune library representative of the VHHs diversity from an immunized dromedary against TNW. Subsequently, the VHHs library was screened, applying the Phage Display technology. Three rounds of bio-panning were carried-out on TNW coated-wells to enrich phage particles expressing a specific TNW- Nb at their tip. Recombinant transformants with binding capacity to TNW were rescued. The expressed Nbs candidates from the retained transformants were analyzed and their immuno-reactivity to TNW was assessed. The Nb exhibiting the best binding capacity was produced, purified and its molecular interaction capacity was characterized by different immunobiochemical methods.

Results and Conclusion: Firstly, we demonstrated the specificity of the immune sera towards TNW using tumor tissues obtained from transgenic mouse models (Dhaouadi et al., 2020). Therefore, from the functional screened VHH library, we identified seven positive transformants encoding TNW-specific Nbs. The best candidate (Nb7) with highest TNW-binding capacity was produced and purified with a production yield of 0.8 mg/L. The Nb7 candidate was further characterized and its capacity to bind and recognize the native and recombinant TNW forms was demonstrated through in vitro (WB, ELISA, Dot Blot) and in situ (IHC assay using colorectal embedded paraffin sections).

Keywords: TNW, biomarker, TME, Nanobody, Diagnostic tool.

239. Coinfection of HPVs Is Associated with Advanced Stage in Colorectal Cancer Patients from Qatar

Queenie Fernandes 1,2, Ishita Gupta 1, Khaled Murshed 3, Hayan Abo Samra 3, Hamda Al-Thawadi 1, Semir Vranic 1, Mahir Petkar 3, Giridhara Rathnaiah Babu 1, Ala-Eddin Al Moustafa 1, 4, 5

1. College of Medicine, QU Health, Qatar University, Doha P.O. Box 2713, Qatar.
2. Translational Cancer Research Facility, National Center for Cancer Care and Research, Translational Research Institute, HMC, Doha, Qatar.
3. Department of Laboratory Medicine and Pathology, Hamad Medical Corporation, Doha P.O. Box 3050, Qatar.
4. Biomedical Research Center, QU Health, Qatar University, Doha P.O. Box 2713, Qatar.
5. Oncology Department, McGill University, Montreal, QC H3A 0G4, Canada.

High-risk human papillomaviruses (HPVs) are considered risk factors in the origin of several human malignancies, such as breast, cervical, head and neck, as well as colorectal cancers. However, there are no data reported on the HPV status in colorectal cancer in the State of Qatar. Therefore, we herein examined the presence of high-risk HPVs (16, 18, 31, 33, 35, 45, 51, 52, and 59), using polymerase chain reaction (PCR) in a cohort of 100 Qatari colorectal cancer patients, and their association with tumor phenotype. We found that high-risk HPV types 16, 18, 31, 35, 45, 51, 52, and 59 were present in 4, 36, 14, 5, 14, 6, 41, and 17% of our samples, respectively.

Overall, 69 (69%) of the 100 samples were HPV positive; among these, 34/100 (34%) were positive for single HPV subtypes, while 35/100 (35%) of the samples were positive for two or more HPV subtypes. No significant association was noted between the presence of HPV and tumor grade, stage, or location. However, the presence of coinfection of HPV subtypes strongly correlated with advanced stage (stage 3 and 4) colorectal cancer, indicating that the coinfection of more than one HPV subtype can significantly worsen the prognosis of colorectal cancer.

The results from this study imply that coinfection with high-risk HPV subtypes is associated with the development of colorectal cancer in the Qatari population.

240. Subtyping of salivary carcinoma ex adenomas

Bacem Abdullah

Mansoura University, Egypt

Background & objectives: Carcinomatous transformations are common atop (monomorphic) basal cell, canalicular, and/or pleomorphic adenomas. Nonetheless, the prognostic value of a newly developing malignancy is variable. This study underpins the literature for outlining malignant transformations with reference to morphologic changes.

Methods: After mining the published literature for all salivary carcinomas arising in benign lesions from 2014 to 2022, we annotated each carcinoma for the marker(s) used and the level of evidence attained for diagnosing each published case. Questionable diagnoses were discarded.

Results: The term 'salivary carcinoma ex mixed adenoma (CXMA)' is proposed as a generic term that clusters, at least, 63 malignant subtypes. Each subtype could reveal one or many mutations drivers that pertain either to a known molecular profile of the malignant component or molecularly unlabeled malignancy developing secondary to a pre-existence mixed adenoma. A user-friendly interface was designed to computationally assist in subtyping of salivary carcinoma ex adenomas (accessible at https://diagnose-me.eu/HN/CXPA.html).

Conclusion: Coining new designations for known pathologic entities featuring unreported morphological variations without significant change in clinical behavior is as beguiling as considering all salivary gland malignancies either low-grade or high-grade. With using the umbrella term CXMA, either mesenchymalizing, reprogramming, transdifferentiating or, with lineage plasticity, to encompass all mixed adenomas that develop malignancies. This typology could prove useful at the clinical level, without compromising the accuracy of the pathological diagnosis.

241. AI in Breast Cancer Imaging

Zahraa Abu Alloul, Fahad AlKhezzi

Breast Cancer continues to kill most diagnosed women from all around the world. Nowadays, we are living in a digital age, as technology pervades every field of our daily lives. This research addresses how Artificial Intelligence (AI) as a technical tool could play a significant role in breast cancer detection. It examines several AI uses in breast imaging. By using AI, researchers will be able to predict the risks using mammograms, through allowing screening programs to be customized in terms of both frequency and modality. This paper also examines several applications and techniques of AI that allow to overcome the shortage of data about breast cancer. Finally, it investigates the different models of AI and what it may offer in the field of breast imaging, through highlighting both its potential and the limitations.

Keywords: Breast cancer, Artificial Intelligence, Automatic Detection, risk prediction

242. End-of-life care in oncology: Ethical issues

I. Aini, K. Annabi, A. Ben Daly, S. Gharsellaoui, O. Bouzid, Z. Jabeur, M. Ben Dhiab

Department of Legal Medicine, Farhat Hached University Hospital, Sousse

Introduction: Accompanying a patient with terminal cancer represents a long, emotionally marked and potentially problematic journey for health professionals.

Objectives: Discuss the ethical issues raised by end-of-life care in oncology.

Results: Facing the suffering of a patient with terminal cancer, without sometimes being able to respond to it, is neither easy nor trivial and requires knowledge and adjusted skills from doctors. The position is particularly delicate for doctors, making them vulnerable, seeking to reconcile the objectives of preserving life and respecting the patient's will and dignity. Doctors must consolidate the palliative culture and support at the end of life. The recognition of needs through adequate communication improves the quality of life of these patients, their well-being and their satisfaction with care.

Conclusion: Doctors must be prepared to manage end-of-life situations. Their role is not limited to the sole therapeutic function, but must encompass a whole ethical culture of pain and death.

243. Intermittent fasting and cancer: a brief introduction to the Warburg effect

Sondess Alouani, Saoussen Alouani
University of Rennes, France

Introduction: Fasting in cancer is an area of increasing researchers' interest, due to the results of clinical and preclinical research in animals, cell lines and yeast models investigating the Warburg effect reverse. The aim of the present study is to perform a systematic review of current studies analyzing the potential beneficial effects of intermittent fasting on cancers patients.

Methods: The literature search in our study has covered an interval of 20 years (from January 2000 until September 2021) and has managed to collect 23 relevant articles among 51,106 articles.

Results: Five studies have tested intermittent fasting as a preventive component against cancer, three of which are carried out in mouse models and two in humans predisposed to cancer. While, eighteen articles have documented the therapeutic effect of intermittent fasting during chemotherapy, including 7 studies in mouse models and 11 studies in cancer patients. Among the 11 clinical studies, only 7 studies were randomized and 6 were comparative. One clinical study investigated a short-term fasting of 7 hours, two studies on a 3-hour-short-term fasting, and two documenting the 24-hour-56-hour-72 hour fast distributed before and after chemotherapy, while 6 clinical studies chosed the fasting mimicking diet as a therapeutic model in conjunction with chemotherapy.

Discussion: The intermittent fasting has been shown to be feasible, tolerated by patients, efficient sometimes and sometimes neutral in reducing the side effects and toxicity of chemotherapy. It has been also evidenced that it is effective in parallel with chemotherapy to accelerate tumor regression. But these results are not conclusive.

Conclusion: Thus, a call for a universal unification of scientific experimental efforts is essential, in order to settle the debate and end up with a final answer.

Key words: Intermittent fasting, Cancer, Warburg effect, Systematic review

244. Primary central nervous system lymphomas : clinicopathological analysis of 5 cases

Alia ZEHANI, Ines CHELLY, Asma AYARI, Heifa Azouz, Khedija BELLIL*, Slim HAOUET
*UR17ES17, Faculty of medicine of Tunis, University Tunis El-Manar, Tunis, Tunisia
Department of Pathology, La Rabta Hospital, Tunis, Tunisia

Introduction: Most central nervous system lymphomas are of the diffuse large B-cell lymphoma (DLBCL) subtype. Other histopathological subtypes of CNS lymphoma are relatively less frequent.

Aim: In this study, we aim to describe the clinical presentation and pathological findings of five patients diagnosed with primary central nervous system lymphoma (PCNSL) in our department between 2014 and 2023

Results: The mean age was 52.2, ranging from 38 to 70. The sex ratio was 2 males to 3 females. The discovery circumstances were as follows: cognitive dysfunction in 2 cases, left-sided hemiparesis in 1 case, left-sided hemiplegia in one case, and intracranial hypertension in one case. Histological examination showed in 2 cases a diffuse infiltrate with an angiocentric pattern, composed of large atypical lymphoid cells with prominent nucleoli, and scant cytoplasm. Immunohistochemistry (IHC) indicated positive staining for CD20, while CD3 was negative. The diagnosis of diffuse large B-cell lymphoma was established. The biopsy revealed in another 2 cases a glial tissue infiltrated by a malignant lymphoid proliferation with a follicular architecture. The lymphocytes are small to medium-sized. Immunohistochemistry demonstrated cell positivity for CD20, CD10, and Bcl-2. CD5 and CD3 marked the interfollicular T lymphocytes confirming a follicular lymphoma. In one case histology showed a malignant lymphoid proliferation exhibiting an angiocentric pattern. The lymphocytes are small to medium-sized. Immunohistochemical analysis indicated that the tumor cells expressed CD3, CD8, CD5, CD7, and focal CD4. While CD30, CD56, and IDH were negative. And cD20 staining highlighted some reactive B lymphocytes. Based on these findings, we reached a diagnosis of T-cell lymphoma.

Conclusion:In most patients, PCNSL presents as an intracerebral mass. Most PCNSLs are diffuse large B-cell lymphomas , whereas T-cell, low-grade, anaplastic, and Hodgkin lymphomas are rarely encountered. The PCNSL shows a characteristic angiocentric pattern, forming cuffs of tumor cells within and around cerebral blood vessels.

245. Primary meningeal melanocytoma: a case report

Dorra Aloui, Alia ZEHANI, Ines CHELLY, Asma AYARI, Heifa AZOUZ, Khedija BELLIL*, Slim HAOUET

*UR17ES17, Faculty of medicine of Tunis, University Tunis El-Manar, Tunis, Tunisia
Department of Pathology, La Rabta Hospital, Tunis, Tunisia

Introduction: Primary meningeal melanocytic tumors are rare, they can be circumscribed or diffuse. Well differentiated circumscribed tumors are called meningeal melanocytomas Their malignant counterparts are meningeal melanomas. We report a rare case of meningeal melanocytoma located in the cerebellum, focusing on its histopathological characteristics and differential diagnosis.

Case report: A 35-year-old patient who has been followed since the age of 15 for central hypogonadism linked to a sellar and suprasellar lesion. presented with symptoms of vomiting and dizziness. Cerebrospinal MRI revealed a cerebellar lesion as well as a centromedullary lesion located 10 cm from the conus medullaris. The patient underwent a biopsy of the lumbar lesion 5 years ago at another hospital, which revealed a meningeal melanocytoma. Complete excision of the cerebellar lesion was performed, and specimen was sent to our department. Microscopic examination demonstrated a melanocytic proliferation organized in nests or lobules. The tumor cells exhibited rounded or ovoid shapes with cytoplasm containing melanin pigment. The nuclei were rounded with the presence of a central groove, sometimes nucleolated but lacking atypia. Mitotic figures were absent. The diagnosis of cerebellar melanocytoma was confirmed.

Conclusion: The diagnosis of melanocytic tumors relies on identifying tumor cells with melanocytic differentiation, which means the presence of melanin pigment finely distributed within the tumor cytoplasm. Meningeal melanocytoma is a well-differentiated, solid, and non-infiltrative melanocytic tumor originating from leptomeningeal melanocytes. It is characterized by the presence of epithelioid or spindled melanocytes, without signs of anaplasia, necrosis, or elevated mitotic activity. The histological differential diagnosis includes malignant melanomas and other primary tumors undergoing melanization, such as pigmented schwannomas, medulloblastoma, and paraganglioma.

256. Histiocytic tumors of central nervous system

Dorra Aloui, Alia ZEHANI, Asma AYARI, Ines CHELLY, Heifa Azouz, Khedija BELLIL*, Slim HAOUET

*UR17ES17, Faculty of medicine of Tunis, University Tunis El-Manar, Tunis, Tunisia
Department of Pathology, La Rabta Hospital, Tunis, Tunisia

Introduction: Histiocytic tumors can affect nearly any organ. Central nervous system (CNS) involvement is rare, and it constitutes a broad group classified by the WHO 2021 into five subtypes: Langerhans cell histiocytosis, Erdheim-Chester disease, Rosai-Dorfman disease, Juvenile xanthogranuloma, and histiocytic sarcoma.

Aim: To investigate the clinical, radiological, and histopathological characteristics of histiocytic tumors in the CNS.

Methods: We retrospectively collected 6 cases of histiocytic tumors over a period of 9 years, ranging from 2014 to 2023.

Results: The mean age was 28 years with a range of 3 to 55 years. The male-to-female sex ratio was 2. Circumstances of discovery were as follows: headaches and generalized weakness in one case, generalized seizures in one case, diabetes insipidus in one case, intracranial hypertension in one case, cranial vault swelling in one case, and visual disturbances in one case. Imaging revealed dura mater thickening in 2 cases, thickening of the pituitary stalk in one case, an extra-axial parietal expansive mass in 2 cases, and a sellar and suprasellar lesion in one case. Biopsies and tumor resection specimens showed in 3 cases a fibrous tissue with numerous large pale histiocytes, lymphocytes and plasma cells arranged in follicles. There were emperipolesis images. Immunohistochemical analysis revealed positive expression of PS100 and CD68 in histiocytic cells and negative expression of CD1a confirming Rosai-Dorfman disease. In 2 cases, histology showed an infiltrate composed of Langerhans-type histiocytes with convoluted nuclei and numerous eosinophils. Immunohistochemistry demonstrated a positive expression of CD1a and PS100, confirming Langerhans cell histiocytosis. In one case, an inflammatory infiltrate composed of lymphocytes, Touton histiocytes, and foreign body-type giant cells, along with numerous cholesterol crystals, was observed, leading to a diagnosis of juvenile xanthogranuloma.

Conclusion: Definitive diagnosis of histiocytic tumors of the CNS relies on histological and immunohistochemical examination which corresponds to their counterparts occurring elsewhere.

257. Chitosan coated ultrapure silicon nanoparticles produced by laser ablation: biomedical potential in nano-oncology as tumor targeting nanosystem

Tarek Baati,1* Imen Chaabani,1,2 Abir Salek,1 Leila Njim,3 Mouna selmi,1 Ahmed Al-Kattan,4 Karim Hosni.1

1 Laboratoire des Substances Naturelles, Institut National de Recherche et d'Analyse Physico-chimique, Biotechpôle Sidi Thabet, 2020 Tunisie.
2 Service de radiologie, Clinique Hospitalo-Universitaire de Médecine Dentaire 5000 Monastir Tunisie
3 Service d'Anatomie Pathologique, EPS Fattouma Bourguiba de Monastir, Faculté de Médecine de Monastir, Université de Monastir 5000 Tunisie.
4 Aix-Marseille University, CNRS, LP3 UMR 7341, Campus de Luminy, Case 917, CEDEX 09, 13288 Marseille.

Ultrapure Silicon nanoparticles (SiNPs) produced by femtosecond laser ablation in water have gained great interest in the area of cancer therapy as they are efficient as photosensitizers in photodynamic therapy modality and induces cell hyperthermia under radio frequency radiation. These biocompatible nanoparticles are not able to reach tumor after intravenous injection in mice due to their rapid clearance from the bloodstream. In order to increase their half-life time and therefore their chances to reach and accumulate in tumor by the EPR effect, a capping agent on SiNPs surface acting as a colloidal stabilizer suspension is required. In this regard, this work focuses for the first time on the functionalization of SiNPs through the modification of their surface by chitosan (SiNPs-CH) to enhance their therapeutic properties in cancer therapy. The in vivo experiments were carried out during 15 days on nude mice developing subcutaneously grafted malignant human brain tumor (glioblastoma). Characterization of SiNPs-CH shows a hydrodynamic size around 142 ± 65 nm as well as a relatively neutral charge (-5.2 mv) then highly colloidal suspension stability. The point of our work concerns the improvement of the biodistribution of SiNPs-CH with regard to tumor, bloodstream and organs. After the intravenous administration of 20 mg.Kg-1, all studied parameters (animal behavior, organs morphology and histopathology) are in according with the absence of toxicity due to SiNPs-CH confirming their biocompatibility even size and surface charge are modified compared to bare nanoparticles. Moreover an increased time in the bloodstream circulation up to 7 days was observed indicating stealth nanoparticles which are escaped to opsonization and premature elimination by macrophages and reticuloendothelial system. As evidenced by silicon assessment the interaction of SiNPs-CH with the liver and spleen is significantly reduced compared to the bare nanoparticles. At the same time, SiNPs-CH concentrates progressively in tumor from 12.03 % after 1 day up to 39.55% after 7 days confirming their uptake by the tumor microenvironment through the enhanced permeability retention effect. Subsequently silicon level is declined progressively down to 33.6 % after 15 days evidencing the degradation of pH-sensitive SiNPs-CH under acidic tumor microenvironment. Taken together, stealth SiNPs-CH exhibited an ideal biodistribution profile within tumor microenvironment with a sustainably biodegradation and elimination promising their application in the nano-oncology field as tumor targeting system.

Key words: Silicon nanoparticles, Laser synthesis, Chitosan, Biodistribution, Toxicity, EPR.

258. Association between physical activity and quality of life among Tunisian breast cancer survivors

Asma Ammar1, Nihel Omri1, Olfa Ezzi1, Souhir Chelly1, Nouha Ammar2, Imene Chabchoub2, Tesnim Ben Elghali3, Leila Ben Fatma2, Slim Ben Ahmed2, Mohamed Mahjoub1, Mansour Njah1

1: Department of Medical Oncology, Farhat Hached university hospital sousse Tunisia
2: Hospital Hygiene department, Farhat Hached university hospital, Sousse Tunisia
3: Higher Institute of Nursing, Sousse, Tunisia

Background: Since BC' therapeutic management is complex involving many therapeutic options, it can have lasting impacts, in the short and long term, on survivors' quality of life (QOL). This study aims to determine the association between BC survivors' health-related QOL and physical activity (PA) among BC survivors (BCS) at a Tunisian University hospital.
Methods: It's a cross-sectional study among BCS attending the outpatient medical oncology, gynecology and radiotherapy clinics at Farhat Hached University Hospital, Sousse, Tunisia, in April 2022 using a self-administered questionnaire. The valid Arabic version of the 12-item Short-Form health survey (SF-12), conceptualized in two components: the "Physical Component Summary" (PCS-12) and "Mental Component Summary" (MCS-12), and the valid Arabic version of the International Physical Activity Questionnaire short version (IPAQsf) were used to assess the BCS' PA. Only patients older than 20 years, without metastasis or relapse, who had completed chemotherapy and were present at the outpatient clinic for a check-up, were eligible to be included. Correlations between medians were performed using Spearman's Rho Test. We set the statistical significance threshold p value at 0.05.
Results: A total of 100 BCS were recruited, with a mean age of 50.2±10.5 years. Two thirds of participants (66%) had a time from diagnosis of less than 5 years. Half of the patients (50%) were diagnosed with locally advanced cancer. Chemotherapy was received by (56%), radiotherapy was reported by (73%) of patients. Overall, BCS tended to have moderate disability in the physical component (PCS-12) with a mean score of 39.3 ±7.08, and mild disability in the mental component (MCS-12) with a mean score of 43.94 ±9.23. BCS' QOL was found to be significantly correlated to PA (r=0,258, p=0,012).
Conclusion: To minimize the BC' psychological and physical therapeutic effects, and to enhance survivors' QOL, a healthy lifestyle including regular PA is well recommended.

259. Quality of life among Tunisian breast cancer survivors in a university hospital

Nihel Omri1, Asma Ammar1, Souhir Chelly1, Olfa Ezzi1, Nouha Ammar2, Imene Chabchoub2, Tesnim Ben Elghali3, Leila Ben Fatma2, Slim Ben Ahmed2, Mohamed Mahjoub1, Mansour Njah1

1: Department of Medical Oncology, Farhat Hached university hospital sousse Tunisia
2: Hospital Hygiene department, Farhat Hached university hospital, Sousse Tunisia
3: Higher Institute of Nursing, Sousse, Tunisia

Background: Since Breast Cancer (BC)' therapeutic management is complex involving many therapeutic options, it can have lasting impacts, in the short and long term, on survivors' quality of life (QOL). This study aims to assess health related QOL among BC survivors'(BCS) attending the outpatient clinic of medical oncology, gynecology and radiotherapy at Farhat Hached University Hospital, Sousse.

Methods: We performed a cross-sectional study among female BCS attending the outpatient medical oncology, gynecology and radiotherapy clinics at Farhat Hached University Hospital, Sousse, Tunisia, in April 2022 using a self-administered questionnaire. The valid Arabic version of the 12-item Short-Form health survey (SF-12), conceptualized in two components: the "Physical Component Summary" (PCS-12) that includes General Health (GH), Physical Functioning (PF), Role Physical (RP), and Body Pain (BP) and "Mental Component Summary" (MCS-12) that includes Vitality (VT), Social Functioning (SF), Role Emotional (RE), and Mental Health (MH). A score of 30 or less is indicative of a severe disability, a score of 30 to 39 is indicative of moderate disability, a score of 40 to 49 is indicative of mild disability and a score of 50 or more is indicative of an average QOL.

Results: Overall, BCS tended to have moderate disability in the physical component (PCS-12) with a mean score of 39.3 ±7.08, and mild disability in the mental component (MCS-12) with a mean score of 43.94 ±9.23. Among the individual dimensions, 'VT' earned the highest score (60.22±11.63), followed in order by 'MH' (53.81±12.61), 'PF' (43.15±9.71) and 'GH' (42.06±11.96). On the other hand, the lowest scores were for 'RP' and 'RE' (25.94 ±4.01 and 18.67±4.54 respectively).

Conclusion: Globally, BCS have moderate QOL scores. Several simple but effective interventions such as physical activity and psychosocial interventions proved to be effective in improving QOL in this population.

260. Associated factors to physical activity among Tunisian breast cancer survivors

Asma Ammar1, Nihel Omri1, Souhir Chelly1, Olfa Ezzi1, Nouha Ammar2, Imene Chabchoub2, Tesnim Ben Elghali3, Leila Ben Fatma2, Slim Ben Ahmed2 ,Mohamed Mahjoub1, Mansour Njah1

1: Department of Medical Oncology, Farhat Hached university hospital sousse Tunisia
2: Hospital Hygiene department, Farhat Hached university hospital, Sousse Tunisia
3: Higher Institute of Nursing, Sousse, Tunisia

Background: Breast cancer (BC) remains one of the most threatening public health concerns. Our aim was to determine associated factors to PA among breast cancer survivors (BCS), at a Tunisian university hospital.
Methods: It was a cross-sectional study among BCS attending the outpatient oncology, gynecology and radiotherapy clinics at Farhat Hached Hospital, Sousse, Tunisia, in April 2022 using: the valid Arabic version of the International Physical Activity Questionnaire short version (IPAQsf) to assess PA, conceptualized as metabolic equivalent task minutes per week (MET-minutes/week) and sitting time. Student t-test and ANOVA test were used to compare means, Mann Whitney U test and the Kruskal-Wallis test to compare medians. Correlations between medians were performed using Spearman's Rho Test. We set the statistical significance threshold p value at 0.05.
Results: A total of 100 BCS were recruited with a mean age of 50.2±10.5 years. Most BCS (45%) tended to have overall moderate PA levels with a median MET of 1440 (IQR 680- 2400) minutes/week and a mean total sitting time of 281.79±134.36 minutes/day. Overall, patients aged 50 years and above had significantly lower levels of sitting time (231.43±129.32vs 332.14±121.63, p= 0.04). Similarly, subjects aged 50 years and above, divorced, and of rural origin had higher levels of PA (1908.5 (IQR 939.7-3268.5) vs. 1266 (IQR 471-2946); 2133 (IQR 458.5-3533) vs. 1290 (IQR (607.5-3034.5); and 1788.5 (IQR 1072.5-3252) vs. 1440 (IQR 537-3057) respectively). Likewise, BCS with locally advanced cancer and those with more than five years since cancer diagnosis reported higher levels of PA compared with other groups (1828 (IQR 791-2826) vs. 1578 (IQR 562.5-3252) and 1512 (IQR 503.25-2965) respectively).
Conclusion: Factors related to advanced age, advanced stage of cancer and recent diagnosis can impact the adherence to PA among BCS. More attention should be given to encourage patients at risk to practice PA.
Keywords: Breast Cancer; Survivor; Physical activity; Sitting

261. Occupational exposure and lung cancer: A based hospital case-control study

Athimni Z 1.2, Bouhoula M1.2 , Bhiri S2.3 , Chouchane A1.2, Aloui A1.2, Kalboussi H1.2,Gaddour A2.4, Kacem I1.2, Maoua M1.2 , Brahem A1.2, El Maalel O1.2 , Chatti S1.2 , Mrizak N1.2

1. Department of Occupational Medicine, Farhat Hached University Hospital, Sousse, Tunisia
2. University of Sousse, Faculty of Medicine of Sousse, Sousse, Tunisia
3. Department of Prevention and Security of Care, Sahloul University Hospital, Sousse, Tunisia
4. Department of Occupational Medicine, Ibn Jazzae University Hospital, Sousse, Tunisia

Introduction: Lung cancer is a public health problem. In Tunisia, the incidence of these cancers is increasing, especially among non-smokers. This could be attributed to environmental and occupational exposure to various kinds of hazardous substances. Therefore, it is important to determine the most affected professional fields and the efficiency of the preventive measures carried out by workers.
Methods: A case-control study of 109 histologically confirmed cases of lung cancer and 109 controls matched for gender and age group (±5 years) was conducted. A job-exposure matrix was used to infer exposure to lung carcinogens.
Results: Controls were younger than cases (mean age: 58 and 60 respectively, p=0,45). Only 11,9% of cases were never-smokers, compared with 40,4% of controls. A significant association existed between smoking and lung cancer (p<10-3, OR= 4,99 IC95%= [2,49-10]). Occupational exposure to crystalline silica (p=0,03 ; OR IC95%= 3,06 [1,06-8,83]), diesel emissions (p=0,01 ; OR IC95%=0,99[0,99-1]), chromium (p=0,01 ; OR IC95%=0,99[0,99-1]) and nickel (p=0,0 ; OR IC95%=0,99[0,98-1]) was significantly associated with lung cancer. The use of personal means of protection was reported by only 7 cases (6.4%) and 17 controls (15.6%). The use of protective equipment had a protective effect on lung cancer with a statistically significant difference between the two groups (p=0.04).
Conclusion: Various occupational exposure increase the risk of lung cancer among workers, so they should be identified, in order to put in occupational safety measures and health monitoring for at-risk individuals. Moreover, we must insist on the protective effect of personal equipment, which has demonstrated its protective effect.

262. Identify the occupational origin of maxillary sinus cancer in a welder

Kalboussi H1,2, Makhloufi M 1,2, Athimni Z1,2, Bouhoula M1,2, Chouchane A1,2, Aloui A1,2, Kacem I1,2 , Maoua M1,2, Brahem A1,2, El Maalel O1,2, Chatti S1,2 , Mrizak N1,2.

1. Occupational Medicine and Professional Pathologies Department, Farhat Hached Teaching Hospital, Avenue Ibn El Jazzar, Sousse, 4000, Tunisia.
2. University of Sousse, Faculty Of Medicine Ibn El Jazzar, Avenue Mohamed Karoui, 4002, Sousse, Tunisia

Introduction: Facial sinus cancers are rare tumors particularly maxillary sinus cancer. The participation of professional exposure in their genesis is not insignificant. We are reporting the case of a maxillary sinus cancer due to professional exposure to nickel vapors.

Case report: This is Mrs. NS, aged 43 years old, a worker in a company manufacturing plastic objects, for 17 years. The patient had no notable family or personal history of neoplasia. She has never smoked. The patient initially presented with a left nasal obstruction. The etiological assessment concluded to an adenocarcinoma of the left maxillary sinus. Treatment was initiated and the patient was referred to us to investigate whether her pathology was attributable to his profession. On interview, the patient stated that she had being assigned to a welding workstation on metals containing Nickel for 12 years. Its aim activity was assembling metal parts. During the welding process, there was release of fumes (containing nickel). The patient also reported not wearing protective equipment at work.

The involvement of nickel in the etiopathogenesis of several sinus cancer has been highlighted by different studies. Therefore, the International Agency for Research on Cancer has classified nickel as a certain human carcinogen.

The Tunisian legislation list of work involving exposure to nickel in its section on sinus cancer, includes welding. Subsequently, a formal declaration was provided to the patient, acknowledging his maxillary sinus cancer as a compensable occupational illness (according to Table No. 6: Nickel).

Conclusion: Several metals are classified as certain carcinogens for humans. Their identification in the workplace makes it possible to establish effective prevention, occupational safety measures and medical monitoring for exposed patients.

263. Occupational non-Hodgkin's tonsillar lymphoma: a case report

Athimni Zeineb1,2, Taktak Meriam2,3, Chouchane Asma1,2, Aloui Asma1,2 , Bouhoula Marwa1,2, Kacem Imen1,2, Kalboussi Houda1,2, Maoua Maher1,2, Brahem Aicha1,2, El Maalel Olfa1,2, Chatti Souheil1,2, Mrizak Nejib1,2

1. Occupational Medicine and Professional Pathologies Department, Farhat Hached Teaching Hospital, Avenue Ibn El Jazzar, Sousse, 4000, Tunisia.
2. University of Sousse, Faculty Of Medicine Ibn El Jazzar, Avenue Mohamed Karoui, 4002, Sousse, Tunisia
3. Department of Family Medicine, Faculty of Medicine Ibn El Jazzar, Sousse, Tunisia

Introduction: Non-Hodgkin's lymphoma is a cancer of the lymphatic system, characterized by abnormal proliferation of B or T lymphocytes, the physio-pathogenesis of which is still poorly understood.

Objective: We report the case of a mechanical engineer with tonsillar non-Hodgkin's lymphoma.

Case report: This was Mr. JA, aged 54, an engineer in a car industry, for 27 years. The patient had no notable family or personal history of neoplasia. He had been complaining of angina for three weeks, for which he was put on antibiotics, which would be adapted. An ulcerated and necrotic lesion persisted in the left palatine tonsil, and the patient underwent a biopsy of the lesion, which revealed the morphological appearance of a large-cell tonsillar lymphoma. As part of an extension work-up, the patient underwent a gastric biopsy showing the gastric location of a large-cell non-Hodgkin's B lymphoma. Treatment was initiated and the patient was referred to us to investigate whether his pathology was attributable to his profession. On interview, the patient stated that he had worked at several jobs in the car industry, where he had been exposed to a variety of chemicals, including polyester, resins, glass fibres, polyvinyl alcohol, various glues, styrene and benzene. Benzene has been implicated in the genesis of several haematological malignancies, and its involvement in the etiopathogenesis of non-Hodgkin's lymphoma has been the subject of several studies, the results of which show that exposure to this solvent increases the risk of this cancer. The occupational origin of this patient's non-Hodgkin's lymphoma cannot be ruled out, as he was exposed to several solvents such as benzene. A declaration of his pathology as an occupational disease would be necessary to assert this right.

Conclusion: When investigating the etiology of a cancer, it would be necessary to look for an occupational origin.

264. Unraveling the Occupational Origins of Hodgkin Lymphoma: Shedding Light on organic solvent exposure as occupational risk factor

Ben Afia L 1,2, Athimni Z1,2, Aloui A1,2 , Chouchane A1,2, Bouhoula M1,2, Kacem I1,2 , Maoua M1,2, Brahem A1,2, Kalboussi H1,2, El Maalel O1,2,Chatti S1,2, Mrizak N1,2.

1. Occupational Medicine and Professional Pathologies Department, Farhat Hached Teaching Hospital, Avenue Ibn El Jazzar, Sousse, 4000, Tunisia.
2. University of Sousse, Faculty Of Medicine Ibn El Jazzar, Avenue Mohamed Karoui, 4002, Sousse, Tunisia

Background: Factors that contribute to the hematological disorders, particularly those involving the lymphatic system, remain insufficiently comprehended in the present day. Numerous occupational risk factors have been examined through scientific studies.

Case presentation: A male carpenter, aged 44 years old, who consulted for painless, firm, asymptomatic cervical and supra-clavicular adenopathy.A cervico-thoraco-abdomino-pelvic CT scan was performed and revealed "multiple staged cervico-thoraco-abdominal lymph nodes associated with heterogeneous splenomegaly." Then a cervical adenopathy biopsy performed led to the diagnosis of "Sclerotic Nodular-Type Hodgkin's Lymphoma". Thus, the diagnosis of Stage III Hodgkin's lymphoma was confirmed, and the patient received chemotherapy and radiotherapy.

At the occupational history interview, our patient has held several positions in the wood industry, including joiner, carpenter, and sawmill worker. Throughout his tenure, the patient was exposed to numerous hazards and wood treatment products, including: Chlorophenols, Formaldehyde in plywood handling, various pesticides in wood treatment, and various solvents, notably epichlorohydrin and benzene, used in wood varnishing.

This carpenter was most likely exposed to these carcinogenic chemicals during his career. His Hodgkin’s disease is highly likely linked to benzene; a toxic solvent known for its adverse effects on the hematopoietic system. Subsequently, the patient was granted a declaration of his Hodgkin's disease as a compensable occupational illness (Table No. 31: benzene and all products containing it).

Conclusion: It's evident that Hodgkin's disease remains a rare condition, with its etiological factors still not well identified. Occupational factors are now likely at the forefront. Benzene, pesticides, and other solvents are believed to play a role in the development of these hematological disorders. Thus, the examination of the patient's occupational background and the investigation into potential workplace exposures are of a great assistance in the etiological diagnosis of cancer disease.

265. Reveal the occupational origin of nasopharyngeal cancer: a case report

Athimni Z1,2, Aloui A1,2 , Chouchane A1,2, Maoua M1,2 , Bouhoula M1,2, Kalboussi H1,2, , Brahem A1,2, El Maalel O1,2, Chatti S1,2, Kacem I1,2, Mrizak N1,2.

1. Occupational Medicine and Professional Pathologies Department, Farhat Hached Teaching Hospital, Avenue Ibn El Jazzar, Sousse, 4000, Tunisia.
2. University of Sousse, Faculty Of Medicine Ibn El Jazzar, Avenue Mohamed Karoui, 4002, Sousse, Tunisia

Introduction: Nasopharyngeal carcinomas represent a specific entity that differs from other head and neck cancers. The upper airways, including the nasopharynx, are directly affected by exposures, which are often work-related. We are reporting the case of a nasopharyngeal carcinoma due to professional exposure to formaldehyde.

Case report: We are reporting the case of Mr HB, died in 2014, at the age of 42. The patient had no significant pathological history. From 2003 to 2014, he worked as a worker in a company that recycles, retouches and repairs automobile steering wheels with manufacturing defects. The patient presented with cervical lymphadenopathy. The etiological examinations objectified the presence of an undifferentiated nasopharyngeal carcinoma. The evolution was unfavorable and the patient died.

Faced with this particular work process, a bibliography and scientific research was carried out to determine the products of thermal degradation of plastics and rubbers as well as the content of the vapors emanated. At the end of this research, it appears that the thermal degradation of polyurethanes, the basic product for the manufacture of steering wheels, even at relatively low temperatures called "implementation" is at the origin of a release of vapors containing aldehydes, particularly formaldehyde which has been classified by the International Agency for Research on Cancer (IARC) as having sufficient evidence to cause nasopharyngeal carcinoma in humans. Although Tunisian legislation restricts the list of work involving exposure to formaldehyde in its section on nasopharyngeal cancer, the frequent exposure of our patient to formaldehyde justifies the declaration of their pathology as an occupational disease via Table 28 (formaldehydes).

Conclusion: When investigating the etiology of a cancer, it would be necessary to look for an occupational origin so that the list of occupational diseases can be revised and patients' rights to treatment for this cancer can be preserved.

266. Tracing the Trail: Role of professional exposure in the genesis of tongue cancer

Athimni Z1.2, Ben Afia L1.2, Ghernim A1.2, Aloui A1.2, Maoua M1.2, Bouhoula M1.2, Chouchane A1.2, Kacem I1.2, Brahem A1.2, Kalboussi H1.2, El Maalel O1.2,Chatti S1.2, Mrizak N1.2

1- Occupational Medicine and Professional Pathologies Department, Farhat Hached Teaching Hospital, Avenue Ibn El Jazzar, Sousse, 4000, Tunisia.

2- University of Sousse, Faculty Of Medicine Ibn El Jazzar, Avenue Mohamed Karoui, 4002, Sousse, Tunisia

Introduction: Tongue cancers are the most common cancers of the oral cavity, and represent approximately 20% of all cancers of the upper aero-digestive tract. The main risks factor were tobacco and alcohol. However nowadays we are witnessing an increase in the incidence of this cancer in young non-smokers. Thus, major risk factors like tobacco and alcohol are not the etiologic factors in young patients.

Case report: This is Mis AK, aged 55 years old, retired, a former laboratory technician. The patient had no notable family or personal history of neoplasia. She had never smoked. She presented with leukoplakia, which was misdiagnosed as oral thrush. As the lesion worsened and his tongue became immobilized, a biopsy was performed and revealed a squamous cell carcinoma of the tongue.

Afterwards, the patient was referred for consultation regarding a possible occupational origin of his cancer.

On the interview, the patient declared that she had held the position of pipetting chemicals (acids, formaldehyde, soda...) for 23 years.

The immersing tongue cancers diagnosed do not admit the usual risk factors, which suggests the appearance of a new entity of these cancers whose etiology is still poorly elucidated. Therefore, the occupational origin of these cancers must be sought. Indeed, our patient sucked chemicals through a pipette. His tongue suffered from microtraumas by the pipette as well as the action of chemicals, particularly acids.

Faced with this particular work process, a bibliography and scientific research was carried out. Cases of cancer of the tongue on lesions of microtraumas have been reported.

Conclusion: Tongue cancers may admit risk factors other than tobacco and alcohol, such as occupational exposures. It is necessary to identify them for targeted preventive strategies.

267. Role Of Mother Occupational Exposure in The Genesis of Childhood Leukemia

Athimni Z1,2, Chouchane A1,2, Aloui A1,2, Aloui F3, Ben Youssef Y3, Bouhoula M1,2, Kalboussi H1,2, Maoua M1,2, Brahem A1,2, El Maalel O1,2, Chatti S1,2, Kacem I1,2, Mrizak N1,2.

1- Occupational Medicine and Professional Pathologies Department, Farhat Hached Teaching Hospital, Avenue Ibn El Jazzar, Sousse, 4000, Tunisia.
2- University of Sousse, Faculty Of Medicine Ibn El Jazzar, Avenue Mohamed Karoui, 4002, Sousse, Tunisia.
3- Hematology Department- Farhat Hached Teaching Hospital, Avenue Ibn El Jazzar, Sousse, 4000, Tunisia.

Introduction: Due to industrial development, humans are exposed to more than 60,000 chemical substances. Most of these substances are implicated in the genesis of cancers especially leukemia, in employees and even their offspring. We aimed to identify mother's occupational characteristics in the genesis of acute leukemia in offspring.

Materials and Methods: Descriptive study carried out in Farhat Hached Teaching Hospital in Sousse.

Participants were children with acute infant leukemia treated in the hematology ward during one year. A questionnaire on socio-demographic characteristics of patients, lifetime and occupational history of mother's patients, was administered to all the mothers.

Results: We enrolled 66 cases of acute leukemia. A predominance of boys was noticed (sex ratio: 1.53). The average age of the children was 7.83 ± 3.48 years. The diagnosis was an acute lymphoblastic leukemia in 59 patients (89.4%). Mothers of patients had exercised mainly in the textile (42.1%) and in agriculture (15.8%) sectors. They were exposed to different toxic product involved before and during the pregnancies in 24.2%. Eight mothers were exposed to flax dust, four exposed to formaldehyde three exposed to solvent and three mothers were moderately exposed to pesticides during 8.3±2.8 years. Five mother got periodic medical monitoring and only two mother used personal protective equipment at work.

Conclusion: The occupational risk factors might play a role in the etiopathogenesis of acute leukemia in offspring. With regards to our study suitable preventive measures are necessary to limit professional exposure.

268. Tracing the Trail: Investigating Occupational Links to Acute Myeloid Leukemia

Ben Afia L 1,2 , Athimni Z1,2, Aloui A1,2 , Chouchane A1,2, Bouhoula M1,2, Kacem I1,2 , Maoua M1,2, Brahem A1,2, Kalboussi H1,2, El Maalel O1,2,Chatti S1,2, Mrizak N1,2.

1- Occupational Medicine and Professional Pathologies Department, Farhat Hached Teaching Hospital, Avenue Ibn El Jazzar, Sousse, 4000, Tunisia.
2- University of Sousse, Faculty Of Medicine Ibn El Jazzar, Avenue Mohamed Karoui, 4002, Sousse, Tunisia

Background: Acute Myeloid Leukemia (AML) is an aggressive hematological malignancy in the bone marrow, manifesting as the uncontrolled proliferation of immature myeloid cells. While genetic mutations have been identified as central players in AML's development, recent investigations have delved into another intriguing factor: occupational exposure to solvents.

Case presentation: A man of 64-year-old, a former worker at a tobacco manufacturing, who retired in 2015. He was incidentally diagnosed with AML during a preoperative hemostasis assessment for cholecystectomy. Complete blood count showed megaloblastic anemia and hyperleukocytosis with a predominance of blast cells (97%). Bone Marrow examination and Immunophenotyping confirmed the existence of AML. Afterwards, he was referred by his hematologist for consultation regarding a possible occupational origin of his AML.

In the process of conducting the professional inquiry, he worked as a packaging machine operator at a tobacco manufacturing company where he was exposed to synthetic adhesive made from polyvinyl acetate resin. This adhesive type could potentially belong to the category of solvent-based adhesives and thus might contain organic solvents, including Benzene. The AML could be traced back to benzene exposure. The likelihood of this condition originating from his occupation is considerable. Subsequently, a formal declaration was provided to the patient, acknowledging his AML as a compensable occupational illness (according to Table No. 31: benzene and all products containing it).

Conclusion and discussion: Solvents contain compounds that may disrupt genetic and cellular processes, potentially triggering genetic mutations or aberrant gene expression patterns leading to leukemia. Recognizing this link underscores the importance of occupational safety measures, preventive strategies, and health monitoring for at-risk individuals.

269. Role of building sector in the genesis of laryngeal cancer in a teaching hospital in Tunisia: a case control study.

Chouchane A1,2, Brahem A1,2, Saidane M3, Bellakhdhar M2,3, Athimni Z1,2, Moussa A1, Gaddour A2,4, Bouhoula M1,2, Aloui A1,2, Kacem I1,2, Maoua M1,2, Kalboussi H1,2, El Maalel O1,2, Chatti S1,2, Mrizak N1,2.

1- Occupational Medicine and Professional Pathologies Department, Farhat Hached Teaching Hospital, Avenue Ibn El Jazzar, Sousse, 4000, Tunisia.
2- University of Sousse, Faculty Of Medicine Ibn El Jazzar, Avenue Mohamed Karoui, 4002, Sousse, Tunisia.
3- Otorhinolaryngology Department- Farhat Hached Teaching Hospital, Avenue Ibn El Jazzar, Sousse, 4000, Tunisia.
4- Occupational Medicine Department- Ibn El Jazzar Hospital, Kairouan, Tunisia.

Introduction: Laryngeal cancer (LC) is largely due to tobacco smoking and alcohol consumption. Some studies have suggested various occupational agents as additional causal risk factors. But, it's not yet clarified.

Aim: Evaluate the possible impact of occupational exposure factors in building sector on the risk of developing LC.

Material And Methods: Case-control study conducted from 2013 to 2016. Cases were patients with histologically confirmed LC treated in otorhinolaryngology department of Teaching Hospital in Sousse (Tunisia). Controls have been recruited from among the patients consulting in the occupational pathology departement in the same hospital as with the cases and who were unharmed by any neoplasia and matched to cases by smoking and alcohol consomption. Questionnaire were used to obtain informations on socio-demographic, occupational and medical characteristics of patients.

RESULTS: A total of 140 cases of LC and 140 controls were enrolled. The average age of the cases was 60.12±9.49 years and 59.30±9.17 years for the control group. Alcohol and tobacco consumption was found in 31.4% and 80% respectively among cases versus 31.4% and 80% in controls with no statistically significant difference (p=1). Among patients with LC, 17.1 % were working in the building sector versus 4.2% in the control group with a significant difference (p=10-3). The average seniority at building sector was 19.66±7,82 years in cases versus17.5±0.7 years in controls without significant difference (p=0.2). In the univariate analysis, the exposure to cement was strongly linked to the risk of developing LC (p=10-3,OR=3.19,IC95%=[1,43-7,12]). After logistical regression, the occurrence risk of LC was significantly associated with exposure to cement (pa=0.04,ORa=3,93,IC95%=[1,04-14,78]).

Conclusion: These data indicate that occupational exposure to cement may play a role in LC. It seems useful to multiply the studies to a much larger scale in order to further explore such relationship and to reinforce the prevention of such serious disease.

270. Burden Among Caregivers of Cancer Patients

Sondes bader1, Samir Aloulou 2, Sameh Hajjaji1, Nesrine Flah1, Oumayma Elleuch1, wafa abbes1

1- Psychiatry department in the University hospital of gabes ,Tunisia

2- Carcinology department in the University hospital of gabes ,Tunisia

Introduction: Providing care for a loved one with cancer can lead to psychological problems such as anxiety and depression, as well as a heavy sense of burden.

Objectives: This study explore the burden among caregivers of cancer patients and its associates factors.

Methods: Cross-sectional study of interviews with primary caregivers (n=121) of consecutive patients with cancer enrolled in the carcinology department in the university hospital of Gabes, Tunisia. Burden among caregivers was assessed using Zarit borden interview. We used Activities of Daily Living Scale (ADL) to assess the patient autonomy. We collect the sociodemographic data of the patient-caregiver couple and the clinical and therapeutic data of the patient. Data were analyzed using the software SPSS (20th edition).

Results: This study revealed that 60.3% of cancer patients were women, 67.7% of caregivers were women, and 36.4% were patients' spouses. According to the Katz Autonomy Scale (ADL), 90.9% of patients were autonomous for basic activities of daily living. According to the ZARIT scale, 67.7% of caregivers had a moderate or severe burden. As the cancer patient's functional status deteriorated, caregiver burden increased. Burden was significantly associated with palliative chemotherapy treatment and reduced caregiver activity after patient management. The multivariate model established the statistically significant association of the burden with the age of onset of the cancer disease.

Conclusion: This study revealed that as the age of onset increased, so did the level of caregiver burden. Family caregivers of cancer patients represent a population at risk of impaired health and emotional distress. Early identification of the factors influencing burden would enable at-risk caregivers to be targeted for special attention.

271. Survival Benefits of Metastasectomy Plus Chemotherapy in Krukenberg Tumors Arising from Gastric Cancer: A Retrospective Analysis and Prognostic Factors

F. Baya, F. Ezzaairi, N. Ammar, M. Hochlaf, I.Chabchoub, L. Ben Fatma, I. Belaid, S. Ben Ahmed

Service de Medecine Carcinologique, CHU Farhat Hached Sousse

Background: A Krukenberg tumor (KT) is defined as a secondary malignant neoplasm located in the ovary, typically arising from gastrointestinal tract cancers. While these occurrences remain rare, they present significant challenges in management due to ongoing controversies regarding the efficacy of metastasectomy and chemotherapy on patient survival.

Methods: It is a retrospective study conducted in the medical oncology department at Farhat Hached Hospital of Sousse. It included 21 patients with Krukenberg tumors originating from gastric cancer over the period between January 2011 and December 2022.

Results: The average age was 47 years (23 -73). The most common clinical manifestation was epigastralgia, observed in 57.1% of cases, followed by deterioration of performance status in 23.8% of cases. Histological examination revealed that 95.2% of cases had adenocarcinoma with signet ring cell characteristics. A total of 76.2% of patients had synchronous ovarian metastasis and 57.1% had bilateral ovarian metastasis. Metastasectomy was performed in 47.6% of cases, while chemotherapy was administered in 85.7% of cases. The median overall survival (OS) was 11 months. Statistical analysis demonstrated a significantly better OS in the metastasectomy group compared to the non-metastasectomy group. Specifically, for patients with synchronous ovarian metastasis, the OS was 16.71 months in the metastasectomy group versus 7.44 months in the non-metastasectomy group (P = 0.002). Multivariate analysis indicated that several factors were independent predictors of unfavorable OS, including elevated serum cancer antigen 125 (CA-125) levels (P = 0.019), the presence of visceral metastasis (P = 0.017), the presence of peritoneal metastasis (P = 0.02), and the absence of metastasectomy (P = 0.007).

Conclusion: Metastasectomy plus chemotherapy was associated with survival benefits in patients with Krukenberg tumors from gastric cancer. Mastasectomy, Elevated serum CA-125 levels, the presence of visceral and peritoneal metastasis were independent prognostic factors for survival.

272. In vitro and in silico approaches to evaluate the anti-leukemic/lymphoma properties of Marrubium Vulgare Dichloromethane fraction.

Lamiae belayachi, Ilham Zarguan, Abdelaziz Benjouad
International University of Rabat, College of Health Sciences,
International Faculty of Medicine, Biomed Unit. Health Sciences Research Center. Technopolis Parc, Rocade of Rabat-Salé, Sala-Al Jadida, 11100, Morocco.

Background: Marrubium vulgare, known in Morocco as "Marriwut" and a member of the Lamiaceae family, traditionally boasts expectorant and antispasmodic properties. This study employed in silico and in vitro methodologies to explore the anti-leukemic/lymphoma potentials of its dichloromethane fraction.

Methods: In vitro: Marrubium vulgare was subjected to extraction processes, yielding five distinct extracts. These were assessed on Jurkat, Jeko-1, TK-6, and NIH3T3 cells using luminescent viability assays. Flow cytometry determined cell cycle dynamics and apoptosis induction, GC-MS was used to determine the chemical constituents of the active extract.

In silico: Molecular docking analysis using AutoDock Vina, focused on the major active components within the dichloromethane fraction, targeting their molecular interactions with caspases.

Results: The dichloromethane fraction (Mv-DF) exhibited cytotoxicity against Jurkat and Jeko-1 cells but was benign to NIH3T3 and TK-6 cells. Cytometry analysis showed an increase in the sub-G1 population, induction of G1 arrest and apoptosis for both cell lines, GC-MS identified bioactives including, widdrol (12%), stigmasterol (17%), and β-sitosteryl (21%). Moreover, the docking results showed that stigmasterol trimethylsilyl ether and widdrol exhibit the highest affinity for caspase 3 and caspase 9 compared to known inhibitors Ac_DEVD_CMK, Ac_DEVD_CHO, and beta_Sitosterol trimethylsilyl ether also showed higher affinity towards caspase 9 than the other caspases. This implies their potential involvement in targeting the intrinsic apoptotic pathway and explain the antileukemic/lymphoma effect exhibited by the (Mv-DF).

Conclusion: Marrubium vulgare's dichloromethane fraction demonstrates significant anti leukemic/lymphoma activity inducing cell cycle arrest and cell death that may operate via intrinsic apoptosis pathway.

273. Sentinel lymph node biobsy in cutaneous melanoma

R. Belayouni, M. Somai, M. Ben Nasr, O. Ben Hamida, I. Yeddes, A. Mhiri;
Salah Azaiez Institute, Tunis, TUNISIA.

Introduction: Lymph nodes involvement (LNI) is a prognostic factor in cutaneous melanoma (CM). Sentinel lymph node biopsy (SLNB) had a crucial role in the optimal management of LNI which we aimed to highlight in this study.

Methods: We performed a retrospective review of all patients, referred to our department for Sentinel Lymph Node Scintigraphy (SLNS) between January and Juin 2021. Patients with primary CM without clinical evidence of LNI or metastatic disease were included. SLNS was carried out following peritumoral injection of 37Mbq of 99mTc-albumin nanocolloids. The used protocol consisted in early acquired dynamic images with delayed planar images or SPECT/CT when necessary focused on lymph node drainage area according to initial tumor site.

Results: Twelve patients were included with a mean age 53 years old (ranging from 21 to 78).The sole of the foot was the predominant initial site of the lesion and Superficial spreading melanoma was the most common histological type. Three patients had ulcerated tumor, and all had a Breslow thickness >1mm.Six of them had an intermediate thickness (1-4mm). All patients had a clinical stage I and II. SLN scintigraphy detected SLN in all patients. According to histology, 3 cases revealed lymphatic metastatic invasion, allowing to have completion lymph node dissection (CLND). In the remaining 9 patients, we did not identify microscopic LNI allowing to postpone a CLND. SPECT/CT provided precise anatomic location of the drainage pathway which guided surgical approach.

Conclusion: Accurate initial lymph node staging in CM is important. SLNS has emerged as the imaging modality of choice in this setting. It should be offered to patients with invasive melanoma but unknown clinical spread of the disease (clinical stage I and II). Thus, it may be considered for T1b patients (0.8 to 1.0 mm Breslow thickness or < 0.8 mm Breslow thickness with ulceration).

274. Mammographic density as a risk factor of breast cancer: Assessment of work-related risk factors among a sample of working women in the region of Monastir-Tunisia.

Ben Afia L., Rassas I., Mahfoudh A., Hayouni M., Bel Hadj N., Henchi A., Akrout M, Hafsa C.*, Ben Salem A*.
Department of Ergonomics and Occupational Health- Faculty of Medicine of Monastir
* Radiology Department- Maternity and Neonatology Center of Monastir

Introduction: Studies have shown that the risk for breast cancer is due to a combination of factors mainly aging, genetic mutations and reproductive history. Mammographic Density (MD) is also considered as one of the strongest breast cancer risk. In fact, it was demonstrated that women with dense breasts are more likely to develop breast cancer.

Aim: To assess the association between sociodemographic, hormonal, and occupational factors and the degree of mammographic density in a sample of professionally active women in the governorate of Monastir.

Methodology: This is a cross-sectional study over 04 months on professionally active women, aged between 25 and 68 years, who consult the Radiology Department of the Maternity and Neonatology Center of Monastir for mammography. Data were collected using a questionnaire covering the sociodemographic, hormonal, and professional characteristics of the participants. The study of psychosocial factors at work was carried out using the standardized questionnaire of Karasek. The assessment of mammographic density was based on the BIRADS 2013 classification.

Results: A total of 139 women were included, with a mean age of 40.9 ± 8.4 years. According to univariate analysis, mammographic density was significantly associated with BMI (p=0.001), cycle period when performing the mammography (p=0.002) and number of weekly worked hours (p=0.008). The multivariate analysis identified as determinants of the mammographic density: the BMI (p=0.002; OR=3.24; CI95% = [1.56-6.73]) and the number of weekly worked hours (p=0.006; OR=2.74; CI95% = [1.33-5.66]).

Conclusion: Mammographic density is modulated by genetic, hormonal, environmental and occupational factors. As it is a modifiable risk factor of breast cancer, it justifies informing and educating women about the risk they involved, as well as optimizing prevention, particularly in the workplace.

275. A rare case of anaplastic solitary plasmocytoma of the scapula: 18 FDG PET/ CT initial staging findings

Ben Ahmed K., Jardak I, Chaltout F, Maaloul M , Amouri W , Chtourou K , Guermazi F.
Nuclear Medicine Department, Tunisia

Introduction: Solitary plasmacytoma of bone (SPB) is a rare immunoproliferative monoclonal disease with localized proliferation of plasma cells. Vertebrae and pelvic bones are the most common sites for SPB and scapula is rarely involved. SPB is the rarest type of plasma cell neoplasm, and the anaplastic form is even more uncommon.
Materials and methods: Here we report the case of a 57-year-old patient with a history of left shoulder pain evolving for one month. An MRI was obtained, and it showed ill-defined expansive lesion epicentered in the left scapula appearing T1 hypointense, T2 hyperintense with true diffusion restriction. The diagnosis of myeloma was suspected. Consequently, 18 FDG PET/ CT was requested to search for additional bone lesions.
Results: PET/ CT demonstrated an abnormal FDG-avid expansive lytic lesion of the left scapula (SUVLbm max= 8.22). There was no evidence of metabolically active lesions neither in the rest of the skeletal system nor elsewhere in the body. Histology of the expansive lesion revealed abundant plasma cells associated to the presence of marked anaplastic cells changes which confirmed the anaplastic variant. Immunohistochemistry was positive for CD138 expression and lambda chains with high Ki 67 (> 60 %). Bone marrow biopsies in two different places were normal. The diagnosis of SPB was confirmed.
Conclusion: Plasma cell neoplasms are monoclonal neoplastic proliferations of B-lymphoid cells, classified into three groups : multiple myeloma (MM), solitary plasmacytoma of bone, and extramedullary plasmacytoma. SPB accounts for 2% to 3% of all plasma tumors. Diagnostic criteria for SBP include a single focus bone marrow infiltration (less than 5 per cent of nucleated cells) with absence of systemic derangement like anaemia, renal impairment and hypercalcaemia. 18 FDG PET / CT usage in the staging of solitary plasmacytomas may unveil multiple soft-tissue masses or additional bone lesions which is helpful for exclusion of SPB and thus confirmation of MM. On the other hand, knowing that SPB progress to MM in 65% to 85% of the cases in ten years, according to several studies PET/CT seemed to be correlated to a higher risk of transformation in MM, in particular for 18FDG avid SBP. Albano and al suggested that among semiquantitative features, SUVlbm > 5.2 was significantly correlated with shorter Time to transformation in MM.

276. Utility of ^{18}FDG PET/CT in identifying penile squamous cell carcinoma metastatic lymph nodes

Ben Ahmed K., Amouri W, Ouachem M , Chaltout F , Jardak I , Maaloul M , Chtourou K , Guermazi F.
Nuclear medicine department, Tunisia

Introduction: Penile cancer (PC) is a rare neoplasm accounting for 2% of all cancers among men. With a silent course and aggressive behavior, PC strongly impacts male health survival. With this highly lymphophilic tumor, inguinal node metastasis are the most relevant prognostic factor in PC and is associated with decreased survival. Its evaluation presents a major challenge for therapeutic strategy.

Materials and Methods: Here we report the case of 73-year-old man who consulted urgently for a penile pus issue, with discovery on clinical examination of a tissue process of the glans. An MRI scan showed a penile tumour process, with the presence of hypertrophic inguinal lymph nodes which were not clearly suspicious. A biopsy was performed and concluded to be a squamous cell carcinoma of the penis (SCCP). He was operated by total penectomy followed by perineostomy. The tumour was classified as pT3Nx. A 18FDG-PET/CT was requested to explore the metabloic pattern of these lymphnodes.

Results: 18FDG-PET/ CT demonstrated suspicious bilaterally hypermetabolic inguinal nodes (SUVLbm max = 5.8 on the right and 4.17 on the left) and a non-specific hypermetabolism of the penile root (SUVLbm max=8). The decision of the urologist was to complete with an inguinal lymphadenectomy.

Conclusion: The main indication for 18FDG-PET/CT in the primary staging or follow-up of PC patients is the prognostically crucial search for lymph node metastases due to the significant potential morbidity of inguinal and pelvic lymphadenectomy. Jakobsen et al. prospectively evaluated the use of 18FDG-PET/CT to stage invasive PC in 128 cN− patients compared to sentinel node biopsy. The authors found 94.4% sensitivity and a 5.6% false negative rate. On pelvic lymph nodes, literature is scarce. Graafland et al. assessed the value of 18FDG-PET-CT in the diagnosis of pelvic node invasion patients with cN+ and palpable inguinal lymph nodes. In 18 patients (36 draining lymph node areas) a total of 11 pelvic lymph node metastases were confirmed histologically, including 10 revealed by PET/CT. Sensitivity was 90% and specificity was 100%, so the accuracy was 96%. It is worth mentionning that the metabolic results seem to improve with the pre-test likelihood of metastatic involvement.

277. Male invasive mammary carcinoma: A case report

N. Benarbia, M. Maoua, Z. athimni, L. Benafia, M. Bouhoula ,A. Chouchane, A. Aloui ,I. Kacem ,A. Brahem , H. Kalboussi ,O. El Maalel, S. Chatti, N. Mrizak.

Occupational Medicine and Professional Pathologies Department-Farhat Hached Teaching Hospital, Avenue Ibn El Jazzar, Sousse, 4000, Tunisia

Introduction : While breast cancer in men is relatively rare compared to its occurrence in women, it holds equal significance in terms of its impact on health, diagnosis, treatment, and awareness. This case sheds light on the intricate interplay between work environments, exposure to specific substances, and the potential impact on both male and female workers.

Case report: we report the case of Mr X a laboratory technician working as a production manager in a textile manufacturing company, diagnosed with invasive mammary carcinoma of the left breast. For thirteen years of his career, Mr. X. has been regularly handling dozens of washing products, detergents, special treatments and paints(Organic solvents and polycyclic aromatic hydrocarbons, particularly benzene/ Phthalates/ Phenolic derivatives (alkylphenols)) without wearing any protective equipment. The patient was operated for a tumour classed T1 N0 M0 in May 2015, followed by longitudinal radiotherapy (between August-September 2015), then hormone therapy.

The aim of this case is to highlight the potential link between certain occupations and an increased risk of developing male breast cancer.

Conclusion: Occupational-related breast cancer sheds light on the complex relationship between our work environments and health outcomes. Implementing proper safety measures, providing adequate protective equipment, and minimizing exposure to potential carcinogens can play a significant role in reducing the incidence of occupational-related breast cancer.

278. Radio-induced papillary thyroid : a real and underestimated risk in medical radiology

N. Benarbia, I. Rassas, L. Ben Afia, M. Hayouni, I. Merchaoui, N. Chaari, Ch. Amri, M. Akrout, A. Henchi.

Department of Ergonomics and Occupational Medicine- Faculty of Medicine of Monastir

Introduction: Exposure to ionizing radiations (IR) is one of the most important hazards in the healthcare environment. However, this exposure is still underestimated.

Observation: We report the case of Mrs A, an X-ray technician at the University Hospital of Monastir, diagnosed with papillary thyroid carcinoma. For twenty years, Mrs. A. has been regularly exposed to IR in her workplace. In fact, she performed daily about 30 standard x-rays and 02 to 04 scans without wearing protective equipment particularly lead apron and thyroid shield. During her career, she did not benefit from any medical surveillance and her exposure to IR has no longer been quantified by a dosimeter. The patient was treated by total thyroidectomy with left mediastino-recurrent curage. Post-operative recovery was straightforward, and the patient was put on levothyrox for life. As regards medico-legal management, the occupational origin of the thyroid cancer in this technician has been confirmed and it was declared as an occupational disease under Table n° 76 relating to ionizing radiation. A professionnel redeployment in a position that does not expose to IR was indicated to Mrs A.

Conclusion: The thyroid is known to be a sensitive organ to ionizing radiations, especially during childhood. The excess risk of thyroid cancer in healthcare workers exposed to IR has been reported in the literature. This prompts exposed personal to be more rigorous in applying radiation protection measures. This observation also highlights the importance of special medical check-ups in the prevention and early detection of radiation-induced cancers.

279. Assessment of Work ability and its associated factors in working women with Breast cancer

N. Ben arbia, I. Rassas, S. Zaied*, N. Belhadj, L. Ben Afia, T. Khalfallah, A. Mahfoudh.

Department of Ergonomics and Occupational Medicine-Faculty of Medicine of Monastir

* Department of Carcinology- Center of Maternity and Neonatology Of Monastir

Introduction: The experience of breast cancer is difficult for victims. In addition to its repercussion on quality of life (QoL), this disease has a considerable impact on work ability in professionally active women.

Aim: To assess the work ability in working women with breast cancer in remission.

Methodology: This is a cross sectional study among women diagnosed with breast cancer, followed in the Oncology Unit of the Maternity and Neonatology Center of Monastir, who were in remission between December 2019 and Avril 2021. Data collection focused on the sociodemographic, medical and occupational characteristics of the participants. To assess the perceived ablity of participants to perform their work, we used the work ability Index (WAI).

Results: One hundred cases of breast cancer in remission were recorded during the study period with a mean age of 46±7.5 years. The mean WAI score was 35.6±6.8 reflecting a moderate work capacity. Lower WAI score was associated to the presence of neurosensory comorbidities (p=0.01) and the exposure to biomechanical constraints at work (p=0.01). This score was negatively correlated with sensation of fatigue (p=0.008), pain (p=0.006), dyspnea (p=0.024), secondary effects of chimiotherapy (p=0.014) and brachial symptoms (p<10-3).Working in the teaching sector was associated with better WAI score (p=0.024). However, the occupational category of cleaning workers was associated with a lower work capacity (p=0.04).

Conclusion: Remission is one of the key moments in the evolution of breast cancer. Socio-professional reintegration have become therapeutic objectives. Attentive listening and active support could help patients through the difficult period between the end of medical treatment, the return to a "normal" life and the resumption of professional activity.

280. The prevalence of chemotherapy-induced mucositis in cancer patients

Wiem Ben Ayed, Imen Toukabri, Azza Ben Said, Imen Limayem

Salah Azaiz Institute, Tunisia

Introduction: Mucositis is a very common side effect of chemotherapy. Quality of life is known to be significantly affected, even compromising the administration of cancer treatment itself. The objective of this study is to determine the prevalence of mucositis in cancer patients treated with chemotherapy in Salah Azaiz Institute.

Method: A prospective descriptive study was conducted from January to December 2021 in Salah Azaiz Institute. Cancer patients hospitalized in the medical oncology department during the study period were included. Demographic and clinical data were collected from patients and medical records. The grades of mucositis were diagnosed by the clinician according to the toxicity scale of the World Health Organization.

Results: A total of 120 patients were included. The mean age was 50 ± 15 years with a male-to-female sex-ratio of 0.66. In our study, 58% of patients developed chemotherapy-induced mucositis, 70% of which was grade 2 to 4 and 30% grade 1. The most incriminated protocols are: cisplatin-based protocols (17.2%), carboplatin-Paclitaxel (13%) and Epirubicin-Cyclophosphamide (7.2%). Fifty percent of patients developed xerostomia and had swallowing problems and 48% suffered from severe to moderate pain. On the other hand, 26% of patients who have developed mucositis have poor dental status and 84% don't receive dental care. Most patients required treatment (91%), of which the most used are: nystatin (32.8%), nystatin and sodium bicarbonate (32%) and fluconazole (6 %). The majority of patients (77%) find that their treatments are effective in relieving mucositis.

Discussion and Conclusion: Our study has shown that chemotherapy-induced mucositis is a very common adverse effect that affects the quality of life of patients. Most patients have poor dental hygiene which can aggravate the signs of mucositis. Hence the need for patient awareness and therapeutic education to prevent mucositis complications and improve their quality of life.

281. Cisplatin-induced ototoxicity: Frequency and risk factors

Wiem Ben Ayed, Azza Ben Said, Imen Toukabri, Imen Limayem.
Salah Azaiz Institute, Tunisia

Background: Cisplatin-induced ototoxicity is a common adverse effect that affects patients' quality of life as well as the therapeutic management of cancer. The objective of this study was to determine the incidence of cisplatin-induced ototoxicity and risk factors.

Patients and Methods: A monocentric prospective descriptive study over a period of four months was conducted. All patients treated with cisplatin-based chemotherapy were included. Clinical and demographic data were collected from medical records and chemotherapy prescription software. The grades of ototoxicity were clinically classified according to the CTCAE (Common Terminology Criteria for Adverse events) scale by the oncologist. Statistical analysis of the data was performed using SPSS software.

Results: A total of 150 patients were included. The mean age of the patients was 53 ± 12 years with a sex-ratio (male/female) of 1.58. The predominant tumor types were: nasopharyngeal cancer (37%), oro-laryngopharynx cancer (21%) and urogenital tract cancer (20%). Forty-eight percent were metastatic. The most prescribed protocols were: cisplatin-5-fluorouracil (35%), cisplatin monotherapy (28%) and cisplatin-gemcitabine (19%). Nine percent (9%) of patients developed cisplatin-induced ototoxicity. Based on the CTCAE Ototoxicity Scale, grades 2 and 3 ototoxicity were present in 85% and 15% of patients, respectively. No cases of grade 4 ototoxicity have been reported. Statistical analysis shows that cancer localization ($p = 0.023$) as well as cisplatin dose ($p = 0.033$) were significantly different factors between the two groups.

Conclusion: Cisplatin-induced ototoxicity remains one of the major treatment-limiting adverse effects. Periodic monitoring by audiogram, especially in patients treated with high doses of cisplatin, is essential in order to prevent complications and improve the management of these patients.

Key words: Cancer, Cisplatin, Toxicity.

282. Prevalence and predictive factors of anxiety-depressive disorders in digestive cancer : A single-center study of 47 cases

Sarra Ben Azzouz, Meriem Sabbah , Khouloud Lassoued, Houssaina Jlassi, Dorra Trad, Norsaf Bibani, Hela Elloumi, Dalila Gargouri.
Department of Gastroenterology; Habib Thameur Hospital

Background: In oncology, anxiety and depression states are associated with psychological suffering. However, they are still often underestimated. The aim of our work was to assess the prevalence and the predictive factors of anxiety-depressive disorders in patients with digestive cancer.
Methods: We conducted a cross-sectional study including patients hospitalized between July and November 2019 for management of digestive cancer. Epidemiological and clinical data were collected. The patients had answered a questionnaire "Hospital anxiety and depression scale" (HAD) for screening of cases of anxiety and depression. It is a scale comprising 14 items each rated from 0 to 3. Seven questions relate to anxiety and seven others to depression. The symptomatology is certain if the score is equal or higher than 11. A score less than 7 defines the absence of symptoms.
Results: We included 47 patients with an average age of 71 years [30-83] and a sex ratio H/F of 1.66. A premorbid history of anxiety-depressive disorders was found in 17% of cases. The type of cancer was colorectal adenocarcinoma in 53% of cases, gastric cancer in 21% of cases, hepatocellular carcinoma in 10%, pancreatic and esophageal cancer in 8% of cases for each localization. Metastases were present in 31% of cases. According to the HAD scale, 70% of patients had symptoms of depression and 38% had symptoms of anxiety. Factors associated with anxiety-depressive disorders were female gender (p= 0.02), age < 45 years (p=0.04) and presence of metastases (p=0.01). Neither the type of cancer nor a premorbid history of psychological disorders were predictive of anxiety-depressive states.
Conclusions: Our study had demonstrated a significant rate of anxiety-depressive states in patients with digestive cancer. Therefore, a systematic screening and specialized care are essential in order to improve the quality of life of patients.

283. Association between celiac disease and cancer

Ben Douissa Nadia, Dabbebi Hbiba;Ben Azzouz Sarra;Cherif Dhouha

Service de gastro-entérologie B la Rabta, Tunisia

Background: Celiac disease (CD) is a common food-related disorder with a prevalence of ~1% worldwide. Failure to follow the only available treatment, a standard gluten-free diet (GFD), increases the risk of adverse outcomes, such as cancer.

Our aim was to estimate the prevalence of malignancy in a cohort of patients with CD and to study its clinical features and evolution.

Methods: We carried out a retrospective study including patients with CD seen between 1993 and 2021. Cases complicated with cancer were included. Clinical Characteristics and outcomes of these patients were collected.

Results: Five of 104 CD patients had a diagnosis of cancer representing a prevalence of 4%. They were three women and two men, with an average age of 38.2 years. CD was diagnosed in childhood in 60% of cases. Delayed diagnosis of CD was found for all patients. Cases of cancer were: duodenal adenocarcinoma (n=1), breast cancer (n=2), gastric Malt lymphoma (n=1) and Hodgkin lymphoma (n=1). The mean time between diagnosis of CD and cancer was 8.2 years. In the cases of duodenal adenocarcinoma and Malt lymphoma, the diagnosis of CD and the cancer were simulatneous. The other patients had already been diagnosed with CD and were all non-compliant to the GFD. All patients were treated with chemotherapy in addition to surgery for breast cancer and duodenal adenocarcinoma cases. In our cohort, cancer-related mortality was 1.9%.

Conclusion: Malignancy in CD is relatively frequent and seem to be precipitated by delayed diagnosis and non-adherence to GFD, hence the importance of early diagnosis and compliance to GFD.

284. Primary Breast B cell lymphoma: a report of a very unusual form of diffuse B cell lymphoma

Ben Elkilani Omar, Dardouri Teheni Baazoug Ghassen Missaoui Zine Ezzine Abir Sfar Raja Chatti Kaouther

Faculty of medicine of Sousse

Introduction: Diffuse B cell lymphoma (DBCL) originating from a mammary gland is a very rare form of this type of Non-Hodgkin Lymphoma. We report a case of a woman that benefited from a 18 fluorodeoxyglucose positron emission tomography combined with computed tomography (18FDG PET CT) in order to establish the staging of a confirmed B cell lymphoma mass in her right breast gland.

Observation: We report the case of a 35 years old woman, complaining of a right breast mass. Physical exam confirmed the presence of a 6cm diameter mass in the external upper quadrant of the right breast with no other significant findings. Mammography has shown an oval 67*60mm mammary mass with irregular limits that came in contact with the pectoral muscle, ultrasound found the mass was hypoechogenous and hypervascular. A biopsy revealed a largely destructed glandular tissue by a proliferation of tumoral cells in a grossly inflammatory stroma. Immunohistochemistry revealed that the cells were highly LCA and CD20 positive while negative for pan-CK, EMA, E-cadherin and CD3, and thus it the mass corresponded to a site of DBLC. A 18 fluorodeoxyglucose PET-CT has been indicated for staging, revealing an intensely hypermetabolic mass of the right breast measuring 80*78mm (SUVmax = 31.5) along with slightly hypermetabolic axillary lymph nodes (SUVmax=3.6). Giving the patient a stage IE of DBLC. The patient was submitted to benefit from the R-CHOP regimen of chemotherapy and will benefit from an interim exam later.

Conclusion: PBL is a very rare form of DBCL and a very uncommon type of primary breast neoplasms, diagnosis is based solely on biopsy, 18FDG PET/CT is extremely important in the staging and the follow up, treatment is pretty much like other types of DBCL and is based on chemotherapy.

285. Mucinous adenocarcinoma of the uterine cervix: a report of 11 cases

Khouloud ben lazreg1, Taghrid Tlili1, Lamia Jaidane1, Safouane Frini1, Hamed Kallel1, Hajer Hamchi2, Badreddine Sriha1, Moncef Mokni1.

1- Department of Pathology, Farhat Hached University Hospital, Tunisia.

2- Cancer registry of centre region, Tunisia.

Introduction: Mucinous adenocarcinoma of the uterine cervix (MAUC) is rare representing 10% of all endocervical adenocarcinomas. It is defined by the presence of intracytoplasmic mucin in more than 50% of tumor cells. We aim to highlight the clinicopathologic aspects of this poorly studied entity.

Methods: This is a retrospective descriptive study enrolling all patients diagnosed with MAUC on a period of 24 years (2000 – 2023) in Farhat Hached pathology department. Clinicopathologic data were retrieved from the files of the cancer registry of Tunisia's centre region.

Results: We enrolled 11 patients. The mean age at diagnosis was 57.82 years (range, 38-84). Six patients were menopaused. The most frequent symptoms were metrorrhagia, followed by pelvic pain, leucorrhoea and general symptoms. The mean tumour size was 5.2 cm (range, 2-8 cm). Six MAUC were of the intestinal subtype, 4 of the NOS subtype and one of the signet-ring cell subtype. Pathological FIGO stage was IB in one case, IIB in five cases, IIIB in one case and IVA in four cases. Five patients underwent concomitant radiochemotherapy, five patients underwent radiotherapy associated with surgery, and one patient had a palliative treatment. At the last follow up, four patients had died, one patient was alive with local recurrence and four were alive without disease.

Conclusions: MAUC is the second most common histotype of HPV associated cervical adenocarcinoma. It encompasses stratified mucin-producing carcinoma (invasive SMILE), intestinal, signet ring and NOS variants. In the 5th edition of WHO classification, adenocarcinoma of the gastric type is no longer considered a histological variant of MAUC. Limited data in the literature suggest a poorer prognosis of MAUC when compared to cervical adenocarcinoma of the usual type.

286. Adenocarcinoma of the gallbladder: a report of 60 cases

Khouloud Ben Lazreg(1), Wiem Majdoub(1), ben Letaifa Mehdi(2), Lamia Jaidane(1), dorsaf Beltaifa(1), Oussama belkacem(1), Atika Baccouche(1), ahlem Bdioui(1), Sarra Mestiri(1), Sihem Hmissa(1)
Pathology Department, Sahloul University hospital, Tunisia
Surgery department, Sahloul University hospital, Tunisia

Introduction: Cancers of gallbladder (GB) are the most common biliary neoplasia, ranking sixth among malignant digestive tumours. The most common histological type is adenocarcinoma. We report the clinic-pathological aspects of 60 cases of adenocarcinoma of the gallbladder (AGB).

Methods: It's a retrospective descriptive study enrolling all patients diagnosed with AGB on surgical specimen over a period of 14-year from 2008 to 2022. Data were collected from medical records of Cancer Registry of the Tunisian Central region and from pathological reports.

Results: The mean age of diagnosis was 65.15 years with four patients under 45 years (7%). The sex ratio(M/F) was 0.53. The diagnosis of AVB was made in 32% of cases on a systematic pathological examination of the cholecystectomy specimens. The tumor occupied the entire VB in 43% of cases. It involved the fundus in 30% of cases. The Mean size was 3.5 cm. Biliary adenocarcinoma was observed in 85% of cases and adeno-squamous carcinoma in 8%. The tumor was classified as T2 or T3 in 43% of cases, and T4 in 3%. The surgical margins were tumoral in almost half of the cases (49%). 57% of these cases were classified as T3. Vascular emboli were observed in 21% of cases and perineuronal invasion in 42%. Stages 2 and 3b were observed in 18% of cases. Among the young patients, three were in stage 3 and one was in stage 4.

Discussion/conclusions: the mean age of diagnosis of AGB is 67 years but it can be seen in younger patient under the age of 45 years. AVB in young patient is thought to develop on adenomas. Surgical tumoral boundaries are associated with locally more advanced stages. Complete resection is a major prognostic factor that considerably improves survival. However, this is not always evident in locally advanced cases.

287. Thyroid lymphomas: a 20-year case series review

Khouloud Ben Lazreg (1), Sarra Yacoub(1), Taghrid Tlili(1), Lamia Jaidane(1), Safwene Frini(1), Thouraya Salem(2),Dorra Chiba(1), Moncef Mokni(1)
1- Department of Pathology, Farhat Hached University Hospital, Tunisia.
2- Cancer registry of centre region, Tunisia.

Introduction: Malignant lymphomas occurring as primary thyroidal tumors account for 1% to 2% of all thyroid malignancies. Herein, we report case series of 14 patients with thyroid lymphomas(TL).

Methods: It's a retrospective study enrolling all patients diagnosed with TL on a period of 20 years (2002 – 2022) in Farhat Hached pathology department. Clinicopathologic data were retrieved from the files of the cancer registry of Tunisia's centre region.

Results: 14 patients were enrolled; the mean age was 56 years (range 45-68). A female predominance was observed. Two patients had a medical history of Hashimoto thyroiditis. Rapidly enlarging neck mass was the main symptom. Cervical and mediastinal extension was found in three cases, cervical, mediastinal, and intraperitoneal lymph nodes were found in five cases. Secondary localisations were found in three cases. Thyroid Cytology was made in five cases suspecting lymphoma in two cases, carcinoma in two cases and medullar carcinoma in one case. The diagnosis was made on biopsy in eight cases, on surgical specimens in six cases. Frozen section was realized in three cases showing aspect of medullary carcinoma, lymphoma and thyroiditis. The diagnosis of diffuse large B-cell lymphoma was made in 11 cases, MALT-type B-cell lymphoma in one case and Mantle cell lymphoma in one case. Lymphocytic thyroiditis was associated in five cases. Polychemotherapy (CHOP) was proposed in 8 cases and local radiotherapy in one case. Only two patients were dead.

Conclusions: Thyroid may be involved by lymphoma as part of a systemic disease or rarely as primary disease. Most patients are elderly women that complain of a rapidly growing mass and compressive symptom. Most thyroid lymphomas are of large B-cell lymphomas. MALT lymphomas are also found and must be distinguished from florid lymphocytic thyroiditis. Treatment of TL is controversial. Survival depends on the stage of the disease at presentation.

288. Kidney biopsy in diabetic women revealing a rare hemopathy

Sonia Dziri, Awatef Azzabi, Hamda ben Saad, Ghassen Tlili, Dorsaf Zellama
Urology Department, Sahloul Hospital, Tunisia

Introduction: Monoclonal gammopathies result from the activation of clonal B cells/plasma cells that secrete a particular type of immunoglobulin, called monoclonal protein or M protein and whose levels may remain stable or progress over time

Here, we report a rare case of MGRS in diabetic women detected by with acute pulmonary edema, leg swelling and nephritic syndrome.

Case presentation: A 67 year-old-woman with history of hypertension, heart failure and type 2 diabetes since 12 years at degenerative complications stage with diabetic retinopathy and neuropathy. She was admitted in cardiology department with acute pulmonary edema and leg swelling. Initial labs were remarkable for elevated creatinine (170 µmol/l), severe nephritic syndrome with hypoproteinemia (55 g/l), hypalbuminemia (21 g/l) and massive proteinuria (36 g/24h). Serum protein electrophoresis (SPEP) showed Hypogammaglobulinemia (5.8 g/l) associated with an increased gamma peak (1.2 g/l). Salivary gland biopsies and rectum biopsies were both normal. Myelogram show normal presence of the different cell lines without morphological abnormalities with absence of plasma cell infiltration on all the slides examined. The patient underwent a kidney biopsy and the results showed a proliferative extra capillary glomerulonephritis with polychromatophilic deposits, a tubular atrophy and interstitial inflammation with prominent eosinophilic infiltrate. Congo red staining was negative. Immunofluorescence shows predominance of kappa light chain glomerular deposits. The patient started chemotherapy combining Melphalan with dexamethasone.

Conclusion: Morbidity associated with monoclonal gammopathy of renal significance is high due to the severe renal lesions and the associated systemic alterations. Accordingly, early diagnosis is fundamental.

289. Antegrade ureteral stenting is a good alternative for the retrograde in malignant obstructive uropathy: A retrospective cohort study

Ghassen Tlili, Sonia Dziri, Hamda ben Saad, Mohamed Kahloul, Awatef Azzabi, Mehdi Jaidane.

Urology Department, Sahloul Hospital, Tunisia

Background: Ureteral double- J stent is usually inserted by retrograde approach to treating obstructed upper urinary tract. The antegrade approach, can be suitable alternative in certain situations without general or spinal anesthesia. The present study demonstrates the indications, success rate, and complications of this approach in treatmenting malignant obstructive uropathy.

Methods: Data of consecutive patients with malignant obstructive uropathy who underwent antegrade ureteral stenting in the Department of Interventional Radiology at Sahloul hospital from January 2013 to February 2020 was retrieved and retrospectively analyzed.

Result: A total of 188 attempts of antegrade ureteral stent insertion was performed during the study period (left side = 78, right side = 82, bilateral = 14). The mean age was 54 years (range: 9–91 years). The indication of the antegrade stenting was the failure of retrograde approach in 63 patients.The single-stage approach was performed 103 times. A percutaneous nephrostomy was placed for the average duration of 22.4 days (range: 2–60 days) for subsequent attempts. Only four patients required general anesthesia. Ureteral obstruction was caused by bladder cancer (n = 92), uterine cancer (n = 31), prostate cancer (n = 28), colorectal cancer (n = 15) and retroperitoneal tumor (n = 8). A protective nephrostomy was left in situ in 44 cases for 48 h. Clinical success was achieved in 96% of the cases. Two and three patients required hospitalization for perirenal abscess and hematuria, respectively.

Conclusion: This retrospective study shows that antegrade ureteral stent insertion has a high success rate with minimal complications.

290. Incidental chronic lymphocytic leukemia diagnosed following radical prostatectomy for prostate cancer: A case report

Ghassen Tlili, Hamda ben Saad, Mohamed Kahloul, Ahmed Loghmari, Mehdi Jaidane.

Urology Department, Sahloul Hospital, Tunisia

Background: Chronic lymphocytic leukemia (CLL) patients have a high risk of occurrence of secondary cancers. This risk is three times higher for all cancers and eight times higher for skin cancer. The coexistence of CLL and adenocarcinoma of the prostate is rare.

Case presentation: We report a case of a66-year-old man who underwent radical prostatectomy for prostate carcinoma. The final histopathological diagnosis of Gleason 7 adenocarcinoma of the prostate with incidental Rai stage I chronic lymphocytic leukemia (CLL) was made. No further investigations or treatment was offered due to the age and low disease stage. At the last follow-up of 12 months, the patient is alive, without disease progression for both lymphoma and prostate, with a PSA value of 0.03 ng/ml.

Conclusion: Early detection of lymphoma after radical prostatectomy will allow optimal management. The analysis of this link requires, therefore, additional investigations.

291. Evaluation of Targeted Therapy for Locally Advanced or Metastatic Renal Cell Carcinoma in Tunisia

Khaled ben Ahmed, Sonia Dziri, Hamda ben Saad, Mohamed Kahloul, Ghassen Tlili.

Urology Department, Sahloul Hospital, Tunisia

Introduction: Renal cell carcinoma (RCC) is known to be chemo resistant but with the introduction of targeted therapies; there has been a “revolution” in its treatment strategies. The only targeted therapy available in Tunisia for the treatment of metastatic and/or locally advanced RCC is sunitinib.

Objective of the Study: To evaluate therapeutic results and tolerance of sunitinib in metastatic and/or locally advanced RCC.

Subjects and Methods: This was a retrospective study covering a period of six years (from January 2008 to January 2014) conducted in 5 medical oncology departments in Tunisia. The population of the study consisted of 29 patients treated with sunitinib for metastatic and/or locally advanced RCC.

Results: The mean age of patients was 51 years. Three patients had tumor recurrence and 26 patients had a metastatic RCC. The prognosis was good for 5 patients, intermediate for 19 patients and poor for 5 patients. The median duration of treatment was 5 months. Because of side effects, treatment was discontinued in 12.5% of cases and the dose was reduced in 10.3% of cases. Side effects consisted of asthenia (95.8%), stomatitis (70.8%), anemia (50%), hand-foot syndrome (55.8%) in addition to nausea and vomiting (54.2%). Objective response was observed in 37.5% of patients after 3 months of treatment and in 50% after 6 months. The median progression-free survival was 14 months (95% CI, 7.9 to 20.6). The median overall survival was 22 months (95% CI, 15.6 to 28.7).

Conclusion: The prognosis of RCC in Tunisian patients has clearly improved with the introduction of sunitinib, but other therapies with a proven efficacy as a first and second line therapy should be considered.

292. Total neoadjuvant treatment in rectal cancer: the first results of the oncology center of Oujda -Morocco

A. BEN SGHIER, S. SAMBA, M. BOUABID, S.BERHILI, M. MOUKHLISSI, L. MEZOUAR.

Department of Radiotherapy, Faculty of Medicine and Pharmacy – OUJDA- MOROCCO
Author of correspondence: AHMED BEN SGHIER

Objectives: The aim of our study is to evaluate the histological response to neoadjuvant treatment in order to approach the predictive factors of a good histological response.

Materials and methods: TNT consists of short radiotherapy followed by 6 cycles of chemotherapy according to the RAPIDO protocol. Thirty-five cases of rectal cancer were treated with TNT at the oncology center in Oujda from 1/11/2019 to 28/2/2022.

Results: The median age of the population is 59 years old, with a sex ratio=0.66. Rectal bleeding with rectal syndrome was the reason for consultation in the majority of patients (more than 80%). The clinical stage was locally advanced (stage III) in the majority of patients. The histological type found in all patients was rectal adenocarcinoma. Anterior resection of the rectum with sphincter preservation was performed in 66% of cases. Among the 35 patients, 28.5% cases had a complete histological response, grade 4 according to Dworak. The analysis of the other factors did not objectify the impact of age, sex, clinical stage or the segment of the rectum affected on the histological response, however a spread of radiotherapy beyond one week positively affects the response histological (p=0.043) No grade 3 toxicity was recorded. After a median follow-up of 18 months, more than 90% of patients are still alive and in good control.

Conclusion: TNT is a new feasible and safe approach allowing a better histological response and survival, this requires the confirmation of our results with large sample sizes.

293. Female lung cancer: About 43 cases

A. Ben Sghier, S. Samba, M. Bouabid, S.Berhili, M. Moukhlissi, L. Mezouar.

Department of Radiotherapy, Faculty of Medicine and Pharmacy – OUJDA- MOROCCO
Author of correspondence: AHMED BEN SGHIER

Objectives: to study the epidemiological, diagnostic characteristics and therapeutic results of female lung cancer at the oncology center of Oujda, Morocco.

Materials and methods: retrospective study of 43 cases of female lung cancer treated at the oncology center in Oujda between 2015-2020. The anatomo clinical, therapeutic and evolutionary characteristics were considered Results: The mean age at diagnosis was 59 years. Active smoking was present in 4.6% of cases and passive smoking in 11.6% of cases. Most of our patients had presented respiratory signs (chest pain in 51% of cases, cough in 42% of cases and dyspnea in 30% of cases); however, 21% of patients had presented signs related to a secondary location. The positive diagnosis was carried by bronchial or pleural biopsy in 51%, CT-guided transparietal biopsy in 16% of cases, biopsy of a metastatic site in 7% of cases and exploratory surgery in 4.6% of cases. The majority of patients (86%) had metastatic lung cancer (contralateral lung (40.5%), brain (35%), and bone (32%)). The most common histological type was adenocarcinoma (76%) followed by squamous cell carcinoma (9%) and large cell carcinoma (7%). On the therapeutic level, 9.3% of patients had benefited from surgical treatment and 4.6% of patients had received concomitant radio-chemotherapy, while 60% of cases had only received palliative treatment.

After an average follow-up of 18 months, 11.6% of patients are still alive and 9.3% of cases had stable disease.

Conclusion: Unlike developed countries, lung cancer in women is diagnosed late, with a poor prognosis justifying the need to establish an effective program to fight against lung cancer in women in our context.

294. Non-metastatic inflammatory breast cancer in the eastern region of Morocco: About 71 cases

A. Ben Sghier, S. Samba, M. Bouabid, S.Berhili, M. Moukhlissi, L. Mezouar.

Department of Radiotherapy, Faculty of Medicine and Pharmacy – OUJDA-MOROCCO Author of correspondence: AHMED BEN SGHIER

Objectives: Describe the clinico-epidemiological, anatomo-pathological, molecular characteristics and therapeutic results of inflammatory breast cancer at the oncology center of Oujda, Morocco.

Materials and methods: Retrospective study of 71 cases of non-metastatic inflammatory breast cancer treated at the oncology center in Oujda between 2016-2020. The anatomo-clinical, therapeutic and evolutionary characteristics were considered.

Results: The median age of the population is 49 years with more than 50% of young patients (under 50 years old) and about 40% of cases were nulliparous. The most common histological type was infiltrating ductal carcinoma (87% of cases). More than 80% of the tumors were classified grade II and III according to the Scarff-Bloom-Richardson histo-prognostic grade. Vascular emboli were found in 44% of patients. Molecular analysis objectified: 63% of luminal cancers, 34% of cancers expressing HER2 and 18% of triple negative cancers. All the patients received neoadjuvant chemotherapy, of which eight patients also received concomitant neoadjuvant radio-chemotherapy. Radical surgery was performed in the majority of patients (94%) of which 15% of cases had a complete histological response (Chevalier class 1). adjuvant radiotherapy was prescribed in more than 80% of patients and adjuvant hormone therapy in 58% of cases.

After an average follow-up of 36 months, 59% of patients are still alive with good local and distant control of their disease.

Conclusion: Inflammatory breast cancer is a significant entity in our context, characterized by both systemic and loco-regional aggressiveness. Other studies are necessary to fully understand the clinical and evolutionary aspect of this type of cancer and to improve the prognosis of the disease.

295. Metachronous bilateral breast cancer: About 22 cases

A. Ben Sghier, S. Samba, M. Bouabid, S.Berhili, M. Moukhlissi, L. Mezouar.

Department of Radiotherapy, Faculty of Medicine and Pharmacy – OUJDA-MOROCCO Author of correspondence: AHMED BEN SGHIER

Objectives: to study the epidemiological, diagnostic characteristics and therapeutic results of metachronous bilateral breast cancers at the oncology center of Oujda, Morocco.

Materials and methods: Retrospective study of 22 cases of bilateral metachronous breast cancer treated at the oncology center in Oujda between 2014-2021. The anatomo-clinical, therapeutic and evolutionary characteristics were considered.

Results: The median age of the patients was 51 years. The median time between the first (1st) and the second (2nd) cancer was 36 months, of which 77% of cases presented their second cancer in the first 5 years. A family history of cancer was noted in 22% of cases and nulliparity in 41% of cases. The second cancer was revealed by surveillance echo-mammography in the majority of patients (77% of cases). The first cancer was locally advanced (classified T3.T4/N2.N3) in 32% of cases against 4.5% of cases for the second. Surgical treatment was radical in more than 50% of cases for the first cancer against 18% of cases for the second. Neoadjuvant chemotherapy was performed in 18% of cases for the first cancer against 4.5% for the second cancer; bilateral adjuvant radiotherapy was delivered to all patients. Adjuvant hormone therapy was prescribed in the majority of cases (82%). After a median follow-up of 3 years, 18 patients are still alive in good control of their tumor disease.

Conclusion: Bilateral metachronous breast cancer has become a not uncommon situation. Knowledge of the risk factors for bilaterality improves the means of care and follow-up.

296. A Case Series Of 19 Patients Diagnosed with Appendiceal Mucinous Neoplasms

N. Ben Abdeljelil, S. Ben Tekaya, D. Beltaief, A. Bellalah, S. Ben Hammouda, R. Hadhri, M. Njima, L. Njim, A. Zakhama,

Department of Pathology, Fattouma Bourguiba University Hospital, Monastir, 5000, Tunisia

Background and objective: Appendiceal mucinous neoplasms (AMNs) are rare tumors with less than 1% of all cancers. Without specific clinical presentation, the great majority are diagnosed from histopathological examination of appendectomy specimens. Our aim to describe the clinical-pathological and epidemiologic features of AMNs.

Methods: A 16-year retrospective analysis (2007-2023) identified 19 patients diagnosed with AMNs in our hospital.

Results: A female predominance was observed with 13 females and 6 males. The mean age was 64.25 years. AMNs were presented as an acute appendicitis in 12 cases (63%), ovarian mass in 4 cases and appendicular abscess in 3 cases. Appendicectomy was performed in 14 cases, completed with hysterectomy and oophorectomy in 4 cases and a right hemicolectomy was performed in 2 cases. On macroscopy, appendix appearances were similar, with a marked thickened walls and dilated mucin-filled lumen. The mean size of the tumor was 5.5cm. Microscopically, the tumor interested all the appendix length in 12 cases and was confined to the tip in 6 cases. Most AMNs were low grade (84%) and high grade in 3 cases. The base was affected in 4 cases. The tumor was associated with ovarian mucinous borderline tumors and peritoneal pseudomyxoma in 3 cases.

Discussion and Conclusion: AMNs are a rare heterogeneous group with varying malignant potential. Defined by the WHO classification as "a neoplasm characterized by mucinous epithelial proliferation with extracellular mucin and pushing tumor margins". It tends to occur in adults in their sixth decade of life. Patients are often asymptomatic. It usually discovered incidentally during radiological or endoscopic evaluation for unrelated symptoms. Given the risk of peritoneal spread, biopsy in colonoscopy or the rupture of an appendiceal mucinous lesion in surgery should be avoided. Clinical course of AMNs appears to be determined by the stage at diagnosis, as well as the histological grade.

297. Synchronous Clear Cell Renal Cell Carcinoma and Angiomyolipoma: A case report

M. Njima, S. Ben Tekaya, A. Bellalah, B. Lahbacha, N. Ben Abdeljelil, I. Bahri, L. Njim, A. Zakhama, R. Hadhri

Department of Pathology, Fattouma Bourguiba University Hospital, Monastir, 5000, Tunisia

Background and objective: It is uncommon for renal cell carcinoma (RCC) and angiomyolipoma (AML) to occur in the same kidney. With fewer than 100 cases were reported in the literature. Herein we report a case of a clear cell renal cell carcinoma (CCRCC) associated with an AML in the same kidney.

Case Report: A 45-year-oldfemale, with no medical history, presented to our hospital with a 10 cm masse in the upper pole of the right kidney. A right radical nephrectomy was performed. Macroscopically, the cut surface revealed 2contiguous masses in the upper pole. The largest mass of 9X7.5X6.5cm was lobulated, well-circumscribed, golden yellow with haemorrhagic changes. The second mass of 2.5X1.5cm was well-demarcated with homogenous beige cut surface. Microscopically, the largest mass corresponded to a carcinomatous proliferation infiltrating the renal tissue, composed of compact nests and rarely acinar structures. Its cells had optically clear cytoplasm, and rounded nuclei with a conspicuous nucleolus (consistent with Fuhrman grade2). The smaller mass was composed of spindle and focally epithelioid cells arranged in intersecting fascicles. Thick-walled vascular channels were scattered within the tumor. At the immunohistochemical study, cells of the smaller tumor were negative for epithelial markers and positive for smooth-muscle actine and HMB45. The cells of first tumor were positive for CD10 and PAX8. The diagnosis of CCRCC associated with AML was retained.

Conclusion: AML with concomitant CCRCC is rare, even more in patients without tuberous sclerosis. Coexisting tumors can occur separately in the same kidney or may occur as a collision tumor. If an AML component is overlooked in a collision tumor, it may lead erroneous upstaging of the CCRCC by misinterpretation the admixture of CCRCC and AML's lipomatous component as fat invasion or the presence of atypical epithelioid cells in the AML as sarcomatoid components of CCRCC.

298. Squamous Odontogenic Tumor: A Case Report of an Exceptional Entity

Seifeddine Ben Hammouda, Sirine Ben Tekaya, Ahlem Bellalah, Dorsaf Beltaief, Ikram Bahri, Abdelfatteh Zakhama
Department of Pathology, Fattouma Bourguiba University Hospital, Monastir, 5000, Tunisia

Background and objective: Squamous odontogenic tumor (SOT) is a rare benign but locally invasive odontogenic neoplasm, with only about 100 cases reported in the literature. The World Health Organization classified SOT as a benign epithelial odontogenic tumor in which the tumor cells show terminal squamous differentiation. We report a case of SOT in order to discuss clinic-pathological features and differential diagnoses.
Case Report: A 41-year-old male was referred to the Department of Oral and Maxillofacial Surgery for further investigation of a painless swelling on the left side of her mandible. A radiographic examination revealed a cystic image of the adjacent roots of teeth. The diagnosis of radicular cyst was suggested and a surgical excision was performed. Microscopically, the specimens received showed a benign tumor proliferation composed of numerous variably sized and shaped islands and nests of squamous epithelium. These nests were focally calcified. The squamous cells appeared bland with neither atypical nor mitotic features. Occasional foci of cytoplasmic vacuolization and some dyskeratotic cells were found. These epithelial islands were embedded in a desmoplastic fibrous connective tissue stroma with a light sprinkling of inflammatory cells. Based on the above features, the diagnosis of SOT was given.
Discussion and Conclusion: SOT is a rare odontogenic tumor with variable presentation ranging from an incidental radiographic finding to an extensive bone-destructive lesion. It characteristically presents as a triangular radiolucency between the roots of teeth, with a base of the triangle towards the root apices. Histologically, it has been confused with ameloblastoma, particularly the acanthomatous and desmoplastic variants, squamous cell carcinoma, and squamous odontogenic hamartomatous lesions in odontogenic cysts. SOT exhibits a slow growth potential with low recurrence rate. Although benign in nature, a very rare malignant transformation has been reported.

299. Assessment of the quality of narrative pathological reports and elaboration of standardized pathological reports: Habib Thameur's department of pathology 's experience

Maissa Ben Thayer, I.Helal, M.Ben Thayer, F.Khanchel, C.Naffouti, R.Hedhli, R.Jouin, A.Aschraf Chadli-Debbiche
Faculty of Medicine of Tunis, Tunisia

Background: Colorectal carcinoma (CRC) is a major public health problem in Tunisia. Standardized pathological reports (SPR) are the key to provide the minimal pathological data required to the optimal therapeutic management and prognostic evaluation of patients. We aimed to develop SPRs for colonic carcinomas (CC) and rectal carcinomas (RC) and to evaluate the quality of narrative pathological reports (NPR) in our institution.
Methods: We retrospectively reviewed the NPR of CC and RC diagnosed in our department from January 2016 to August 2020. The elaboration of SPR was based on data from the International Collaboration on Cancer Reporting. We evaluated the quality of NPR according to each pathological parameter's specific completeness (PSC), essential data score (EDS) and overall completeness (OS).
Results: We retrieved 149 CC and 79 CR's NPR. Minimal mandatory pathological data were 100% complete in 1.3% of CCs and 0% of RCs. EDS was 86.7% in CC and 83% in CR. The percentage of OC was 1.3% in CC and 0% in RC. Specimen type and histological type were specified in 100% of CC and CR NPRs. Tumor location, grade of differentiation, state of resection margins, presence or absence of vascular emboli and perineural involvement were provided in over 90% of CC and CR NPRs. pT was mentioned in 94% and 95% of CC and CR NPRs respectively while pN was mentioned in 93.3% and 94% of CC and CR NPRs respectively. The presence or absence of tumoral perforation was specified in 16.8% and 14% of the NPRs of CC and CR respectively and the presence or absence of tumor deposits in 12.1% and 15% of the NPRs of CC and CR respectively.
Conclusion: Our results were in accordance with those of the literature and underlined the incompleteness of NPRs and the need to introduce SPR for CRC. The widespread use of these SPR in our country would enable to comply with the international recommendations and to provide all the necessary data for patients' management and prognostic stratification.

300. Rare trochanteric tumor of the young adult: a case report

M.Ben Thayer, L.Bel Hadj Kacem, M.Ksentini, M.Alaya, D.Aloui, R.Aloui, A.Blel, S.Rammeh
Department of pathology, Charles Nicole's hospital

Introduction: Chondroblastomas are rare benign tumors, accounting for less than 1% of all primary bone tumors. They occur in children and young adults and mainly affect the epiphyses of long bones. We aimed, through the case we present, to study the clinico-pathological characteristics of these uncommon tumors.

Case presentation: A 20-year-old female patient, with no previous medical history, presented for left hip pain evolving for three months, with no fever. Physical examination revealed a slight tenderness on mobilization of the left hip. An X-ray showed an eccentric osteolytic lesion of the greater trochanter. MRI revealed a T2 signal abnormality. A malignant bone tumor was first suspected according to these radiological features. Surgical biopsies were performed. The biopsy cores were completely infiltrated by a benign tumour proliferation consisting of atypical chondroblasts and multiple giant cells set in a chondroid matrix. The nuclei were round and incised, with rare mitoses. The diagnosis of chondroblastoma was established and the patient underwent surgical excision with favourable outcome.

Discussion: Chondroblastomas arise from cartilage germ cells, epiphyseal cartilage cells or synovial cells. They are mainly diagnosed in the second or third decade of life (10-25 years) with a slight male predominance (sex-ratio: 2:1). Our patient was 20 years old. Symptoms are nonspecific : local pain, swelling, joint tenderness. The diagnosis of certainty is based on pathological examination. Microscopic examination reveals a diffuse proliferation of round chondroblasts set in a characteristic chondroid matrix. Increased cellularity, mitotic figures, necrosis and giant cells may be seen. Differential diagnoses include eosinophilic granuloma, chondrosarcoma, enchondroma and osteoblastoma. Surgical treatment is the gold standard. The prognosis is favorable. Local recurrence may be seen and rare cases of distant metastases have been reported in the literature.

Conclusion: Chondroblastomas are uncommon benign tumors, rarely suspected clinically or radiologically. A better knowledge of these tumors by pathologists would enable them to eliminate differential diagnoses, in particular malignant bone and cartilage tumors, and to propose appropriate curative surgical treatment.

301. Aggressive renal cell carcinoma not to be missed: about four cases

M.Ben Thayer, L.Bel Hadj Kacem, A.Blel, D.Aloui, M.Alaya, R.Aloui, M.Ksentini, S.Rammeh

Department of pathology, Charles Nicole's hospital

Objective: We aimed to study the clinical and anatomopathological features of collecting duct carcinoma (CDC).

Methods: We conducted a retrospective descriptive study. All cases of CDC diagnosed in the pathology department of Charles Nicoles hospital between 2016 and 2022, were included.

Results: Four cases were reported. They were one man and three women, with a sex-ratio of 0.33. The mean age was 68.7 years. The mean tumor size was 7.3cm. Invasion of hilar and perirenal fat was noted in all cases. Renal vein thrombus was observed in one case. The adrenal gland was invaded in one case. Tumour stage was pT4 in one case and pT3 in three cases.

Discussion: CDCs are rare, accounting for less than 1% of renal cell carcinomas. They occur in adults with a peak of frequency at 60 years old and a slight male predominance. However, in our series, a female predominance was noted (3 women/1man). They present with nonspecific features such as hematuria, flank pain, a palpable abdominal mass or distant metastasis. CDCs are highly aggressive and rapidly progressive carcinomas, often diagnosed at the metastatic stage. Their radiological presentation does not differ from that of other renal cell carcinomas. Therefore, they are rarely suspected according to radiological findings. Diagnosis is based on pathological examination. On microscopic examination CDCs present as carcinomatous proliferations of cordonal, tubulopapillary or papillary architecture. Cells are cubic or Hobneil-like. Nuclei are highly atypical, increased in size and polymorphic. Mitotic index is high. Given their rarity, the management of CTCs has not yet been standardized. The contribution of chemotherapy is still controversial. The prognosis is poor, with a one-year survival rate of 40%. Only early diagnosis seems to improve prognosis.

Conclusion: CDCs are uncommon aggressive tumours, rarely suspected on clinical or radiological features. Only accurate and early diagnosis would improve the prognosis.

302. Prevalence of EGFR gene mutations in Non-small Cell Lung Cancer in a Tunisian tertiary health care center

Maissa Ben Thayer[1]; Linda Bel Hadj Kacem[1,2]; Meriem Ben Rekaya[1,2]; Baligh Miladi[1,2]; Yasmine Ben Thaher[2]; Ahmed Hmeyada[2]; Emna Hamdeni[2]; Emna Romdhane [2]; Raoudha Aloui[1,2]; Mariem ksentini[1,2]; Ahlem Blel [1,2]; Soumaya Rammeh [1,2]

1 : Pathology Department, Charles Nicole hospital

2 : LR23ES02: onconcotheranostic markers, Faculty of medicine, University of Tunis El Manar

Background: Non-small cell lung carcinomas (NSCLC) are often diagnosed at advanced stages and have poor prognosis. The advent of targeted therapies, especially tyrosine kinase inhibitors (TKIs), has revolutionized the treatment of patients with NSCLC. Activating mutations in the EGFR gene are correlated with a good response to TKIs. Currently, molecular testing for EGFR gene mutations has become one of the evidence-based standards of care for the management of advanced NSCLC. We aimed to report the prevalence of EGFR gene mutations in NSCLC in our practice.

Methods: We retrospectively assessed cases of NSCLC for which EGFR gene mutation testing was performed, from January 2017 to May 2023. The analyzed FFPE tissue blocks corresponded to 158 primary tumors and 20 metastases. EGFR gene mutation testing was performed using real-time PCR (Rotor Gene).

Results: We analyzed 178 tests. Sixteen tests were excluded: seven tests were not performed due to poor tumor cellularity and nine were invalid with deteriorated DNA quality. Among the 162 tested cases, there were 111 men and 51 women, with a sex ratio of 2.1. The mean age was 61 years [35-83]. EGFR gene mutations were detected in 37 cases (22.8% of cases): in 26 women (70%) and 11 men (30%). These included deletions in exon 19 of the EGFR gene in 24 cases, L858R mutation in exon 21 in nine cases, insertion mutation in exon 20 in one case, G719X mutation in exon 18 in one case and double mutation (T790M in exon 20 with L858R mutation in exon 21) in two cases.

Discussion: EGFR gene mutations are the second most common driver mutations in NSCLCs. Their prevalence varies widely worldwide (10 to 35%), with a higher frequency in Asians. In line with the literature, this prevalence was 22.8% in our study. Deletions in exon 19 and L858R mutations at exon 21 were the most common mutations found in our study (94.6% of cases). These data were consistent with those of the literature (77,8-100%). Co-occurrence of mutations T790M in exon 20 with L858R mutation in exon 21 is extremely rare reported in 1% of all EGFR gene mutations. Similar proportions were reported in our study (1,2%). The efficacy of TKI for the patients carrying out this double mutation remains controversial.

303. Lung cancer due to occupational exposure to silica dust in a mine worker: A case report

I. Rassas, M. Ben Yahia, A. Moussa, M. Hayouni, Ch. Amri, I. Merchaoui, N. Chaari, M. Akrout, A. Henchi.

Department of Ergonomics and Occupational Medicine- Faculty of Medicine of Monastir.

Introduction: Millions of workers worldwide are exposed to respirable crystalline silica which is a confirmed human lung carcinogen.

The aim of this case-report is to highlight the residual risk of lung cancer secondary to silica exposure and the importance of post-occupational monitoring of exposed workers.

Observation: Mr NB is a 75-year-old former mechanic in the underground phosphate mines, retired in 1999. Throughout his career, he was exposed to high atmospheric concentrations of crystalline silica. Its medical history dates back to 2010 when he presented chest pain and mMRC stage II exertional dyspnea. The diagnosis of silicosis was retained in 2014 on the basis of his occupational exposure to silica and the presence of suggestive radiological images in the thoracic CT scan. Since then, Mr NB was lost to follow-up until 2023, when he presented with the same symptomatology, associated with back pain and impaired general condition. Investigations revealed that the patient is suffering from a bronchopulmonary cancer with bone metastases.

In this case, the declaration of the BPC as an occupational disease under table n°17 relating to “mineral dusts containing crystalline silica”, is legitimate although the patient retired in 1999. In fact, referring to the Tunisian table of occupational diseases, the legal latency period for the appearance of BPC due to silica exposure can be as long as 30 years.

Conclusion: Being exposed to crystalline silica dust, mine workers are prone to develop silicosis that can fatally evolve into lung cancer. Given the seriousness of the risk involved, prevention must be optimized. We emphasize the importance of the special medical monitoring of the exposed persons during their career. This monitoring must continue even after retirement in order to detect cancer at an early stage.

304. Histopathological and molecular classifications of thyroid cancers: Challenges in genetic practice settings

Nouha Bouayed Abdelmoula1, Balkiss Abdelmoula1, Imen Masmoudi1, Samir Aloulou1

1Genomics of Signalopathies at the service of Precision Medicine LR23ES07, Medical University of Sfax, Tunisia

Introduction: Thyroid cancer is a relatively rare disease. While its frequency varies between countries, its incidence has increased faster than any other malignancy in recent decades, mainly owing to the increasing rate of detection of small cancers.

Methods: A literature review concerning successive histopathological and molecular classifications of thyroid cancer was conducted to highlight new guidelines for molecular diagnostics to be implemented in practice for the management of papillary thyroid cancer (PTC) which represents 90% of all differentiated thyroid carcinomas.

Results: Our review showed that the binary classification of benign or malignant thyroid neoplasms raised many clinical issues of unnecessary diagnosis and treatment. The 2017 WHO classification classified them into benign, borderline (uncertain malignant potential) and malignant tumors. The histopathological types of PTC have thens been redefined to better stratify the prognosis and management of patients. Historically, the diagnostic criteria for PTC have been revised in almost every edition of the WHO classification. While in the first edition (1974), PTC was a malignant epithelial tumor containing a papillary structure (independently of nuclear characteristics), nuclear characteristics and molecular signatures have become essential criteria in subsequent classifications (1988, 2004, 2017 and 2022 editions). In the WHO 2022 classification, thyroid neoplasms are classified into three groups (BRAF V600E-like, RAS-like and non-BRAF V600E-/non-RAS-like) on the basis of mutational and gene expression profiles. The BRAF V600E molecular profile includes the BRAF V600E mutation and gene fusions involving BRAF, RET and NTRK1/3. RAS-type molecular profiles include NRAS, HRAS, KRAS, EIF1AX, EZH1, DICER1, PTEN, BRAF K601E mutations, and gene fusions involving PPARG and THADA. PAX8/PPARG gene fusion and mutations in EIF1AX, EZH1, IDH1, SOS1, SPOP, DICER1 and PTEN are classified in a non-BRAF V600E-/non-RAS-like group.

Conclusion: In this review, we summarized the genetic landscape of PTC, which remains molecularly heterogeneous.

305. CRISPR/Cas9 genome editing clinical trials for genetic red blood cell disorders

Balkiss Abdelmoula1, Nouha Bouayed Abdelmoula1

1 Genomics of Signalopathies at the service of Precision Medicine LR23ES07, Medical University of Sfax, Tunisia

Introduction: Recently, the new therapeutic approach based on genome editing using the CRISPR/Cas9 system has been adopted to treat hereditary haematological diseases. CRISPR/Cas9 allows specific correction of the altered gene without affecting the rest of the genome. The aim of this study was to report the current CRISPR/Cas9 genome editing clinical trials and their approaches.

Methods: We conducted a search via the ClinicalTrials platform to describe clinical trials that have been conducted for the treatment of genetic red blood cell diseases using the CRISPR/Cas9 genome editing tool.

Results: Our search showed twelve clinical trials (phases 1/2/3) that were terminated (n=1), unknown status (n=1) or active (not yet recruiting, recruiting or not recruiting) (n=10). Only two genetic red blood cell disorders were included which were β-thalassemia and sickle cell disease. GPH101 and CTX001 were the principal investigational CRISPR gene-edited therapy for patients suffering from β-thalassemia and sickle cell disease. GPH 101, use the gene correction approach to correct the classical mutation -hemoglobin SS - causing sickle cell disease. CTX001 is designated for patients suffering from β-thalassemia and sickle cell disease in which a patient's hematopoietic stem cells are engineered to produce high levels of fetal hemoglobin F in red blood cells. The elevation of hemoglobin F by CTX001 has the potential to alleviate transfusion-requirements for β-thalassemia patients and painful and debilitating sickle crises for sickle cell patients. Clinical trial -NCT05577312- is a phase 1/2 clinical study, which is designated to evaluate the safety and efficacy of BRL-101, autologous CRISPR-Cas9 modified CD34+ human hematopoietic stem and progenitor cells (hHSPCs) for use clinically in bone marrow transplantation.

Conclusion: The development and human-scale application of new CRISPR/Cas9-based gene therapy tools for haemoglobinopathies should be evaluated in the near future.

306. Cancer and innovative therapeutics: Genomics at our service

Nouha Bouayed Abdelmoula1, Balkiss Abdelmoula1, Samir Aloulou1

Genomics of Signalopathies at the service of Precision Medicine LR23ES07, Medical University of Sfax, Tunisia

Introduction: mRNA-based vaccines encode cancer antigens that stimulate, after internalization an immune anti-cancer response. To examine the paradigm of antigen selection as a critical process in cancer vaccine design, we conducted this review highlighting the role of high-throughput genomic technologies.

Methods: A comprehensive review was conducted to detect studies related to the paradigm of antigen selection and mRNA cancer vaccines. The following key words were used in our systematic search (((Personalized [Title]) AND (mRNA vaccine [Title])) AND (antigen [Title])) OR (neoantigen [Title]).

Results: Our bibliographic review retrieved 586 published studies. While neoantigens were first reported in the 1980s, it was recognized gradually that non-synonymous somatic mutations in cancers were the source of neoantigens. These antigens are exclusively expressed by tumor cells, and are recognized by T cells in the human immune system. Now, neoantigens are regaining attention as components of cancer vaccines. However, while for the majority of cancers there are no high-penetrance mutations, it has been shown that more than 90% of the mutations present in a patient's tumor appear to be unique to that tumor, and that personalized identification of these mutations can provide an effective means of targeting them. However, analysis of T cells derived from tumor-infiltrating lymphocytes or peripheral blood showed that only about 1% of selected neoantigens are spontaneously recognized by the affected host.

Conclusion: Tumor mutanome may offer a large number of potential targets for personalized vaccine therapies. High-throughput next-generation sequencing platforms for personalized tumors mutation screening will be needed worldwide to identify more and more mutations. However, it will remain necessary to come up with appropriate methods to efficiently select and target genuinely immunogenic mutations, and consequently qualify mutated epitopes that will be the source for effective vaccines.

307. Developmental origin of cancers: what are we dealing with?

Nouha Bouayed Abdelmoula1, Imen Bouaziz1, Balkiss Abdelmoula1, Samir Aloulou1

1Genomics of Signalopathies at the service of Precision Medicine LR23ES07, Medical University of Sfax, Tunisia

Introduction: Childhood challenges, including emotional and nutritional deficits, have implications on both the mental and physical health in adulthood, with links to chronic diseases and cancer.

Methods: A literature review concerning early life adverses and the cancer risk within the theory of the Developmental Origins of Health and Disease (DOHaD) was conducted.

Results: The DOHaD theory is a paradigm that has changed our understanding of the origins of non-communicable diseases (NCDs) that human beings are at risk of developing over the course of their lives, or rather of escaping by remaining in good health. According to DOHaD, the epigenome and epigenetic modifications retain the memory of the effects of environmental factors to which an individual is subjected. Epigenetic marks are sensitive to the maternal environment with a remarkable remodeling during early development. The epigenetic marks including the mitotic memory of chromatin architecture pass down through the generations of cells during mitosis, resulting in altered gene expression and tissue function in adulthood, leading to the onset of cancer. Moreover, the microbiota, transmitted from mother to child and present from birth to adulthood, is another component of DOHAD mechanisms. During human early life, the gut microbiome is highly dynamic and shaped by many environmental factors. This period appears to be a critical window for microbiome-based cancer programming.

Conclusion: Our study highlights that early life exposures can influence the risk of developing cancer among other NCDs throughout the human life course, and that the DOHaD approaches and strategies can be particularly beneficial to include in public health practices to address related risk factors early in life, while promoting protective factors. Moreover, the DOHaD paradigm may lead to new emerging diagnosis and therapeutic opportunities for cancer.

308. Clinical trials in mRNA cancer immunotherapy

Nouha Bouayed Abdelmoula1, Balkiss Abdelmoula1, Samir Aloulou1

1Genomics of Signalopathies at the service of Precision Medicine LR23ES07, Medical University of Sfax, Tunisia

Introduction: Cancer vaccines using whole cells (in particular dendritic cells) as antigen transporters or cell-based cancer vaccines, peptide-based vaccines, DNA and RNA-based vaccines are considered as effective strategies for cancer immuno-therapy. The recently evolving mRNA-based technologies have allowed the production of another type of cancer vaccines. Considered as the best promising immuno-therapeutics, particularly during the COVID-19 pandemics, mRNA vaccines combine the potential of mRNA to code for almost any protein with excellent efficacy and safety. The aim of this review was thus to report on these mRNA-based promising technologies in cancer therapy.

Methods: We comprehensively reviewed the scientific literature using ClinicalTrials, mycancergenome, and the FDA database to highlight the potential mRNA cancer vaccines.

Results: According to our review, multiple preclinical and clinical trials (phases 1 and 2) of mRNA-based vaccine treatments for patients with various cancers are either terminated, completed or ongoing (designed now recruiting or designed but not yet recruiting). While FDA accelerated approval is ongoing for certain mRNA-based vaccines, it is expected that mRNA cancer vaccines will be soon available. These vaccines include CV9202 for non-small cell lung cancer (NSCLC), mRNA-5671 for patients with advanced or metastatic KRAS mutations in NSCLC, colorectal or pancreatic cancer, Moderna's mRNA-4157 for melanoma with 20 patient-specific neoantigen epitopes, BNT122 (Phase II) to treat locally advanced or metastatic solid tumors, including melanoma, NSCLC and bladder cancer. Other tumor vaccines are in development, such as BNT111 for advanced melanoma, BNT112 for the treatment of metastatic prostate cancer against castration and high-risk localized prostate cancer, BNT114 for triple-negative breast cancer, BNT115 for ovarian cancer, etc.

Conclusion: We are currently in the era of mRNA cancer vaccines, which could usher in the era of precision medicine.

309. Cancer genetic testing between inequity and precision global health

Balkiss Abdelmoula1, Samir Aloulou1, Nouha Bouayed Abdelmoula1
1Genomics of Signalopathies at the service of Precision Medicine LR23ES07, Medical University of Sfax, Tunisia

Introduction: Health equity, defined as the equitable opportunity for every human being to reach his or her full health potential, has long been a key objective of public health and global health action. Calls for action on a health equity agenda in the field of genomics and precision medicine have recently begun to emerge. In this update, we propose to discuss equity in cancer genomics and the emerging concept of Precision global health.
Methods: This is a review of recent literature through the consultation of scientific databases such as PubMed and Google Scholar using keywords and keyword combinations.
Results: Precision medicine, defined as the approach to disease treatment and prevention that takes account of individual gene variability, is based on genetic and molecular testing. It has revolutionized the field of oncology, with profiling, stratification and evolutionary molecular classifications. However, molecular profiling of cancers seems to be reserved, mostly if not exclusively, for patients from high-income countries. The main reason for the lack of application of precision and genomic medicine for cancer would appear to be the problem of access to genetic testing and the routine deployment of sequencing resulting from the inaccessibility of public services to technical platforms encompassing genomic technology, massive data analysis, electronic medical records, etc... Additional international efforts must be made to ensure that cancer research addresses diseases worldwide, so that models are not limited to disease subtypes found in high-income countries.
Conclusion: Precision global health, with the potential to address transnational issues, is an approach similar to precision medicine, which facilitates, through innovation and technology, better targeting of public health interventions to populations worldwide, with the aim of maximizing their effectiveness and relevance. We believe that precision global health can transform approaches to reducing the burden of cancer diseases and close the equity gap in genomics and precision medicine in low- and middle-income countries.

310. Genetic testing of germline and somatic mutations in cancers: The experience of our genetic counselling at the Medical University of Sfax

Balkiss Abdelmoula1, Samir Aloulou1, Nouha Bouayed Abdelmoula1
1Genomics of Signalopathies at the service of Precision Medicine LR23ES07, Medical University of Sfax, Tunisia

Introduction: In oncology, there two types of genetic testing: DNA testing that looks for inherited mutations acquired from parents or germline mutations predisposing to certain cancers, and tumor DNA testing that looks for somatic mutations acquired within tumor cells during the course of life. These somatic mutations are typically isolated within the tumor, whereas germline mutations will be present in the tumor as well as in other cells in the body. The aim of our study was to report mutations detected in Tunisian patients referred to us for cancer genetic counselling.

Methods: We explored, through our genetic counselling reports at the medical University of Sfax (Tunisia), all patients referred to us for oncologic genetic counselling and assessed by a genetic testing, looking for germline and/or somatic mutations. Patients with hematologic cancers were excluded.

Results: During the last two decades of our genetic counselling experience, only 200 patients were selected for this study. Data analysis revealed that the most prevalent cancers among our patients included breast cancer, ovarian cancer, colon cancer, kidney and adrenocortical cancers, retina and brain tumors, thyroid cancer and cancerous hydatidiform mole. Before genetic testing, familial and medical history were taken, including risk factor questionnaires. Genetic testing looking for germline and/or somatic mutations was conducted, according to international guidelines and indications in oncology genetics. During counselling, patients were informed about inheritance, testing options, management strategies, as well as familial prevention and research opportunities. The main tested genes were BRAF, KRAS, APC, MLH and TSC1/2.

Conclusion: Genetic information has become a key tool in guiding oncologic therapeutic decision-making in recent years. Cancer genetic counseling thus needs to be considered in our hospitals and clinical practices, while ensuring the training of adequate number of graduated genetic counsellors.

311. Germline RAS-MAPK mutations and cancers: Genetic counselling for BRAF mutated syndromes

Balkiss Abdelmoula, Samir Aloulou, Nouha Bouayed Abdelmoula
Genomics of Signalopathies at the service of Precision Medicine LR23ES07, Medical University of Sfax, Tunisia

Introduction: Germline heterozygous gain-of-function mutations of the BRAF gene that encode a downstream molecule of RAS in the RAS-MAPK signaling pathway have been identified in Noonan and other related syndromes such as CFC. Here, we report two BRAF mutated children and discuss genetic counselling regarding predisposition to cancers.
Methods: The diagnoses of RAS-MAPK syndromes were based on congenital heart defects and other extra cardiac features such as facial dysmorphism and developmental/cognitive delay. Genomic DNA was obtained from samples of whole peripheral blood collected in EDTA tubes. DNA was extracted from leukocytes and stored at -20°C for studies. High resolution melting analysis for screening of mutations in the entire coding sequence of PTPN11 gene and of hot spot mutations coding regions of the other genes of the RAS-MAPK pathway: SOS1, SHOC2, KRAS, RAF1, KRAS, NRAS, CBL, BRAF, MEK1, MEK2, HRAS and RIT1, was carried out to 54 patients. Samples that were positive in HRM analyses were bidirectionally sequenced by using the same PCR product.
Results: Two BRAF germline mutations were detected in two 7-years-old girls of our serial. Mutations were heterozygous and were identified in exons 6 and 12 having respectively, p. A246P and p. E501K point mutations. Both patients had distinctive facial appearance of cardio-facio-cutaneous syndrome (CFC1) (MIM 115150). At the genetic counselling level, the management of the risk for malignancies have been discussed with parents and clinical team. Furthermore, regarding the probability of germline mosaicism, prenatal diagnosis has been recommended in future pregnancies.
Conclusion: Patients with RAS-MAPK mutations have cancer risks that should be considered with regular physical examinations and complete blood counts. Cancer screening in CFC patients showed that the cancer risk may be mildly increased. Enriched molecular studies and cancer profiles estimates will improve the refinement of surveillance recommendations care of individuals with germline BRAF mutation.

312. Chronic Myeloid Leukemia and Tuberculosis

Nouha Bouayed Abdelmoula1, Balkiss Abdelmoula1

1Genomics of Signalopathies at the service of Precision Medicine LR23ES07, Medical University of Sfax, Tunisia

Introduction: Here, we report the case of a 43-year-old Tunisian man in whom CML was confirmed two years after the diagnosis and treatment of a multifocal lymph node Tuberculosis.

Methods: Clinical, hematologic and cytogenetic assessments were carried out to confirm the clonal proliferation of myeloid cells in a 43-year-old man who presented splenomegaly, fever and chronic enlargement of axillary, inguinal and cervical lymph nodes, and for whom the diagnosis of nodal tuberculosis was made based on the findings of Koch's bacillus in sputum. He received anti-tuberculosis medications for one year and half.

Results: The evolution was marked by the persistence of splenomegaly, and chronic enlargement of the inguinal lymph nodes as well as a deterioration of general condition and concomitantly a marked hyperleukocytosis. The presence of the Ph chromosome in the bone marrow cells, along with the high white blood cell count and the presence of blasts in the blood samples confirmed the diagnosis of CML in the accelerated phase in our patient. The Ph chromosome was homogeneous without additional chromosomal abnormalities.

Conclusion: Extrapulmonary tuberculosis such as nodal tuberculosis accounts for about 20–30% of all active Tuberculosis cases. It is well established that tuberculosis compromises the immune system. It is also well known that Mycobacterium tuberculosis influences both proliferation and differentiation of hematopoietic stem cells and can infect progenitor cells in the bone marrow during active disease, driving towards an increase of myeloid differentiation. Bone marrow cytology and cytogenetic analysis should be carried out for diagnosis of CML to prevent the evolution to the accelerated phase, which is a signal of progression and transformation to the usually fatal blast phase.

313. Managing female fertility preservation in the Tunisian territory: the state of the art in 2023

Ines Boughzala1,2, Amira Sallem1,2, Rim Kooli1, Dhekra Chebil3, Manel Boussabbeh1,4, Meriem Mehdi1,2

1. Laboratory of Cytogenetics and Reproductive Biology, Maternity and Neonatology Center, Fattouma Bourguiba University Teaching Hospital, Monastir, Tunisia.

2. Laboratory of Histology-Embryology and Cytogenetics (LR 18 ES 40), Faculty of Medicine of Monastir, University of Monastir, Monastir, Tunisia.

3. Faculty of Medicine of Sousse, University of Sousse, Sousse, Tunisia.

4. Laboratory for Research on Biologically Compatible Substances, Faculty of Dentistry of Monastir, University of Monastir, Monastir, Tunisia.

Introduction: The incidence of cancers is increasing worldwide. Female patients of prepubertal age as well as those of reproductive age are eligible to fertility preservation (FP). The lack of literature data focusing on the state of the art of managing fertility preservation among Tunisian women with cancer encouraged us to conduct the current study.

Methods: This descriptive, observational and multicentric study was conducted online. A survey containing 24 questions was sent to 529 Tunisian oncologist and hematologist covering all the Tunisian territory (public and private centers). A reminder was sent by e-mail 2 weeks later.

Results: A total of 48 responses were received and analyzed. The answering rate was of 9%. Infertility risks were discussed with patients of reproductive age by 64.4% of all physicians surveyed, and 62.5% referred patients to a fertility center before beginning treatments. The most mentioned FP technique was oocyte cryoconcervation (58.3%). Collaborating with a fertility center was the most recommended way to enhance the effectiveness of FP. A percentage of 2.1% of practitioners considered themselves knowledgeable in FP techniques.

Conclusion: This Study is at the best of our knowledge the first national survey to explore oncofertility management in Tunisia. It showed that FP field is still in the processing range. A more effective collaboration between cancer and fertility centers is required for a better management of fertility preservation for female patients in Tunisia.

314. Navigating Glioblastoma Metastasis: Patulin's Triple Impact

Manel Boussabbeh1,2, Intidhar Ben Salem1,3, Soumaya Ben Ahmed1, Salwa Abid-Essefi1, José Luis4

1 Laboratory for Research on Biologically Compatible Compounds, Faculty of Dental Medicine, Rue Avicenne, 5019 Monastir, Tunisia.

2 Reproductive Biology Department of the Center of Maternity and Neonatology of Monastir, Fattouma Bourguiba University Hospital, Monastir, Tunisia.

3 Université de Sousse, Faculté de Médecine de Sousse, 4000, Sousse, Tunisia

4 INSERM UMR 911-CRO2, Faculté de Pharmacie, Aix-Marseille Université, Marseille, France.

Patulin (PAT) is a secondary harmful metabolite synthesized by various filamentous fungi, including Penicillium, Aspergillus, and Byssochlamys, often found on fruits like apples. This mycotoxin has exhibited the potential to induce apoptosis in a range of carcinoma cells, suggesting potential as an anticancer agent. This study delves into the effects of PAT on the progression of metastasis in human glioblastoma cells (U87). The investigation demonstrates that PAT hinders cell migration, substantiated by both the Boyden Chamber experiment and video microscopy. Cell migration is intricately linked to invasion in the metastatic process. Using the spheroid assay, the study establishes that PAT post-treatment improves the restraint of cell invasion within collagen matrices. Furthermore, using human microvascular endothelial cells (HMEC1), the study illustrates PAT's ability to curtail the formation of capillary networks after a 6-hour exposure, indicating potential anti-angiogenic attributes of the mycotoxin. Notably, the effects of PAT on the mechanistic steps of metastasis are not ascribed to its toxicity, a conclusion supported by the LDH assay. In essence, this research introduces fresh perspectives on PAT's impact on glioblastoma cell metastasis, highlighting its potential to inhibit in vitro cell migration, invasion, and angiogenesis.

315. Role of FDG-PET/CT in the diagnosis of recurrent breast cancer

Fatma Chaltout, Nawres Fkih, Khawla Ben Ahmed, Hamdi Frikha , Tembgha Bent Mohamed, Issam Jardak, Khalil Chtourou, Fadhel Guermazi

Department of Nuclear Medicine, Habib Bourguiba University Hospital of Sfax, Tunisia,

Introduction: The recurrence of breast cancer remains a serious challenge requiring an extensive diagnostic workup. We aim in our study to highlight the value of PET/CT in the diagnosis of recurrent breast cancer.

Materials and methods: This is a retrospective study carried out at our institution from january 2022 to july 2023. It included 25 female patients presenting with clinical, laboratory and/or radiological suspicion of loco-regional or distant metastatic recurrence of breast cancer.

All patients had undergone thoraco-abdomino-pelvic CT examination prior to PET/CT .

Results: the mean age was 51 years, ranged between [38-72]. The majority of them presented with invasive ductal carcinoma except for three patients: two had lobular invasive carcinoma and one patient had mixed invasive ductal and lobular carcinoma.

The PET/CT has shown recurrence in 73,1% of patients affecting: bone (n=11), lung (n=3), liver (n=1), axillary lymph nodes (n=11), distant lymph nodes (n=5) and other visceral sites (n=6).

PET-CT was effective in clarifying uncertain findings from CT scans. It ruled out bone metastasis in two out of nine equivocal cases and confirmed seven out of nine, excluded three out of seven pulmonary lesions while confirming three. It had also confirmed other uncertain lesions in CT like muscular and parietal ones.

Moreover, PET/CT detected additional lesions not seen in CT : bone (n=4) and liver (n=1).

Conclusion: This study reaffirms the findings of prior studies, highlighting the valuable contribution of PET/CT in the detection of recurrent breast cancer.

316. Fused PET/MRI images in therapeutic follow up of recurrent chordoma

Fatma Chaltout, Maali Ben Nasr , Mohamed Amine Chaari , Nawres Fkih , Wissem Amouri , Khalil Chtourou , Fadhel Guermazi

Department of Nuclear Medicine, Habib Bourguiba University Hospital of Sfax, Tunisia

Introduction: Chordoma is an extremily rare malignant bone tumor arising from embryological remnants throughout the axial skeleton. Sacrococcygeal involvement is most common (50%).

Treatment can be complex and radiation therapy is often used as an adjuvant to surgery to destroy any remaining chordoma cells.

Case presentation: We present a case of 76 year old man with a history of sacrococcygeal chordoma treated surgically 2 years earlier by tumour resection.

Currently, a local recurrence has been suspected following the appearance of a subcutaneous nodule upstream of the surgical scar, therefore a pelvic MRI scan was done . it showed hypointense and hyperintense lesions in weighted T1 and T2 images, respectively. These findings suggest multifocal locoregional recurrence. Consequently, FDG PET was conducted to delineate the planning target volume for radiotherapy.

The fused PET/MRI images revealed the presence of abnormal foci of tracer uptake not only in the multiple lesions identified in the MRI, but also in the adjacent soft tissue (SUV MAX = 5), suggestive of extensive sites of recurrence.

Conclusion: Fused PET/MRI acquisitions hold the potential for a significant contribution in managing recurrent chordomas and refining therapeutic follow-up, thereby enhancing overall life expectancy.

317. Obesity and cancer: Prevalence and associated factors

Mouna Cheour , Nedia Charfi and Mohamed Abid

Department of endocrinology, Hedi Chaker Hospital, Sfax, Tunisia

Background: Obesity is a global public health concern. It is considered as a growing healthcare problem associated with cardiovascular, metabolic diseases and some cancers including endometrial, breast, ovarian, prostate, liver, gallbladder, kidney, and colon cancer. We aimed to evaluate the prevalence of cancer among obese patients and to determine its associated factors.

Methods: We carried out a retrospective study conducted on 2258 obese patients, which consulted in endocrinology and diabetology of Intermediate Center in Sfax Tunisia and accepted to participate in this study. Patients were eligible if they were aged 20 years or older. Sociodemographic data, clinical, anthropometric and biologic variables were collected.

Results: This study showed that the prevalence of cancer among obese patients is 2%. Participants' median age was 59.42 ± 15.82 years and the study sample had a male/female gender ratio of 0.3. Personal history of medical conditions was reported by 40 % of participants. The most frequently reported condition was diabetes (47.5%) followed by cardiovascular disease (50%) and obesity (38%). Duration of obesity and Body Mass Index (BMI) was 25.62 ± 14.61 years and 33.28 ± 3.21 kg/m2respectively. Moderate to extremely severe obesity were reported by 92.5% and 7.5 % of obese patients respectively.

Analyses of the data showed that age, longer duration of obesity and metabolic complications were independent risk factors of cancer. Although there was no significant relationship between gender, BMI and frequency of cancer among obese patients. The multiple regression analysis revealed that menopause was found to be an independent predictor of cancer among female obese patients.

Conclusion: Obesity is associated with increased cancer risk. The prevalence of this disease among obese patients demonstrates the crucial need of obesity prevention in order to prevent it and to decrease deaths by cancer.

318. Cardiac myxoma: clinicopathological study of nine cases

Yasmine Dhouibi, Oussama Belkacem, Marwa Krifa, Meriam Alaya, Atika Baccouche, Wiem Majdoub, Sarra Mestiri, Sihem Hmissa

Pathology Department, Sahloul Hospital of Sousse, Tunisia

Cardiac myxoma is a rare and benign neoplasm, standing as the most prevalent among primary heart tumors. Its clinical manifestations vary based upon both its size and location.

We aim to describe the epidemiological and clinico-pathological features of this tumor by a retrospective, descriptive study of nine cases of cardiac myxoma collected at Pathology and Cardiovascular Surgery Department of Sahloul Hospital of Sousse.

The median age was 61 years with a female predominance (M/F sex ratio=0.28). The main reason for discovery was exertional dyspnea (observed in 5 patients). Cardiac imaging assisted in diagnosing and outlining the precise location and size of the myxoma. The predilection site was the left atrium, predominantly afflicting the mitral valve (observed in 7 patients). All patients underwent surgical excision as part of their management. Grossly, the tumor was nodular, with a smooth surface. Its size a mean size of 4 cm. It was friable with a gelatinous appearance and hemorrhagic areas. Microscopically, it was a well-limited, non-encapsulated benign tumor proliferation composed of neoplastic cells dispersed within a myxoid matrix. These neoplastic cells are oval or spindle-shaped, characterized by copious eosinophilic cytoplasm and ill-defined cell borders. Nuclei were oval without distinct chromatin features, and neither mitotic activity nor necrosis were evident. Abundant vascular structures featuring distended endothelial linings and angioid formations were seen. This tumor presents hemorrhagic and polymorphous inflammatory infiltrate.

Cardiac myxoma is a benign tumor with excellent prognosis. Complete surgical excision is required to avoid recurrence and complications. Diagnosis confirmation is based on histopathological examination.

319. Unhabitual location of schwannoma simulating gastrointestinal stromal tumor (GIST)

Dhouibi Y, Bdioui A, Majdoub W, Moussa S, Alaya M, Hmissa S.

Pathology department, Sahloul hospital, Sousse, Tunisia

Schwannomas are benign nerve sheath tumors that arise from differentiated Schwann cells. They typically occur in the skin and subcutaneous tissues of the head and neck or along the flexor surfaces of the extremities. Pelvic localization is extremely rare. We reported a case of presacral schwannoma.

A 53-year-old male patient with a history of autoimmune bullous dermatosis. He was admitted to the nephrology department to investigate a nephrotic syndrome. A CT scan was performed revealing a right-sided presacral pelvic mass. The patient underwent a CT guided biopsy. Pathological examination concluded to a morphological and immunohistochemical characterstics of a spindle cell tumor with a neural differentiation. The patient underwent a surgical excision. Intraoperatively, it was found a solitary mass. It measured 6 cm in greater dimension and was located in the right Para rectal area, with a retro vesical extension reaching the two ureters and the levator ani muscle. Grossly, the tumor was well circumscribed, encapsulated with a light tan cut section. Microscopic examination showed an encapsulated, spindle cell tumor with variable and biphasic cellularity. It was composed with compact areas (Antoni A tissue) showing occasional nuclear palisading (Verocay bodies), alternating with loosely arranged foci (Antoni B tissue). Mitotic figures were rarely observed. Blood vessels had hyalinized walls.

Immunohistochemical analysis demonstrated that the tumor cells were uniformly negative for AML, Desmine and DOG1 stains while presenting a strong and diffuse staining for PS 100 confirming the diagnosis of schwannoma.

Pelvic schwannomas are rare, slow-growing neoplasms with a favorable prognosis when completely excised. Their rarity and diverse clinical presentation can lead

To misdiagnosis. Therfore, when encountering an encapsulated spindle cell tumor, regardless of its location, considering the possibility of schwannoma is essential for accurate diagnosis.

320. Primary high-grade surface osteosarcoma: a case report

Dhouibi Y, Mestiri S, Majdoub W, Moussa S, Alaya M, Hmissa S

Pathology department, Sahloul hospital, Sousse, Tunisia

High-grade surface osteosarcoma is a rare subtype of osteosarcoma that arises on the cortical surface of the bone. It represents less than 1% of all sarcomas.

Here, we report the case of a 53-year-old male patient referred to Sahloul Hospital. He presented a 6-month swelling with no history of significant trauma or pre-existing medical conditions. On examination, a painful mass was found on the posterior and internal aspect of the lower extremity of the femur. Radiological investigations has shown a destructive bone process that extends into the surrounding soft tissue.

An incisional biopsy was performed and the diagnosis of a high-grade surface osteosarcoma was confirmed. In fact, histopathological examination revealed a malignant sarcomatous proliferation. Tumor cells were pleomorphic with an increased mitotic activity. Atypical mitotic figures were seen. The neoplastic cells produced malignant bone and osteoid that varied in amount. The tumor infiltrated muscle and adipose tissue. A multidisciplinary team compromising orthopedic surgeons, medical oncologists and radiation oncologist was involved in the treatment management. An adjuvant chemotherapy followed by a surgical resection were planned.

High-grade surface osteosarcoma is a rare but challenging entity. Its management requires a multidisciplinary approach.

321. Borderline serous tumors of the ovary: what management?

ELOUNI W. ; DAHMANI H. ; CHOUCHENE K. ; BEN KHALIL N. ; MECHAAL M.

Service de maternité, Hôpital régional de SIDIBOUZID

Introduction: Borderline tumors of the ovary BTO are rare tumors. The most important prognostic factors are the stage, the type of peritoneal implants and the existence of a residual tumor. Through this case and a review of the literature, we studied the management of BTO.

Observation: Mrs Z.S. aged 49 y.o, with no medical history, menopausal, consulted us for acute pelvic pain with vomiting without fever. On examination, his general condition is preserved, the abdomen is supple, sensitivity of the defenseless IDF. At the Speculum: Healthy cervix, no metrorrhagia. And at the Vaginal Touch: posterior cervix, no palpable mass. On ultrasound: the uterus is of normal size and echostructure, the endometrium is regular echogenic empty of 7 mm. The unseen right ovary and the left ovary are the seat of a cyst of 10 x 7 cm heterogeneous multi-partitioned, with a double solid-liquid component, with regular thin wall, non-vascularized classified IOTA M4 with a effusion of moderate abundance in the Douglas. An emergency laparoscopy was performed for suspicion of ovary torsion and in intraoperatively: the Right ovary, heterogeneous necrotic cystic of 15 cm, twisted in 3 turns of whorl , the Left: polylobed solidokystic aspect, 15 cm twisted in 2 turns, a medium-abundance bloody effusion in the Douglas fir the liver and appendix are healthy the presence of peritoneal carcinomatosis can't be ruled out. Bilateral adnexectomy was performed. The anapath examination concluded with a borderline serous tumor of both papillary and micro-papillary ovaries without an image of invasion with non-invasive self-implants. The extension assessment was negative as well as the tumor markers, the patient was taken back for Restaging with cytology, peritoneal biopsy, omentectomy and total hysterectomy.

Conclusion: BOT usually occur in young patients. Their clinical presentation, prognosis and treatment differ from those of ovarian adenocarcinomas.

322. Triple negative breast cancer: therapeutic alternatives

Elouni W.; MKHININI I., CHOUCHENE K., MOULEHI K., FATNASSI R.

obstetrics gynecology department, Ibn Eljazzar Hospital, Kairouan

Triple-negative breast cancer is a subtype of breast cancer known to have a poor prognosis, and the inadequacy of current treatments to treat unresectable or recurrent tumours. In this review, we summarize recent advances to support TNBC. Currently, research has been done in targeting homologous recombination defects as a novel and effective therapeutic measure for TNBC, platinum analogs and PARP inhibitors have led to relevant results even in the metastatic setting. In androgen receptor positive TNBC, AR inhibitors and inhibitors of key enzymes improved survival rates. Additionally, kinase inhibitors have also shown great promise. Immunotherapy is an inevitable alternative for the treatment of TNBC depending on its characteristics. Immune checkpoint blockade with atezolizumab or pembrolizumab provided partial benefit to patients. Immunotherapy is now making significant progress in the treatment of TNBC, but used alone is not sufficient to treat TNBC, on the other hand, combination therapy involving immunotherapy may be a better option to improve the outcome of TNBC . Additional research is needed to improve the effectiveness of existing drugs and overcome drug resistance, but also to identify new targets and improve care.

323. Desmoid tumor of the breast: cases report with review of literature

Safouane FRINI , Taghrid TLILI , Syrine BEN CHEIKH , Sirine MOUSSA , Badreddine SRIHA , Moncef MOKNI

Background and Aims: Desmoid tumor (DT) is an uncommon entity whose occurrence in mammary parenchyma is extremely rare. The WHO defines DT as a proliferation of fibroblastic cells with a locoregional infiltrative behavior. It accounts for only 3% of soft tissue neoplasia and less than 0.03% of all tumors. Being a spindle cell proliferation with intermediate malignancy, its diagnosis is challenging as it mimics metaplastic spindle cell carcinoma. We report two cases of DT , analyzing its main clinico-pathological features and reviewing the literature.

Cases presentation: The 1st case is of a 51-year-old female patient who presented with a 3 cm mass in her right breast discovered on self-examination. The 2nd case concerned a 15-year-old patient presenting with a 5 cm nodule. In both cases, the nodules were classified as ACR 4 by the BI-Rads classification system. Microbiopsies of the nodules showed fibroepithelial proliferation in favor of adenofibroma. Both patients underwent a lumpectomy in view of the radio-pathological discrepancies. On gross exam, both nodules were whitish, poorly limited and had a vaguely lobulated appearance. Histologically, the nodules showed an infiltrative proliferation formed by short bundles of monomorphic fibroblastic-like cells. Mitoses were rare. On IHC, the cells showed nuclear positivity for β-catenin. They were negative for hormone receptor (HR), pancytokeratin (PCK), AML, desmin and Stat-6. The surgical margins were negative in both cases. The final diagnosis in both cases was primary DT of the breast. The patients did not develop recurrences during follow-up.

Discussion/Conclusion: Intramammary localization of DT is extremely rare(<0.2% of mammary tumors). DT occur in women aged between 13 and 80 and are mostly sporadic(90%), in the context of trauma or surgery; a link between silicone breast implants and DT has been reported. In 10% of cases, DT are associated with familial adenomatous polyposis or Gardner's syndrome. Morphologically, the pattern of DFs is variable (keloid-like, nodular fasciitis-like, cellular type). On IHC, β-catenin and AML positivity, coupled with RH, PCK and desmin negativity, support the diagnosis. Although β-catenin has a high sensitivity and specificity for DT, its expression can be seen in other spindle cell tumors, such as fibromatose-like metaplastic carcinoma. Management is surgical, with the necessity for healthy margins,due to increased risk of recurrence. Given its exceptional metastatic potential, the prognosis is excellent, depending on surgery, which usually produces sequels.

324. Value of cell blocks and fine needle aspiration cytology in the cytopathologic evaluation of lymphomas: a case study

Sarra YAKOUB , Dorra CHIBA , Zaineb NFIKHA , Lamia Jaidane , Khould BEN LAZREG , Moncef MOKNI

Context and Aim: Fine needle aspiration cytology(FNAC) is becoming a common procedure in current practice. FNAC of superficial or deep-seated lesions are a safe,reliable,and cost-efficient technique that could provide a quick diagnosis of various neoplasms.The residual tissue fluids remaining after completion of cytologic preparations can be processed and embedded in paraffin cell blocks(CB).CB can be useful in adjunction to smears for establishing a more accurate diagnosis but can also enable ancillary studies(IHC and molecular techniques). We aim to discuss a case of lymphoma, in which the diagnosis was established by a FNAC with ancillary study on CB; and pinpoint the importance of this procedure in day-to-day practice.

Case presentation: A 53-year-old man consulted with a dyspnea and a general state deterioration. Clinical and imaging work-up pointed to mediastinal lymphadenopathy with a pleural effusion. A Fine-needle aspiration(FNA) of the pleural space liquid was performed and delivered for cytopathologic examination. An abundant lymphocytic infiltrate was objectified in the FNAC. A CB was then performed and confirmed the monoclonal nature of the infiltrate by IHC. The diagnosis of lymphoma was considered in view of clinical, radiological and cytopathological features. A lymph node biopsy further established the diagnosis. The patient was referred to the oncology out-patient department for addition care .

Discussion and conclusion: In the era of personalized medicine, requests for ancillary testing of specimens obtained with minimally invasive procedures have been increasing. Even though these tests can be performed on FNA,the use of CB offers better results whether for IHC or for molecular genetic tests and Proteomics. CB preparations are used routinely for pleural, peritoneal fluids, bronchial washing and FNA. Preparing paraffin- embedded CB from FNAC can be made by direct transfer of all centrifuged cellular material embedded in plasma or,ideally, with the use of an AAF fixative(95% ethyl alcohol 34ml+formalin4 ml+Glacial acetic acid 2ml).

An overall improvement in the final diagnosis was noted when FNA smears were complemented by CB, with an increase in sensitivity of 84.44%. A recent study assessing the performance characteristics of FNA and CB in 182 cases of follicular lymphomas(FL), established its importance in the clinical indications of initial diagnosis, recurrence, or transformation of FL over a 5-year period.

A major benefit of CB is that it predominantly contains tumor cells without stroma,which is present in core biopsies;Thus, reducing noise related to contaminant non-tumor cells. For all these reasons, properly made quantitatively and qualitatively optimum CB should be the preferred approach for performing most IHC and molecular tests.

325. Assessment of Nurse’s knowledge Towards Chemotherapy Management

Ghenim A1, Kacem I1, Kahloul M2, Ajmi M2, Ben Abderhmane S1, Naija W2, Mrizak N1.

1. Occupational Medicine Department, Farhat Hached Teaching Hospital, Sousse, Tunisia.
2. Anesthesia and Intensive Care Department, Sahloul Teaching Hospital, Sousse, Tunisia.

Introduction: The management of chemotherapy in the hospital environment has been associated with increased risk of exposure to harmful factors. The use of the designated protective area and equipment during the preparation and the administration of chemotherapy is considered as the gold standard of prevention.

Objective: To study the nurse's knowledge of the risks involved in handling cytostatics, and the precautions to be taken to limit occupational exposure.

Methods: This is a cross-sectional survey conducted during the months of March and April 2023 among the healthcare professional in five departments of the Farhat Hached University Hospital. The data collection method was based on a questionnaire.

Results: We collected 103 cases. The mean age was 38.41 ± 6.47 years and the sex ratio was 0.69. Average occupational seniority in the job was 12.05± 8.2 years. A training in the use of anti-cancer drugs was performed in 54.4% of cases. Most of the sample had a positive attitude towards the management and preparation of chemotherapy and kept the personal protection measures (52,4%). Inadequate aeration system was reported in the five departments in 17,1% of cases. The knowledge level of newly recruited nurses is found to be statistically higher than nurses with more seniority (p<0,001).

Conclusion: Educational programs need to be designed and implement to update nurse’s knowledge about chemotherapy risks. Also, the management of the healthcare institution need to ensure all the safety standards and health regulations.

326. Breast cancer and agricultural work : Results of a survey carried out in Sousse (Tunisia)

Kacem I1, Ghenim A1, EL Maalel O1, Moussa A1, Bouhoula M1, Chouchane A1, Aloui A1, Maoua M1, Brahem A1, Kalboussi H1, Chatti S1, Ben Ahmed S2, Mrizak N[1].

1. Occupational Medicine Department, Farhat Hached Academic hospital, Sousse, Tunisia
2. Carcinology Department, Farhat Hached Academic hospital, Sousse, Tunisia

Background: Breast cancer (BC) is the leading cause of cancer mortality and morbidity in women. Preventive measures should target modifiable risk factors. Several recent studies have focused on work-related factors (WRF) in BC but results still controversial. The aim of this study is to identify the WRF involved in BC genesis. The aim of this study is to identify the impact of work in an agricultural environment in BC genesis.

Methods: A case-control study was conducted among patients with BC treated at the carcinology department of the Farhat Hached University Hospital in Sousse (Tunisia). The controls were randomly recruited among women consulting at the different departments of the same hospital, exempt from carcinologic diseases. Occupational characteristics were collected.

Results: A total of 110 BC cases and 150 controls were collected. The mean age of the patients was 48.4±9 years versus 45±9.3 years for the controls. Of the cases, 13.6% worked in the agricultural sector with direct handling of pesticides. After multivariate analysis, the agricultural sector was independently associated with an increased risk of BC (pa = 0.006; ORa = 7.07; 95% CI = [1.76-28.33]).

Conclusion: Thus, our results supported the role of the agricultural sector in increasing the BC risk, suspected from exposure to chemicals such as pesticides, solvents and hydrocarbons.

327. Problems faced in hospital setting by relatives of cancer patients

Ghenim A1, Kacem I1, Kahloul M2, Ajmi M2, Naija W2, Mrizak N1.

1. Occupational Medicine Department, Farhat Hached Teaching Hospital, Sousse, Tunisia.
2. Anesthesia and Intensive Care Department, Sahloul Teaching Hospital, Sousse, Tunisia.

Introduction: Having a family member with a neoplastic disease and accompanying them to hospital for treatment is a real burden. Humanized care and good communication can make this painful experience less unpleasant.

Objective: To identify the difficulties encountered by parents of patients with neoplastic diseases.

Methods: A cross-sectional study was conducted among the parents of neoplastic patients who were either hospitalized or had come for exploration or consultation in oncology department of Farhat Hached University Hospital,

Results: The number of participants was 102. The companion was the mother in 24.5% of cases, the spouse in 21.6% of cases and the sister in 13.7% of cases. The most encountered difficulties were the absence of a caregiver in 57.7% of cases, the absence of a wheelchair in 28.8% of cases, and a broken-down elevator in 22.2% of cases. Almost 47% of the population were dissatisfied with the time taken to receive care which was considered very long in 29.4% of cases. For better care, 43.1% of parents of cancer patients needed a specialist's intervention, and 29.4% a financial assistance.

Conclusion: The recognition of these problems by health-care professionals may contribute to finding solutions in order to assist the difficult task of these individuals.

328. Occupation, industry, and the risk of prostate cancer

Kacem I1, Ghenim A1, Tlili G2, Kahloul M3, Ajmi M1, Jaidane M2, Naija W3, Mrizak N1.

1. Department of Occupational Medicine, Farhat Hached Academic hospital, Sousse, Tunisia
2. Department of Urology, Sahloul Academic Hospital, Sousse, Tunisia
3. Department of Anesthesia and Intensive Care, Sahloul Academic Hospital, Sousse, Tunisia

Background: Prostate cancer (PC) is the second most common type of cancer among men but its etiology is still largely unknown. Different studies have proposed several risk factors such as ethnic origin, age, genetic factors, hormonal factors, diet and insulin-like growth factor, but the spatial distribution of the disease suggests that other environmental factors are involved. This study explores relationships between employment, by occupation and industry, and PC risk.

Methods: A case-control study was conducted on 107 men with histological confirmed PC during a five years period at Tunisian University Hospital. Controls group included 107 cancer-free participants matched by age. To assess self-reported exposure to occupational factors, the daily exposure frequency(H), the exposure duration in years(D) and the exposure level (N) were recorded.

Results: The mean age was 71.1 ± 9.2 years for cases and 69.4 ± 7.5 years for controls (p = 0.15). The majority of cases and controls worked in the Buildings and Public Works (BTP) sector in 25.2% and 17.8% respectively. After a multivariate analysis by binary logistic regression, the agricultural sector was independently associated with prostate cancer (pa = 0.016; ORa = 2.06; 95% CI = [074-5.68]) and the health sector was independently associated with protection against prostate cancer (p= 0.024; ORa = 0.084; 95% CI = [0.01-0.72])

Conclusion: Excess PC risks were observed across several occupations. Further analyses must focus on specific occupational exposures.

329. Medico-legal management of laryngeal cancer in occupational medicine: A report of three cases

Amal Ghenim 1,2, Asma Aloui1,2, Zeineb Athimni1,2 ,Marwa Bouhoula1,2 ,Asma Chouchane1,2 ,Imen Kacem1,2, Maher Maoua1,2 , Aicha Brahem1,2, Houda Kalboussi1,2 , Olfa El Maalel1,2, Souheil Chatti1,2 ,Nejib Mrizak1,2.

1. Occupational medicine and professional pathologies department, Farhat Hached Teaching Hospital, Avenue Ibn El Jazzar, Sousse, 4000, Tunisia
2. University of Sousse, Faculty of medicine Ibn El Jazzar, Avenue Mohamed Karoui, 4002, Sousse, Tunisia

Introduction: Laryngeal cancer is a grave condition that might be caused by occupational hazards and represent a significant professional hindrance.

Cases presentation: Three cases of laryngeal cancer were collected during the last three years.

Case 1: A 63 year old male with no significant past medical history was diagnosed with a moderately differentiated keratinizing invasive squamous cell carcinoma of the larynx. He underwent total laryngectomy with bilateral neck dissection. He was a former smoker who had a persistent hoarseness. He was an independent worker in the construction and agriculture sector for 36 years. He was proposed for retirement for disability with a partial permanent disability rate.

Case 2: A 57 year old spray painter consulted to determine the attributability of his vocal cord carcinoma cancer to his profession. He was a former smoker and drinker. He had no family or personal neoplasia history. He was exposed to organic solvents, isocyanates, metals, epoxy resin. He worked in a cabin of 10 m2 with an occasional use of Personal Protective Equipment (PPE). In this case, a declaration of an occupational disease was not possible because reparation conditions were not filled. An eviction of the exposure to paints and metallic dust was indicated with the reinforcement of the PPE.

Case 3: A 58 year old patient presented with a laryngeal cancer. He underwent total laryngectomy with bilateral neck dissection and adjuvant radiotherapy. He had a family history of brain and pulmonary cancers. He had a hypothyroidism, dyspnea and fatigue as sequelas of the treatment. He was an independent worker in construction sector and since the operation he is no longer capable to be productive. Thus, he was proposed to retirement for disability.

Conclusion: More efforts should be dedicated to updating the tables of occupational diseases to keep pace with technical developments and medical progress.

330. Stress factors and coping strategies in oncology settings nursing staff.

Kacem I1, Kahloul M2, Ajmi M2, Ghenim A1, Naija W2, Mrizak N1.

1. Occupational Medicine Department, Farhat Hached Teaching Hospital, Sousse, Tunisia.
2. Anesthesia and Intensive Care Department, Sahloul Teaching Hospital, Sousse, Tunisia.

Background: Workplace stress is an international scourge with individual, organizational and social consequences. The nursing staff caring for cancer patients is a population particularly exposed to stress and this is due partly to patient-related factors and partly to work-related factors. To cope with various stressful situations; the nurse often uses different coping strategies.

Aim: To describe stress factors and coping strategies in the face of stress among oncology settings nurses.

Methods: This is a cross sectional study conducted with a sample of 70 nurses working at Farhat Hached teaching hospital for a period of 3 months. Occupational stress and coping strategies were carried out by two validated instruments (the KARASEK questionnaire and the BRIEF COPE).

Results: The results of our study show that the majority of nurses surveyed (70%) take care of cancer patients on a daily basis. Caring for cancer patients is a stress factor for 87% of nurses surveyed. Only 3% of the nurses participating in our study had received training on managing stress at work. According to the results of the KARASEK questionnaire, half of the nurses surveyed (50%) were in job strain.

Stress was significantly higher among female nurses (p=10-3) and among married nurses (p=0.014). On the other hand, the result of BRIEF COPE shows that the coping subscales most used by the nurses in our study are seeking instrumental support and seeking emotional support in 13% of cases. The coping most used by nurses in our study to cope with stress is emotion-focused coping (38% of cases).

Conclusion: Recommendations in terms of management and prevention of stress are necessary in order to improve coping strategies in oncology nurses.

331. Occupational urinary bladder cancer: a case report

Amal Ghenim, Ghada Bahri, Hiba Ziedi, Imen Youssef, Mariem Mersni, Dorra Brahim, Hanene Ben Said, Najla Mechergui, Nizar Ladhari

Occupational Medicine and Professional Pathologies Department, Charles Nicolle Hospital, Tunisia.

Introduction: Bladder cancer is the tenth most common cancer worldwide, and its incidence is steadily rising. Multiple risk factors have been associated with its etiology, including occupational factors. The proportion of bladder cancers of occupational origin is estimated at between 2% and 14%.

Objective: We report the case of a pump attendant with recurrent bladder cancer.

Case report: It's about a 57-year-old, weaned smoker, who presented in 2020 with urinary symptoms consisting of total macroscopic hematuria and pollakiuria. Cystoscopy revealed a bladder tumor. Pathological examination concluded that the tumor was a non-invasive papillary urothelial carcinoma (stage pT1). Tumor resection was indicated, supplemented by BCG therapy. The patient returned to work as a pump attendant. Two years later, he reconsulted with renewed urinary symptoms related to a recurrence of his bladder tumor. Having worked as a pump attendant for twenty years, the patient was referred to us to study the imputability of his disease to the profession. The patient had been exposed to polycyclic aromatic hydrocarbons (PAHs) and aromatic amines present in vehicle fuels and exhaust fumes. The bladder tumor was declared an occupational disease. Permanent avoidance of chemical exposure was indicated.

Conclusion: By presenting this case, we hope to raise awareness in the medical community that bladder cancer can potentially be an occupational disease and should therefore be thoroughly investigated. Better prevention and early detection can prevent the occurrence of this occupational cancer.

332. Occupational bronchopulmonary cancers: a report of two cases

Amira Belkahla, Ghada Bahri, Amal Ghenim, Hiba Ziedi, Mariem Mersni, Dorra Brahim, Hanene Ben Said, Najla Mechergui, Imen Youssef, Nizar Ladhari

Occupational Medicine and Professional Pathologies Department, Charles Nicolle Hospital, Tunisia.

Introduction: Occupational respiratory diseases account for 15-20% of all recognized occupational diseases. In Tunisia, they rank third among recognized occupational diseases in the private sector. Bronchopulmonary cancers are among the most commun respiratory diseases.

Case report: We report the case of a 53-year-old worker, with a history of hypertension, who had been an inspector at the Office of Merchant Navy in charge of controlling the condition of ships and exhaust pipes for 25 years, and who had been exposed to asbestos used as a coating on ship exhaust pipes. He complained about a left basithoracic pain at the end of inspiration. A malignant pleural mesothelioma was diagnosed by thoracic CAT scan and left thoracoscopy with anatomopathological examination. The patient underwent chemotherapy followed by a left enlarged pneumonectomy. His pathology was recognized as a compensable occupational disease, in accordance with the provisions of table no18 of the Tunisian list of compensable occupational diseases.

The second case is about an hydraulic technician who worked for Phospates compagny in southern Tunisia for 19 years, with a history of silicosis recognized as a compensable occupational disease in 1995 with a permanent partial disability of 60%. He died in 2018 as a result of a small-cell bronchial carcinoma diagnosed by fibroscopy with bronchial biopsy after exacerbation of his basic dyspnea. At the request of the deceased's wife, his bronchial cancer was accepted as an occupational disease eligible for compensation, in accordance with the provisions of table no. 17 of the Tunisian list of compensable occupational diseases.

Conclusion: Respiratory diseases of occupational origin are frequent, sometimes with serious socio-professional consequences, and are still under-reported. The implementation of a prevention strategy requires the identification and objective assessment of occupational risks, through a continuous and reliable census of all sectors of professional activity.

333. A rare case of epidermoid cancer recurrence on osteoradionecrosis: Challenges in diagnosis and management

M. Grira, K. Ismail, N. Ennafti, A. Eleuch, M. Ben Rejeb, A. Slama
Oral and maxillofacial surgery department of Sahloul university hospital, Sousse

Introduction: Osteoradionecrosis and epidermoid cancer recurrence are distinct yet challenging entities encountered in patients with a history of head and neck cancer treated with radiotherapy due to the overlapping clinical and radiological characteristics. Accurate differentiation between these two entities is crucial for optimal patient care and improved outcomes.
Method: A comprehensive analysis of the patient's medical history, clinical presentation, radiological imaging, surgical findings and histopathological reports was conducted to establish an accurate diagnosis.
Result: A 79-year-old male, with a history of oral epidermoid cancer of the inner cheek who was operated in our department in 2018 treated with radiotherapy 5 years ago, presented with multiple maxillary and mandibular bone exposures. Radiological imaging demonstrated osteoradionecrosis of the mandible and the maxillas. A biopsy was performed, and histopathological analysis revealed an epidermoid carcinoma in the left hemimandible, distinct from the primary squamous cell carcinoma, confirming epidermoid cancer recurrence on ORN.
Discussion: The coexistence of epidermoid cancer recurrence on osteoradionecrosis is extremely rare, with limited reported cases in the literature. The diagnostic challenge arises due to the resemblance of both conditions in clinical and radiographic manifestations. Both osteoradionecrosis and cancer recurrence often present clinically as non-healing ulceration or bone exposure and radiologically as osteolysis, further complicating the distinction, hence the importance of the histopathological analysis. The management would require a multidisciplinary approach involving the patient's oncologist, radiation oncologist, and oral and maxillofacial surgeon to assess the risks and benefits of using radiotherapy in such a situation.
Conclusion: This case highlights the rarity of epidermoid cancer recurrence on osteoradionecrosis and the challenges faced in accurately differentiating between the two entities. Prompt biopsy and collaboration between oncologists, radiation oncologists and maxillofacial surgeons are essential for an accurate diagnosis and appropriate management.

334. A rare case report of invasive ductal salivary carcinoma in parotid gland

M. Grira, O. Mejri, M. Kahloul*, S. Tritar, S. Ayachi, A. Slama
Oral and maxillofacial surgery department of Sahloul university hospital, Sousse
*Anesthesiology department of Sahloul university hospital, Sousse

Introduction: Invasive ductal salivary carcinoma is an exceptionally rare malignancy, accounting for less than 1% of all salivary gland tumors. Limited information is available on the optimal diagnostic and therapeutic strategies. Our case report aims to contribute to the existing literature and enhance the understanding of this rare malignancy.
Method: This is a case report of a patient diagnosed with invasive ductal salivary carcinoma in the parotid gland. Clinical presentation, radiological findings, histopathological characteristics, treatment modalities, and follow-up data were reviewed and analyzed.
Results: The patient, a 44-year-old male, presented with a peripheral facial paralysis since 1 year. The patient was initially diagnosed with idiopathic facial paralysis and was treated with corticosteroids, with no improvement. An MRI was performed, and was in favor of a malignant tumor of the left parotid. Histopathological examination confirmed the diagnosis of invasive ductal salivary carcinoma. A PET-scan was performed showing pulmonary metastasis. The cancer was classified as T4aN2bM1. A multidisciplinary approach involving surgical resection with ipsilateral lymph node dissection, followed by adjuvant radiotherapy, chemotherapy and immunotherapy was undertaken. Follow-up assessments showed the disappearance of lymph node and lung metastases.
Discussion and Analysis: Invasive ductal salivary carcinoma shares histological similarities with invasive ductal carcinoma of the breast, leading to diagnostic challenges. The rarity of this tumor adds to the complexity of accurate diagnosis and optimal management. Surgical excision remains the mainstay of treatment, often combined with adjuvant treatment like radiotherapy, chemotherapy and immunotherapy for locally advanced cases.
Conclusion: Our case report highlights the importance of considering invasive ductal salivary carcinoma in the differential diagnosis of parotid gland tumors. Multimodal treatment approaches can lead to favorable outcomes. However, further research and larger case studies are necessary to elucidate the optimal therapeutic strategies and long-term prognosis of this rare malignancy.

335. Monobloc Surgical Resection of a Large Leiomyosarcoma of The Chest Wall: A Case Report

Hadj Dahmane Mariem, Abdennadher Mahdi, Bouassida Imen, Abdelkbir Amina, Zribi Hazem, Zairi Sarra, Marghli Adel

Department of thoracic surgery. Abderrahmen Mami Hospital. Ariana. Tunisia

Introduction: Leiomyosarcoma (LMS) is a malignant tumour of smooth muscle. In more than 50% of cases, it is located in retroperitoneal or intra-abdominal and pelvic sites. LMS of the chest wall is very rare and manifested mainly as chest pain and/or parietal swelling. The treatment of choice is wide surgical resection.

Case: The patient was a non-smoker 58 years old man. He had a history of hypothyroidism. He presented with a left lateral parietal swelling. A chest CT scan showed a heterogeneous mass in the lateral arch of the left rib, with a lytic bone lesion. A CT-guided biopsy concluded in a pleomorphic LMS. Surgery consisted of a large monobloc resection of the affected lateral costal arches combined with covering by a plate Prosthetic. The median duration of follow-up after surgery resection was 18 months with no complications reported.

Conclusion: Extensive surgical resection is the only guarantee of curative treatment. Sometimes surgery requires covering techniques using plates and/or muscle mobilization to fill the defect.

336. Childhood Thymoma; surgical management

Hadj Dahmane Mariem, Bouassida Imen , Abdennadher Mahdi, Abdelkbir Amina, Zribi Hazem, Zairi Sarra, Marghli Adel

DEPARTMENT OF THORACIC SURGERY. ABERRAHMEN MAMI HOPITAL. ARIANA. TUNISIE

Introduction: Thymoma accounts for approximately 20% of mediastinal tumors and less than 1% of all mediastinal tumors in children. Mediastinal neoplasms in children are mainly lymphomas or neurogenic tumors, but thymoma is extremely rare.

Material and method: Retrospective study of 10 children under 18 years operated on at the thoracic surgery department of Abderrahmen Mami Hospital for a thymoma confirmed on surgical specimen over a period of 23 years.

Results: These included 3 boys and 7 girls. The mean age was 15 years [10-18 years]. The most frequent symptom was dyspnoea. The mass was lateralized to the right in 6 cases and to the left in 7 cases. The mean size was 6 cm. Myasthenia gravis was observed in 4 cases. All children underwent surgery. The approach was video-assisted thoracoscopy in 4 cases, lateral thoracotomy in 4 cases, sternotomy in 1 case, and clamshell in 1 case. The operative procedures were thymectomy in 5 cases, enlarged thymectomy in 3 cases, and biopsy in 2 cases. The histological types found were: Thymoma B1 in 5 cases, Thymoma B2 in 3 cases, Thymoma AB in 1 case and a case of Thymoma B3. Three children underwent adjuvant radiotherapy. No recurrence was noted in patients whose tumors were completely resected during an average follow-up of 5 years.

Conclusion: Thymoma remains an exceptional tumor in children. Complete surgical excision is the treatment modality of choice. Depending on the type and stage of the tumor, the surgery can be associated with adjuvant treatment us radiotherapy and/or chemotherapy.

337. Surgery of malignant neurogenic tumors of the mediastinum

Hadj Dahmane Mariem, Bouassida Imen , Abdennaher Mahdi, Abdelkbir Amina, Zribi Hazem, Zairi Sarra, Marghli Adel

Department of thoracic surgery , Abderrahmen Mami Hospital, Ariana, Tunisia

Introduction: Neurogenic tumours may occur at many different anatomic sites, but the mediastinum represents a uniquely challenging site given the complex anatomy. They are rare tumors, predominating in the posterior mediastinum.

Methods: This is a retrospective study of 13 patients operated on in the thoracic surgery department of Abderrahmane Mami Hospital in Ariana between 1996 and 2020 for a malignant neurogenic tumor of the mediastinum.

Results: There were 13 patients; 7 males and 6 females. The mean age was 38.61 years (3-73 years). Forty per cent of the cases were discovered incidentally. The most frequent symptom was posterior chest pain, which occurred in 30% of cases. The thoracic CT scan showed a mass in the posterior mediastinum of the costovertebral sulcus in 10 cases. The approach was posterolateral thoracotomy in 6 cases, VATS in 2 cases, mediastinotomy in 2 cases and cervicodorsal thoracotomy in 3 cases. The surgical procedure was a tumor biopsy in 7 cases, tumor resection in 5 cases, and tumor resection extended to the spine in one case. Pathological examination showed malignant schwannoma in 7 cases, malignant peripheral nerve sheath tumor in 3 cases, ganglioneuroblastoma in one case and neuroblastoma in 2 cases. One case of postoperative cerebrospinal fluid leakage was observed.

Conclusion: Malignant neurogenic tumors are rare tumors. Their treatment is multidisciplinary, involving the thoracic surgeon, radiotherapist and chemotherapist.

338. Evaluation of Immunotherapy Consumption at Salah Azaïz Institute

Abdelhamid Hamza1, Zina Haj Belgacem1, Wiem Ben Ayed1, Azza Ben Said1, Imen Limayem1 1:

Unité de préparation centralisée des cytotoxiques, Institut Salah Azaiz.

Introduction and Objectives: Immunotherapy has revolutionized cancer treatment by stimulating the immune system to combat cancer cells. However, it comes at a high cost. The objective of this study was to evaluate the costs associated with the consumption of immunotherapy treatments at Salah Azaïz Institute (SAI).

Materials and Methods: This is a retrospective descriptive study conducted within the centralized cytotoxic preparation unit over a period of approximately 3 years (01/01/2020 to 30/04/2023). All cancer patients treated with immunotherapy (nivolumab/atezolizumab/ ipilimumab/ pembrolizumab). were included Patient demographic data (age, gender) and treatment information were collected from the chemotherapy prescription software Asclepios®. Data analysis was performed using Excel version 2016.

Results: During the study period, thirty-two patients were included. The mean age was 55.7 years with a male-to-female ratio of 1.9. The number of patients increased from 3 in 2020 to 32 in the first four months of 2023. The most prescribed molecules were nivolumab (59.0%), pembrolizumab (22.0%), and equally ipilimumab (9.5%) and atezolizumab (9.5%). In the same order of mention, their average doses were 274.0 mg, 192.5 mg, and 141.6 mg. Atezolizumab was prescribed at a fixed dose of 1200 mg/cycle. The average costs of immunotherapy cycles were 7277€ for nivolumab (240 mg/cycle),6935€ for pembrolizumab (200 mg/cycle), and 3927€ for atezolizumab (1200 mg/cycle). For ipilimumab, the prescription is based on mg/kg. In this study, the average cost was 10571€ (Min 3515/Max: 14061).

Discussion and Conclusions: The consumption of immunotherapy treatments continues to increase since their introduction in Tunisia. However, their high cost on one hand, and the current state of public finance on the other, have limited their accessibility for patients with relevant indications. Therefore, adopting a healthcare policy based on governance to rationalize the consumption of these innovative therapies while limiting unnecessary expenses is crucial.

Keywords: immunotherapy, cancer, consumption, cost.

339. Colorectal Cancer in Young Patients: Ras and Braf Mutational Particularities

Ghada sahraoui, hayet douik, malek hamzaoui, eya khemir,lamia charfi, ines nasri, dorra benghezala, raoudha doghri, karima mrad

Introduction: The detection of abnormalities in the KRAS, NRAS, and BRAF genes holds paramount importance in accurately qualifying colorectal cancer (CRC) patients for therapy with anti-EGFR (epidermal growth factor receptor) monoclonal antibodies. Nevertheless, information regarding the prevalence of mutations in these genes among young patients, remains limited.

Methods: In this retrospective study conducted at Salah Azaiz Institute, we analyzed 226 colorectal cancer samples sent to the histopathology department between April 1, 2021, and December 31, 2022. Our main objective was to investigate the frequency of mutations in the KRAS, NRAS, and BRAF genes specifically within young-aged patients (<60 years).

Results: Our series comprises 55.75% males and 44.24% females, with a sex ratio of 1.26. The age group in this population ranges from 49 to 60 years, with a mean age of 49 years.

Regarding the molecular analysis, 46.45% of patients have a mutated KRAS gene. Mutations in exon 2 are found in 37.61% of cases, exon 3 mutations in 2.65% of cases, and exon 4 mutations in 6.19% of cases.

Additionally, 53.54% of patients have a mutated NRAS gene. Exon 2 mutations are found in 46.46% of cases, exon 3 mutations in 1.76% of cases, and there is an absence of exon 4 mutations.

Furthermore, we identified 5.30% of cases affected by the V600E/D type of this mutation, while it is absent in 48.23% of cases. Additionally, we have 48.23% of cases with unspecified mutations.

Conclusion: These findings contribute significantly to the characterization of the Tunisian mCRC young patient population and hold promise for enhancing the precision targeting of anti-EGFR therapies. However, further research is warranted to explore potential clinicopathological and survival differences based on mutation status.

340. Knowledge, Attitude and Perception of the Hospital Staff towards Smoking at Ibn El Jazzar University Hospital Kairouan-Tunisia 2022: Knowledge, attitude and practice towards smoking

Hajer Hannachi, Latifa Merzougui, Donia Ben Hassine, Emna Arfaoui, Dhekra Chebil

CHU IBN ELJAZZAR de Kairouan service hygiène

Introduction: Healthcare workers have an important role to play both as advisers, influencing smoking cessation and as role models. However, many of them continue to smoke. Aim: to examine knowledge, attitudes, and behaviors among healthcare workers towards smoking in the Teaching Hospital Ibn ELJazzar of Kairouan-Tunisia.

Methods: A cross-sectional descriptive study conducted during 12 months. Data were collected using a self-administered and anonymous questionnaire. A pre-study was made in January 2021 in three departments of the hospital in order to test the questionnaire. The statistical analysis was performed using the SPSS software.

Results: The prevalence of tobacco consumption among healthcare workers was 20% (67/336) with a significantly higher rate among male compared to female health care professionals (95.5% vs 4.5%). All responders agreed that smoking is harmful to health. Pulmonary diseases were mentioned by 83.4% while cardiovascular diseases and cancers were mentioned by respectively 59 and 58 percent of study's population.

Conclusion: Smoking remains a public health problem among health professionals. A holistic approach, including a strengthening of laws against smoking, and provision of resources of tobacco cessation, is necessary to promote smoking cessation among the hospital staff.

Keywords: Smoking; healthcare workers; knowledge; attitude

341. Clinical and pathologic features with diagnostic and management profile of sacral tumors: A Tunisian case series

Hnen Youssef, Eya Karabibene, Imen Helal, Raweh Hedhli, Ihsen Ben Brahim, Jouini Raja, Fatma Khanchel, Aschraf Chadli

Service d'anatomie et cytologie pathologique de l'hôpital Habib Thameur

Introduction: Tumors of the sacrococcygeal region (TS) are rare. They account for 1 to 7% of spinal tumors. They are usually tumor metastases of distant tumors. The most frequent primary malignant tumor of the sacrum is chordoma (> 50%). The giant cell tumor is the most common benign tumor.
Goal: To underline the clinical and pathologic features and to expose diagnostic and therapeutic modalities of TS.
Methods: It's a retrospective study of TS cases gathered at our Pathology department over a period of 22 years [2000-2022].
Results: Nine cases of TS were collected with pediatric population. They were 5 girls and 4 boys (sex ratio: 0.8). The average age was 7 years [1 days-20 years]. Present complaint was a sacred mass in all cases. On imagery an extension to the medullary canal was noted in only one case. Endopelvic and intra-abdominal extension of the tumor was observed in 2 cases. A biopsy was done preoperatively in three cases. Resection was with healthy margins in all cases. A recurrence was observed in a patient diagnosed with immature sacrococcygeal teratoma.
Discussion and conclusion: According to literature various studies have shown that computed-tomography guided biopsy is not very contributory to the diagnosis of TS. This is explained by the fact that this type of sampling brings back very little material. It's also associated with a risk of swarming of the biopsy path. As a result, surgical resection remains the gold standard for sacral tumors. Surgery is still a challenge for the surgeon given the risk of complications following spine surgery. The surgeon should preserve the nerve roots as much as possible to avoid sphincter and motor disorders of the lower limbs. Particular attention should be paid to the pelvic and abdominal structures. Such surgery can also interfere with lumbopelvic stability.

342. Mucinous Adenocarcinoma of bladder: Case Report

I.Smichi(1), W.Guedhrib(2), L.Ferchichi(1)

(1) cyto-anatomo-pathology departement of regional hospital of Kasserine

(2) urology departement of regional hospital of kasserine

Introduction: Primary adenocarcinoma of the bladder accounts for less than 2% of all bladder cancer

Case presentation: An otherwise healthy 40 year-old female patient presented with intermittent dysuria and macrohaematuria

Initial imaging with ultrasound showed a midline mixed echogenic mass at the dome of the bladder . Cystoscopy revealed a large inflammatory mass midline of the posterior bladder wall . Biopsy was consistent with a mucinous adenocarcinoma. CT scan of the abdomen and pelvis showed a lobulated mixed solid and cystic mass centred the urinary bladder, measuring up to 4cm.

Discussion: Mucinous primary bladder adenocarcinoma (PBA) usually appears at the bladder dome, trigone, and lateral wall. PBA occurs more frequently in geographic regions where schistosomiasis is endemic. Approximately 70% of PBA cases arise in the bladder cavity, especially in the posterior wall and trigone, and approximately 30% originate from the urachal remnant near the dome and anterior wall of the bladder. Morphologically, PBA causes a diagnostic dilemma for pathologists because it is difficult to differentiate from secondary involvement of the bladder by adenocarcinomas arising in adjacent organs, typically the colorectum, prostate, and female genital tract

Conclusion: Bladder adenocarcinoma is resistant to chemotherapy and radiation, surgery is currently considered the most effective treatment option. Thus, early diagnosis is crucial.The most effective diagnostic investigations are urinary cytology, cystoscopy, and biopsy followed by histopathological evaluation.

343. Survival among patients with squamous cell carcinoma of the mandibular gingiva classified N0

Khouloud Ismail, Sophia Jmel, Abdelaziz Boubaker*, Amir Eleuch, Sirine Tritar, Maha Ben Rejeb, Samia Ayachi, Abdelfateh Slama

Department of Maxillofacial surgery,Department of Anaesthesia and Intensive Care; Sahloul University Hospital, Tunisia

Introduction: The mandibular gingiva is the one of the most common site of oral cavity squamous cell carcinoma. This study aims to assess the survival outcomes among patients diagnosed with Gingival squamous cell carcinoma (SCC).

Patients and methods: We conducted a retrospective study of patients with Gingival squamous cell carcinoma (SCC) who were seen in the Department of Maxillofacial surgery at Sahloul University Hospital between 1999 and 2017. Inclusion criteria for this study were fulfilled in all patients.

Results: thirty-two patients were included in the study, all of whom were between 51 and 85 years old. 11 patients were women and 21 men. premolar and molar teeth was the preferred site in 24 cases (75%). Only one patient (3,1%) had histopathological early-stage disease (T1) 5 patients were staged as T2 (15.6%), 2 patients in T3 (6.3%) and 24 patients In T4 (75%).

Fourteen of the primary tumors were well-differentiated (43,3%), 14 (43,3%) moderately differentiated, and only 1 (3,4%) was poorly differentiated. Neck dissection was performed to all patients, bilateral in 8 patients (25%). The majority had an elective neck dissection, only 14 patients had a functional one and no one had a radical neck dissection. Seven patients (21,9%) were treated by postoperative radiation.

The mean follow-up in our study was 69.8 months. Local recurrence occurred in 2 patients (6,3%), a second location in the oral cavity occurred in two patients (6.2%), in 7 patients (21,9%) tumor recurred in the neck. Overall survival at 5 years was 75,9% and 61,3% at 10 years.

Conclusion: squamous cell carcinoma of the mandibular gingiva has unique clinical and pathological characteristics, and a new risk model to predict the overall survival and outcomes of patients can be proposed.

344. Management of scalp melanoma: a case report

Khouloud Ismail Mehdi Grira, Oussama mejri, Sirine Tritar, Samia Ayachi, Abdelfateh slama

Department of Maxillofacial surgery,Department of Anaesthesia and Intensive Care; Sahloul University Hospital, Tunisia

Introduction: Melanoma constitutes one of the most sinister and troublesome malignancies encountered by humanity. Scalp melanomas currently comprise 3–5% of all cutaneous melanomas, with higher recurrence and mortality.

Observation: We present a 57-year-old female, phototype III, who has a medical history of varicose veins of the lower limbs, and an Endometrial adenocarcinoma under exploration. She initially presented for evaluation of a parietal scalp lesion which was present for 2 months, during which she had noted it increasing in size. The examination revealed a darkly pigmented and nodular lesion, measuring approximately 2.0 × 2.0 cm in diameter with irregular Borders, with no palpable lymphadenopathy.

Biopsies were consistent with nodular invasive malignant melanoma, Clark level V, Breslow's thickness of at least 3mm and diagnosed as Stade IIA nodular melanoma. PET scans did not show any visceral or lymph node metastases. the patient was preoperatively staged as T3aN0M0.

Wide local excision with 2-cm margins was performed leaving behind a large, galeal scalp wound defect left for healing by secondary intention.

Her one-month follow-up visit showed a well-healing wound, and Treatment with chemotherapy was started.

2 months later, she developed a palpable lymphadenopathy, notably a right upper level 5 posterior cervical node of 2 cm in diameter and 2 other infra-centimetric retroauricular nodes. A full workup for metastatic disease was completed, including computed tomography of the thorax, abdomen, and pelvis, which did not show any suspicious lesions. Therefore, a selective right neck dissection was performed.

Conclusion: Nodular melanoma is a less common but more fatal melanoma subtype. It is a devastating skin malignancy and should be in suspicion for any skin lesion that present even in association with rare diseases.

345. Circulating immune cell subpopulations in breast cancer

Jafar U1,2, Thomas R2, Sikhondze M2, Alajez N1,2, Decock J1,2.
1 College of Health and Life Sciences (CHLS), Hamad Bin Khalifa University (HBKU), Qatar Foundation (QF), Qatar
2 Translational Cancer and Immunity Center, Qatar Biomedical Research Institute (QBRI), Hamad Bin Khalifa University (HBKU), Qatar Foundation (QF), Qatar

Background: Breast cancer treatment involves a combination of surgery, chemotherapy, and radiation, which may be complemented by targeted therapy and immunotherapy. Mounting evidence suggests that treatment efficacy is influenced by the presence of an active anti-tumor immune response, and conversely that treatment can trigger changes in immune cells. Furthermore, breast tumors display a heterogeneous tumor immune microenvironment which results in different clinical outcomes and treatment responses. In this pilot study, we characterize circulating immune cells in patients with different breast tumor subtypes, and before and after surgery.
Materials and methods: Peripheral blood mononuclear cells were isolated from blood samples of healthy controls (n=4), breast cancer patients with hormone receptor positive, Her2 positive (HR+Her2+) tumors (n=7) and patients with HR+Her2- tumors (n=6). Multi-parametric flow cytometry was utilized to identify T cell subsets such as CD4+, CD8+, naïve (TN), effector (TE), central memory (TCM), effector memory (TEM), PD1+, and regulatory (Treg) T cells.
Results: Breast cancer patients displayed an increase in the number of FoxP3+ Tregs and CD4+CD25+CD127hi T cells compared to healthy controls, indicative of an immunosuppressive response. Notably, we observed a significant increase in TCM and TN MFI in HR+Her2+ versus HR+Her2- patients, resulting from an increase in CCR7 expression which plays an important role in T cell homing to peripheral lymphoid organs. When comparing the phenotype of circulating T cells before and after surgical resection of HR+Her2- tumors, we found a significant downregulation of FoxP3 expression in Tregs post-surgery. Further analysis in relation to pathological responses is ongoing.
Conclusions: Our findings suggest that circulating T cells from patients with HR+Her2+ tumors likely exhibit enhanced T cell priming compared to cells from HR+Her2- breast cancer patients, which may affect treatment response. Further, we found that surgical resection of HR+Her2- tumors could induce the immune response through reduced Treg functionality.

346. Neuroendocrine Carcinoma of the Breast with Multiple Metastases: Case report

Jaouadi Souha, Bouida Amine, Aloui Marwa, Naija Lamia, Jaidane Olfa, Zemni Ines , Slimane Maher, Chargui Riadh, Dhiab Tarek
Surgical oncology department, Salah Azaiez institute, Tunis, Tunisia

Introduction: Neuroendocrine carcinoma of the breast is a distinctive and uncommon subtype of breast cancer presenting less than 0.1% of breast cancers. It challenges the conventional understanding of mammary malignancies. It exhibits a wide range of clinical behaviors, from indolent and hormone-responsive tumors to highly aggressive variants with propensity for early metastasis.
Case report: We present a case of a 54-year-old female patient diagnosed with neuroendocrine carcinoma of the left breast. At initial clinical presentation, the patient presented with a 3 cm palpable nodule in the left breast. A fine needle biopsy was practiced, confirming the diagnosis of neuroendocrine carcinoma of the breast. Imaging studies revealed no initial local extension. The tumor was classified T2N0M0 and the patient underwent modified radical mastectomy followed by Radiotherapy.
The follow-up was marked by the presence of cutaneous, adrenal, thyroid, and cerebral metastases. This systemic dissemination suggested an aggressive disease course.
The treatment included a multimodal approach involving hormonotherapy, chemotherapy, and local radiotherapy. However, despite these interventions, metastatic progression persisted.
With a grim prognosis, palliative therapeutic strategies were implemented to alleviate symptoms and enhance the patient's quality of life. Targeted therapy combined with hormone therapy was initiated in an attempt to control tumor growth. Supportive care was provided to manage neurological and cutaneous symptoms associated with cerebral and cutaneous metastases.
Discussion and Conclusion: This case report underscores the challenges posed by neuroendocrine carcinoma of the breast, particularly when associated with multiple and systemic metastases. Given the limited number of current cases, it remains uncertain whether breast neuroendocrine carcinoma should be approached in accordance with the established guidelines for more prevalent tumor types. As of now, there are no defined protocols for the staging and treatment of these tumors.

347. Squamous Cell Carcinoma in Gorlin-Goltz Syndrome: A Rare Association

S.Jmal, O.Mejri, M.Grira, E.Elleuch, M.Ben Rjab, A.Slama
Maxillo facial Surgery Department Hospital of Sahloul, Sousse, Tunisia

Gorlin-Goltz syndrome, also known as nevoid basal cell carcinoma syndrome (NBCCS), is a rare autosomal dominant genetic disorder caused by a mutation in the 'patched' tumor suppressor gene. This syndrome is characterized by various developmental anomalies, including odontogenic keratocysts of the jaws, multiple basal cell carcinomas, and skeletal abnormalities. Additionally, various neoplasms can be observed in association with NBCCS.

Case report: we present a case of a 70-year-old male patient with Gorlin-Goltz Syndrome who has been under treatment and regular follow-up since 2017. Throughout the course of the disease, the patient underwent a surgical removal of multiple basal cell carcinomas on the face, as well as numerous maxillary keratocysts. In November 2021, he presented with a right subdigastric cervical lymphadenopathy. The clinical and radiological evaluation did not reveal any primary site. The patient underwent a functional cervical lymph node dissection, and the definitive pathological analysis confirmed the presence of a moderately differentiated squamous cell carcinoma.

Discussion: While basal cell carcinomas and jaw cysts are well-known manifestations of the syndrome, the development of a squamous cell carcinoma (SCC) is a rare and challenging association.

Within the oral and maxillofacial field of NBCCS, various tumor types have been reported, including ameloblastoma, odontogenic myxoma of the maxilla, fibrosarcoma, spindle cell carcinoma, and SCC of the jaws. However, no case of an associated Squamous cell carcinoma of unknown primary of the head and neck (SCCUP) has been reported in the literature.

Conclusion: The development of SCC in Gorlin-Goltz syndrome adds complexity to the management of affected patients, necessitating thorough and vigilant monitoring. The rarity of this association underscores the importance of continued research to better understand the underlying mechanisms linking NBCCS and SCC. Early screening and timely intervention are crucial for improved treatment outcomes.

348. Management of Cutaneous Carcinomas in Xeroderma Pigmentosum Patients

Sofia Jmal Khouloud Ismail, Nouha Nafti, Syrine Tritar, Maha Ben Rjab, Abdelfateh Slama
Maxillo-facial Surgery Department, Hospital of Sahloul

Introduction: Xeroderma Pigmentosum (XP) is a rare genetic disorder characterized by a deficiency in the ability to repair DNA damage caused by ultraviolet light exposure. XP patients are highly susceptible to developing multiple cutaneous carcinomas, primarily due to their extreme sensitivity to sunlight. In these patients, management of cutaneous malignancies in the head and neck region poses several challenges, including a higher risk of recurrence and a more aggressive clinical progression.

This study aims to explore the various therapeutic options available and shed light on the challenges frequently encountered during the treatment process.

Methods: Between 2018 and 2022, 10 XP patients with face skin cancer were included. Demographic information and treatment approaches were evaluated.

Results: The mean age of the patients was 25.7 years (9-55) including 4 males and 6 females. basal cell carcinoma emerged as the most prevalent tumor type, with the nasal region being the most commonly affected location. Among the treatment modalities, local flap reconstruction stood out as the most frequently performed surgical intervention. On average, each patient underwent 1.5 surgical procedures, and 4 patients experienced local recurrences.

Conclusion: While significant progress has been made in understanding the genetic underpinnings of XP, there is yet to be a definitive treatment algorithm for managing its cutaneous malignancies. The standard approach involves early surgical intervention and vigilant monitoring, given the tumors' propensity for rapid growth and recurrence. Tailoring treatment to each patient's unique requirements and situation is imperative. Photodynamic therapy, curettage and electrodesiccation, as well as surgical excision, are commonly used methods. Oral isotretinoin, oral niacinamide, topical imiquimod and topical fluorouracil can be used for the prevention of skin malignancy. In cases of recurrent skin cancers or those located in high-risk areas, Mohs micrographic surgery is considered the most effective treatment.

349. Preliminary results of breast irradiation using the 'Fast Forward' protocol in the Tunisian center

Wael Kaabia1, Sarra Sghaier1, Amal Chamsi1, Ons Bettaieb1, Sabrine Tbessi1, Dalia Yazid1, Nadia Bouzid1, Samia Belajouza1, Sameh Tebra Mrad1

1Radiation oncology department, Farhat Hached hospital, Sousse, Tunisia

Purpose: The aim of this study was to evaluate the results in terms of dosimetry and early toxicities in the first breast cancer patients treated in our department using an extremely hypo-fractionated regimen.

Material and methods: We retrospectively analysed the records of breast cancer patients treated using the 'Fast-Forward' protocol (FF), between January 2021 and July 2023. Irradiation concerned the breast or chest wall alone at a dose of 26Gy in 5 fractions over one week. Acute toxicities were assessed according to the CTCAE v5.0. Clinical and dosimetric data were analysed.

Results: A total of ten breast cancers were treated in nine patients, one of whom had a bilateral form. The median age was 70 years (61-79). All tumours were classified as cT2N0M0, treated by radical surgery in 60% of cases. All patients were treated using a 3D-conformal mono-isocentric technique, supine on an inclined plane, using two tangential beams and high-energy photons. Coverage of the planning target volume (PTV) was ≥ 95% in 90% of cases. The volume receiving 105% of the dose was <7% and Dmax was kept <110% except for the patient treated bilaterally. For the heart, on average, V1.5Gy, V7Gy and Dmean(EQD2 α/β=3) were 9.15% (<30%), 3.48% (<5%) and 1.54Gy respectively. These values were higher for the left irradiations, while still being within the protocol limits. For the left anterior descending artery (LADA), V20Gy (EQD2 α/β=3) averaged 49% [0-69%] on the left side, vs. 0% on the right. V8Gy in the ipsilateral lung averaged 11% (<15%). Clinically, no cases of acute cutaneous toxicity grade ≥2 were noted. No cases of late cutaneous toxicity of grade ≥2 were found (median follow-up 6 months).

Conclusion: Using the FF regimen, we achieved dosimetric objectives at target volumes and organs at risk. Doses received by the LADA may be reduced using deep-inspiration breath-hold. A longer follow-up and a larger-scale study is needed.

350. Postoperative Management of Major Cancer Surgery outside Intensive Care Units: The Example of Maxillofacial Surgery

Abdelaziz Boubaker 1, Habiba Ben Hamada 1,3, Khouloud Ismail 2, Souha Guellim 1,3, Salma Garna 1, Wided Ghallabi 1, Ameni Mellouli 1, Farouk Jedidi 1, Samia Ayachi 2,3, Ajmi Chaouch 1,3, Walid Naija 1,3, Mohamed Kahloul 1,3.

1- Department of Anesthesiology and Intensive Care, Sahloul University Hospital, Sousse, Tunisia.
2- Department of Maxillofacial Surgery, Sahloul University Hospital, Sousse, Tunisia.
3- Faculty of Medicine "Ibn El Jazzar", Sousse, Tunisia.

Introduction: Major carcinological surgery is particularly prolonged and debilitating in maxillofacial surgery, with an increased risk of postoperative complications, particularly respiratory ones. Optimization of postoperative management has frequently involved routine admission to the intensive care unit (ICU). However, due to resource limitations, this postoperative care is now being conducted outside the ICU.

Objective: To determine the epidemiological and prognostic characteristics of patients who underwent postoperative management for major maxillofacial cancer surgeries outside the ICU.

Methodology: This was a retrospective, observational, and descriptive study involving 40 patients who underwent major cancer surgeries in the maxillofacial surgery department of Sahloul University Hospital between January 2019 and December 2021, and who did not have postoperative transfer to the ICU. The studied variables focused on the demographic, clinical, therapeutic characteristics of the patients and outcomes.

Results: The average age of our patients was 60, with extremes ranging from 31 to 90 years. All surgeries were scheduled (100%), with tumor excision and lymph node removal performed in 72.5% of cases. Intraoperative management included standard monitoring (100%), urinary catheterization (65%), arterial and venous catheterization (57.5%). The majority of patients (70%) did not experience any intraoperative incidents. 17.5% of patients received norepinephrine, and 12.5% required blood transfusion. Two patients (5%) underwent tracheostomy. The duration of surgeries exceeded 06 hours in 30 % of cases. In the post operative period, the majority of patients (80%) received multimodal analgesia. No transfers to the ICU were reported. Hospital stays were less than one week for 37.5% of patients and between 7 and 14 days for 40% of cases. No deaths were recorded.

Conclusion: Major surgery could be managed in the post operative period outside the ICU without an increased risk for the patients.

351. Patients' outcomes after Brain Tumor surgery

Mohamed Bacem Chanbeh, Habiba Ben Hamada, Souha Guellim, Salma Garna, Wided Ghallabi, Khalil Hochlef, Nesrine Bouji, Ajmi Chaouch, Walid Naija, Mohamed Kahloul

Department of Anesthesia and Intensive Care, Sahloul University Hospital, Faculty of Medicine "Ibn El Jazzar", Sousse, Tunisia.

Introduction: Brain tumors are a common condition in neurosurgery. Their surgical management requires multidisciplinary collaboration. to reduce postoperative complications such postoperative meningitis, early postoperative convulsions, postoperative intracerebral hematoma.

Aim: to assess the morbidity and mortality associated with brain tumor surgery.

Materials and Methods: This is a retrospective descriptive study conducted over a period of 2 years in a Surgical Intensive Care Unit. The study included all patients admitted to the ICU after scheduled craniotomy for tumor surgery. The studied variables included demographic characteristics, surgical, and perioperative data.

Results: Over a 2-year period, 80 patients were admitted to the surgical ICU after craniotomy for brain tumor. The mean age was 43.65 ± 19.09 years, ranging from 1 to 76 years. The sex ratio was 0.9. Half of the study population (52.5%) had no specific medical history. Temporo-parietal location was the most common (35.1%). Meningiomas were the most frequent tumor type in our series (55%). Preoperatively, 51.3% of patients were evaluated as ASA I, 35.5% as ASA II, and 13.8% as ASA III. In addition, 78 patients (97.5%) had a Glasgow Coma Scale between 13 and 15. Among the patients, 67 (83.8%) underwent primary craniotomy, while 13 (16.3%) were for recurrent cases. All patients underwent surgery under general anesthesia. Complete tumor resection was achieved in 69 patients (86.3%). Intraoperative incidents such as hypotension occurred in 25% of the study population, and 18.75% of patients experienced bleeding. Only 18.75% of patients required intraoperative transfusions, while 8.75% needed vasoactive drugs. Surgery duration ranged from 2 to 6 hours. The dorsal position was the most commonly used (87.5%), followed by the ventral position (7.5%) and lateral position (5%). Extubation occurred for 63.75% of patients a few hours after transfer to the ICU. Postoperative complications occurred in 49% of patients, with postoperative meningitis observed in 10% of cases. The mortality rate was 18.75%, with septic shock being the leading cause of death (40%).

Conclusion: Brain tumor surgery is associated with complications that impact both vital and functional prognosis. Improving outcomes and reducing mortality requires enhancements in technical skills and effective multidisciplinary collaboration among neurosurgeons, pathologists, oncologists, radiologists, and anesthesiologists.

352. Place of intra operative lidocaine infusion in open cancer colorectal surgery

Abdelaziz Boubaker, Habiba Ben Hamada, Souha Guellim, Ilhem Houichi, Bahaeddine Habli, Salma Garna, Wided Ghallabi, Ajmi Chaouch, Walid Naija, Mohamed Kahloul.
Department of Anesthesia and Intensive Care, Sahloul Academic Hospital, University of medicine, "Ibn Al Jazzar", Sousse, Tunisia

Background: Lidocaine, with its proven anti-inflammatory and analgesic effects is increasingly used as an adjuvant during general anesthesia. It seems to have an important role in enhanced recovery after colorectal surgery despite controversial findings in the literature. The main objective is to evaluate the interest of an intraoperative lidocaine perfusion on postoperative rehabilitation parameters after non laparoscopic colorectal surgery.
Materials and Methods: Thirty four patients were scheduled for elective non laparoscopic colorectal surgery under general anesthesia. Exclusion criteria were history of hepatic, renal or cardiac failure and allergy to local anesthetics. Patients with history of psychiatric disorder, arrhythmia or seizures were also excluded. Patients were randomized to receive either intra operative lidocaine infusion (bolus of 1.5 mg/kg then 2mg/kg/h until the end of surgery) or normal saline. Anesthetic protocol was the same for all patients. Postoperative multimodal analgesia was used combining morphine PCA, paracetamol and nefopam. We compared postoperative pain, morphine consumption and rehabilitation parameter in both groups. We used the Mann Whitney U test and the two factors ANOVA (Factorial analysis) to compare the judgment criteria between the 2 groups and their evolution over time.
Results and Discussion: Demographic and surgical data were comparable in all patients. We found a morphine sparing effect only at 48 hours postoperatively. The analysis of ileus duration, PONV incidence, time to postoperative ambulation, time of oral refeeding and length of hospital stay did not show any significant difference. In contrast, there was a decrease in intraoperative isoflurane consumption and an attenuation of the hemodynamic response during laryngoscopy in favor of the lidocaine group. Our results were similar to those found by Herroeder and Kranke, whom concluded to a beneficial effect of lidocaine on post operative pain scores at 24 hours only in laparoscopic colorectal surgery which is known to be less painful than open surgery.
Conclusion(s): Our study did not find a beneficial effect of IV lidocaine at the used doses on the recovery parameters after open cancer colorectal surgery.

353. Postoperative Management of Major Urological Cancer Surgery in intermediate monitoring units

Ghazi Karmi, Habiba Ben Hamada, Souha Guellim, Abdelaziz Boubaker, Salma Garna, Wided Ghallabi, Skander Laadhari, Ajmi Chaouch, Walid Naija, Mohamed Kahloul.

Department of Anesthesia and Intensive Care, Sahloul Academic Hospital, University of medicine, "Ibn Al Jazzar", Sousse, Tunisia

Introduction: The postoperative management of major urological cancer surgery had been ensured in intensive care units for decades. Recently, the increased numbers of these surgeries and the resources limitation have led to new routes of care such as intermediate monitoring units (IMU). These units, less sophisticated then ICU, offer a suitable care quality level for patients with serious chronic conditions or those scheduled for major surgeries. However, their real effectiveness has not been assessed in our context. The aim of this study was to assess the outcome of patients who had had a postoperative management of their major urological cancer surgeries in intermediate monitoring units.

Methods: This is an observational, retrospective, and descriptive study enrolling all patients undergoing major urological cancer surgeries, in the urological surgery department of Sahloul teaching hospital, over a 3-month period, who did not require postoperative transfer to the ICU. The studied variables included demographic, clinical, therapeutic characteristics and outcomes of patients.

Results: Our study included 30 patients. The mean age was 25.65 years, with a male predominance (77%) and a sex ratio (SR) of 3.34. Main chronic conditions were hypertension (20%), diabetes (13.3%), and chronic obstructive pulmonary disease (13.3%). ASA II status was noted in 70% of cases. The majority of patients (43.33%) underwent radical nephrectomy. In our study, no cases of transfer to the ICU or in-hospital mortality were recorded. No postoperative complications were noted. Mortality at on month was nil.

Conclusion: IMU may improve patient's outcomes; reduce the risk of nosocomial complications, and conserve resources. These encouraging results suggest adopting this strategy. However, further studies on a larger population are necessary before definitive conclusions.

354. Intraoperative hemodynamic status in elderly patients undergoing major urological cancer surgery: individualized versus standard thresholds

Mohamed Bacem Chanbeh 1, Habiba Ben Hamada 1, Ghassen Tlili 2, Souha Guellim 1, Samer Ben Ammou 1, Chourouk Gouaou 1, Salma Garna 1, Mohamed Ajmi 1, Ajmi Chaouch 1, Walid Naija 1, Khaireddine Bouassida 2, Mohamed Kahloul 1.

1- Department of Anesthesia and Intensive Care, Sahloul Academic Hospital, University of medicine, "Ibn Al Jazzar", Sousse, Tunisia

2- Department of Urology, Sahloul Academic Hospital, University of medicine, "Ibn Al Jazzar", Sousse, Tunisia

Introduction: Intraoperative organ perfusion optimization is a real challenge, especially in elderly patients undergoing major urological cancer surgery, in order to avoid serious repercussions, such as cardiovascular, renal and neuropsychiatric ones.

Aim: To compare the incidence of organic dysfunctions according to two targets of intraoperative mean arterial pressure (MAP), a standard threshold of 65 mmHg and an individualized threshold equal to the preoperative MAP.

Method: A randomized, controlled single-blind clinical trial, carried out in the urological department of the academic hospital of Sahloul (Tunisia), over a 15 month-period, enrolling patients over than 65 years old, scheduled for major cancer surgery. Sixty patients were randomized between two equal groups: Group standard MAP (MAPs) and group individualized MAP (MAPi). Outcomes criteria were the occurrence of postoperative myocardial, renal, neurological complications and postoperative mortality. Neurological complications were assessed by the MOCA score.

Results: Both groups were comparable according to socio-demographic characteristics and surgical indications. The mean age was 67.5±8.12 years in MAPs group and 64.05±8.65 years in MAPi group (p=0.2). Postoperative renal failure was observed in 5 cases (16%) in the MAPs group and in a single case in the MAPi group, with no significant difference between the two groups (p=0.09). Mean postoperative MOCA score was 22.26 ± 5.91 in the MAPs group and 21.36 ± 4.39 in the MAPi group with no significant difference between the two groups (p=0.5). No postoperative cardiac complications were observed in both groups. The mean length of stay was shorter for the MAPi group (9.3 ± 3.64 vs. 10.33 ± 4.89 days); (p=0.35).

Conclusion: The individualized hemodynamic approach is at least comparable to the standard one, in terms of postoperative organic dysfunctions. Further studies are needed for a definitive conclusion.

355. Microbiological profile of bile in patients undergoing pancreatoduodenectomy

Mouna Belaid 1, Habiba Ben Hamada 1, Souha Guellim 1, Mohamed Aya Alrahman Rouis 1, Houssem Ammar2, Wided Ghallabi 1, Ilhem Houichi 1, Nouha Dammak2, Ajmi Chaouch 1, Walid Naija 1, Mohamed Kahloul 1.

1 Department of Anesthesiology and Intensive Care, Sahloul University Hospital, Sousse, Tunisia.

2 Department of general surgery, Sahloul University Hospital, Sousse, Tunisia.

Background: Preoperative biliary drainage was widely indicated to prevent the consequences related to cholestasis and retention of bile salts. However, it may lead to biliary contamination with the risk of developing antibiotic resistance germs. The aim of this study was to determine the microbiological profile of the bile sampled from patients who underwent pancreatoduodenectomy.

Materials and methods: This is a descriptive study enrolling all patients scheduled for pancreatoduodenectomy between June 2020 and December 2021. An intraoperative sample of bile was collected before the bile duct resection and immediately sent for culture. Demographic and clinical information were prospectively collected using a form established from the literature. Statistical analyses were performed utilizing the SPSS version 21. The categorical variables were analyzed by Chi-2 test and U of Mann Whitney test. A P value< 0,05 was considered statistically significant.

Results: Thirty six patients with mean age of 63,22 years were included. The most common comorbidity was diabetes (41,7%). The indications for pancreatoduodenectomy were dominated by the pancreatic head carcinoma (50%). 50% of patients underwent preoperative biliary drainage for a median of 29 days. Bile culture was positive in 50% of cases with a polymicrobial profile in 44%. The microorganisms cultured were Enterobacter species (55,6%), Gram-positive cocci (31,1%), Gram-negative bacilli (11,1%) and Fungi (2,2%). They had wild phenotype in 64,4% and were antibiotic resistant in 28,9% of cases. The rate of postoperative infectious complications was 14% : intra-abdominal abscess (5,6%), severe sepsis (5,6%), postoperative peritonitis (2,8%). The rate of antibiotic prophylaxis compliance was higher in the group of patients without preoperative biliary drainage : 88,9% vs 27,7% (p=0,001).

Conclusion: Preoperative biliary drainage is a risk factor of bacteriobilia after pancreatoduodenectomy. An appropriate perioperative antibiotic therapy reduces postoperative complications. Therofore, by taking into consideration the bile contamination after biliary drainage, a local antibiotic prophylaxis protocol would be necessary.

356. Enhanced recovery after carcinologic surgery: A survey among anesthetists

Rami Ayadi, Habiba Ben Hamada, Souha Guellim, Mouna Belaid, Salma Garna, Wided Ghallabi, Omar Fakhfakh, Ajmi Chaouch, Walid Naija, Mohamed Kahloul.

Department of Anesthesia and Intensive Care, Sahloul Academic Hospital, University of medicine, "Ibn Al Jazzar", Sousse, Tunisia

Introduction: Enhanced Recovery After Surgery (ERAS) is a collection of well-standardized practices for perioperative management of patients scheduled for surgery. These guidelines significantly reduce post-operative complications, hospital stay and health care costs mainly in carcinologic surgery.

Aim: To assess anesthetists' knowledge and practices regarding enhanced recovery after carcinologic surgery.

Methods: This is a descriptive study enrolling anesthetists of a teaching hospital. A self-administered questionnaire was distributed to participants. The data collected covered the socio-professional characteristics of the participants, their knowledge and the degree of compliance with the different standardized elements of ERAS. Obstacles to the implementation of this rehabilitation and possible suggestions for better care were also sought.

Results: A total of 50 anesthetists participated in the study. The majority were female (85%), older than 40 years (65%), working continuously in the same operating room and had experience of more than 10 years (87.5%). In half of the cases, intestinal preparation and administration of carbohydrate are not done before surgery. However, long-acting premedication and prophylactic antibiotics 30 minutes before surgery were prescribed.

In one third of cases, locoregional anesthesia is used, and treatments to prevent chronic pain are given. In our study, the main eras items recognized by our participants were IV analgesia in 72.5% of cases, early refeeding (62.5%), preventing hypothermia (60%), ambulation (47.5%) and preventing nausea and vomiting (45%). However, other elements were given less consideration, such as early catheter removal (22.5%) and chewing gum (17.5%).

The average length of hospital stay was three days according to 62.5% of anesthesiologists. The main difficulties in setting up ERAS protocols were the lack of awareness among staff (70% of cases), the absence of ERAS referents (47.5%), the limitation of human resources (30%) and logistical resources (32.5%) and the absence of institutional strategy (27.5%).

Conclusion: ERAS has been shown to be effective in reducing perioperative morbidity and mortality mainly in carcinologic surgery. Its implementation in our practice requires good multidisciplinary coordination and an adequate transmission of knowledge within the care team.

Keywords: ERAS, post-operative rehabilitation, anesthesiologists

357. Epidemiological characteristics and outcomes of patients admitted to intensive care units after a major cancer surgery

Mouna Belaid, Ben Hamada Habiba, Souha Guellim , Salma Garna, Wided Ghallabi, Mohamed Mongi Ghdira, Mohamed Aya Alrahman Rouis, Ajmi Chaouch, Walid Naija, Mohamed Kahloul.

Department of Anesthesia and Intensive Care, Sahloul Academic Hospital, University of medicine, "Ibn Al Jazzar", Sousse, Tunisia

Introduction: With the rising life expectancy, major cacinologic surgeries of patients with multiple comorbidities have become more frequent. Thus, the number of patients requiring a postoperative management in intensive care units continues to increase. This benefit should be analyzed according to the risk of ICU related adverse events and the economic constraints.

The aim of this study is to assess the outcome of patients admitted to ICU after a major carinologic surgery.

Materials and methods: This is a descriptive study enrolling all patients for a post operative management of a major carcinologic surgery admitted to surgical intensive care units between January 2019 and December 2021.

Information were collected retrospectively. The analyzed variables were: the epidemiological characteristics (age, gender, BMI, ASA grade, medical and surgical history), data related to the anesthetic management (anesthetic protocol, incidents during anesthesia, postoperative analgesia), to the surgical management (the surgery, the indication for surgery, urgency of surgery, the duration, and the incidents) and the patients outcome (complications, invasive treatment, surgical revision, length of hospital stay, mortality).

Results: One hundred patients were included. The mean age was 55 years. The patients were aged over 70 years in 47% of cases. The proportion of men was higher (SR= 1.12). The BMI was > 30 in 89%. Patients had ASA II status in 51% of cases. The surgery was elective in 81% of cases. The most performed carcinologic surgeries were indicated for gastrointestinal cancers (50%) and neurological cancer in 30%. 72% of patients did not require specific therapies in intensive care unit. For the other patients, the main complications were hemorrhage (48%), respiratory problems (34%) and infectious diseases (2%). These patients required invasive mechanical ventilation in 28% of all cases, vasopressors in 15% of cases, non invasive mechanical ventilation in 10% and blood transfusion was in 2% of cases. The ICU length of stay was over 96 hours in 51% of cases. 5% of patients were readmitted to ICU. The hospital mortality rate was 14%.

Conclusion: Postoperative management of major carcinologic surgeries in ICU didn't include specific therapies in the majority of cases, suggesting the possibility of a route of care outside the ICU.

358. Intraoperative Continuous Positive Airway Pressure to reduce respiratory complications after urologic carcinology surgery

Ghazi K 1, Habiba B H 1, Souha G 1, Ghassen T 2, Abdelaziz B 1, Marouane B 1, Ahmad L 2, Ajmi C 1, Walid N 1, Khaireddine B 2, Mohamed K 1.

1- Department of Anesthesia and Intensive Care, Sahloul Academic Hospital, University of medicine, "Ibn Al Jazzar", Sousse, Tunisia 2- Department of Urology, Sahloul Academic Hospital, University of medicine, "Ibn Al Jazzar", Sousse, Tunisia

Background: Respiratory postoperative complications are common after carcinology surgery. Their management includes Non Invasive Ventilation therapy, which may also be used intraoperatively as a preventive measure. The purpose of this study is to evaluate the effect of intra operative **Continuous** Positive Airway Pressure (CPAP) in patients with a higher risk of postoperative respiratory complications, undergoing urologic carcinology surgery under spinal anesthesia (SA).

Materials and Methods: It's a single-blind randomized study, conducted in the urology operating room at Sahloul teaching hospital over a 3 month period. After the agreement of the local Ethics Committee, 30 patients proposed for endoscopic tumor resections under SA and presenting risk factors of postoperative respiratory complications were included in the study. These patients were randomized into 2 groups of 15 each: an intervention group (with intra-operative CPAP) versus a control group.

Results and Discussion: Both groups were comparable according to demographic characteristics. Average age was 69.73 years with a sex ratio of 4. Average BMI was 35.09 kg/m2. Respiratory history was noted in 56.6 % of cases. Smoking history was noted in 80 % of cases. A status ASA III was noted in 70 % of cases. CPAP allowed a significant improvement in the SpO2 immediately after SA (p=0.02), at the 15th minute (p=10-3) and at the 30th minute (p=0.002) of intra operative period. It also allowed a significant improve of the SaO2 after the SA realization (p=0.013), in postoperative period (p=0.015) and at hospital discharge (p=10-3). A single case of hemodynamic compromise with CPAP was noted. No postoperative respiratory complication was noted in the intervention group versus 4 cases in the control group (p=0.03). Average length of hospital stay and the incidence of respiratory complications at 1 month were in favour of the CPAP without significant difference.

Conclusion(s): Intra operative CPAP improves the oxygenation parameters and reduces the rate of respiratory complications. Other studies with a wider population and a longer follow-up are necessary before any definitive conclusion.

360. Effectiveness of a conscious sedation protocol with remifentanil in urologic tumor endoscopic procedures

Rami Ayadi 1, Habiba Ben Hamada 1, Ghassen Tlili 2, Souha Guellim 1, Mouna belaid 1, Ahmad Loghmari 2, Salma Garna 1, Achref Hazgui 1, Ajmi Chaouch 1, Walid Naija 1, Khaireddine Bouassida 2, Mohamed Kahloul 1.

1- Department of Anesthesia and Intensive Care, Sahloul Academic Hospital, University of medicine, "Ibn Al Jazzar", Sousse, Tunisia

2- Department of Urology, Sahloul Academic Hospital, University of medicine, "Ibn Al Jazzar", Sousse, Tunisia

Background: Anesthesia management in urology poses particular challenges. Even minimally invasive procedures such as tumor endoscopic interventions may be associated with an important risk of postoperative complications. By extrapolating data related to digestive endoscopic procedures under remifentanil infusion, we established a similar protocol for urologic endoscopy in our institution. The aim of this study is to evaluate its effectiveness in urologic endoscopic procedures.

Materials and Methods: This is an observational study conducted in a Tunisian urologic operating room over a 3 month period. The purpose of the study was to evaluate the effectiveness of a local protocol that consists to perform urologic tumor endoscopic procedures under conscious sedation with remifentanil alone (bolus of 1mcg/kg of remifentanil during 1 minute then a continuous infusion of 0,2mcg/kg/min). Inclusion criteria were patients scheduled for simple urologic tumor endoscopic procedures. Exclusion criteria were chronic respiratory diseases and criteria of difficult airway management. The first end point was the failure rate of the studied protocol, defined by the need to convert to general anesthesia. Second endpoints were intra operative complications and patient's satisfaction.

Results and Discussion: During the study period, 51 patients were enrolled. Average age was 65.90 ± 6 years. Sex ratio was 2.64. Average BMI was 29.41 kg/m2. ASA status >2 was found in 25.5%. The failure rate was 9.8%. The main intraoperative incidents were: Visual Analogic scale pain level > 3 (13 patients), thoracic rigidity (2 cases) and bronchospasm (1 case). The dissatisfaction rate was 27.5% in patients, 15.7% in anesthesiologists and 19.6% in surgeons.

Conclusion(s): Conscious sedation protocol with remifentanil in high-risk elderly patients undergoing urologic tumor endoscopy procedures can be safe. However it could be improved by using Target Controlled Infusion technique or by combining pharmacologic and non-pharmacologic adjuvants.

361. Chromoblastomycosis: A skin pathology you should know

Youssef Hnen, Eya Karabibene1, Imen Helal 1, Raja Jouini1, Ehsen Ben Brahim 1, Badri Talel2 , Fatma Khanchel1 , Aschraf Chadli Debbiche1

1-Service d'Anatomie et de cytologie Pathologique Hôpial Habib Thameur , Tunis

2- Service de dermatologie, Hôpial Habib Thameur , Tunis

Introduction: Chromoblastomycosis (CB) is a rare fungal infection of the skin and subcutaneous tissue caused by the pigmented dematiaceous fungi. CB occurs mainly in tropical and subtropical regions. It's a chronic skin infection, resulting in warty skin lesions. Diagnosis is made on histopathology by pathognomonic findings or by identification and culture of the fungi.We present a case to demonstrate the histopathologic features of CB.

Case report: A 72-year-oldman, presented with 7cm erythematous plaque on his back, covered with several scales and some oval pustules. The skin lesion had a chronic 12-year course. The referent physician suggested psoriasis and neoplasia as a differential diagnosis. Skin biopsy under light microscopy showed pseudoepitheliomatous hyperplasia with hyperkeratosis of the epidermis, and a superficial suppurative dermal inflammation with numerous epithelioid and gigantocellular granulomas. Multiple brown-pigmented, rounded, aggregate bodies were found in the middle of the granulomas. They were bigger than red blood cells and had a PAS positive staining reaction. Underlying derma was normal. Diagnosis of CB was made.

Commentary: Chromoblastomycosis is a rare chronic dermal infection caused by pigmented fungi. CB is a worldwide infection but found mainly in tropical and subtropical regions. Its incidence is probably underestimated. Clinically it begins with an erythematous slightly itchy macule, then slowly spreads. Diagnosis is made by identification or culture of the fungal agent after the biopsy or scraping. On histopathology, brown pigmented, bodies known as fumagoid cells also called muriform cells, or cooper pennies are pathognomonic. They are found in the superficial dermal inflammation extracellularly or intracellularly in the pyogranuloma or less frequently in tuberculoid granulomas.

As a conclusion, CB is a rare skin infection especially in our country. Diagnosis is easy with pathognomonic findings such as fumagoid cells. Management is difficult, so CB needs an early diagnosis to prevent complications.

362. Prognostic value of galectin-3 in pancreatic cancer: case series

Youssef Hnen, Imen Helal, Raweh Hedhli, Ihsen Ben Brahim, Jouini Raja, Fatma Khanchel, Aschraf Chadli

Service D'anatomie Et Cytologie Pathologique Habib Thameur, Tunis

Background: Primary carcinoma of the pancreas is a relatively rare entity with poor prognosis. For prognosis purposes, many immunohistochemical markers have been studied, including the galectin-3. Our study aims to identify the expression of galectin-3 in pancreatic cancers, and to determine his prognostic value.

Methods: Retrospective and analytic study conducted in the pathology department of the Habib Thamer university hospital over a period of 14 years (2001-2015). Galectin-3 expression was studied by immunohistochemistry, using an immunoreactive score which is calculated by multiplication of positive cells proportion score and staining intensity score. Based on this score, two groups of galactin-3 expression were obtained: a low-grade group (score ≤ 3) and a high-grade group (score > 3).

Results: We found 39 cases. Most of them were males, with median age of 59-year-old. Ductal adenocarcinoma was identified in 95% of cases, was well-differentiated in 54% and essentially classified as pT3 (54%) N1 (67%). The immunohistochemical findings has showed that 87% of pancreatic cancers overexpressed galectin-3 (score > 3). The were significant correlation between the overexpression of the galectin-3, the tumoral location (p=0.036) and the histological type (p=0,002). There was no significant correlation with the age, the gender, the tumor status T or the nodal involvement N.

Discussion: In similar series on literature, samples sizes were more important than our study, the means of measurement of galectin-3 expression were variables and the results remain controversial. Nevertheless, same results were found in studies that used same methodology.

Conclusion: The galectin-3 is overexpressed in the most ductal adenocarcinoma of the pancreas. A significant correlation was found with the histological type and with tumoral location, which is not satisfying to consider the galectin-3 as a reliable pancreatic cancer prognostic factor.

363. A rare tumor with atypical location: embryonal tumor with multilayered rosettes

Youssef Hnen, Khemir A, Khanchel Fatma, Jouini Raja, Koubaa W, Hlel I, Mansouri N, Ben abdallah R, Trabelsi R, Ben Brahim S, Chadly Achraf

Service d'Anatomie et de cytologie Pathologiques Hôpial Habib Thameur , Tunis

Introduction: Embryonal tumor with multilayered rosettes (ETMR), C19MC-altered is rare malignant tumors of the central nervous system (CNS). The disease affects mainly the pediatric population, both sexes equally. It's a cerebral tumor with very aggressive clinical course. Diagnosis is suggested by morphological aspect and immunohistochemical profile and is confirmed by identification and amplification of C19MC locus on chromosome 19.

Goal: We present a case report of ETMR with an atypical sacral location to underline the anatomopathological features and the molecular profile of this entity.

Case report: It's a male infant, born with polymalformative syndrome, and followed for a psychomotor developmental delay, who presented with a sacral mass with a one-year clinical course. He has a poor weight gain and unexplained loss of energy. Spinal medullary MRI showed a subcutaneous retro-sacral solid mass measured 16 mm of great axis with an outgrowth in the coccygeal canal. On macroscopic study, gross resection piece measured 9 cm. It's a gray-white colored, irregular tumor, partially encapsulated. Histologically, it's a high-density cellular proliferation with necrosis. It's a biphasic tumor, with multilayered rosettes where cells have an atypical oval-shaped highly-mitotic nuclei. Rosettes were intermingled with small round-shaped undifferentiated cells in a fibrillary background. Immunohistochemical study, demonstrated a high positivity of CD99 and vimentin with a low-positivity of anti-GFAP. Ki-65 labeling index was approximately 90%. Histological findings suggested the diagnosis of ETMR and was confirmed with genetic study of C19MC. Due to poor prognosis the patient was put on palliative care.

Discussion: In the 2016 WHO classification of tumors of the CNS, embryonal tumors represent heterogenous group of highly-malignant tumors in which primitive cells have numerous morphologic and molecular features. Amplification of C19MC is a diagnostic criterion for ETMR. They have a poor prognosis with complete surgical resection and radiotherapy as a management strategy.

364. Invasive micropapillary carcinoma of the breast: a case series of an under-recognized entity

Khaldi.O 1, sbika. W1 ,Jbir.I2,Ben ammar.N2,Touinsi.M1, belfkih.H1, Touinsi.H2

1) Department of medical oncology- Taher Maamouri hospital- Nabeul

2) Department of general surgery -Taher Maamouri hospital- Nabeul

Background: Invasive micropapillary carcinoma (IMPC) of the breast is an aggressive and rare variant of breast cancer characterized by high-grade lymphovascular invasion and a high incidence of axillary lymph node metastases. The aim of this study was to investigate the clinic-pathological features and immunohistochemical profile of (IMPC).

Methods: The data of 15 patients with IMPC treated in Taher Maamouri Hospital between 2018 and 2023 were retrospectively reviewed

Results: The age at presentation ranged from 31 to 86 years (mean 58 years). The tumor size ranged from 18 to 80 mm (mean 45 mm).

The main radiological findings were nodules. Microcalcifications were noticed in two cases. At presentation,53% of them were staged T4b and none of them had distant metastasis. Fine needle biopsy with histological study and immunochemistry were performed for all patients.

The percentage of micropapillary components ranged between 10 and 100%. 53% of cases had a high histological grade. 93% of cases were positive for estrogen receptor (ER) and 66%for progesterone receptor (PR). 4 cases presented Her 2neu amplification. The mean value of Ki67 was 33%, ranging between 60% and 10%.14 patients had surgical treatment and 7 patients had neo-adjuvant chemotherapy.92% of cases who had axillary lymph node dissections had positive lymph nodes; and 63% had lymphatic invasion. Of lymph node-positive cases, 75% had four or more metastatic lymph nodes. The median follow-up was 20 months.2 patients had local recurrence and 2 patients had distant metastases

Conclusion: Despite the rarity of IMPC, recognition of this distinctive and aggressive variant is crucial because of its poor prognosis and high incidence of lymph node metastases.

365. Peritoneal tuberculosis mimicking advanced ovarian cancer: a diagnostic dilemma in developing countries

Khaldi. O, Ben othmen.S, Sakhri.S , Zemni.I, Ayadi.MA, Dhieb. T

Department of oncologic surgery Salah Azaiz Institut-Tunis

Background: Peritoneal Tuberculosis (PT) is an extra-pulmonary tuberculosis, which involves the parietal and visceral peritoneum, the omentum, and the female genital tract. It's a mimicker of advanced ovarian cancer. Diagnosis remains challenging even for experienced clinicians. We aim to report our experience as an oncology expert center in the management of peritoneal tuberculosis in an endemic country

Methods: Clinical and pathological features of patients diagnosed with PT, at the surgery department of Salah Azaiz Institut between 2014 and 2021, were retrospectively reviewed

Results: 12 Patients were included. The median age was 45 Years old ranging between 16 and 80 years old. The most common socioeconomic status was low (66%). None of them had a history of pulmonary tuberculosis. The main symptoms were abdominal distension and pain in 11 cases and weight loss in 1 case. Upon physical examination, ascites were found in 91% of cases. CA-125 elevation was reported in 75%, with a mean value of 480. On imaging studies the common findings were as fellow: ascites (83%) peritoneal carcinomatosis (50%), adnexal masses (66%) omentum and mesentery thickening and nodules (41%), and lymph node enlargement (50%) All patients underwent surgery: 9 cases had a laparoscopy and 3 laparotomy due to severe adhesion. All patients had a peritoneal biopsy,3 had an omental biopsy, and 2 had unilateral adnexectomy. All patients had histological confirmation and were referred to the infectious disease department for further workup and anti-tuberculosis treatment.

Conclusion: In endemic countries, the diagnosis of PT should always be considered in patients with ascites, carcinomatosis, or adnexal masses. Laparoscopy should be performed to establish the diagnosis of PT and rule out ovarian malignancy.

366. Male breast cancer: a series of 5 cases

Khaldi.O 1,Jbir.I2, sbika.W1,Ben ammar.N2,Touinsi.M1, belfkih.H1, Touinsi.H2

1) Department of medical oncology- Taher Maamouri hospital- Nabeul

2) Department of general surgery -Taher Maamouri hospital- Nabeul

Background: Breast cancer, the first malignant disease among women, remains uncommon in men accounting for less than 1% of all cases of breast cancer. Given the rarity of this disease, the only way to study its characteristics is the retrospective analysis of several small series over several years. The aim of this study is to analyze the epidemiological, clinical, and therapeutic data of male breast cancer cases treated in our institution.

Methods: We retrospectively reviewed five cases of male breast cancer treated at Taher Maamouri Hospital between 2018 and 2023.

Results: The average age was 52 ranging between 37 and 69 years. The main symptom is retro areolar breast mass with edema and nipple retraction in one case. The main radiological findings were nodules. The median size of the tumor was 42 mm. One patient had distant metastasis at presentation. Four patients underwent surgery: mastectomy with lymph node dissection which was positive in all of them. The definitive histopathological assessment showed invasive breast carcinoma associated with solid papillary components in 2 cases.

All of them had positive hormonal receptors and one of them presented her2neu amplification. The mean value of Ki67 was 31%.

Four patients received hormonotherapy (Tamoxifen) and one patient received adjuvant chemotherapy in addition to trastuzumab.

Two patients developed local recurrence and distant metastasis after 6 and 12 months of surgery. They died after 18 and 20 months of follow-up.

Conclusion: Treatments for male breast cancer have been mostly extrapolated from studies on female breast cancer due to the lack of data. Mastectomy with lymph node sampling is the standard treatment. Hormonotherapy/adjuvant chemotherapy can be recommended based on the hormonal receptors' status.

367. Desmoplastic small round cell tumors: A diagnostic and therapeutic challenge

Khaldi.O, Ben Othman.S, Ben Ammar.N, Bouida.A, Ayadi.MA, Zemni.I, Dhieb.T

Department of surgical oncology, Salah Azaiz institut Tunis

Background: Desmoplastic small round cell tumor (DSRCT) is a very rare type of soft tissue sarcoma with an incidence estimated between 0.2 and 0.5 new cases per million per year. Owing to limited literature published on DSRCT, making an accurate diagnosis and offering optimal treatment have been challenging for oncologists.

Materials and methods: Data of 6 patients referred to our department for DSRCT were retrospectively reviewed. The clinical manifestations, pathological characteristics, treatment approaches, and prognosis were analyzed.

Results: 6 patients were identified (4 males and 2 females). The mean age was 22 years old ranging between 16 and 32 years old. All patients presented symptoms at diagnosis including abdominal pain and distension, gastro duodenal reflux, anorexia, weight loss and dysuria. All of them were with no past medical history. One patient had only ganglionic disease and five patients had abdomino-pelvic disease. The median tumor size was 14 cm ranging between 8 cm and 26cm. Diagnosis was histologically confirmed for all the patients.5 patients had pre-operative chemotherapy based on vincristine, ifosfamide, doxorubicin, Etoposide (VIDE). Only two of them had clinical and radiological response .50% of our patients had debulking surgery and 33% had post-operative radiotherapy. Among patients having debulcking surgery only 2 cases had complete surgery R0 and one of them had ganglionic relapse 6 months after surgery. The median OS was 24 months. Three patients died during follow-up.

Conclusion: DSRCT is a rare aggressive soft tissue sarcoma with poor outcomes. Multimodal treatments, including surgery performed in expert centers, multi-drug chemotherapy, and radiotherapy can improve survival. Currently, new therapeutic approaches such as targeted therapy and immunotherapy are being studied to expand the treatment options and guide some patients to cure.

368. Non-squamous cells vulvar tumors: A single-center experience

Khaldi.O, Ben Ohman.S, Ben Ammar.N, Bouida.MA, Ayadi.MA, Zemni. I, Dhieb.T

Department of Surgical Oncology Salah Azaiez Institut of Tunis

Background: Vulvar cancer is a rare malignancy, representing 0.65% of all female cancers. While invasive vulvar squamous-cell cancers represent 90% of vulvar cancer, non-squamous cell tumors of the vulva are a rare entity. Due to their rarity and the presence of different clinicopathologic characteristics for each, there is no standardized treatment regimen for these tumors. We herein report our experience in the management of this entity.

Materials and Methods: We retrospectively reviewed the data of 11 patients who were treated for non-squamous cancer of the vulva between 2011 and 2022 at Salah Azaiez Institute of Tunis.

Results: A total of 11 patients were included. The mean age was 32 years. The main complaint was a vulvar painless mass. The mean tumor size was 5.1 cm ranging between 3 and 10 0.5-6 cm. The histopathologic diagnosis of the patients was as follows: malignant melanoma in 6 patients, adenoid cystic carcinoma in 2 patients, low-grade fibromyxoid sarcoma in 2 patients, Darier-Ferrand dermatofibrosarcoma in 1 patient. For all patients, surgery was the primary treatment: five patients underwent total vulvectomy with bilateral inguinofemoral lymphadenectomy, three patients had local excision, one patient had simple vulvectomy and one patient underwent wide local excision and sentinel lymph node investigation. This patient had local recurrence 4 months later and had a radical vulvectomy and lymph node dissection. Histological findings showed free margins in 10 patients. 27.2% of patients had adjuvant radiotherapy. No adjuvant treatment was considered necessary for the other patients. Only one patient has distant metastasis one year after surgery. The median disease-free survival was 15 months and the median overall survival time was almost 24 months.

Conclusion: Non-squamous cell vulvar cancer is a rare entity including a heterogeneous group of tumors. Malignant melanoma remains the most aggressive one. Multicenter prospective studies are necessary to standardize the treatment of these rare tumors.

369. Breast fibromatosis a 15 year-experience

Khaldi.O, Ben Othman.S,Sakhri.S, Saadallah.F, Bouaziz.H, Dhieb.T

Department oncologic surgery Salah Azaiez Institut -Tunis

Background: Breast fibromatosis (BF) is a rare neoplasm representing 0.2% of all breast tumors. Due to their low incidence, there is no clear recommendation for this specific location. Our aim is to report our 15-year experience in the management of BF.

Materials and methods: We conducted a retrospective study of all patients admitted to our institution for BF between 2007 and 2022. Clinicopathological features, therapies, and follow-up data were retained from medical files.

Results: Ten patients were identified. The median age at diagnosis was 46 years old (between 26 and 71 years old). No medical history of breast surgery or cancer was noted. At presentation, all patients had palpable mass and one had skin retraction. The mean size at diagnosis was 5cm. Mammography and ultrasonography revealed solid masses with irregular margins in 50% of cases but without calcifications. BIRADS classification was distributed as follows: Three BIRADS-3, five BIRADS-4B, and two BIRADS-4C. 70% of them underwent core biopsy. All patients diagnosed with BF were discussed at the departmental weekly breast meeting. 90% of cases underwent wide local excision while only one was treated using a watch-and-wait approach and progressed after 3 months of follow-up. Clear margins were obtained in 9 patients and only one had a re-excision. Immunochemistry demonstrated positive staining for actin in 3 cases, beta-catenin in 5 cases, and desmin in 2 cases. Two patients stained positive for s100 and one for CD34. Median follow-up is estimated at 36 months only 2 patients had recurrence.

Conclusion: BF is a rare entity with high recurrence rates. Management remains controversial because of limited data. Dedicated guidelines are required to ensure better outcomes.

370. Metastatic and/or locally advanced kidney cancers: Role of targeted therapies

Khalifa H1, Ben Ahmed K1, Ben Fatma L1, Belaid I1, Chabchoub I1, Hochlef M1, Ezzaairi F1, Ben Ahmed S1

Medical oncology department at UH F.Hached Sousse

Objective: Evaluate the results of targeted therapies and their tolerance in metastatic and/or locally advanced inoperable kidney cancer in Tunisia (2015-2020).

Materials and methods: Retrospective study including 13 patients treated with Sunitinib or Pazopanib in the medical oncology department of FH over a period of 6 years (January 2015-January 2020).

Results: The average age of patients in the study is 60 years old with a sex ratio of 5. Two patients had an isolated locoregional relapse and 11 patients were metastatic from the outset (5 metachronous and 6 synchronous). The median duration of treatment was 6 months (1 to 29 months).

%23of patients were treated with Pazopanib in 1st line against 77% for Sutent with respectively a median OS of 21 months versus 22 months and a median PFS of 10 months VS 12 months.

An objective overall patient response at 3 months of treatment is noted at 84.61%, 76.92% at 6 months, 61.53% at 9 months.

Treatment toxicity was noted in 20% of patients treated with Sunitinib, 6.6% of whom required dose adjustment, compared to 3.3% toxicity with Pazopanib (all grade 1 or 2).

Conclusion: The prognosis of locally advanced/metastatic kidney cancer is improved by the introduction of Sunitinib, and secondly Pazopanib which has proven its effectiveness in terms of reduced drug toxicity and survival: not inferior to Sunitinib, but the arsenal therapy remains insufficient and the introduction into the Tunisian market of other therapies that have proven their effectiveness remains to be considered.

371. Direct and indirect detection of a carbohydrate antigen 19-9 using the Photothermal Lens Spectroscopy

B. Khammari1, I. Soyeh1, S. Mrad2, R. Hannachi1, R. Baati1, B. Charfeddine2

1Laboratoire des Energies et des Matériaux (LabEM), Institut Supérieur d'Informatique et des Techniques de communication, Université de Sousse, Hammam Sousse 4011, Tunisia.

2Laboratoire de Biochimie, faculté de médecine de Sousse

The photothermal lens (PTL) spectroscopy is considered in literature as one of the most sensitive method developed for the chemical analysis and have a lot of potential in biomedical applications. In this work we have applied the PTL technique to assess it capacity to identify the carbohydrate antigen 19-9 (CA19-9) which is the best validated biomarker for pancreatic cancer. Around 80 serums were analyzed based on this method and all the performed measurements were then compared with those made with the immunoassay technique. Besides of the direct detection of CA19-9, indirect detection were also made based on the permanganate and manganese dioxide. The main obtained results show that for the direct detection, does not exist any linearity between the PTL signal amplitudes and the concentrations of CA 19-9 deduced from the biochemical test. However, for indirect detection we have obtained for more than 80% of the analyzed serums, PTL signal amplitudes less than a threshold value for the serums with concentrations of CA19-9 less than 40 U/mL. For the samples with greater concentrations, the PTL signal varies and fluctuates around the threshold value where we note a significantly decrease of PTL signal for highly contaminated serums (> 1000 U/mL).

372. Bilateral Breast Cancer : Experience of the gynecology and Medical oncology at the maternity center of Monastir

Khechine Wiem , Hmad Alaeddine , Felfoul Asma , Souid Khouloud , Daldoul Amira , Zaied Sonia

Department of Medical Oncology , Fattouma Bourguiba University Hospital , Monastir, Tunisia

Objectives: Breast cancer is defined as bilateral when both breast have a malignant lesion simultaneously or at different times. The objectives of this work was to determine: epidemiological, clinical, therapeutic and prognosis characteristics of the bilateral breast cancer (BBC) .

Methods: This cross-sectional descriptive and analytic study was held on 20 Tunisian women treated for BBC in the maternity center of Monastir.

Results: The frequency of BBC is 1.9% according to our study. The average age of our patients is 46.9 years. Histologically, ductal infiltrative carcinoma is the predominant histologic type. Surgery was performed in 85% cases at least on one side. The majority of patients had a bilateral mastectomy and conservative treatment accounted for only 10% of cases. Thirty percent of patients underwent one-sided mastectomy with lumpectomy on the other side. Axillary lymph node dissection was carried out in 80% of cases .For synchronous cancers, adjuvant chemotherapy accounts for 30% of case, neoadjuvant chemotherapy of cases 20% and palliative chemotherapy for 30% of cases. For asynchronous cancers, the adjuvant chemotherapy accounts for 30% of cases, neoadjuvant chemotherapy for 70% and palliative chemotherapy for 71.4% of cases. Radiotherapy has been done in 60% of cases. For adjuvant endocrine therapy, it has been prescribed in 30% of the cases. Adjuvant Targeted Therapy was used in 20% of cases. The overall 5-year survival is 72.3%, recurrence free survival is 43.4%. There are no significant differences between tumors synchronous and asynchronous in survival rate. About survival overall, it was found to be significantly influenced by tumor size and the expression of hormone receptors.

Conclusion: In the future, the use of novel sequencing technology generation as well as the using multigene test panel may could significantly Help identifying high-risk patients of developing BBC and therefore of providing prophylactic treatment that improve prognosis and survival rates.

373. Chronic pain among patients treated for breast cancer: prevalence and associates factors

Khechine Wiem , Hmad Alaeddine , Felfoul Asma , Souid Khouloud , Daldoul Amira , Zaied Sonia

Department of Medical Oncology , Fattouma Bourguiba University Hospital , Monastir, Tunisia

Objectives: New health problems like chronic pain among women treated for breast cancer have emerged and now represents a true burden to the patients affecting their quality of life . Our main objective was to determine the prevalence and the characteristics of chronic pain amid a population of Tunisian breast cancer survivors.

Methods: This cross-sectional descriptive and analytic study was held on 100 Tunisian women treated for breast cancer in the medical oncology department of Fattouma Bourguiba University Hospital in Monastir .The instruments we used were a determine patient's sociodemographic data , life habits, medical history , PBI , PCS, DN4 and family Apgar score .

Results: Pain prevalence among our study population was 100%. All patients were confirmed to have pain after breast cancer surgical treatment and no medical explaining their pain was identified. The most common pain location was the breast area follower by the upper limb area. Pain interference was also mild on both the affective and activity clusters. Eighty-eight of percent of our patients belonged to highly functional families based on the family Apgar score .We've manage to prove that the number of children that our patients had and the personal history of dysthyroidism affected pain intensity as they increased it .In the multivariate analysis ,BMI , the number of children and the number of lymph nodes collected during surgery and were proven to be independently associated to pain intensity .Studying the impact of chronic pain on our patients 'daily lives has enabled us to prove that higher pain intensity was associated to a more severe level of anxiety .

Conclusions: Chronic pain remains a complex health issue that needs to be further studied due to its great prevalence among patients treated for breast cancer.

374. Primary Central Nervous Tumors in Pediatric Population: A Retrospective Study About 26 cases

Khlifa H1, Chabchoub I1 , Khlifi K1, Bouzid N2, Ezzaairi F1, Belaid I1, Hochlef M1, Ben Fatma L1, Chabchoub I3, Ben Ahmed S1.

1 -Department of medical Oncology 2 -Department of radiotherapy 3-Department of genetics, Faculty of medicine Sousse Tunisia

Introduction: Primary Central nervous system (CNS) are the most common solid tumors in children and the second leading cause of cancer death.

They comprise a variety of tumor types, of which nearly 50% arise below the tentorium. Treatment of pediatric CNS malignancies requires multimodal treatment using a combination of surgery, chemotherapy(CT), and radiotherapy (RT).

Methods: We retrospectively reviewed 23 patients diagnosed with primary CNS and treated between 1996 and 2022 in the medical oncology department Farhat Hached Hospital, Sousse, Tunisia

Results: Median age at diagnosis was 6 years (0-14). A slight female predominance was noted (52.2%)

The tumor was infratentorial in 78.3% of cases and were dominated by tumors of the fourth ventricle and vermis (66.6%).Twenty one patient (91.3%) underwent surgery, of which 9 had incomplete resection.RT was delivered to 18 patient at a mean dose of 54 gy (30-54) with concomitant CT on 8 patients. Twenty one patients received adjuvant chemotherapy based mainly on VP16-carboplatin-cyclophosphamide and vincristine (52.3%).Ten patients have relapsed after a median delay of 6 months (1-26). up. After a mean follow up of 37 months, twelve were in complete remission, 9 deaths were noted and 2 patients were lost of follow up.The 5-year-overall survival and the 5-year relapse free survival were respectively 48% and 44%.

Conclusion: Multimodal treatment has improved survival and prognosis. In our study, the recurrence rate seems to be higher, and the overall survivor seems to be poorer which can be related to incomplete surgery and delay in radiotherapy in our country with poor ressources. Broader studies are needed to more describe and understand these tumors.

375. Management of Childhood Medulloblastoma in the center of Tunisia

Khlifa H1, Chabchoub I1 , Khlifi K1, Bouzid N2, Ezzaairi F1, Belaid I1, Hochlef M1, Ben Fatma L1, Chabchoub I3, Ben Ahmed S1.

1- Department of medical Oncology 2 -Department of radiotherapy 3-Department of genetics, Faculty of medicine Sousse Tunisia

Introduction: Medulloblastoma (MD) is the most common malignant brain tumor in children, comprising 40% of all childhood posterior fossa (PF) tumors. It is potentially curable and prognosis depends of the likelihood of disseminated disease at the time of diagnosis.

Methods: We retrospectively reviewed 28 patients treated for MD in the radiation oncology department and the medical oncology department Farhat Hached Hospital, Sousse, Tunisia between 1996 and 2022

Results: Median age at diagnosis was 7.8 years (1-15) with a sex ratio of 1. The main reason for consultation was intracranial hypertension syndrome in 13 patients. Radiotherapy (RT) was delivered to 24 at a dose of 23.4 to 36Gy(1.8Gy/fraction) to the craniospinal axis with a complement in the PF at a dose of 54 to 56Gy.21 patients received adjuvant Chemotherapy (CT) associating essentially VP16-Carboplatin-Vincristine-cyclophosphamide (50%) and 8 had concomitant RT-CT based on Vincristine. Four patients kept neurological sequelae of which 2 had gait impairment,1 neurocognitive disorders and 1 kept akinetic mutism. Eleven relapses (42.3%) were observed after median time of 11 months (3-76) mostly localized in the PF(87.5%).Reirradiation was performed in one case at a dose of 15 Gy in the PF. After a mean follow-up of 39 months, 15 children were in full remission. Median overall survival was 22.5 months (2-248).

Conclusion: The challenge of MD treatment is how to achieve a maximum of benefits with minimum of toxicities. Such measures include a multidisciplinary approach and the respect of timetable schedule in a limited resource country.

376. Burkitt’s lymphoma in children: Epidemiologic, clinical and therapeutic characteristics: about 50 cases

Khlifa H1, Chabchoub I1 , Khlifi K1, Bouzid N2, Ezzaairi F1, Belaid I1, Hochlef M1, Ben Fatma L1, Chabchoub I3, Ben Ahmed S1.

Department of medical Oncology 2 -Department of radiotherapy 3-Department of genetics, Faculty of medicine Sousse Tunisia

Introduction: Burkitt's disease or lymphoma is lymphoblastic B lymphoma characterized by monoclonal proliferation of B lymphoid cells. It is the most common of all Non-Hodgkin's Malignant Lymphomas (NHLH) and accounts for 30 to 60% of childhood cancers. in Africa. Its management requires a multidisciplinary collaboration between oncologist, surgeon, anatomopathologist, radiologist, and biologist.

Objectives: 1)To analyze the epidemiological aspects of Burkitt's disease, 2) to Study the different clinical forms observed in a hospital environment, 3) To Analyze the therapeutic, evolutionary and prognosis aspects of this disease in children

Materials and methods: It is a retrospective study over 24 years has been carried out among 50 children treated for Burkitt’s lymphoma in the department of medical oncology in Farhat Hached hospital –Sousse- Tunisia

Results: The median age is 6 years with extremes of 2 years and 16 years. There was a male predominance (72.1%). The abdominal location is predominant, found in 74.6% of patients, followed by the ORL localization found in 13%. In our series, abdominal pain is a sign of frequent call in our series since they are present at 34.7%. Genetic testing is pending. According to Murphy's classification, 2 patients had stage I, 14 stage II, 25 stage III and stage IV.34 patients were treated according to the LMB89 protocol (32 patients were classified in group B, 2 patients were classified in group C), 2 patients are treated according to the LMB96 protocol (classified in group B). 14 patients are treated according to the LMB 2001 protocol (classified in group B). Complete remission was obtained in 39 patients. Overall survival for 5 years is 57%.

Conclusion: Burkitt's lymphoma is the first viro-induced cancer, future prospects must go through prevention against the EPSTEIN BARR virus. Childhood cancer, particularly Burkitt's lymphoma, should no longer be a fatality in Mali because effective therapeutic protocols exist. Their effectiveness would be more noticeable if it was accessible to the largest number of patients on time.

377. Atypical fibroxanthoma of the wall chest: a rare case

Maroua Krifa*1, Atika Baccouche1, Oussema Belkacem1, Sihem Hmissa 1, Moncef Mokni2

1. Pathology department, university hospital of Sahloul, Sousse, Tunisia
2. Pathology department, university hospital of Farhat Hached, Sousse, Tunisia

Introduction: Atypical fibroxanthoma (AFX) is a low-grade cutaneous undifferentiated pleomorphic sarcoma that typically occurs on sun-damaged, actinic skin of the elderly. EB Helwig describes it for the first time in the 1960s. AFX is a diagnosis of exclusion that requires the evaluation of multiple immunohistochemically studies to rule out other differential diagnoses.

Case presentation: A 44-year-old Tunisian woman with personal history of hereditary epidermolysis bullosa complicated with an oesophageal stenosis presented with chest wall mass next to the sternum. Initially a biopsy of the mass was indicated. An undifferentiated sarcoma was evoked. The patient was subsequently operated on.

Macroscopically, we received an excision piece measuring 65x35x15 mm, surmounted by a budding, irregular, ulcerated tumour, 35 mm long axis. This tumour is distant from the surgical limits.

On microscopic examination, the tumour was ulcerated, bordered by a fibrin-leukocyte coating rich in neutrophils. It was circumscribed, dermal, with a little cellular, fibrous tumoral background, comprising a moderate inflammatory infiltrate. Tumour cells were spindle-shaped with scanty clear cytoplasm with vesicular, finely nucleated nuclei. Some tumour cells were bi or multinucleated with frank pseudo-sarcomatous nuclear atypia with sometimes-abnormal mitoses. The immunohistochemically study showed intense and diffuse labelling of tumour cells by smooth muscle actin. The other antibodies were negative including pancytokeratin, pS100, CD34, HMB45, Melan and ALK.

Thus, the diagnosis of AFX was retained after an inter-service staff.

Discussion and conclusion: AFX often affects the head and neck region predominantly with a slight male predominance. It remains a diagnosis of elimination that requires the evaluation of multiple immunohistochemical studies to rule out other differential diagnosis.

378. Primary pleomorphic carcinoma of the right lower lobe of the lung: A case report

Maroua Krifa*1, Atika Baccouche1, Bechir Ben Radhia2, Sihem Hmissa1

1. Pathology department, University hospital of Sahloul, Sousse, Tunisia
2. Cardiovascular surgery department,University hospital of Sahloul, Sousse, Tunisia

Introduction: Pleomorphic carcinoma (PC) of the lung is rare, and it is classified as a subtype of sarcomatoid carcinoma of the lung in the World Health Organization histologic classification of lung tumors.

Case presentation: Our patient was a 66 years old male recently found to have a right lower lobe mass. The transthoracic needle biopsy demonstrated spindle cell neoplasm favoring sarcoma. Then he was referred to our facility for further management. Thoracotomy with right lower lobectomy and with lymph node dissection was performed. Grossly, the tumor measured $10 \times 8.5 \times 6.8$ cm and was located at inferior lateral part of the right lower lobe. Sectioning revealed tan-white cut surface and the tumor was grossly infiltrating the surrounding visceral pleura and diffusely necrotic. Microscopically, the tumor was mainly composed of spindle cells. Singly dispersed and loose small clusters of pleomorphic tumor cells and tumor giant cells were identified. A small area of malignant epithelial cells with focal squamous differentiation was noted within the tumor. The tumor had high-grade features including bizarre looking atypical cells, tumor giant cells, high mitotic count and atypical mitotic figures. Immunostains demonstrated that the malignant epithelial cells were cytokeratin (AE1/AE3) and the spindle and pleomorphic component were strongly positive for vimentin. Two lymph nodes were metastatic. The patient was diagnosed with pleomorphic carcinoma of the lung (pT4N2).

Discussion and conclusion: Pleomorphic carcinoma (PC) is a rare tumor comprising <1% of all the invasive lung carcinoma. The diagnostic of PC on a core biopsy can be challenging due to sampling limitation. Evaluating the whole tumor with generous sampling is mandatory to provide an accurate diagnosis as the disease progression may vary.

379. Intestinal obstruction as early clinic manifestation of lung adenocarcinoma

R. Kaddoussi1, S. Ksissa1, M.A.Tormen2, I.Korbi2, L.Loued1, A.Ben Saad1, S.Cheikh Mhamed1, S.Joober1, N.Rouatbi1.

1. Service de pneumo-allergologie CHU Fattouma Bourguiba Monastir.
2. Service de Chirurgie génerale CHU Fattouma Bourguiba Monastir.

Introduction: Lung cancer is the most common cause of cancer-related deaths. The diagnosis is sometimes made from secondary locations.

Case Presentation: A 51-year-old man was admitted in the surgical department with an acute abdominal pain and vomiting for 3 days Examination of the abdomen demonstrated a tenderness in right lower quadrant.

Abdominal X-ray manifested intestine obstruction with hydro aerial levels.

A dilatation of the small intestine due to an ileal mass located 2.3 meters from the duodenojejunal angle and extending over 8 centimeters was found at the laparotomy and the tumor was resected. The histological examination of the resected tissue indicated a lung metastatic adenocarcinoma.

Postoperative thorax CT revealed a mediastino_hiliary gangliotumoral complex.

Conclusion: brain, bone, kidney, adrenal gland, and liver are the most frequent localizations of pulmonary metastases but the metastases to the gastrointestinal tract are rare.

380. Expression of E-Cadherin and DNAJB4 in Gastric Adenocarcinoma

M. Lakhal1*, S. Ben Rejeb1,2, A. Labidi2, A. Dhaoui1,2, A. Zehani3, H. Azzouz3, A. Ayari3, H. Ben Mahjouba3, I. Chelly3, S. Haouet3, K. Bellil1,3

1. Research Unit of Epithelial-Mesenchymal Transition in Tumour Pathology (UR17ES17), Medical School of Tunis, University Tunis El-Manar, Tunis, Tunisia
2. Pathology Department, Internal Security Forces Hospital, Tunis, Tunisia
3. Pathology Department, La Rabta Hospital, University Tunis El-Manar, Tunis, Tunisia

Background: DNAJB4, a heat shock protein, is defined as a chaperone to E-cadherin in gastric cancer.

Objectives: The aim of this work was to study the relationship between E-cadherin and DNAJB4 in gastric cancer and find any association with epidemiological and histological features.

Methods: Fifty-eight FFPE samples from gastric adenocarcinoma patients were collected. Immunohistochemistry was performed using Tissue MicroArray (TMA) approach with antibodies against E-cadherin (clone 36B5) and DNAJB4 (polyclonal) in an autostainer instrument. Statistical analysis was based on $\chi 2$ and Fisher exact tests.

Results & Conclusions: Among the collected samples, E-cadherin was positive in thirty-two cases (55%) and negative in twenty-six cases (45%) which were statistically associated with tumour invasion beyond muscularis propria layer ($P<0.05$).

Within the E-cadherin positive cases, DNAJB4 was detected in only nineteen cases (59%). In E-cadherin negative cases, DNAJB4 was positive in fourteen cases (58%).

DNAJB4 positive cases were significantly associated with male patients. No statistical association between E-cadherin and DNAJB4 was found in our cohort study.

381. Expression Of Zeb1 in A Tunisian Gastric Adenocarcinoma Cohort Study

M. Lakhal1*, A. Zehani2, H. Azzouz2, A. Ayari2, H. Ben Mahjouba2, I. Chelly2, S. Haouet2, K. Bellil1,2

1. Research Unit of Epithelial-Mesenchymal Transition in Tumour Pathology (UR17ES17), Medical School of Tunis, University Tunis El-Manar, Tunis, Tunisia
2. Pathology Department, La Rabta Hospital, University Tunis El-Manar, Tunis, Tunisia

Background: Zinc Finger E-box Binding Homeobox 1 (Zeb1) protein is a transcription factor that, among other proteins, induces epithelial-mesenchymal transition (EMT). The Asian Cancer Research Group (ACRG) had identified this biological process, associated with microsatellite stable status (MSS), as the subtype (MSS/TEM) with the worst prognosis in its molecular classification of gastric adenocarcinoma.

Objectives: We aimed to evaluate the expression of Zeb1 in a Tunisian cohort of gastric adenocarcinoma cases and look for any association with epidemiological and pathological data.

Methods: Fifty-nine FFPE samples were retrospectively collected. Immunohistochemistry of monoclonal recombinant antibody Zeb1 (clone EPR17375) was performed on slides from TMA blocks using a Leica Bond Max autostainer instrument. Association between Zeb1 expression and epidemiological and pathological features were determined using $\chi 2$ and Fisher exact tests.

Results & Conclusions: Among our 59 cases, Zeb1 was detected in 15 cases (25%) and absent in 44 cases (75%).

Zeb1 positive cases were associated with undifferentiated gastric adenocarcinoma, tumour invasion of the serosa and adjacent structures to the stomach and a high number of metastasis lymph nodes.

Assessment of Zeb1 may be relevant for identifying the epithelial-mesenchymal transition process.

382. Expression Of P53 in Gastric Adenocarcinoma with Microsatellite Stable Status

M. Lakhal1*, A. Zehani2, H. Azzouz2, A. Ayari2, H. Ben Mahjouba2, I. Chelly2, S. Haouet2, K. Bellil1,2

1. Research Unit of Epithelial-Mesenchymal Transition in Tumour Pathology (UR17ES17), Medical School of Tunis, University Tunis El-Manar, Tunis, Tunisia
2. Pathology Department, La Rabta Hospital, University Tunis El-Manar, Tunis, Tunisia

Background: The Asian Research Cancer Group identified two subtypes based on p53 protein expression in its molecular classification of gastric cancer: microsatellite stable associated with wild-type p53 subtype (MSS/p53+) and microsatellite stable with aberrant p53 subtype (MSS/p53-).

Objectives: This work aimed to assess the expression of p53 in the microsatellite stable status gastric cancer group.

Methods: We collected forty-four cases of gastric cancer with microsatellite stable status (MSS) from Tissue MicroArray blocks. p53 expression was determined by immunohistochemistry using clone DO7 in a Leica Bond Max instrument and assessed according to Kohler et al., 2018 publication1. Statistical analyses were carried out using Fisher exact test.

Results & Conclusions: Among the MSS gastric adenocarcinoma samples collected, thirty-three of them (75%) had aberrant p53 with a significant association with male patients.

Reference:

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383. Therapeutic education program: preliminary feasibility study among Tunisian women undergoing chemotherapy for breast cancer

Maatallah Sarra1, Ben Ahmed Amel1, Ben Fatma Leila1, Mtiraoui Ali2, Belaid Imtinene1, Chabchoub Imene1, Hochlef Makram1, Gahbiche Selma1, Ezzairi Faten1, Ben Ahmed Slim1

1. Medical Oncology Department, Sousse (Tunisia)
2. Community Medicine Department, Faculty of Medicine, Sousse (Tunisia)

Key Words: Breast cancer, chemotherapy, side effects, therapeutic patient education.

Background: Therapeutic patient education (TPE) in oncology is an important element for a person-centered and individualized care approach. As part of the implementation of a TPE program, an educational diagnosis must be carried out first, to define the needs and expectations of patients.

Purpose: To explore the knowledge of women with breast cancer concerning the side effects of chemotherapy and to propose intervention methods for therapeutic patient education.

Methods: 102 women were interviewed in the medical oncology department of Sousse (Tunisia). Data collection was based on a questionnaire consisting of 26 items exploring cognitive knowledge, how to manage the side effects of treatment, educational needs and expectations. Then, 20 patients took part of a workshop "Living better with chemotherapy" set up as part of the implementation of a TPE program. A second evaluation was carried out using the same questionnaire as well as an evaluation of satisfaction with the workshop.

Results: The average age was 50 ± 11.3 years. Most patients were aware of their diagnosis. The evaluation of knowledge about the side effects related to chemotherapy revealed a lack of information. They judged this knowledge insufficient in 79.41% of cases and 80.39% preferred to be informed when starting treatment. Their practices when side effects occur were inadequate in 75.5%. We observed that 48.03% of patients preferred group education rather than individual. After the intervention we noticed an improvement in knowledge in 100% of the patients concerning the information received. An improvement in women's adequate practices was noted in all patients.

Conclusion: All these data support the interest of TPE in the management of side effects and promote the process of acceptance-adaptation to the disease.

384. Sequellar chronic pain after cancer: what characteristics in a Tunisian population?

Mahjoub M1, Touinsi M1, Ben Fatma L1, Ezzaairi F1, Gammoud A1, Khlifi K1, Chabchoub I1, Hochlef M1, Bougattaya w1, Belaid I1, Ben Ahmed S1

Oncology department of Farhat Hached Hospital, Sousse (Tunisia)

Objective: assess the prevalence of chronic sequelae pain during the after-cancer period, identify its characteristics and evaluate its impact on functional capacity.

Methods: descriptive study about adult patients treated curatively for cancer at the oncology department of Farhat Hached Hospital (Sousse, Tunisia), suffering from chronic pain. Data were collected using a self-administered questionnaire between October and December 2022. Functional capacity was assessed using the French version of the Oswestry Disability Index.

Results: Among 441 patients in remission undergoing surveillance, 41 had sequelae of chronic pain, with a prevalence of 9.3%. Women accounted for 95% of cases. The median age is 57.5 years. Breast cancer was the most common (75%), followed by digestive cancers (17.5%). The majority of patients (97.5%) underwent surgery. Chemotherapy is used in 85% of patients (Taxane:65%, platinum salt:22.5%), radiotherapy in 52.5%, hormone therapy in 67.5% of cases. Pain was neurogenic in 45% of cases, nociceptive in 27.5% and mixed in 27.5%. It was paroxysmal in 77.5% of cases and continuous in 22.5%. Localized to the surgical scar in 45% of cases, upper limbs in 25%, lower limbs in 20 and joints in 12.5%. The median maximum intensity was 5/10. Only ten patients (25%) were under analgesic treatment, paracetamol is used in 100% of cases. It was taken continuously in only 20% of cases, and was prescribed by a doctor in only half the cases. Only in 2 cases it was prescribed by an oncologist and only one was completely relieved. Overall, functional capacity was often little or unimpaired, with a median score of 18% (0% - 68%).

Conclusion: Our study shows that chronic sequellar pain during the after-cancer period is a frequent problem, neglected in the management strategy of our patients.

385. Systematic detection of dihydropyrimidine dehydrogenase (DPD) deficiency in patients with digestive cancers in central Tunisia: prevention of toxicity or lack of efficacy?

Mahjoub M1, Belaid I1, Ben Rhouma S1, Nouira M2, Laouani A2, Gammoudi A1, Khlifi K1, Chabchoub I1, Hochlef M1,,Bougattaya W1 ,Ben Fatma L,,Saguem S2 ,Ezzairi F1, Ben Ahmed S1

1. Oncology Department of Farhat Hached Hospital, Faculty Of Medicine Of Sousse, University Of Sousse, Sousse, Tunisia
2. Department Of Biophysics, Faculty of Medecine Of Sousse, University Of Sousse, Sousse, Tunisia

Objective: To highlight the need for screening for Dihydropyridine dehydrogenase (DPD) deficiency prior to a fluoropyrimidines based chemotherapy in patients with digestive cancers.

Methods: retrospective longitudinal study from January 2017 to December 2021 including patients treated for digestive cancer with an indication to fluoropyrimidine based chemotherapy who underwent DPD assay at the Department of Biophysics of the Faculty of Medicine of Sousse, by evaluating the UH2/U ratio between the concentration of dihydrouracil (UH2) and uracil (U).

Results: Among the 322 patients in the Study two groups were defined : 258 patients had normal DPD activity (80,1 %) and 52 had DPD deficiency (16,1 %), which was partial in 12.4%, severe in 3.1% and profound in 0.6% ..In the first group 72.1% developed 5 FU toxicity that were digestive in (42.8%) and hematological (27.9%) mainly G3 neutropenia (9.2%) .Patients with DPD deficiency presented with G2 diarrhea (3,2%) , G3 mucositis(2,4%) and toxic deaths by heart rhythm disorders(0,6%). toxicities were less frequent in the second group who received appropriate dose with a 50% dose reduction and bolus removal through systematic screening . After reduction no grade ¾ toxicity was observed . Toxicities were more frequent in patients with a medical history of heart disease(61,5%), hypertension(75%) or diabetes(70,2). 97,2% of patients with normal enzymatic activity had screening for DPD and 2,7% received the assay following toxicity,in deficient patients the assay was performed following toxicity in 13,46% Treatment response was comparable in the 2 groups(44,5 % and 38,5% in the second group were in complete response) and the relapse rate was not increased in the second group (2,3%).

Conclusion: Our study showed that fluoropyrimidines toxicity is frequently observed in the treatment of digestive cancers and could be reduced by DPD assay.

386. The importance of caring in women with breast cancer awaiting mastectomy in Tunisia

Hakima Mansouri, Mohamed Ayoub Tlili

In Tunisia, women's breast cancer is the most prevalent female cancer and is considered as a serious public health issue. The most common therapeutic intervention is breast removal, i.e. a mastectomy. However, the use of a mastectomy requires a lengthy procedure that includes a significant physical and psychological preparation phase for the woman. Indeed, the patient experiences stress and anxiety during this preparatory phase of, which may negatively affect her vital prognosis.

Additionally, while waiting for a planned mastectomy, women have physical, emotional, and informational requirements; CARING care interventions can help women with these needs. A structured educational intervention at the preoperative stage is therefore undoubtedly one of the best methods to satisfy the needs of women undergoing mastectomy. Being at the core of Watson's HumanCaring philosophy, this study aimed to determine the importance of preoperative nursing care for women waiting for a mastectomy.

To do so, a mixed-methods design, using three data collection methods was chosen. Semi-directed interviews and a logbook were adopted from six patients (n=6) and a self-administered questionnaire, including the Cossette et al measurement scale, on the importance of caring behaviors, was distributed to nurses (n=44).

The most important findings from this study have been assumed in patients and nurses who concur on the value of nursing care in the preoperative stage for women waiting for mastectomy surgery. Although patients tended to prefer the humanistic and relational dimensions, nurses prioritize the "comfort" and "clinical" dimensions. Appropriate preoperative preparation, technical and also human care imbued with caring, prove that significant improvements are needed in to enhance the quality of nursing care provided. This study yielded recommendations for nursing research and training in addition to the clinical component.

387. Hidradenocarcinoma: a particular evolution

O. mani1; N. Fetoui Ghariani1; BA. Yasmine1; M. BEN KAHLA1; H. Mkhinini1; M. LAHOUAL EP GAIED1; S. Saad1; M. Ben rejeb1; A. Ben Abdelkader2; D. Chiba2; A. Aounallah1; N. Ghariani1; S. Mokni1; M. Denguezli1

1Dermatology department, Farhat Hached Hospital, Sousse, Tunisia; 2Anatomical pathology laboratory, Farhat Hached Hospital, Sousse, Tunisia

Introduction: Hidradenocarcinoma (HC) is a rare malignant adnexal skin tumor arising from the eccrine sweat glands. Its prognosis is usually poor, given the frequency of recurrence and regional and distant metastases. We report a new observation.

Observations: A 43-year-old female patient presented to our consultation with a bulging mass in the right iliac fossa, which had been progressively evolving for 11 years, worsening rapidly over the past 4 months. On examination, she presented with a purplish-red, ulcerative budding tumor, of approximately 4 cm, with an infiltrated border, and a homolateral inguinal adenopathy, with 7 cm in size. histopathological evaluation concluded that it was a hidradenocarcinoma. Radiological investigation revealed a cutaneous tissue mass in the right iliac fossa, associated with homolateral inguinal adenomegaly. Surgical removal of the tumor was recommended, with 3 cm lateral margins and a deep margin including the hypodermis, and inguinal lymph node dissection. Adjuvant radiotherapy was indicated. However, the patient did not re-consult until 4 months later, with a profound deterioration in general condition associated with a very painful presternal subcutaneous swelling and a right inguinal lymph node magma, with no signs of local recurrence. Radiological investigation revealed a voluminous anterior thoracic mass, encompassing two chondrosternal joints and responsible for significant bone lysis, invading the anterior mediastinum posteriorly and the pectoralis major muscles anteriorly, associated with adenomegaly of the internal mammary, inter-aortocaval, subrenal, iliac and bilateral inguinal chains. The patient refused any further investigations. After a multidisciplinary consultation, palliative chemotherapy with carboplatin and paclitaxel was proposed.

Discussion: Hidradenocarcinoma is a rare malignant cutaneous adnexal tumor, located electively on the head and neck. Several localizations have also been reported, particularly on the trunk. The prognosis is generally good when the tumor is less than 2 cm in size. The disease usually progresses slowly over several years, followed by rapid progression, as in our patient's case, suggesting the presence of an underlying hidradenoma. Our patient had no local recurrence, but lymph node involvement was above and below the diaphragm. The aggressive thoracic mass was suggestive of bone metastasis. A recent review of the literature demonstrated the frequency of local recurrence, complicating half the cases, as well as distant metastases in 60% of cases, mainly in lymph nodes, lungs and bone. The treatment of choice is surgical excision, for which there is no consensus on margins. Chemoresistance is reported in the majority of cases.

Conclusion: Hidradenocarcinoma is a rare, aggressive, lymphophilic and chemoresistant tumor. Its slow progression over several years suggests that it arises from a pre-existing benign lesion, prompting early and systematic treatment of hidradenoma.

388. Plasmablastic Lymphoma with Isolated Nasal Involvement in a Seronegative Patient

Asma Mahmoudi, A.Chaabane, K.Mfarrej, A.Dougaz, B.Cehlly, A.Bani, S.Nechi, E.Chelbi

Laboratory of Anatomy and Pathological Cytology, Med Tahar Maamouri Hospital, Nabeul, Tunisia.

Introduction: Plasmablastic lymphoma is a rare and aggressive variant of non-Hodgkin lymphoma. It is classically described in patients infected with HIV, particularly affecting the oral cavity. This entity poses diagnostic challenges due to its similarity with other plasmablastic differentiation lymphomas. However, thanks to its specific immunohistochemical profile and the detection of Epstein-Barr virus (EBV) antigen expressed by tumor cells using in situ hybridization, a definitive diagnosis can be established.

Objective: We report a case of a plasmablastic lymphoma with an unusual presentation, and isolated nasal involvement, in a young immunocompetent patient, aiming to generate more interest in extra-oral locations in seronegative patients.

Materials and Methods: Presentation of a case of plasmablastic lymphoma in a 27-year-old man, collected at the laboratory of pathological anatomy.

Case Presentation: The patient, aged 27, presented with a tissue mass in the left nasal cavity's lower part, which bled during sneezing. The general condition was good, and there was no personal history of immunodeficiency. Biopsy revealed a tumor proliferation composed of round to large-sized cells with eosinophilic or amphiphilic cytoplasms. The cellular nuclei were sometimes round and central, resembling immunoblasts, and sometimes oval with eccentric nuclei and small perinuclear clearing (perinuclear hof), resembling plasmablasts. Limited areas with clear plasmacytic differentiation were also observed. Immunohistochemical examination showed intense and diffuse expression of CD138 and Mum-1 and focal expression of CD79a. The cells were negative for CD20, PAX5, CD3, ALK, LMP-1, and bcl-6. The Ki67 proliferation index was assessed at 50%. Given this histological and immunohistochemical presentation, two diagnoses were considered: plasmablastic lymphoma or plasmablastic myeloma. In situ, hybridization ultimately confirmed the diagnosis of plasmablastic lymphoma by demonstrating EBV-positive tumor cells.

Discussion: Plasmablastic lymphoma is a rare aggressive lymphoma that most commonly occurs in the oral cavity in HIV-positive individuals, with a median age at diagnosis of 50 years. While its histological and immunohistochemical appearance is similar to other plasmablastic differentiation lymphomas, it stands out due to the expression of the Epstein-Barr virus genome. It is not yet a common practice to consider this diagnosis in a seronegative patient presenting with an extra-oral location, as seen in our case, with a nasal mucosal tumor.

Indeed, extra-oral plasmablastic lymphomas are even more aggressive, progress faster, and have a worse prognosis, especially in seronegative individuals. Among other described extra-oral locations are the anus, rectum, orbit, and heart. Therefore, it is important to draw attention to the various extraoral locations of this type of lymphoma, particularly in seronegative patients, to better understand this condition, especially since there is currently no established therapeutic strategy to address it.

Conclusion: We present a case highlighting the possible occurrence of plasmablastic lymphoma in extra-oral locations, including the nasal mucosa, and emphasize the importance of considering this diagnosis in seronegative patients."

389. Liver metastases from colorectal cancer after curative treatment: prognostic factors affecting overall survival and recurrence-free survival

Sadok Megdiche, Zied Hadrich, Sofiene Gabsi, Mohamed Hajri, Sahir Omrani, Rached Bayar, Hafedh Mestiri
General Surgery Department, Mongi Slim University Hospital, La Marsa, Tunis, Tunisia

Introduction: Despite the progress of systemic chemotherapy and targeted therapy, surgical resection or radiofrequency therapy remains the only curative treatment for metastases from colorectal cancers improving long-term survival and recurrence-free survival. The aim of the study is to identify factors affecting overall survival and disease-free survival in patients who have received curative treatment for colorectal metastases.

Methods: We conducted a retrospective study that included sixty-seven patients who had received curative treatment for either surgical resection or radiofrequency ablation between 2013 and 2020. The primary endpoints were overall survival and disease-free survival.

Results: The median age was 58 years. The Sex ratio was 1.39. The site of the primary tumor was the sigmoid colon (31.3%), followed by the right colon (28.4%). Metastases were localized to the left liver in 71.6% and synchronous in one third of cases. 3-year recurrence-free survival was 56% and 3-year overall survival was 62%. Factors affecting overall survival were age greater than 55 years (p=0.023), low socioeconomic status (p=0.001), high ACE (p=0.001), moderately differentiated or undifferentiated tumors (p=0.017), tumor size less than 5cm (p=0.031) especially in cases of synchronous metastases (p=0.002) and multisegmental location (p=0.004). Factors affecting recurrence-free survival were age greater than 55 years (p=0.02), low socioeconomic status (p=0.006), high ACE (p=0.025), moderately differentiated or undifferentiated tumors (p=0.001), presence of vascular emboli (p=0.005), and multisegmental location (p=0.001).

Conclusion: the factors influencing overall and recurrence-free survival are complex. In our study, ACE elevation, synchronous metastasis, and multisegmental localization were independent factors of overall survival and recurrence-free survival.

390. Mandibular intraosseous carcinoma mimicking benign tumor : a case report

O. Mejri, M. Grira, N. Ennafti, S. Tritar, A. Slama

Maxillo-facial Department, Sahloul university hospital, Sousse

Introduction: Mandibular intraosseous carcinoma is a rare malignancy originating from the jawbone. It can sometimes present with clinical and radiological features that mimic benign tumors, leading to misdiagnosis. We present a case of mandibular intraosseous carcinoma initially suspected to be benign, highlighting the importance of a comprehensive diagnostic approach.
Case Report: A 37 year-old patient presented to our department with a progressive swelling of the left lower third of the face. The oral cavity examination showed firm vestibular swelling centered on the retromolar trigone. No mucosal lesions were seen. Panoramic X-ray revealed a large multilocular radiolucent lesion of the left mandibular angle with few cortical erosions. Clinical and radiological presentation suggested a benign tumor of the mandible. Incisional biopsy confirmed the presence of intraosseous carcinoma of the mandible.
Discussion: Mandibular intraosseous carcinoma is a bone tumor characterized by the uncontrolled proliferation of malignant epithelial cells within the bone. It arises from pre-existing benign lesions or from direct malignant transformation of the jawbone's epithelial tissues. Symptoms are not specific. On imaging, it may resemble benign lesions such as ameloblastoma. The differential diagnosis includes odontogenic tumors or cysts, ameloblastoma, and fibro-osseous lesions. Imaging, biopsy, and histopathological examination are essential for accurate differentiation and appropriate management. Early diagnosis is essential for better outcomes. Surgical resection, followed by reconstruction, is the primary treatment approach. Adjuvant therapies may be considered based on the tumor's stage and histopathological characteristics.
Conclusion: A multidisciplinary approach involving thorough clinical evaluation, advanced imaging techniques, and histopathological examination is critical to achieve an accurate diagnosis of mandibular tumors and initiate timely management. Increased awareness of this rare malignancy with a presentation that can suggest a benign nature is necessary for improving patient outcomes.

391. Rare solitary Plasmacytoma of the Maxillary sinus: Case Report

O. Mejri, S. Jmal, K. Ismail, A. Eleuch, S. Ayachi, A. Slama
Maxillo-facial surgery Department, Sahloul university hospital, Sousse

Introduction: Solitary plasmacytoma is a rare neoplastic disorder characterized by the proliferation of abnormal plasma cells in a single anatomical site, without evidence of systemic involvement. Although most commonly observed in bone, solitary plasmacytoma of the maxillary sinus is an uncommon entity, with only a few reported cases in the literature.

Case Report: We report the case of a 55-year old male patient who presented with progressive swelling of the right upper vestibule. A CT-Scan was performed showing a right intra-maxillary lesion reaching the orbital floor, the infratemporal fossa and the nasal septum with lysis of several parts of the sinus walls. A Biopsy has shown the aspect of a Maxillary Sinus Plasmacytoma. Other investigations including PET Scan did not show multifocal involvement.

The management consisted in a primary radiotherapy since the extent of the tumor didn't allow surgical removal.

Discussion: The diagnosis of solitary plasmacytoma of the maxillary sinus can often be challenging due to its rarity and the similarity of its clinical presentation to other sinus pathologies. Imaging including CT and MRI, play a crucial role in identifying the lesion and its extent.

Histopathological examination of biopsy specimens remains the gold standard for definitive diagnosis, revealing a monoclonal proliferation of atypical plasma cells with characteristic immunohistochemical markers. Biological, cytopathological and nuclear imaging are crucial to rule out multiple myeloma, a potential progression of solitary plasmacytomas.Treatment options include surgical excision, radiation therapy, and systemic therapy. The choice of treatment modality depends on factors such as tumor size, extent, and patient's overall health.

Conclusion: Solitary plasmacytoma of the maxillary sinus is a rare and challenging clinical entity to diagnose and manage. This case report emphasizes the importance of a multidisciplinary approach for accurate diagnosis and optimal treatment planning and follow-up.

392. Surgical management of thoracic Ewing sarcoma

R.Essid(1), I.Bouassida(1), A.Abdelkbir (1), M.Abdennadher(1), S.Zairi(1), H.Zribi (1), N.Fitouhi(2), A.Marghli

1 : Department of thoracic surgery of Abderrahmen Mami hospital
2 :Department of anesthesiology of Abderrahmen Mami hospital

Ewing sarcomas are aggressive tumors that affect children and adolescents. They represent 10 to 15% of all bone sarcomas. Its thoracic location is rare. Its treatment is based on a multidisciplinary approach which determines the prognosis.

Methods: Retrospective study of files of patients operated on for Ewing sarcoma in the thoracic surgery department of Abderrahmen Mami hospital between 2010-2020.

Results: There were 7 men and 2 women. The average age was 16 years old. The symptoms consisted of wall swelling (n=5), dyspnea associated with chest pain (n=2) and a cough with chest pain evolving in a context of deterioration in general condition (n=2). All patients had a chest CT scan to localize the tumors. The involvement was right in 5 cases, and left in 4 cases. All patients underwent primary chemotherapy. All patients were operated on by posterolateral thoracotomy. The procedure consisted of a resection of 3 ribs on average. The resection was extended to the diaphragm in 2 cases, and associated with a left upper lobectomy in one case. Partial spinal resection was necessary in one case. The postoperative course was simple in all cases. The duration of drainage was 3.2 days and the duration of hospitalization was 4.5 days. Pathological examination of the surgical specimens concluded that it was Ewing's sarcoma with healthy resection limits in all cases. All patients underwent adjuvant chemotherapy. Only one case of recurrence was found after a period of 2 years.

Conclusion: Ewing sarcomas are primitive neuroectodermal tumors (PNET). Multimodal oncological treatment associated with radical surgical resection determines long-term survival.

393. Management of Giant Cell Tumor of the First Metacarpal: 2 case reports

O. Mejri, M. Taghouti, M. Ben Khedher, M. Chaieb, N. Mahdhi

University of Sousse, « Ibn El Jazzar » Faculty of Medicine, Plastic, reconstructive, aesthetic surgery and burn department of Sahloul university hospital, Sousse, Tunisia

Introduction: Giant cell tumors (GCTs) of the first metacarpal bone are locally aggressive neoplasms with potential malignant transformation. Their management is challenging for hand surgeons in terms of resection and reconstruction. This poster aims to present a comprehensive analysis of cases to underline the treatment approach and encountered difficulties.
Case Reports: * A 50-year-old male presented with a progressive firm and painless swelling of the first commissure of the hand. Imaging revealed an osteolytic lesion of the first metacarpal. Tumor curettage was performed while preserving the radial artery's carpal branch and anterior thenar muscles and employing the induced membrane technique. Histopathological analysis confirmed GCT, with a lateral resection margin of less than 0.1 cm. * A 25-year-old female patient presented with a three-year history of pain at the base of the thumb, accompanied by recent swelling and paresthesia in the thumb pulp. CT scan revealed an expansive osteolytic lesion at the base of the first metacarpal, with cortical expansion and focal breach, suggestive of a GCT. The diagnosis was confirmed by biopsy. Curettage of the lesion with interposition of an iliac crest corticocancellous graft was performed. The patient experienced two recurrences, necessitating repeat surgical interventions. The approach remained conservative.
Discussion: Through presented cases and literature review; the discussion addresses key considerations in the management of GCTs of the first metacarpal. including the importance of accurate diagnosis through radiographic and histopathological examination, the selection of appropriate surgical approaches (curettage, en bloc resection, reconstruction techniques), and the significance of adjuvant therapies such as denosumab. Furthermore, postoperative outcomes, including functional outcomes and recurrence rates, will be reviewed.
Conclusion: Management of GCT involving the hand is challenging in the realm of musculoskeletal oncology. Striking a balance between preserving anatomy and function while mitigating the high risk of recurrence necessitates a nuanced and multidisciplinary approach.

394. Evaluation of the in vitro and in vivo anticancer proprieties of ethyl acetate extract of the plant Crateagus azarolus against colorectal cancer cells

Mokdad Bzeouich I1,2*, Maatouk M1, Chaabane F1, Chekir-Ghedira L1

1-Department of Biochemistry, Faculty of Medecine of Monastir, university of Monastir, Avicenne street, Monastir 5000 Tunisia.

2- Research Unit Bioactive Natural Products and Biotechnology UR17ES49, Faculty of Dental Medicine of Monastir, University of Monastir, Avicenne Street, Monastir 5000, Tunisia.

Colorectal cancer is a major public health problem. In Tunisia, colorectal cancer ranks third after lung cancer and breast cancer with percentages of 9.2% among men and 10.1% among women. Due to the chemoresistance of cancer cells and the adverse effects of current therapies, there is growing interest in the use of natural products to enhance anti-cancer potency.

Crataegus azarolus is a plant widely used in traditional medicine and performs a multitude of biological activities. In this study, Ethyl acetate (EA) extract from C. azarolus leaves was shown to inhibit the proliferation of CT26 colorectal cancer cells. This extract induces cell cycle arrest in the G2/M phase, the emergence of a sub-G1 peak and DNA fragmentation. The AE extract has anti-metastatic power by reducing the invasion and migration of CT26 cells. The in vivo antitumor potential of this extract was tested on Balb/C mice carrying the tumor. The AE extract significantly reduced tumor volume and mass and inhibited nitric oxide production by peritoneal macrophages.

The Ethyl acetate (EA) extract from the leaves of C. azarolus could be used as a potential agent for the treatment of colorectal cancer.

Keywords: Crataegus azarolus; colorectal cancer; ethyl acetate extract; anticancer activity.

395. Evolution of the Number of Requests for Analysis of Hazardous Medications at LNCM-Tunisia

Y. Mokni, S. Ouertani, E. Amira, F. Elkara, H. Oueslati, C. Ben Rayana,

Introduction: Management of hazardous drugs (HDs), due to their carcinogenic and genotoxic effects, represents a public health challenge. This study describes the evolution of hazardous drug control within the chemistry service of the National Laboratory for Drug Control (LNCM). The aim of this study is to assess trends in hazardous drug control.

Methods and materials: This is a retrospective observational study conducted over a 4-year period, from January 2019 to March 2023, within the chemistry service of LNCM. Hazardous drugs (HDs) were identified using the list of antineoplastic and other hazardous drugs in healthcare facilities (NIOSH list: The National Institute for Occupational Safety and Health). Data were collected from an Excel® file that records all requests for drug analyses received by the chemistry service, whether for market authorization, pre-marketing, or post-marketing control purposes. The identification of HDs received for analysis was carried out and verified by three residents. Trend regression analysis was performed using Microsoft Excel® version 2019.

Results: Our study revealed that 217 cases of hazardous drugs (HDs) were processed in the chemistry laboratory over a 4-year period. Among these, 70% were anticancer medications, and 50% were intended for parenteral administration. The number of HD cases decreased from 59 in 2020 to 50 in 2022. An increase in the number of HD cases from foreign countries was observed, rising from 4 cases in 2020 (6%) to 23 cases in 2022 (46%), while there was a significant decrease in the number of cases from local generic manufacturers, dropping from 55 cases (93%) to 27 cases (54%) during the same period.

Conclusion: This study has provided an overview of hazardous drugs registered in Tunisia, which were predominantly represented by cytotoxic medications. Foreign hazardous drugs showed a significant increase, while those manufactured in Tunisia decreased. A national program promoting local production could pose a new challenge with substantial economic implications.

396. ALK and PD-L1 expression in NSCLC: about 19 cases

W. MOKNI[1], W. GHRIBI[1], N.GOUIAA[1]

(1) Service d'Anatomie et de Cytologie pathologiques, CHU Habib Bourguiba route El Ain, 3029, Sfax, Tunisie.

Background: NSCLC accounts for 80–85% of all cases of lung cancer. Within the last decade, the discovery of anaplastic lymphoma kinase (ALK) gene rearrangement in lung cancer as well as the programmed death ligand (PD-L1)/PD1 signaling pathway has respectively led to the development of targeted therapy and immunotherapy.
We aimed to investigate the profile of PDL1 and ALK in NSCLC patients, and discuss the prognostic as well as the therapeutic impacts of those biomarkers.
Methods: The study covered the period from January 2021 to August 2023. Immunohistochemistry was used to identify ALK and PD-L1 proteins expression, in respectively 18 and 2 NSCLC patients, using AlK (clone 5A4) and PD-L1 (clone 4_11) antibodies on formalin-fixed paraffin embedded specimens. Cytoplasmic and membranous staining were considered positive for respectively ALK and PDL-1and percentage of positive tumour cells was noted.
Results: The median age was 62,47 years (range 42- 77 years) and there were 15 males (79%). Clinically, all patients were non smokers with stage four NSCLC. Histological subtypes were mainly adencarcinoma (89%) with only two cases of undifferentiated carcinoma. ALK was scored 1+ (weak staining, 20%) in one adenocarcinoma case Out of the 19 studied specimens, requiring a FISH analysis to identify an ALK rearrangement. As for PD-L1, it showed positive staining in 20% of tumor cells in one of the two ALK negative adenocarcinoma studied cases.
Conclusion: ALK gene Rearrangements are detected in around 3–5% of all NSCLC patients. ALK testing is particularly recommended in advanced adenocarcinoma, as its overexpression is predictive of response to tyrosine kinase inhibitors. The introduction of immune checkpoint inhibitors, which prevent tumor immune escape also highlighted the importance of characterizing a tumor's PD-L1 status. ALK and PDL-1 proteins overexpression is an independent prognostic factor, that showed benefits in global survival and long lasting response.

397. Esophageal Cancer Epidemiological Profile

Monastiri Souhir, Hassine hajer , Khemiri Ranya , Dabbebi Habiba , Yaacoub Haithem, Cherif Douha, Kchir Hela , Maamouri Nadia

Introduction: Esophageal cancer is the 7th most common cancer, causing substantial morbidity and mortality, ranking 6th in cancer-related deaths. Often diagnosed at advanced stages, this study aims to explore esophageal cancer's epidemiological, clinical, and paraclinical aspects.

Patients and Methods: This retrospective study spanned 8 years (January 2015 to July 2023) at La RABTA University Hospital's Hepato-Gastroenterology Department, focusing on esophageal tumors. We gathered epidemiological, clinical, and paraclinical data, including staging results.

Results: Thirteen patients, aged on average 65 years (range: 37-89), participated, with a male-to-female ratio of 1.6. Notably, 46.2% were smokers, and 23.1% were alcohol consumers. Hypertension (15.4%) and vitamin B12 deficiency (7.7%) were common medical histories. The average BMI was 19.8 kg/m² (range: 17-25), and consultation delay averaged 6.1 months. Clinical symptoms included dysphagia (92.3%), general deterioration (84.6%), epigastric pain (30.8%), vomiting (23.1%), and heartburn (23.1%). WHO performance status was 1 in 61.5% of cases. Anemia affected 53.8% of patients (average hemoglobin: 10.3 g/dL, range: 4.2-15), and 53.8% had nutritional deficiencies. Endoscopy revealed predominantly ulcerating and fungating forms (69.2%), followed by the fungating form (15.4%) and ulcerated polypoid appearance (15.4%). Tumor localization was in the lower esophagus (61.5%) and mid-esophagus (38.5%). The most common histological type was adenocarcinoma in 76.9% of cases, followed by squamous cell carcinoma (23.1%). Tumors were mostly moderately differentiated (61.5%). At diagnosis, 76.9% of tumors were locally advanced with metastases. Tumors led to digestive stenosis in 30.8% and digestive bleeding in 15.4%. One patient had a concurrent pulmonary neoplasm. Curative treatment was recommended for only one patient.

Conclusion: Esophageal cancer prognosis is grim due to late diagnosis, resulting in significant mortality in a relatively young population; over 70% of patients are in the metastatic stage upon diagnosis.

398. Descriptive Study of Hepatic Nodules

Khemiri Ranya, Hassine Hajer , Monastiri Souhir, Cherif Dhouha, Yaacoub Haithem , Kchir Hela , Maamouri Nadia

Introduction: Hepatic masses may be discovered incidentally or as part of a screening process. They can be solitary or multiple, with either tumorous or pseudotumorous characteristics. Among these lesions, the most common include hepatic hydatid cysts, biliary cysts, hemangiomas, focal nodular hyperplasia (FNH), adenomas, hepatocellular carcinoma (HCC), and metastases. The aim of our study was to describe the main hepatic lesions and investigate their etiology.

Materials and Methods: We conducted a retrospective analysis of patient records admitted to the Hepato-Gastroenterology Service B at CHU La Rabta, for the evaluation of hepatic nodules over a 6-year period [January 2016 - December 2022]. We collected clinical, laboratory, radiological, and histological data.

Results: We enrolled 27 patients with an average age of 67.07 years [range: 40-87] and a male-to-female ratio of 1.25. Among our patients, 33.3% were smokers, and 7.4% were alcohol consumers. Hepatic risk factors were mainly associated with surgery (37%), dental procedures (37%), scarifications (29.6%), and tattoos (7.4%). The average BMI was 28.7 kg/m² [range: 18-28.1]. The most common clinical symptoms included abdominal pain (85.2%), primarily located in the right hypochondrium (66.9%), general malaise (70.4%), vomiting (11.1%), jaundice (7.4%), and a feeling of heaviness (3.7%). The nodules were incidentally discovered in 2 patients. Hepatic biopsy was performed in 29.6% of our patients, with histological examination revealing HCC in 2 patients and cholangiocarcinoma in 1 patient. Other benign histological findings included hepatic tuberculosis (3.7%), hepatic sarcoidosis (3.7%), focal steatosis (3.7%), and hepatic dystrophy (3.7%). Tumors were malignant in 59.3% of cases and benign in 40.7% of cases. Hepatic metastases were the most common cause of malignant nodules (37%), primarily originating from the colorectum (11.1%), lung (7.4%), pancreas (3.7%), or stomach (3.7%). Metastatic nodules were generally multiple (>6) in 44.4% of cases, with an average size of 47.3 mm [range: 6.7-120] and elevated tumor markers. Benign lesions were predominantly angiomas (18.5%), biliary cysts (7.4%), and hydatid cysts (3.7%).

Conclusion: The discovery of a hepatic mass is becoming increasingly common due to advances in medical imaging. A well-conducted diagnostic approach with precise protocols is essential to avoid missing a malignant lesion.

399. Mycosis fungoides of the vulva: a rare secondary extension

Syrine Moussa, Sarra Yaacoub, Taghrid Tlili, Safouane Frini, Dorra Chiba, Zeineb Nfikha, Atef Ben Abdelkader, Badreddine Sriha, Moncef Mokni
Laboratoire d'anatomopathologie du CHU Farhat Hached de Sousse, Tunisie

Background: Mycosis fungoides (MF) is the most common type of cutaneous T-cell lymphomas. Vulvar involvement by MF is rare and it's essentially a secondary location. We aim to analyze clinico-pathological aspects of the vulvar MF.
Methods: We present a case of vulvar MF in a 39-year-old woman, with history of cutaneous lymphoma evolving for 2 years treated with chemotherapy (8 cures) and radiotherapy. This case was diagnosed in our institution in 2021.
Report of case: The patient presented at the gynecology consultation with a nodule of the right labia majora. The physical examination of the patient objectified a painless ulcerated nodule associated with ipsilateral inguinal lymphadenopathy. The nodule was misdiagnosed and deemed to be a vulvar squamous cell carcinoma for which the patient was operated. The first biopsies performed came back negative. Large excisional biopsies of the nodule and one of the lymph nodes were performed. On histological examination, diffuse lymphomatous tumor proliferation of deep dermal site was found with discreet epidermotropism. The tumor cells were small to medium to large in size with irregular nuclei showing one or more nucleoli without a large cell-like contingent. It was associated with numerous giant cells, histiocytes and macrophages with tangible bodies. In the immunohistochemical study, the tumor cells were positive for CD2, CD3, CD8 and CD4 and negative for CD30. In view of the patient's history, we thus made the diagnosis of secondary vulvar MF.
Conclusion: Vulvar MF is extremely rare. Its diagnosis is challenging given that it mimics several benign and even malignant skin lesions. In the present case, the patient was operated for vulvar squamous cell carcinoma and the diagnosis was confirmed by histological examination and immunohistochemistry. Vulvar involvement by MF is a sign of disease progression and it's associated with poor prognosis.

400. Submandibular oncocytoma: a case report with literature review

Syrine MOUSSE, Taghrid TLILI, Sarra YAACOUB, Khouloud BENLAZREG, Lamia DJAIDANE, Atef BEN ABDELKADER, Moncef MOKNI.

Department of Pathology. CHU Farhat Hached.

Background: Submandibular oncocytoma are rare benign salivary gland neoplasms. They are often misdiagnosed since their clinical and histological presentation overlaps with other benign tumors of the gland. We aim to study the clinical and histopathological aspects of this entity.

Methods: We present the case of a 75-year-old-man who presented at the ENT consultation with a right submandibular painless mass evolving for 3 years. The patient underwent unilateral sub-mandibulectomy. This case was diagnosed in our institution in 2022.

Observation: We received a fresh sub-mandibulectomy specimen measuring 5x3.5x2.5cm. The cut surface showed a solid fleshy, well-defined nodule measuring 4 cm, without necrosis. On histological examination, the nodule was well circumscribed with thin capsule. It was composed of monotonous polyhedral cells with abundant eosinophilic granular cytoplasm and centrally located vesicular nuclei with prominent nucleolus. These cells were arranged in nests and sheets separated by thin fibrovascular stroma. There was no mitosis or necrosis. The adjacent submandibular gland showed foci of oncocytosis. The postoperative course was regular and the patient was discharged in good condition on the next postoperative day. There was no recurrence at follow-up.

Conclusion: Sub-mandibular oncocytoma is a rare benign salivary gland tumor accounting for 2% of all salivary gland neoplasms. Surgical excision is the optimal treatment. Recurrences are rare.

401. Lung neoplasia in the subset of patients treated with radiotherapy for Hodgkin’s lymphoma

Syrine Moussa, Ahlem Bdioui, Yasmine Dhouibi, Mariem Alaya, Sarra Mestiri, Sihem Hmissa

Background: Radio-therapy is a double-edged sword. Indeed, radiotherapy has improved the survival rate in several types of cancer, however, it could induce other primary cancers in a few years following exposure. Effectively, Hodgkin's patient develop lung cancer at two to eight times the rate of the general population.

Methods: Two cases of lung cancer of 1 smoking male and 1 female aged 31 and 61 years old, respectively, with history of Hodgkin disease treated by radio and chemotherapy. The cases were diagnosed in 2022 in our institution.

Results: The two patients had been followed for Hodgkin's disease since 2011 and 2013, respectively and they were referred to the thoracic surgery department for a management of lung lesion. Chest CT scan showed right proximal tumor mass measuring 1cm and 5.5cm respectively with pleural infiltration and ipsilateral adenopathy in 1 case. The histological examination showed in both cases a pulmonary invasive mucinous adenocarcinoma, associated with a lepidic component estimated at 20% and 30% respectively. The tumor cells were positive for CK7 and they showed weak and focal expression for TTF1 on immunohistochemical study.

Conclusion: Hodgkin disease has become a curable disease que to the advances in his treatment, however, developing a second primary cancer may lead to death. Lung cancer is one of the most common malignancies after Hodgkin's disease and is rapidly fatal. Smoking and exposure to radiotherapy would obviously increase the risk of developing lung cancer compared to the general population.

402. Primary prostatic extra-gastrointestinal stromal tumor: a case report and review of literature

Syrine Moussa, Oussama Belkacem, Wajdi Ben Abdallah, Ahmed Loghmari, Sarra Mestir, Sihem Hmissa

Pathology Department, Sahloul Hospital of Sousse, Tunisia, Urology Department, Sahloul Hospital of Sousse, Tunisia

Background & Objective: Prostatic extra-gastrointestinal stromal tumors (E-GIST) are an extremely rare mesenchymal tumor accounting for 1% of all prostatic neoplasms. Clinical presentation is not specific mimicking other prostatic tumors. We aim to describe the clinical and pathological features of this entity.

Material & Methods: We present a case of prostatic E-GIST in a 58-year-old man with no previous pathological history. This case was diagnosed at our institution in 2022.

Observation: Patient presented at the Urology Outpatient Department with lower urinary tract symptoms. Digital rectal examination revealed a solid enlarged prostate. Serum prostate-specific-antigen level was normal. A 6 core transrectal ultrasound guided prostatic biopsy was performed. The histopathological examination revealed a mesenchymal proliferation infiltrating the prostatic tissue. This tumor was composed of bland spindle cells with elongated nuclei, and inconspicuous nucleoli. Some areas showed an epithelioid morphology. The mitotic count was estimated at 1 mitosis per 10 high power fields (HPF). Immunohistochemistry study showed positive expression of CD117, DOG-1, and CD34. Cytokeratin and desmin were negative. Thus, the diagnosis of primary prostatic E-GIST was made.

Conclusion: Primary prostatic E-GIST is an extremely rare mesenchymal tumor with misleading clinical features which may delay the diagnosis. It should be included in the differential diagnosis of prostatic spindle cell lesions. The diagnosis of E-GIST in the differential diagnosis of spindle cell tumors of the prostate is based on immunohistochemical study.

403. A case-control study of occupational risk factors for bladder cancer in the Sousse region

Moussa A1, Kacem I1, Tlili G2, Kahloul M3, Bouhoula M1, Chouchane A1, Aloui A1, Maoua M1, Brahem A1, Kalboussi H1, El Maalel O1, Chatti S1, , Naija W3, Jaidane M2, Mrizek N1.

1. Occupational medicine department –Farhat Hached Academic Hospital
2. Urology Department, Sahloul Academic Hospital
3. Anesthesia and Intensive Care Department, Sahloul Academic Hospital

Introduction: Bladder cancer is one of the first cancers for which occupational causes have been highlighted and it is still an important problem of occupational pathology. The proportion of occupational causes of bladder cancer varies from about 5 to 25%.

The occupational origin of these tumors is well established and constitutes the second major etiological factor.

Objective: To investigate occupational and extra occupational risk factors of bladder tumors.

Material and methods: This is a case-control study carried out in the Urology Department of Sahloul University Hospital of Sousse. The study included 93 cases of bladder tumor compared to 93 controls chosen from among the patients admitted to the General Surgery departments in the same hospital.

Results: The average age of cases was 62.67 ± 12.28years. Tobacco, consumption of coffee and tea were independently associated with bladder cancer ($p = 0.027$, $p<10-3$) respectively.

The agricultural, metal, and painting sectors were independently associated with bladder cancer. The substances handled, incriminated in the genesis of bladder tumors, were solvents, pesticides, paints and varnishes.

Conclusion: Occupational exposures are a frequent cause of bladder tumors after tobacco, in particular aromatic amines and work exposing to dyes (paints ...). Physicians should therefore be aware of the need for occupational etiology by collaborating with occupational physicians.

404. Occupational Cancers: Outcomes of Studies at the Occupational Medicine Department of CHU Farhat Hached in Sousse

Moussa A, I Kacem, Chouchane A, Ghenim A, Aloui A, Bouhoula M, Brahem A, Kalboussi H, El Maalel O, Chatti S, Maoua M, N Mrizak.

Occupational medicine department –Farhat Hached Academic Hospital

Introduction: Cancer is a multifactorial condition. There has been substantial focus on the intricate relationship between specific work settings and the emergence of cancer. The proportion attributable to occupational exposures varies according to estimates from 2% to 8%, affecting numerous sites.

Aims: To identify high-risk sectors of the most common occupational cancers from studies conducted at the Occupational Medicine Department of CHU Farhat Hached in Sousse.

Methods: A descriptive, bibliometric study was conducted at the Occupational Medicine Department of CHU Farhat Hached in Sousse, focusing on the occupational cancers affecting common anatomical sites.

Results: A total of 9 studies was identified, covering nine sites: bronchopulmonary, bladder, heamatologic, skin, colorectal, brain, prostate, breast, and laryngeal cancers.

Among the industries at higher risk for bladder cancer, metallurgy, painting, and agriculture stood out. In the case of blood, brain, bronchopulmonary, skin and colorectal cancers, agriculture was the predominant sector. Both the agricultural sector and organic solvents were independently associated with prostate cancer. Building construction and mechanical industry sectors were highly associated with laryngeal cancer. Agriculture pesticides exposure, were associated with higher risk of breast cancer.

Conclusion: The underestimated implication of occupational exposures on cancer development, possibly due to delayed onset, underscores the imperative of prioritizing high-risk job sectors and settling targeted prevention policies.

405. The risk of Bladder Cancer inherent to occupational exposures: A Case report among a printer

I. Rassas, A. Moussa, M. Hayouni, A. Mahfoudh, I. Merchaoui, Ch. Amri, N. Chaari, A. Akrout, A. Henchi.

Department of Ergonomics and Occupational Medicine- Faculty of Medicine of Monastir.

Introduction: Bladder cancer is one of the most common types of work-related cancers. It has been estimated that 10% to 18% of all bladder cancer cases are due to longterm exposure to certain chemicals and agents in the workplace. The purpose of the present case report is to highlight the underestimated role of occupational exposures in the genesis of bladder cancer, and the importance of strengthening prevention.

Observation: Mr. M.K is a 39-year-old man presented with the complaint of hepatic colic evolving over the last 04 months, without any other associated symptoms. The patient was a non-smoker with no previous medical history. The abdominal ultrasound revealed the presence of an intra-vesical tumor. A surgical excision of the tumor was carried out. The histopathological examination confirmed the diagnosis of low-grade papillary urothelial carcinoma. An etiological investigation has been initiated and revealed that Mr MK, a printing machine operator, was exposed during 16 years to aromatic amines contained in azo colorants used by the patient in his workstation. The patient reports that he never wore any personal protective equipment, nor did he benefit from any special medical supervision during his career. As a consequence of this exposure, the occupational origin of this bladder cancer was retained. Referring to the Tunisian table of occupational diseases, this cancer was declared as an occupational disease according to Table n°33 related to "aromatic amines." When he returned to work after completing treatment, Mr MK has been reclassified in a workstation that does not expose him to these carcinogenic substances.

Conclusion: The association between exposure to aromatic amines and the development of human bladder cancer is well-established. Unfortunately, these chemicals are in widespread use in industrial and manufacturing processes. It is therefore crucial to reinforce prevention and monitoring of exposed employees.

406. Clinico-biological characteristics of paraproteinemia in the biochemistry laboratory at Farhat Hached Hospital in Sousse

S.ammous (1), N.hamdi (1), C. Boughzala (1), S. Mrad (1), J. Ben Abdallah (1). B. Charfeddine (1), S. Ferchichi (1)

(1) Biochemistry laboratory, Farhat Hached University Hospital, Sousse, Tunisia

Introduction: Paraproteinemias are a diverse group of diseases defined by the presence of a serum monoclonal protein (M-protein) due to aberrant overproduction by a monoclonal plasma cell population. They are characterized by clinical and biological polymorphism, requiring multidisciplinary management. The aim of this study was to investigate the clinical and biological characteristics of paraproteinemias diagnosed in our laboratory.
Methods: This was a retrospective, descriptive study conducted in the biochemistry laboratory at Farhat Hached University Hospital in Sousse over a 2-year period (2020 - 2022), including all patients with a monoclonal spike (M spike) on serum protein electrophoresis and confirmed by immunotyping.
Results: In our study, 114 patients were included with a median age of 59 years and a sex ratio of 1. Among these, 91 were identified as Multiple myeloma, 3 were detected to have monoclonal gammopathy of undetermined significance and 20 were under investigation. Sixty percent of our patients presented bone symptoms (bone pain, bone fractures) and 56% presented asthenia, weight loss and anorexia. Biologically, anemia, elevated total serum protein, renal failure and hypercalcemia were reported respectively in 77%, 38.5%, 17.5% and 6.18% of patients. On serum protein electrophoresis, 71.8% of cases had the M band in the gamma globulin region, 25% had it in the the beta2 globulin region and 4.16% in the beta1 globulin region. The most frequent immunotyping distribution of serum monoclonal paraprotein was IgG Kappa (41.6%), followed by IgG Lambda (38.54%), IgA Kappa (10.4%) and then IgA Lambda (9.3%).
Conclusion: Biology plays an important role in the diagnosis and monitoring of paraproteinemia. Developments in biochemical techniques have enabled better analysis of the monoclonal component and more appropriate management.
Key words: Paraproteinemia, multiple myeloma, serum protein electrophoresis

407. Unveiling the Challenges and Realities of Gastric Adenocarcinoma: An In-depth Study of 81 Cases

Raouia Saidani, Mahmoud Selma, Khouildi Dorsaf, Elloumi Hanen, Belkhamsa Awatef, Bouaziz Saber, Ben Hamida Sonia, Cheikh Imed
Department of Gastroenterology; Habib Bougatfa Hospital; Bizerte

Introduction: Gastric adenocarcinoma (GA) ranks second among neoplasms worldwide. Its prognosis remains grim due to delayed diagnosis.
Objective: To assess the epidemiological, clinical, and therapeutic characteristics of GA.
Materials And Methods: A retrospective study (2010-2020) involving all GA patients followed at the Bizerte Gastroenterology Department.
Results: 81 patients were included. The mean age was 63.7 years (28-88 years). They comprised 62 males and 19 females (male-to-female ratio: 3.2). No family history of neoplasia was found. Discovery circumstances were dominated by general deterioration (74%), epigastric pain (59.2%), vomiting (27.16%), gastrointestinal bleeding (13.5%), and 1 case revealed by deep vein thrombosis. The average consultation delay was 4.72 months. Examination was normal in 33.8% of cases. Epigastric tenderness was found in 48.14% of cases. The most common locations were corpus (44.44%) and antrum (28.4%). The most frequent histological types were ulcerative-polypoid (59.25%) and ulcerative (38.27%). Histological types included undifferentiated carcinoma with signet ring cells (23.45%), moderately differentiated (35.8%), poorly differentiated (23.45%), and well-differentiated (13.58%). Helicobacter pylori was found in 29.63% of cases. Staging revealed local invasion (24.7%), distant metastases (33.33%), and peritoneal carcinomatosis (25.92%). Curative surgery was performed in 46.91% of cases. Palliative chemotherapy was indicated in 40.74% of cases. Therapeutic abstention was decided in 6 patients.
Conclusion: Stomach cancer is a formidable disease with high mortality. In our department, 48.14% of our patients were diagnosed late, preventing the initiation of curative treatment. These sobering statistics emphasize the critical importance of early detection and intervention in the battle against gastric adenocarcinoma, urging for enhanced efforts in both awareness and healthcare infrastructure to improve patient outcomes.

408. Hereditary Cancer Syndromes in Tunisia : role of genetic testing and impact on therapeutic decision making

N. Jandoubi[1], M. Boujemaa[1], N. Mighri1, N. Mejri [1,3], S. Ben Nasr [1,4], H. Bouaziz [1,5], Y. Berrazega[3], H. Rachdi[3], N. Daoud [3], A. Zribi[4], J. Ayari[4], H. El Benna [1,3], S. Labidi [1,3], A. Haddaoui[4], R. Mrad[6], S. Ben Ahmed[7], H. Boussen [1,3], S. Abdelhak[1], S. Boubaker [1,2], Y. Hamdi [1,2*]
1 Laboratory of Biomedical Genomics and Oncogenetics, LR20IPT05, Institut Pasteur de Tunis, Tunis, Tunisia, University of Tunis El Manar, Tunis, Tunisia
2 Laboratory of Human and Experimental Pathology, Institut Pasteur de Tunis, Tunisia
3 Medical Oncology Department, Abderrahman Mami Hospital, Faculty of Medicine Tunis, University Tunis El Manar, Tunis, Tunisia
4 Department of Medical Oncology, Military Hospital of Tunis, Tunis, Tunisia
5 Surgical Oncology Department, Salah Azaiez Institute of Cancer, Tunis, Tunisia
6 Department of Human Genetics, Charles Nicolle Hospital, Tunis, Tunisia.
7 Department of Medical Oncology, Farhat Hached University Hospital of Sousse, Faculty of Medicine of Sousse, Tunisia

Background: Identifying cancer syndromic cases is fundamental for the clinical management and preventive care of patients and unaffected family members. This study aims to explore the clinicopathological features and genetic factors associated with hereditary cancer in Tunisia.
Materials and methods: Clinicopathological features, and personal/family history of cancer were explored in 521 patients. Genetic analysis using Sanger and next-generation sequencing was performed for a set of patients.
Results: Hereditary breast and ovarian cancer syndrome was the most frequent cluster in which 36 BRCA mutations were identified. We described a subgroup of patients with likely ''breast cancer-only syndrome'' among this cluster. Two cases of Li-Fraumeni syndrome with distinct TP53 mutations been identified. Genetic investigation also allowed the identification of a new BLM homozygous mutation in one patient with multiple primary cancers. Phenotype-genotype correlation suggests the diagnosis of Bloom syndrome. MUTYH-Associated polyposis was diagnosed in an endometrium cancer patient carrying a recurrent MUTYH homozygous mutation. The same mutation was identified at a heterozygous stat in two other patients with breast and pancreas cancers suggesting a possible funder effect. Further, we have identified a set of patients with likely new familial syndromes sharing particular clinical and epidemiological characteristics.
Conclusion: Our study calls for more collaborations between clinicians and geneticists in order to properly diagnose, personalize treatment, and orient screening and surveillance policies.

409. Lifestyle habits associated with the occurrence of prostate cancer in a Tunisian population

Nakhli R1, Kacem I1, Tlili G2, Belhadj N1, Jaidane M2, Mrizek N1

1: Occupational Medicine Department, Farhat Hached Teaching Hospital, Sousse, Tunisia.
2: Urology Department of Sahloul University Hospital, Sousse, Tunisia

Introduction: Prostate cancer ranks second in terms of frequency and is the fifth leading cause of cancer-related deaths among men. In Tunisia, it constitutes the third most diagnosed cancer in men. The etiopathogenesis of prostate cancer remains a subject of controversy. Established risk factors are primarily associated with age and lifestyle habits.

Objective: The aim of our study was to identify lifestyle habits associated with the occurrence of prostate cancer in a Tunisian population.

Materials and Methods: This is a case-control study conducted at the Urology Department of Sahloul University Hospital, Sousse and the Occupational Medicine Department of Farhat Hached University Hospital, Sousse from October 1st, 2019, to September 30th, 2020. The cases consisted of patients diagnosed with prostate cancer, confirmed by histopathological examination, and followed at the Urology Department of Sahloul University Hospital during the period from January 1st, 2013, to December 31st, 2019.

Results: In total, 107 cases of prostate cancer and 107 controls patients were included in the study. Regular physical activity was found in 21.5% of cases compared to 68.2% in controls and was associated with a statistically significant decrease in the risk of prostate cancer occurrence, with an odds ratio (OR) of 0.12, 95% confidence interval [0.06-0.23], P<10-3. Alcohol consumption and smoking were identified in 47.2% and 60% of the selected cases, respectively, and were statistically significantly associated with an increased risk of prostate cancer occurrence, with respective ORs of 0.86, 95% CI [0.46-1.6], P = 0.63, and OR of 1.7, 95% CI [0.95-3.2], P = 0.68. No significant association was reported between prostate cancer risk and coffee consumption, regardless of frequency. Regarding dietary habits, low consumption of fruits and vegetables was a risk factor for prostate cancer, with an OR of 2.29, 95% CI [1.22-4.3], showing a statistically significant difference (p=0.009). Frequent consumption of red meat and fats were both statistically significantly associated with an increased risk of prostate cancer occurrence, with respective ORs of 6.5, 95% CI [3.29-13.16], p<10-3, and OR of 7.31, 95% CI [3.33-16.03], p<10-3.

Conclusion: Prostate cancer has significant morbidity and mortality. Its etiopathogenesis, which is not fully elucidated, involves environmental, occupational, or lifestyle factors. Identifying modifiable risk factors for prostate cancer and gaining a better understanding of the underlying mechanisms should facilitate the implementation of prevention strategies.

410. Occupational Cancers: Clinical Features and Workplace Links - A Retrospective Study at the Tunisian Institute of Occupational Health and Safety

Rania Nakhli1,2, Nesrine Kammoun1, Jihene Rejab1, Belhadj Narjess2,Sonia Fehri1.

1.Tunisian Occupational Health and Safety Institute, Faculty of Medicine of Tunis, Tunis El Manar University.
2. Occupational Health Department, Faculty of Medicine of Sousse

Introduction: Cancer stands as the fourth leading cause of global mortality. The prevalence of occupational cancers varies within the range of 4% to 8.5%. The links between exposure to carcinogenic agents in the workplace and the subsequent development of various forms of cancer have been definitively established in scientific literature.

Objective: This study aimed to analyze the epidemiological characteristics of occupational cancers reported in the Tunisian Institute of Occupational Health and Safety during 2015–2020.

Methods: This was a descriptive retrospective investigation, focusing on cases of reported occupational cancers that were documented during clinical consultations at the Institute of Occupational Health and Safety in Tunisia over the period from 2015 to 2020. Epidemiological characteristics were analyzed by year, region, industry, gender, age at diagnosis, and exposure duration to occupational hazards.

Results: A total of 7 patients sought consultation for the evaluation of the potential occupational origins of their cancers. The mean age of the cohort was 60.14 ± 10 years. All patients had a history of smoking (7 cases), with an average of 22 pack-years. Alcohol consumption was reported in a solitary patient. In each case, a definitive occupational link was established. The patients held diverse occupational roles: miners (3 cases), construction workers (2 cases), machine operators (1 case), and maintenance agents (1 case). The average duration of occupational exposure was 27 years. Six patients had bronchopulmonary cancer. One patient had bladder cancer. The primary reasons for seeking consultation were general health decline and weight loss (5 cases), along with dyspnea (2 cases). Symptoms manifested, on average, 20 years after starting employment. Detailed occupational scrutiny unveiled exposure to distinct hazardous agents: silica particles (4 cases), asbestos (1 case), solvents (1 case), and nickel (1 case). Correspondingly, the reported cancer cases were classified under specific categories of the Tunisian list of compensable occupational diseases: Table No. 17 (Mineral dust containing free silica: 5 cases), Table No. 18 (Asbestos dust: 1 case), Table No. 33 (Aromatic amines, their hydroxyl, halogen, nitroso, nitro, and sulfonic derivatives, and 4-nitrodiphenyl: 1 case), and Table No. 6 (Nickel: 1 case).

Conclusion: The role of occupational agents in the development of bronchial and pleural cancer and bladder cancer is important but not routinely assessed. The diverse causes of occupational cancers demand urgent preventive actions. Employing protective equipment and automating certain processes are vital in reducing their occurrence.

411. Male breast cancer: a report of 27 cases

Fatima Rezzoug1,2, Jihan derfoufi1,2, Soufia El Ouardani1,2, Ikram Kharmach1,2, Ouissam Al Jarroudi1,2, Said Afqir1,2

1. Medical Oncology Department, Mohammed VI University Hospital Center, Oujda, Morocco
2. Faculty of Medicine and Pharmacy, Mohammed First University, Oujda, Morocco

Introduction: Male breast cancer is a rare disease, representing approximately 1% of all cancers in men and less than 1% of all breast cancers. Due to the rarity of this disease, the currently available information on male breast cancer has largely been derived from case reports and retrospective single-center studies. Diagnosis and treatment strategies have been primarily extrapolated from research conducted in women with breast cancer.

Materials and methods: This is a retrospective descriptive study of a cohort of male patients treated for breast cancer in the Medical Oncology Department of Mohammed VI Oujda University Hospital Center. The study covers a 10-year period from January 2012 to December 2022. The aim of this study is to analyze the epidemiological and etiopathogenic aspects, the circumstances of discovery, histological characteristics, therapeutic modalities, as well as prognostic factors.

Results: In total, 27 patients were collected. The median age was 67 years. A family history of cancer was found in 7 patients (25.9%). The median time for consultation was 3.7 months. The primary clinical complaint was a retroareolar mass in 23 cases (85%). The most common histological type was infiltrating ductal carcinoma, in 22 patients (84.1%). Out of all the patients, 22 (81%) underwent surgery, with 20 (91%) undergoing mastectomy. Radiotherapy was administered to 13 patients (48.14%). Adjuvant chemotherapy was indicated in 10 patients (37%). 6 patients received palliative chemotherapy (22.2%). 8 patients did not receive chemotherapy (29.6%). Hormone therapy, with tamoxifen, was prescribed to 20 patients (70.3%). In our series, 2 patients expressing the HER2 gene received trastuzumab treatment.

Conclusion: Breast cancer in men is rare and is often diagnosed at an advanced stage. Its treatment is similar to that in women, but delayed diagnosis significantly impacts the prognosis. Further studies are needed to improve the management and prognosis of this condition.

412. Adenocarcinoma of the Ampulla of Vater: a report of 9 cases

Fatima Rezzoug1,2, Ikram Kharmach1,2, Ouissam Al Jarroudi1,2, Said Afqir1,2

1. Medical Oncology Department, Mohammed VI University Hospital Center, Oujda, Morocco
2. Faculty of Medicine and Pharmacy, Mohammed First University, Oujda, Morocco

Introduction: Adenocarcinoma of the Vater's ampulla is a rare digestive cancer, often diagnosed at a localized stage, thanks to symptoms resulting from biliary obstruction. Two main subtypes are identified: the biliopancreatic subtype and the intestinal subtype. The prognosis is favorable with a 40% 5-year survival rate. There are few studies describing the characteristics of patients and their management.

Materials and methods: This is a descriptive retrospective study of 9 cases of ampullary adenocarcinomas treated in the medical oncology department of Mohammed VI University Hospital in Oujda over a 5-year period from January 2017 to December 2022. The aim of this study is to describe the clinical and paraclinical characteristics as well as the treatment modalities.

Results: In total, 9 patients were collected. The median age was 59 years. Male patients were more frequently affected, with a male-to-female ratio of 2. The primary clinical symptom observed was obstructive jaundice in 100% of the patients. Essential paraclinical investigations for diagnosis included duodenal endoscopy with biopsies, biliary MRI, CT scans, and ultrasound. Endoscopic ultrasound was performed on 6 patients (66.7%), and ERCP on 8 patients (89%). The final histological findings showed that 4 patients (44%) had an indeterminate phenotype, 3 (33%) had a biliopancreatic type, and 2 had an intestinal type. 8 patients (89%) had localized disease, while 1 patient had bone metastases. Surgical treatment involved a Whipple procedure. Five patients (55%) received chemotherapy, with 4 patients receiving adjuvant chemotherapy and 1 patient receiving palliative chemotherapy.

Conclusion: Patients diagnosed with ampullary adenocarcinoma require early therapeutic intervention, with pancreaticoduodenectomy (Whipple procedure) being the standard curative treatment. As for systemic therapy, there are currently no well-defined guidelines due to the rarity of this disease, and decisions should be made in a multidisciplinary team setting. Further studies are needed to better delineate the management approach.

413. Exploratory thoracotomies for unexpected extensions of non-small-cell lung cancer: reasons and its influence on survival

Asma Saad1, Mahdi Abdennadher1, Amina Abdelkebir1, Hazem Zribi1, Imen Bouacida1, Sonia Ouerghi2, Sarra Zairi1, Adel Marghli1

1: Department of Thoracic Surgery. Abderrahman Mami Hospital. Ariana. Tunis
2: Surgical Anesthesia and Intensive Care Unit. Abderrahman Mami Hospital. Ariana. Tunis

Introduction: Despite the recent progress in imaging and induction therapy, a thoracotomy may remain exploratory when the surgical exploration reveals an unexpected extension of the tumor, the nodes or both of them. It's a major pitfall of the surgical management of non-small-cell lung cancer. Thoracic surgeon faces then a dilemma, between performing the resection, and closing the chest. Our purpose was to revisit these situations, describe its causes and its influence on survival.

Methods Retrospectively study including 25 patients who underwent exploratory thoracotomy for unexpected extensions of non-small-cell lung cancer between January 2018 and June 2023 in the thoracic surgery department of Abderrahmen Mami hospital.

Results: There were 22 men and 3 women with a mean age of 60 years [44 - 80]. The diagnostic procedure before ET comprised bronchoscopy in all patients, transthoracic needle biopsy in 14 cases, cervical mediastinoscopy in 5 cases, and thoracoscopy in 6 cases, in all patients without proving unresectability. A CT scan was performed in all patients indicating resectability in 80%, doubtful resectability in 12 % and unresectability in 1 %. Clinical and surgical staging were equal in 92% of stage IIB patients, in 85% of stage IIIA, 60% of stage IIIB and 53% of patients in stage IV. Exploratory thoracotomies were due to the intraoperative evidence of bulky N disease in 5cases, to the local infiltration of mediastinal organs not clearly evident operatively on CT scan in two cases and due to unexpected pleural metastasis detected during operation in three cases.

Conclusion: Exploratory thoracotomy could be avoided through a more accurate preoperative staging procedure. In comparison with Exploratory thoracotomy, R2 resection is associated with a higher rate of postoperative complications, but a higher long-term survival.

414. Surgery for bilateral lung metastases

Asma Saad1, Amina Abdelkbir1, Imen Bouassida1, Kaouther Ben Amara1, Eya Aouled Ali2, Sarra Maazaoui3, Sonia Ouerghi4, Adel Marghli1

1: Thoracic surgery department of Abderrahmen Mami hospital of Ariana
2: Emergency department of Charles Nicoles Hospital -Tunis
3: Pneumology department Pav 2 of Abderrahmen Mami hospital of Ariana
4: anaesthesia and intensive care department of Abderrahmen Mami hospital of Ariana
Thoracic surgery department of Abderrahmen Mami hospital of Ariana

Introduction: Pulmonary metastasectomy is an established treatment that can provide improved long-term survival for patients with metastatic tumor(s) in the lung. Bilateral metastases are a special case. Surgery still has its specific indications for well selected cases discussed at a multidisciplinary consultation meeting.

Methods: This is a descriptive retrospective study of 26 patients with bilateral lung metastases operated at the thoracic surgery department of Abderrahmen Mami Hospital in Ariana between 2010 and 2022.

Results: Our series includes 12 men and 14 women with a mean age of 55 years [25- 75]. The nodules were discovered as part of the systematic follow-up of the initial neoplastic pathology. The mean number of nodules was estimated at 2 (range 2 to 12) with a mean size of 18 mm. Metastases were secondary to colorectal adenocarcinoma in 13 cases, osteosarcoma in 4 cases, synovialosarcoma in 3 cases and breast cancer in 6 cases. The indication for surgery was based on a collegial decision. The most frequent procedure was atypical resection, with nodules removed in 21 patients (80% of cases) and lymph node sampling in 16 patients. Lobectomy was indicated in five cases of tumor progression, and in one case of metastatic recurrence with partial response to chemotherapy. Our patients were approached by posterolateral thoracotomy (n=20) and video-assisted mini thoracotomy (n=6). Immediate postoperative follow-up was marked by pneumopathy in one patient.

Conclusion: Surgery for lung metastases allows prolonged survival, which has been integrated in recent decades with multimodal treatments.

415. Diagnostic and therapeutic surgery for malignant pleural mesothelioma: single-centre experience

Asma Saad1, Amina Abdelkbir1, Imen Bouassida1, Kaouther Ben Amara1 , Eya Aouled Ali2, Sarra Maazaoui3, Sonia Ouerghi4, Adel Marghli1

1 :Thoracic surgery department of Abderrahmen Mami hospital of Ariana
2 :Emergency department of Charles Nicoles Hospital -Tunis
3 : Pneumology department Pav 2 of Abderrahmen Mami hospital of Ariana
4 : anaesthesia and intensive care department of Abderrahmen Mami hospital of Ariana

Introduction: Malignant pleural mesothelioma is rare. The diagnosis must include preliminary thoracoscopy. Surgery for malignant pleural mesothelium is still mainly for diagnostic purposes, but surgical removal via pleuropneumonectomy is indicated for well-selected patients.

Methods: This is a descriptive retrospective study of 13 patients with malignant pleural mesothelioma: operated on at the thoracic surgery department of Abderrahmane Mami Hospital in Ariana between 2010 and 2023.

Results: Our series includes 10 men and three woman with a mean age of 58 years. The main symptoms were dyspnoea, cough, weight loss, associated with chest pain. Radiological investigations revealed pleurisy and irregular and nodular thickening of the pleural layers with variable extension. All our patients underwent thoracoscopy with pleural talcation and biopsy, confirming the diagnosis of mesothelioma. They were 8 referred for neoadjuvant treatment. Subsequently, 5 patients underwent pleuropneumonectomy extended to the pericardium and diaphragm with repair of the diaphragm with a goretex plate and repair of the pericardial breach. One patient underwent pleuro decortication extended to the diaphragm and pericardium. The other patients had biopsy and talcation only. Post-operative follow-up was marked by rhythm disorders in 2 cases, with a survival rate of 3 to 5 years.

Conclusion: Despite real progress in the management of patients with malignant pleural mesothelioma, including multimodal treatment (chemotherapy, radiotherapy and surgery), it remains a cancer with an unfavourable prognosis and an almost mediocre 5-year survival rate.

416. A rare association of ovarian cancer with Antineutrophil Cytoplasmic Antibody Vasculitis: a Case Report

Saadaoui Mariem, Azzabi Awatef, Mahfoudh Olfa, Thabet Nesrine, Ben Aicha Narjes, Guedri Yosra, Mrabet Sanda, Sahtout Wissal, Fradi Asma, Boukadida Raja, Zellama Dorsaf
Service de néphrologie dialyse et transplantation rénale CHU Sahloul

Anti-neutrophil cytoplasmic antibody (ANCA)-associated vasculitis (AAV) is an organ and life-threatening vasculitis affecting small- and medium-sized blood vessels. Coexistence of a vasculitis and a neoplastic disease is rare and the pathogenesis is unknow. Most of the associations reported are with gastrointestinal, pulmonary, and haematological malignancies. Here we describe a case of a paraneoplastic AAV associated with a mucinous ovarian cystadenocarcinoma.

A 72-year-old lady was admitted to the Rheumatology ward to explore a 4-week history of polyarthralgia and myalgia. She had a background of hypertension, hypothyroidism, osteoporosis, profound normochromic normocytic anemia, adnexectomy, and then hysterectomy for a mucinous ovarian cystadenocarcinoma a year before with no chemotherapy. Physical exam showed no abnormalities other than symmetrical limb edema and a limited active shoulder mobility.

Blood tests revealed the presence of a nephrotic syndrome: Albumin—27.7g/l, 24-hour-urinary protein—3.72g/24 h, microhaematuria, serum creatinine—201 µmol/l, urea—14.5µmol/l, normochromic normocytic anemia, normal platlets , PTH—217 pg/mL. Tumor markers were within normal range. By indirect immunofluorescence on serum, p-ANCA was positive with anti-MPO antibodies, anti GBM and anti-PLA2R antibodies were negative. Thoracic CT scan showed alveolar type condensation in both alveolar fields. Bronchoscopy and Bronchoalveolar Lavage showed slightly inflammatory specimen without siderophages or signs of malignancy. Renal biopsy was performed showing 2 out of the 9 glomeruli with extracapillary proliferation and Interstitial fibrosis with tubular atrophy, Immunofluorescence microscopic examination was negative. Paraneoplastic anti MPO pauci immune AAV was diagnosed. Additional examinations carried out to evaluate the possibility of tumor recurrence were negative. Literature suggests possible association between vasculitis and malignancy in a general sense but the causal relation between AAV and malignancy is difficult to prove. Further investigations of pathophysiological mechanisms of this rare association is needed.

417. Nephrotic Syndrome revealing a Total Hydatidiform Mole: a Case Report

Saadaoui Mariem, Azzabi Awatef, Mahfoudh Olfa, Thabet Nesrine, Ben Aicha Narjes, Guedri Yosra, Mrabet Sanda, Sahtout Wissal, Fradi Asma, Boukadida Raja, Zellama Dorsaf

Service de néphrologie, dialyse et transplantation rénale CHU Sahloul

Total Hydatiform moles (THM) are usually considered the benign non invasive form of gestational trophoblastic disease. They are premalignant and do have the potential to become malignant and invasive.A review of the literature revealed cases of nephrotic syndrome (NS) due to preeclamptic nephropathy associated with a partial or transitional mole but only three cases of NS associated with THM.

We report the case of a THM revealed by a nephrotic syndrome.

A 47 year-old patient with a known history of Hyperthyroidism was referred to the Nephrology department after consulting cardiology for persistant palpitations to investigate a NS. Physical exam revealed an afebrile patient , with blood pressure of 180/100 mmhg, a heart rate of 120 beats a minute, a soft non-tender abdominal mass and a bilateral renal-type edema. She reported having metrorrhagia for eight days. Blood tests showed : Hypoalbuminemia—25.4 g/l, Protein—51 g/l 24-hour-urinary protein— 4 g/24 h, normal serum creatinine—67 µmol/l, normochromic normocytic anemia, complement fractions C3 and C4 were within the normal range, and she had elevated CA 125 tumor marker. Abdominal ultrasound revealed an abdominopelvic mass of uterine origin with a flocculent, heterogeneous, poorly defined appearance, vascularized on Doppler. The human chorionic gonadotropin was 20 x104 mIU/ml. A Paraneoplastic NS was suspected and the patient underwent a surgery to remove the mass. The removed mass was pathologically diagnosed as a THM. Two weeks following surgery we observed complete remission of the NS with a 24-hour-urinary protein of 0.2g/24 h.

This case highlights an intriguing association between THM and NS, shedding light on the potential clinical complexities of gestational trophoblastic disease. However the physiopathological basis of this rare association remains unsolved at present.

418. A case serial study of Dihydropyrimidine dehydrogenase deficiency in patients with 5-fluorouracil toxicities

Dhouha Sahnoun1, Neila Fathallah1, Manel Nouira2, Imtinène Belaid3, Raoudha Slim1, Khaled Saad Saguem2, Slim Ben Ahmed3, Chaker Ben Salem1

1. Metabolic Biophysics, Professional Toxicology and Applied Environmental Laboratory, Department of Clinical Pharmacology, Faculty of Medicine of Sousse, Sousse University.
2. Metabolic Biophysics, Professional Toxicology and Applied Environmental Laboratory, Department of Biophysics, Faculty of Medicine of Sousse, Sousse University
3. Department of Medical Oncology, Farhat Hachad Hospital University, Faculty of Medicine of Sousse, Sousse University.

Introduction: Fluoropyrimidines are widely used in the treatment of solid tumors, including colorectal, breast, and aerodigestive tract cancers. Metabolism of Fluoropyrimidines depends on the dihydropyrimidine dehydrogenase (DPD), a constitutional enzyme with a high interindividual variability. DPD deficiency should be detected for each patient to avoid a standard dose induced overdose. A deficiency can be of different degrees, or even total, causing serious treatment-related toxicities.

Objectives: Assess tolerance of 5-Fluorouracile (5-FU) in patients with DPD deficiency according the dose adjustment.

Methods: We conducted a retrospective descriptive study at the department of Biophysics in collaboration with the department of Medical Oncology at the Farhat Hached Hospital of Sousse over two years period ranging from 02/01/2019 to 31/12/2020, including all patients with a DPD phenotyping test who had a deficit (UH2/U ratio < 1.5).

Results: Forty-three DPD-deficient patients were included. The degree of enzymatic deficit in DPD was most frequently partial deficit (76.7%), followed by severe partial deficit (18.6%) and deep deficit (4.7%). The average age was 61 years with 39.5% between 60-70 years. The female gender was predominant (60%). Overweight and obesity were reported in 31.7% and 21.9% of patients, respectively. The most common medical history was high blood pressure (37.93%) and diabetes (31.03%). The majority were followed for colorectal cancer (54%). The most commonly used protocol was folfox type (40%). Most reported adverse effects were digestive toxicity, followed by hematological toxicity. The most reported type of initial dose adjustment was to decrease the dose of 5-FU in continuous infusion by 25-50% (72%). The adaptation allowed the disappearance of the adverse effect in 12 patients and the persistence in seven.

Conclusion: The evaluation of the UH2/U ratio is a simple tool for dosage adaptations of 5-FU. However, the measurement of uracilemia is currently the most trustworthy method for the detection of enzyme deficiency in DPD.

419. A case of Severe Acute Pancreatitis Due to Tamoxifen-Induced Hypertriglyceridemia with Positive Rechallenge and brief revue of literature

Dhouha Sahnoun1, Maryam Agrebi1, Neila Fathallah1, Raoudha Slim1, Chaker Ben Salem1 and Jaballah Sakhri2

1. Department of Clinical Pharmacology, Faculty of Medicine of Sousse University.
2. Department of Surgery, Farhat Hached Hospital, Sousse University

Introduction: Tamoxifen is a non-steroidal estrogen antagonist commonly used in adjuvant hormonal therapy for breast cancer. Tamoxifen therapy has been associated with alterations in serum lipoprotein metabolism, such as a decrease in low-density lipoprotein cholesterol and an increase in triglyceride and high-density lipoprotein cholesterol levels.

Methods: We report a case of tamoxifen-induced acute pancreatitis occurring after hypertriglyceridemia with positive rechallenge.

Case report: A 44-year-old woman underwent a radical mastectomy for breast cancer and received subsequent radiotherapy and chemotherapy. She was prescribed a daily dose of 20 mg of Tamoxifen. Twelve months later, she was admitted to the intensive care unit due to acute respiratory distress syndrome. Laboratory tests showed elevated triglycerides at 11.8 g/L. Her liver function tests were normal, and an abdominal ultrasound did not reveal gallstones. A computed tomography scan revealed acute pancreatitis grade E. There was no history of alcohol consumption, recent abdominal trauma, or viral illnesses preceding the symptoms. The patient required intubation and mechanical ventilation for 10 days. Suspecting Tamoxifen as a potential cause of pancreatitis, the medication was immediately discontinued. The patient's condition improved and she was discharged two months later. Over the following weeks, her serum triglyceride levels returned to normal without the need for lipid-lowering therapy, and her amylase and lipase levels also normalized. Ten months later, the patient was advised to resume Tamoxifen by her gynecologist. Shortly after restarting the medication, she was readmitted to the hospital with severe acute pancreatitis, confirmed as grade E by computed tomography. Her triglyceride levels had risen to 10.3 g/L. The patient received treatment. After a period of intensive care unit care, she gradually recovered and was discharged with clear instructions to avoid Tamoxifen in the future.

Conclusion: Clinicians should be aware of the risks of developing severe acute pancreatitis when using tamoxifen therapy.

420. Quality of life of cancer patients in palliative care

Samir ALOULOU1, Wafa ABBES2, Hadil CHAARI1, Asma YAICH1.

1.Department of medical oncology. Gabes universitary hospital. Tunisia
2.Department of psychiatry. Gabes universitary hospital. Tunisia

Background: Cancer is a public health problem. The management is multidisciplinary and aims to control the cancerous disease. Management of the palliative phase is also multidisciplinary and essentially aims to control symptoms and maintain an optimal quality of life.

The objective of our study is to evaluate the quality of life (QoL) of cancer patients at the palliative care stage.

Patients and methods: This is a descriptive and analytical cross-sectional study of cancer patients at the palliative stage collected at the medical oncology department of the Gabès University Hospital during the year 2019. The collection of patient data was carried out from medical records. We used the SF-36 scale for the evaluation of QoL and the ESAS scale for the evaluation of bothersome symptoms.

Results: We collected 60 patients. The average age was equal to 46 years (extreme 29-73 years), 65% had associated comorbidities. 67% had an average socioeconomic level, 83% were physically dependent, 90% had good family support. All patients had stage IV metastatic disease. Poor tolerance of chemotherapy and radiotherapy was noted respectively in 60 and 63% of cases.

The QoL of cancer patients in palliative care was very altered. The scores were very low, especially for the following dimensions: fatigue, physical activity, limitations due to the physical state and limitations due to the mental state. The alteration of the physical component was greater than the psychological one (18.2/100 vs 24.4/100).

Conclusion: The quality of life of cancer patients in the palliative care stage is impaired. It is necessary to raise the awareness of relatives and caregivers in order to plan a comprehensive holistic care taking into consideration the physical, psychological, socio-familial, economic and spiritual aspects.

421. Breast cancer in elderly women in Southeastern Tunisia: Anatomoclinical aspects and therapeutic results

Samir ALOULOU1,3, Asma YAICH1, Hadil CHAARI1, Wafa ABBES2, Nouha BOUAYED ABDELMOULA3

1.Department of medical oncology. Gabes universitary hospital. Tunisia
2.Department of psychiatry. Gabes universitary hospital. Tunisia
3.Research Laboratory LR23ES07. Faculty of medicine. Sfax university. Tunisia.

Background: Breast cancer in women over the age of 65 has specific diagnostic and therapeutic features. The objective of our study is to identify the epidemiological, anatomo-clinical and therapeutic characteristics of breast cancer in elderly women in the South East of Tunisia.

Methods: This is a descriptive retrospective study of breast cancers in women over the age of 65 years collected at the medical oncology department of Gabes hospital between 2015 and 2019. All patients had histologically proven breast cancer. The expression of estrogen receptor , progesterone receptor and HER2 were studied by immunohistochemistry in all cases.

Results: We collected 53 patients. The mean age was 72 years (65-87 years). The mean consultation time was 6 months (1-48 months). No patient had a specific geriatric assessment. The circumstances of the discovery were dominated by the appearance of a breast nodule. The average clinical tumor size was 44.6 mm. Tumors classified as T2 were 60% of cases. Thirteen patients (24.5%) were metastatic at diagnosis. The anatomopathological examination concluded that infiltrating carcinoma of the non-specific type in 85%, grade SBRII in 68%, hormone receptors (RH) were positive in 70% of cases. Her2 neu was overexpressed in 15% of cases. The patients were treated by oncological surgery in 77.4% (patey-type intervention in 63% and conservative treatment in 15% of cases). All the patients received chemotherapy based mainly on anthracycline. Trastuzumab was administered in 5 patients and hormone therapy in 63% of cases. It was based on antiaromatase in 76%. Locoregional radiotherapy was delivered in 70% of cases. Overall 5-year survival was 69.2%.

Conclusion: the challenge in the management of elderly patients is to avoid both overtreatment and undertreatment. These tumors having biological specificities with the predominance of the luminal molecular phenotype make hormone therapy a very effective therapeutic means.

422. Non small cell lung cancer in the south of Tunisia. A retrospective study

Samir ALOULOU1,4, Manel Bahri2, Hadil CHAARI1, Asma YAICH1, Ahmed BEN AYED3, Nouha BOUAYED ABDELMOULA4

Department of Medical Oncology. Gabes universitary Hospital. Tunisia.
Department of Radiotherapy. Gabes universitary Hospital. Tunisia.
Department of Thoracic Surgery. Gabes universitary Hospital. Tunisia.
Research Laboratory LR23ES07. Faculty of medicine. Sfax university

Introduction: Lung carcinoma is the most common cause of cancer death in males in Tunisia. Cigarette smoking is clearly the major cause of lung cancer. Treatment prognosis and survival of non small cell lung cancer (NSCLC) are all dependent on disease stage.

In Tunisia more than 50% of NSCLC are locally advanced or metastatic at diagnosis.

Aim: The aim of our study is to report clinicopathological characteristics, treatment modalities and survival of NSCLC in a population of patients from the south of Tunisia.

Patients and methods: From January 2021 to December 2021 we enrolled 114 patients with NSCLC in the department of medical oncology of Gabes hospital. All patients had histological diagnosis of NSCLC. All patients are staged retrospectively according to the classification of lung cancer (TNM UICC 2009).

Results: 114 patients were enrolled (98 men and 16 women). The median age was 55 years (extremes 37-84). Most frequent histological subtypes are adenocarcinoma 52 cases (45%) and squamous cell carcinoma 46 cases (40%). According to TNM 2009 two patients (1,7%), four (3,4%), eight (14%), ten (8,7%) and 82 (72%) had respectively stage IIA, IIB, IIIA, IIIB and IV. 62 (54%) patients had visceral metastasis (M1b status), 20 (17,5%) patients had malignant pleural effusion and/or contralateral metastatic node (M1a status). NSCLC was revealed by metastatic disease in 12 cases (10,5 %). Chemotherapy used was platinum based regimen in combination with Etoposid Vinorelbin or Gemcitabin. 18 patients underwent surgery as first treatment or after neoadjuvant chemotherapy. Four patients dead after postoperative complications. Six patients dead after relapse. Eight patients remain in live with complete remission.

Conclusion: Early diagnosis and surgical treatment of NSCLC are necessary to improve survival and prognosis. Prevention by cessation of smoking can decrease the incidence of this fatal disease. Personalized therapies improve overall survival.

423. Palliative care in oncogeriatrics: Experience of medical oncology department of the University Hospital of Gabes

Samir Aloulou1,3, Wafa Abbes2, Hadil Chaari1, Asma Yaich1, Nouha Bouayed Abdelmoula3

1.Department of medical oncology. Gabes universitary hospital. Tunisia
2.Department of psychiatry. Gabes universitary hospital. Tunisia
3.Research Laboratory LR23ES07. Faculty of medicine. Sfax university. Tunisia.

Background: The incidence of cancers in the elderly is constantly increasing. The often late diagnosis explains the high rate of locally advanced and/or metastatic cancers. The context of the elderly subject is quite complex due to associated comorbidities and socio-family environment. The objective of this work is to report our experience in palliative care in oncogeriatrics.

Patients and methods: This is a descriptive retrospective study of cancer in subjects aged 65 or over in palliative care collected at medical oncology department of Gabes Hospital between 1er January 2021 and 31th December 2021. The data were identified from medical records. Statistical analysis was performed by SPSS 20.0

Results: Our series includes 90 patients. These are 60 men and 30 women. The average age was 73 years (extreme 65 – 84 years). The majority of patients were from Gabes (68 patients). The others are from Medenine (14 patients), Kebili (6 patients) and Tataouine (2 patients). Comorbidities are associated in 42 patients (46%).

The most frequent tumors were: Prostate cancer (14 cases), lung cancer (32 cases), bladder cancer (10 cases), ovarian cancer (08 cases) and pancreatic cancer (08 cases). In 70 cases (77.7%) the cancer was stage IV. The initial geriatric assessment has been performed by medical oncologist. A total of 77 patients (85.5%) had received chemotherapy. Among patients who received platinum salts, cisplatin was only used in 20% of cases. In our series, 50 patients were in the palliative phase proper and 06 patients were at the end of life. As of the update date (December 31, 2022) 94% of patients have died.

Conclusion: Palliative care in oncogeriatrics is complex. Difficulties observed are as follows: Low socioeconomic level, distance from the hospital centre, absence of a palliative care network, absence of a family environment and finally the lack of pain medication.

424. Squamous cell carcinoma: a 4-year epidemiological study

A. Saoudi, M. Ben Khedher, I. Sboui, H. Ncibi, M. Chaieb, N. Mahdhi

University of Sousse, Tunisia.
Faculty of medicine "Ibn El Jazzar", Sousse, Tunisia. Department of Plastic, reconstructive, Aesthetic Surgery and Burns, Sahloul University Hospital, Tunisia.

Introduction: Squamous cell carcinoma (SCC) is the second most common form of skin cancer in the world behind Basal Cell Carcinoma. UV solar exposure is the most frequent cause of SCC. It typically presents as an indurated nodular keratinizing tumor, or as an ulcer without tendency to keratinization. Surgical excision represents the first-line treatment option.

Material: It's a descriptive retrospective study conducted in the department of Plastic, Reconstructive and Aesthetic surgery of University Hospital Sahloul between January 2019 and August 2023.

A total of 33 patients whose histopathological examination revealed SCC were included. Results:

Mean age was 64 years old, the sex distribution was 5 women (15%) and 28 men (85%). The most common lesion location was on the lower limb (54,4%), leg represents 55.5%. Of the operated patients 91% had a primary SCC. 36.4% of the patients present a skin condition exposing to SCC. Nodal metastasis is present in about 9% of cases. Among the surgical procedures performed, the most frequent was excision (85%). Amputation was done in 3 cases. In terms of tumor margins, 7 patients (21%) had positive margins.

Immediate skin graft was performed in 3 cases.

Conclusion: It's recommended to excise with a surgical margin of 4 mm for low-risk SCC and greater than or equal to 6 mm for high-risk SCC. The use of dermoscopy is recommended for precise excision margins.

Prevention, early identification and surgical treatment are the key to obtaining a favorable outcome in the management of SCC.

425. Risk factors of breast cancer in Tunisian women: A case control study

Soui.K, Khechine.W, Hmad.A ,Felfoul.A , Daldoul.A , Zaied.S

University Hospital Center of Monastir, Oncology department

Introduction: Breast cancer is the most common cancer in women worldwide and the leading cause of cancer death among women. In Tunisia, as in many developing countries, the incidence of breast cancer has increased significantly in the recent years. The present study aimed to assess the risk factors for breast cancer in Tunisian women.

Population and Methods: A hospital-based case-control study carried out in the oncology and preventive medicine departments of the University Hospital Center of Monastic on a sample of 300 subjects (151 cases and 149 controls) and over a period from 2016 to 2021. The cases are women followed for breast cancer (in situ or invasive with anatomopathological confirmation) in the oncology department and the controls are women who consulted for breast cancer screening between 2017 and 2021 in the preventive medicine department and whose the mammographic result came back without abnormalities. Data were analyzed using descriptive, univariate and multivariate analysis via the SPSS software version 21.

Results: Our study included 151 cases and 149 controls. The mean age was 48.8 ‡11.5 years and 49.97 ‡9.2 years (p=0.34) respectively for cases and controls. In the group of cases, there were more single women (17.2% than in the group of controls (6.7%). However, all other socio-demographic characteristics (residence, level of study, professional status, socio-economic level, and social assurance) have not showed a statistically significant difference between the two groups of study. After the multivariate analysis, the risk factors retained were: indigent-subtype of social assurance, family history of breast cancer, wearing an underwired bra, armpit hair removal with sugar and high consumption of red meats. with respective Odds Ratios of: 5.3 (95% CI= [1.04; 26.97]), 6.07 (95% CI=[1.93-19.139]), 3.4 (95% CI=[1.55-5.11]), 9.7 (95% CI=[3.7-25.8]) and 1.68 (95% CI=[1.1-2.57]). The protective factors retained were breastfeeding, high level of physical activity, high consumption of legumes and high consumption of dairy products with respective Odds Ratios of: 0.3 (95% CI= [0.1-0.86]), 0.05 (95% CI=|0.017-0.14]), 0.728 (95% CI=[0.53-0.98]) and 0.67 (95% CI=0.53-0, 95]).

Conclusion: Breast cancer is a multifactorial disease. A certain number of risk factors are now known, even if there are still uncertainties as to the involvement and weight of several of these factors. This study highlighted, especially the family risk, and the factors related to the lifestyle. Therefore, the provision of education to change unhealthy lifestyle choices and periodic check-ups for early breast cancer detection are recommended.

426. Delay in seeking care in breast cancer : causes and consequences

Hmad.A, Souid.K , Khechine.W , Felfoul.A , Daldoul.A , Zaied.S

Maternity and Neonatology Center of Monastir, Oncology department

Introduction: Breast cancer is a frequent and serious pathology, improving the prognosis requires early management of patients. The objective of the study was to evaluate the delays in consultation, diagnosis and treatment of patients followed for breast cancer and to identify the determining factors of these delays as well as the consequences on the evolution of the disease.

Patients and methods: Descriptive and analytical longitudinal, monocentric study involving 150 patients consulting for breast cancer over a period of one year in the oncology department at the Maternity and Neonatology Center of Monastir, MNCM .

Results: The median delay for consultation was 28 days, it exceeds 03 months in 23.3% of patients, the cause of the delay in consultation the most mentioned was the non-thinking about breast cancer in the face of the symptomatology (62% of the responses) ,followed by the fear of the diagnosis. The median time to diagnosis was 15 days and exceeded 30 days in 20% of cases, the trivialization of symptoms by the doctor initially consulted was the raison most reported (37%). the financial problems represented 20% of the causes. The median time to treatment was 15 days and 16.7% of patients had started their treatments after 30 days of histological diagnosis, according to patients who had a delay in treatment the most incriminated cause was the delay in the response of the CNAM insurance (32%) followed by the postponement of the appointment by the department concerned (24%) . Regarding the evolution of the patients, at the end of the study, 108 patients had a favorable evolution and 44 had an unfavorable evolution. the analytical study showed that rural origin, the level of family support, family income, distance from the MNCM, as well as patients' lack of knowledge of symptoms represented the factors significantly linked to a consultation delay. The factors significantly linked to a delay in diagnosis were rural origin and distance from the MNCM. The treatment initially received by the patients was the only factor significantly and independently related to a delay in treatment. We had studied the association between the total delay in diagnosis and the TNM stage of the tumor, and the impact of the time taken between symptom recognition and treatment on the evolution of the disease. The total time to diagnosis seems to have a significant impact on tumor size and metastatic invasion. The association between the delay in the total time to treatment and the progression of the disease was not significant.

Conclusion: The considerable progress in the management of breast cancer had contributed to an increase in the survival of cancer patients diagnosed and treated early.

427. Surgical Management of a Recurrent phyllodes tumor

F. SOUISSI1, T. CHERIF1, B.BEN RADHIA1, N. Mahdhi2; C. KORTAS1, S. JERBI1, I. MGARRECH1

1: Department of thoracic and cardiovascular surgery, Sahloul University Hospital, Sousse, Tunis
2: Department of Plastic Surgery Sahloul University Hospital, Sousse, Tunis

Introduction: Phyllodes tumors are very rare tumors and represent between 0.3 and 1% of all breast tumors. These tumors do not have significant metastatic potential but the risk of local recurrence is still considerable.

Surgery and adjuvant radiotherapy are the gold standard and effective treatment for local control of borderline and malignant phyllodes.

Observation: We report the case of a 47-year-old woman, single, with no notable medical history, operated on both breasts: She had a left mastectomy for a phyllodes tumor with, on anatomopathological examination of the specimen, a phyllodes sarcoma of 18cm with healthy surgical borders. Similarly; she had a right lumpectomy for a nodule that was an adenofibroma of low grade of malignancy on anatomopathological study. She received radiotherapy postoperatively. One year later; she was reoperated by her gynecologist for a first recurrence on mastectomy scar. She had a resection of the mass with coverage by an abdominal flap. Anatomopathological examination of the surgical specimen concluded to a 14 cm borderline phyllodes tumor with healthy deep surgical borders.

Radiotherapy was indicated but the patient was lost to follow-up.

6 months later, she was referred to us for management of a 2nd recurrence at the level of the surgical scar.

On examination, the mass was voluminous, poly-lobed, of solid consistency, fixed in relation to the deep plane with area of tumor necrosis.

A thoracic CT scan was ordered and showed a weakly enhancing tissue mass after injection of contrast medium measuring 8cm in long axis; occupying the left mastectomy scar at the pre- and parasternal level and coming into contact with the pericardium.

Abdominal and pelvic CT scan did not show any secondary location.

The patient was then re-operated: she had a one-piece resection of the mass taking with it the anterior and lateral arches of the 2nd to the 8th left rib with the intercostal spaces as well as half the sternum.

The parietal defect was covered by a polypropylene plate and a musculocutaneous flap (right greater dorsal muscle).

The postoperative course was marked by the occurrence of a pneumonia which was controlled by antibiotic therapy and NIV sessions.

The anatomopathological study of the surgical specimen showed a phyllodes sarcoma.

Conclusion: Phyllodes tumors are rare and usually benign but their local recurrence is frequent. The behavior of the tumor is difficult to predict. Surgery remains the reference treatment. It can be associated with adjuvant radiotherapy to decrease the risk of local recurrence postoperatively.

428. Primary sarcoma of the heart: Case report

H. Belfekih1 ; F. Souissi 1 ; I. Jebir1 ; A. Triki1 ; S. Oueslati1
1-Medical carcinology Department -Mohamed Taher Maamouri-Nabeul Hospital
2-General Surgery Department-Mohamed Taher Maamouri-Nabeul Hospital

Introduction: Primary malignant cardiac tumors are extremely rare and have a very poor prognosis.

Case report: A 41-year-old patient with a history of type 2 diabetes was admitted to hospital with recently worsened dyspnea. Electrocardiogram and chest X-ray were normal. Transthoracic echocardiography revealed a mass in the left atrium measuring 4.9 cm × 3 cm, developing at the interatrial septum, well limited with diastolic wedging at the mitral orifice. A surgical indication for probable left atrial myxoma was given but refused by the patient. Two weeks later, the patient presented with acute pulmonary edema with bilateral pleural effusion that was not improved by intravenous diuretic treatment. A second transthoracic echocardiography showed an increase in size of the intracardiac mass extending towards the right atrium and almost completely obstructing the mitral orifice. The patient was then urgently referred for surgical tumor resection. The operation was performed by sternotomy, under extracorporeal circulation. The surgeon performed a lumpectomy, removing a large part of the interatrial septum and the areas of the endocardium that appeared to be invaded. The septal defect was repaired with a patch of autologous pericardium. Macroscopic examination showed a nodule measuring 7.5 cm in long axis, solid and shiny on section with some yellowish foci. On histological examination, the nodule was a spindle cell and pleomorphic proliferation, arranged in tangled bundles. An immunohistochemical study was performed. It showed that the tumor cells are negative to pancytokeratin (AE1/1AE3), SOX10 and caldesmone. They are focally labelled with anti-MDM2 antibody. These histological aspects and immunohistochemical profile are those of a histopronostic grade 2 intimal sarcoma. The search for an amplification of the MDM2 (MurineDouble Minute 2) gene by fluorescence in situ hybridization (FISH) came back positive. The postoperative CT scan did not reveal any secondary thoracic or extra thoracic locations. The follow-up TTE showed clear cardiac chambers. Pleural biopsies taken during a subsequent thoracoscopy ruled out tumor infiltration of the pleura. Postoperative chemotherapy, combining doxorubicin and ifosfamide, was decided upon after multidisciplinary discussion. Six courses of chemotherapy were carried out with granulocyte growth factors with good tolerance. One year after surgery, the various clinico-radiological and echographic controls showed a diffuse pulmonary and hepatic metastatic relapse. The patient received a 2nd line chemotherapy but died after 05 months.

429. Chest wall Desmoid tumor…A multidisciplinary care

F. Souissi1, T. Cherif1, B.Ben Radhia1, N. Mahdhi2; C. Kortas1, S. Jerbi1, I. Mgarrech1
1: Department of thoracic and cardiovascular surgery, Sahloul University Hospital, Sousse, Tunis
2: Department of Plastic Surgery Sahloul University Hospital, Sousse, Tunis

Introduction: Desmoid tumors known also as aggressive fibromatoses or desmoid type fibromatoses are rare, highly invasive, highly recurrent but without metastatic potential. They commonly arise in abdominal wall. The chest wall is an uncommon site of this fibromatous tumor.

Observation: We report the case of a 44-year-old woman, without any notable pathological history, who consulted us for a parietal swelling that appeared 3 months ago and was initially painless. It was a solid left basi-thoracic swelling that has rapidly increased in size. The examination showed multiple "café au lait" spots spread over the whole body with a left paraspinal mass, solid, fixed in relation to the deep plane, without inflammatory signs opposite. In order to better explore the soft parts of the chest wall and the relationship of the mass, a thoracic MRI was requested. Imaging showed a left anterior paraspinal thoracic infiltrating mass with extension to adjacent structures. An ultrasound-guided biopsy was performed and the anatomopathological study of the specimens concluded to a desmoid type fibromatosis. The decision was to initially monitor the patient but the evolution was marked by an increase in size and the mass became increasingly painful. One month later the patient was operated. Through an incision in the face, she had a one-piece resection of the tumor process taking out the anterior arches of the 3rd to the 5th left rib with their intercostal spaces, the lower and left part of the sternal body as well as the xiphoid appendage. A polypropylene plate was used to cover the parietal defect. In order to cover the loss of substance, a myoplasty with a pure and pedicle left pectoralis major muscle flap was necessary. The postoperative course was simple and the patient was discharged at 8 days postoperatively. The final anatomopathological examination of the specimen concluded to a complete resection of the tumor with healthy margins. For this patient the overall survival was 12 months and no local recurrence has been noted to date.

Conclusion: Despite the benignity of desmoid tumors, they do represent a real local danger considering their aggressiveness. The tumor resection must be complete and carcinologically satisfying in order to decrease the risk of local recurrence.

430. Surgery for pulmonary metastases of colorectal cancer

Feriel Souissi1, Amina Abdelkebir1, Imen Bouacida1, Kawther Amara1, Sarra Maazaoui2, Nizar Fitouhi3, Hazem Zribi1, Adel Marghli1

1-Thoracic surgery department- Abderrahmen Mami Hospital in Ariana, Tunisia.
2-Pneumology department PAVILLON C- Abderrahmen Mami Hospital in Ariana, Tunisia.
3-Anesthesia department- Abderrahmen Mami Hospital in Ariana, Tunisia.

Introduction: Colorectal cancer is the third most common cancer in men worldwide. Its prognosis remains poor due to late diagnosis, frequent local recurrence and high metastatic potential. The management of pulmonary metastases of colorectal cancers has evolved considerably.
Objective: Analyze the particularities of the management of pulmonary metastases of colorectal cancers and evaluate surgical outcomes and prognostic factors.
Methods: Retrospective study of patients operated for pulmonary metastases of colorectal cancers between 2010 and 2023 at the Department of Thoracic Surgery of Abderrahmen Mami Hospital in Ariana, Tunisia.
Results: We collected 29 cases: 17 men and 12 women, with a sex ratio of 1.4. The average age was 58.7 years. The procedure consisted on metastasectomy in 23 patients, lobectomy in 5, bilobectomy in 1, pneumonectomy in 1 and exploratory thoracotomy in the other 2 patients. Post-operative management was straightforward in 24 patients (82.8%). Average survival was 43.76 months. The main prognostic factors were: age, grade of cellular differentiation of the primary cancer, histopathological stage and degree of prognostic staging and degree of extension of colorectal cancer, lymph node status, therapeutic attitude towards colorectal tumors and the interval between diagnosis and detection of MP. The CEA level, the presence of metastases and the surgical attitude were not prognostic criteria.
Conclusion: Surgery has become one of the mainstays of multimodal treatment of pulmonary metastases of colorectal cancers, as its impact on survival has been demonstrated. However, a better understanding of prognostic factors would help improve their management.

431. A rare location of ovarian adenocarcinoma

F.Souissi1, H. Belfekih2, A. Triki1, I. Jebir1, S. Nechi 3, S. Ben Othman1, A. Chaabane3, H. E. Chelbi3

1- General surgery department, Mohamed Taher Maamouri Hospital Nabeul.
2-Department of medical carcinology, Mohamed Taher Maamouri Hospital Nabeul.
3--Anatomy and pathological cytology Department- Mohamed Taher Maamouri Hospital- Nabeul

Introduction: Sternal metastases are rare. They are frequently observed in breast or lung cancers but rarely in ovarian cancers.

We report the case of a patient with this rare metastatic location.

Clinical case: This is a 61-year-old female patient followed for serous carcinoma of the ovary. She had a complete ovarian staging with pelvic and lumbo-aortic lymphadenectomy. The tumor was classified as stage IIIC1 according to the 2014 FIGO classification. Then, she had six courses of Paclitaxel-Carboplatin chemotherapy.

Two years later, the patient consulted for a sternal swelling that has progressively increased in size. The complete clinical examination was without abnormality including breast examination. A thoracic and abdomino-pelvic CT scan was normal.

A sternal biopsy was performed. Pathological examination showed carcinomatous proliferation with diffuse and intense nuclear expression of WT1 compatible with ovarian serous carcinoma.

She underwent radiotherapy on the sternal mass at a dose of 30 Gy in conventional fractionation with good tolerance. Then she had a Pacllitaxel-carboplatin CT for six cycles with clinical and radiological progression.

The patient is currently proposed for a second line of chemotherapy like Gemcitbine-adriamycin.

Conclusion: Given the rarity of these sternal metastases, the treatment remains poorly codified in the literature.

Hence the interest to always discuss the management in a Multidisciplinary Consultation Meeting.

432. A rare association of two thoracic tumors

Feriel Souissi, Mahdi Abdennadher, Amina Abdelkebir, Adel Marghli

Departement of thoracic surgery- Abderrahmen Mami hospital

Introduction: Basaloid thymic carcinoma is a rare type of thymic cancer, while bronchopulmonary adenocarcinoma is one of the most common types of lung cancer. The association of these two tumors is rare, as adenocarcinoma develops from the glandular cells of the respiratory tract, while basaloid thymic carcinoma develops from the cells of the thymus.

Case: We report the case of Mr HH, 67 years old, with no pathological history, a 30PA smoker, who initially consulted for 2 months' history of retro-sternal pain. The chest X-ray showed two opacities: one in the superior mediastinum and the other one in the lower lobe of the left lung. The CT scan showed a 107*81*97mm left anterior mediastinal mass and a suspicious parenchymal mass in the apical segment of the the lower lobe of the left lung T3N0M0. Bronchial fibroscopy showed extrinsic compression on the left. The patient's case was discussed at a multidisciplinary consultation meeting, and the decision was the resection for the mediastinal mass and a left lower lobectomy with lymph node dissection. With a left lateral thoracotomy, the patient had a resection of the mediastinal mass, which was well encapsulated, and a left lower lobectomy with lymph node dissection. Post-operative course was uneventful and the patient was discharged at J06 post-op.

The final pathological examination of the surgical specimens showed a totally encapsulated basaloid carcinoma of the thymus pT1NxM0 with a bronchopulmonary adenocarcinoma pT2aN0M0.

The patient was then referred to the oncology department for further postoperative management.

Conclusion: Basaloid thymic carcinoma and bronchopulmonary adenocarcinoma can develop at the same time. This association remains rare and requires multidisciplinary management involving a team experienced in the management of thymus and lung cancers, in order to determine the best therapeutic approach.

433. Particularities of bronchopulmonary cancer in women

Feriel Souissi1, Amina Abdelkebir1, Imen Bouacida1, Kawther Amara1, Sarra Maazaoui2, Nizar Fitouhi3, Hazem Zribi1, Adel Marghli1

1-Thoracic surgery department- Abderrahmen Mami Hospital in Ariana, Tunisia.
2-Pneumology department PAVILLON C- Abderrahmen Mami Hospital in Ariana, Tunisia.
3-Anesthesia department- Abderrahmen Mami Hospital in Ariana, Tunisia.

Introduction: Bronchopulmonary cancer is the leading cause of cancer-related deaths worldwide. In recent years, its incidence in women has increased.

Objective: Study the epidemiological, histological and therapeutic characteristics of bronchopulmonary cancer in women.

Methods: Retrospective study of 224 female patients operated for bronchopulmonary cancers in the thoracic surgery department of Abderrahmen Mami Hospital, Ariana, over the past 20 years.

Results: Among 1358 cases of bronchopulmonary cancer, 224 women underwent surgery (16.49%). The average age was 54 years (13-92 years) vs 58 years for men. Forty-six percent of women were smokers. Controlled resection was performed in 184 patients (125 lobectomies, 24 bi-lobectomies and 35 pneumonectomies). Adenocarcinoma was the most frequent histological type (50%). A carcinoid tumor was found in 35% of patients and squamous cell carcinoma was diagnosed in 10.2%. Post-operative management was straightforward in 91.3% of cases. Complications were noted in only 16 patients. Prolonged air leakage and pneumothorax were the 2 most frequent complications. Mortality was estimated at 0.89 ٪ (2 deaths) vs. 2.11 ٪ for the male sex.

Conclusion: Bronchial cancer in women has many specificities in terms of risk factors, histological type and therapeutic management.

434. Randall's disease

Ndiaga Sow, A. Azzabi, O. Mahfoud, N. Ghanam, R. Boukadida, N Thabet N. Ben Aicha, S. Wissal, S. Mrabet, Y. guedri, A. Fradi, D. Zellama.

Service de néphrologie, dialyse et de transplantation rénale, Tunisia

Introduction: Monoclonal immunoglobulin deposition disease (MIDD) of the Randall type is a rare complication of plasma cell proliferation. It is defined histologically by unorganized linear deposits of monoclonal immunoglobulins along membranes basal, not colored by Congo red. In terms of the kidneys, it most often manifests as glomerular nephropathy. Preservation and restoration of renal function are possible with treatment targeting the clone responsible. We report the case of a patient with Randall's disease with a immunofluorescence negative.

Case description: The patient was 58 years old, with no notable personal history, and had been receiving treatment for anemia for two months. She was hospitalized for impure nephrotic syndrome (hypertension, renal failure) and on urine dipstick: Pu+++ Lu ++ Hu+.

Biologically: creatinine: 699 µmol/L, urea: 26.4, calcium: 2.24, phosphorus: 2.7, bicarbonates:1, proteins: 53, albumin: 29, preteinuria: 4.8g/24h, Hb: 7.4 VGM: 94, GB:6400, PLQ: 166000, TP: 100%, TCA:21.9. ECBU: hematuria: 30/mm^3 and leukocytes: 2/mm^3.

Abdominal ultrasound: no abnormalities. EPP: In favor of nephrotic syndrome with hypo-gamma. Serum protein immunotyping favors monoclonal gammopathy with kappa light chains. Myelogram: 28% infiltration of dystrophic plasma cells.

Renal biopsy: glomeruli nodular, lobular, crescent-shaped appearance in 2 glomeruli. Negative staining and absence of deposits by immunofluorescence.

Conclusion: MIDDs are systemic diseases caused by the systemic deposition of a pathogenic monoclonal immunoglobulin, with significant renal involvement. Its diagnosis is easy in its typical form. However, in the case of MIDD with heavy chain deposits, diagnosis requires microscopy and other heavy chain detection techniques.

435. Breast cancer and lupus

Sow Ndiaga, A Azzabi , O Mahfoudh, N Ghanam, R Boukadida, N Thabet, N Ben Aicha, S Mrabet Mrabet, W Sahtout, Y Guedri, A Fradi, D Zellama

Service de néphrologie, dialyse et de transplantation rénale, Tunisia

Introduction: Systemic lupus erythematosus (SLE) is a systemic autoimmune disease with a variety of clinical manifestations that progresses in relapses. Lupus patients have an increased risk of neoplasia, notably lung cancer and non-Hodgkin's lymphoma. They have a lower risk of developing certain cancers, notably breast and ovarian. We report the case of lupus after diagnosis of and treatment for breast cancer in an elderly patient.
Observation: This is a 67-year-old patient with a history of lymphocytic thyroiditis operated on in 2010 and put on Levothyrox, right breast neoplasia operated on in 2020. She is currently undergoing hormonal treatment (Anastrozole) and familial lupus. She is in complete remission.
She was admitted to hospital for investigation of proteinuria at 1.7g/24 hours. The diagnosis of SLE was based on: Anticoprs antinuclear positive at 1/100, anti-DNAn positive at more than 800UI/L, anti-nucleosome, anti Sm/Rnp and anti-histone positive. A renal biopsy was performed showing:
- Light microscope: an endo-capillary proliferation in some glomeruli, extra-capillary proliferation in some glomeruli with probable fibrinoid necrosis and some interstitial damage.
- Direct immunofluorescence: IgG, IgA and C3 deposits.

She was therefore diagnosed with class IV lupus nephropathy and put on immunosuppressive therapy based on mycophenolate mofetil and glucocorticoids.
Discussion: Our patient's particularity lies in the fact that her breast cancer occurred before the diagnosis of lupus. Thus, the therapeutic management of her lupus nephropathy was based on the introduction of an immunosuppressant.
Conclusion: Lupus can be associated with all types of cancer. Several studies have investigated the association between lupus and breast cancer. Immunological disturbances could play a role in the oncogensis. Advanced age is the main factor associated with breast cancer in lupus patients. Further search for factors that determine the lower risk of breast cancer in SLE may be warranted.

436. Renal mucinous tubular and spindle cell carcinoma: A case report

A. Bani*, S. Nechi, A. Douggaz, A. Chaabène, B.Chelly, K.Mfarrej, A. Mahmoudi Emna Chelbi
Taher Maamouri University Hospital, Pathology Department, Nabeul, Tunisia.

Introduction: Mucinous Tubular and spindle cell carcinoma (MTSCC) is a rare renal tumor with low potential for malignancy. Our objective is to report a rare entity of kidney tumor whose knowledge by clinicians and pathologists is essential because of its favorable prognosis.

Case report: We report the case of a 80-year-old woman diagnosed incidentally with a left renal mass on computed tomography scan. Histological examination revealed a kidney MTSCC.

Discussion: MTSCC accounts for less than 1% of all neoplasms of the kidney. It affects primarily adult patients aged between 13 and 81 years old (mean age : 58 years old) and shows a female predominance like our patient. MTSCC is usually incidentally discovered on abdominal imaging as our case. This tumor is found usually in the renal cortex and rarely in the medulla. Histologically, the tumor is characterized by a mixture of tubular and spindle cell components, separated by variable amounts of mucinous stroma. The tubules are round, ovoïd with a collapsed central lumen. The transition between the elongated tubules and the spindle cells are commonly obvious The stroma shows extracellular abundant mucin with a bubbly appearance. MTSCC express distal nephron markers (EMA, CK19, CK7, E-Cadherin) and proximal tubule markers (RCC Ma, AMACR, CD15).

The main differential diagnosis of MTSCC is papillary renal cell carcinoma (RCC) in its compact variant. Therefore, MTSCC may be distinguishable from papillary RCC by evaluating the presence of a trisomy for chromosomes 7 and 17. Sarcomatoid carcinoma is a diagnosis to be made when the spindle cell component dominates. However, MTSCC can undergo a sarcomatoïd transformation. MTSCC with classic morphology has an excellent prognosis.

Conclusion: MTSCC is a low-grade malignant renal tumor with characteristic histological, immunohistochemical and molecular features. The diagnosis of this subtype of renal tumor can be challenging for pathologists.

437. Occupational scrotal basal cell carcinoma : a case report

Taktak Meriam 1,2 , Athimni Z1,2, Maoua M1,2 , Ghenim Amal 1,2 , Bouhoula M1,2 , Chouchane A1,2, Aloui A1,2 , Kacem I1,2, Brahem A1,2, Kalboussi H1,2, El Maalel O1,2, Chatti S1,2, Mrizak N1,2.

1- Occupational Medicine and Professional Pathologies Department, Farhat Hached Teaching Hospital, Avenue Ibn El Jazzar, Sousse, 4000, Tunisia.
2- University of Sousse, Faculty Of Medicine Ibn El Jazzar, Avenue Mohamed Karoui, 4002, Sousse, Tunisia

Introduction: Basal cell carcinoma (BCC) is the most common cutaneous malignant tumour. This type of cancer develops as a result of long-term exposure to ultraviolet (UV) radiation. However, scrotal BCC is very rare and since scrotum is a covered area, it may be also influenced by other factors especially due to occuaptional exposure to carcinogens or irritants that could contribute to its development.
Objective: We report the case of a roadworker with scrotal basal cell carcimona .
Case report: We report the case of Mr. Z.T, aged 62, having held the position of roadworker for a period of one year , then worked as sweeper, with no family or personal pathological antecedents.
He was treated in dermatology for multiple basal cell carcinomas of the scalp and nape of the neck, histologically confirmed, and removed at Farhat Hached University Hospital in Sousse.
Readmitted for recurrence and extension by the appearance of a nodular lesion with a pearly border of 1.5 cm in diameter on the scrotum, strongly suggestive of basal cell carcinoma. The patient was referred for medical assessment regarding a possible occupational origin of his cancer. On interview, the patient stated that he had been exposed for many hours per day to UV, asphalt, Asphalt fumes and coal tar.
According to INRS, the main agents responsible for BCC are tar and its derivatives, coal combustion by-products, mineral oils derived from petroleum, and UV radiation. The occupational origin of this patient's scrotal BCC cannot be ruled out. The declaration of his occupational disease has been made under table no. 38 .
Conclusion: When investigating the etiology of a cancer, it would be necessary to look for an occupational origin.

438. Bladder cancer in young adults: a report of 39 cases

Hadhami Testouri, Wiem Majdoub, Khouloud Ben lazreg, Sarra Mestiri, Ahlem Bdioui, Oussama Belkacem, Atika Baccouche, Sihem Hmissa
Pathology Department, Sahloul Hospital, Tunisia

Background and objectives: Bladder cancer is rare in young adults less than 40 years of age. Data regarding this cancer are scarce. Our study aims to evaluate the clinical, pathological, and survival outcomes of this entity.

Methods: We included in this retrospective study 39 patients under the age of 40 years diagnosed with bladder cancer and listed in the Cancer Registry of Center Tunisia during a period of 20 years from 2000 to 2020. Tumours were classified according to the last WHO 2022 classification. The Kaplan-Meier method was used for overall survival analysis.

Results: Thirty-nine cases were identified, 36 males and 3 females. The median age of diagnosis was 35 years ranging from 18 to 40 years. Nearly 67% were smokers. Macroscopic hematuria was present in 97,4% of cases. The large majority of the patients (n = 37) was diagnosed with an urothelial carcinoma. One patient had a squamous cell carcinoma and the other had a large cell neuroendocrine carcinoma. Of all malignancies, 5,1% were papillary urothelial neoplasia of low malignant potential, 64,1% were low grade and 25,6% were high grade.74,4% of patients had non-muscle invasive tumors while 25,6% had muscle invasive tumors. Three patients had distant metastasis at time of presentation. Transurethral resection of bladder tumor was conducted for 32 patients. Seven patients underwent radical cystectomy. During follow-up, recurrence occurred in 30.8%. Four patients died of the disease. Multivariable analysis demonstrated that higher stage and higher grade were predictors of worse overall survival.

Conclusion: The majority of patients aged less than 40 years with bladder cancer present with low-grade, non-muscle-invasive tumor associated with better survival. However, further studies are warranted to optimize the management approaches for young patients with bladder cancer.

439. Risk factors for chemotherapy-induced mucositis in cancer patients

Imen Toukabri, Wiem Ben Ayed, Azza Ben Said, Imen Limayem

Salah Azaiz Institute

Introduction: Mucositis is one of the most frequent and fearsome side effects of cancer treatments that can alter the quality of life of patients. The objective of this study was to determine the risk factors for mucositis in cancer patients treated with chemotherapy.

Patient and Method: A prospective study was carried out in the medical oncology department for a period of one year in Salah Azaiz Institute. Cancer patients admitted to the medical oncology department were included. Patients' data were collected from medical record and Asclépios®. Mucositis grades were determined by clinicians according to the World Health Organization toxicity scale. Statistical analysis of the data was performed using SPSS software.

Results: A total of 120 patients were included, 58% of whom developed chemotherapy-induced mucositis. The mean age was 50 ± 15 years with a sex ratio (male/female) of 0.66. Univariate statistical analysis showed that quitting smoking (p= 0.001, OR = 0.19; IC95% [0.069 – 0.411]) was a protective factor in the development of mucositis. In addition, alcoholism (p= 0.074), smoking (p= 0.062) and treatment with concomitant radio-chemotherapy (p=0.06) were close to significance (p< 0.1). The level of patient education (p=0.035) as well as the number of treatments administration (p=0.001) were significantly different between the two groups. Multivariate analysis showed that quitting smoking and alcohol was a protective factor (p= 0.001; OR = 0.114; CI95% [0.033 – 0.39]). In addition, a number of courses administered > 6 was a strong predisposing factor for chemotherapy-induced mucositis (p= 0.002; OR = 9.426; 95% CI [2.217-40.15]).

Discussion and Conclusion: Our study showed that stopping smoking and alcohol is a protective factor. On the other hand, patients who have administered more than 6 courses are more exposed to chemo-induced mucositis, so preventive measures must be taken into consideration for better management.

440. Sexuality and anxiety in women with breast cancer

TRABELSI Y., ALOULOU J .,BADER S., ELLEUCH O .,ABBES W .

Gabès regional hospital., Tunisia.

Introduction: Deeply affected in their femininity and intimacy, patients followed for breast cancer find it difficult to maintain or regain their sexual health during and after their therapeutic course and may develop pathological anxiety.

Objectives: identify the relationship between sexual dysfunction and pathological anxiety in women with breast cancer

Materials And Methods: This is a cross-sectional, descriptive and analytical study conducted among 50 women followed for breast cancer at the Gabès regional hospital. We used a general information sheet including the clinical and therapeutic data of the women as well as the data concerning the partner. We assessed sexual functioning using a self-questionnaire: the Female Sexual Function Index (FSFI) and the level of anxiety was determined using the Hospitalanxiety and depressionscale (HAD).

Results: Among the cases studied a rate of (40%) were dignosed with pathological anxiety. Assessment of sexuality using the FSFI scale yielded a mean total score of 19.93, 37 women (74%) presented a sexual dysfunction.

Pathological anxiety was associated with subjective sexual difficulties(p=0.009) In addition, pathological anxiety was associated with two sexual dysfunction dimensions: absence of desire (p= 0.03) and lubrication defect (p= 0.05). The factors associated with the presence of female sexual dysfunction were: personal somatic history (p= 0.03), personal surgical history (p= 0.044), existence of a sterility problem (p= 0.02), use of a means of contraception (p= 0.05), the intrauterine device (p= 0.01) and hormone therapy (p= 0.01).

Conclusion: The findings may be useful for preventive and clinical interventions by health professionals to deal with the associated psychiatric disorders in women with breast cancer.

441. Cowden Syndrome: Clinical Insights and Comprehensive Overview

Narjes Trabelsi1,3, Amira Sallem1,2, Khawla Mahmoudi1 , Hana Messadi1, Fadhila Chebil1, Mouna Zarrad1, Dhekra Chebil3, Meriem Mehdi1,2

(1) Laboratory of Reproduction Biology, Fattouma Bourguiba University Teaching Hospital, Monastir, Tunisia

(2) Laboratory of Histology, Embryology and Cytogenetics (LR18ES40), Faculty of Medicine, University of Monastir, Tunisia

(3) Faculty of Medicine of Sousse, University of Sousse, Tunisia.

Cowden syndrome is a rare genodermatosis, typically characterized by the development of multiple hamartomas across various organs. Most patients with Cowden syndrome eventually develop malignant neoplasms, particularly in the thyroid, endometrium, or breast. In this context, we present a case study that delves into the repercussions of Cowden disease on the male reproductive system.

A 39-year-old male patient presented at Fattouma Bourguiba University Hospital's Reproductive Biology Department due to concerns regarding primary infertility lasting for five years. His medical history included a thyroidectomy for multinodular goiter. He exhibited multiple nodules in the esophagus, stomach, intestines, and rectum, bilateral varicocele and testicular hamartomas. In addition, removal of a left spermatic cord cyst, revealed necrotic lipomatous tissue. The hormonal panel indicated secondary hypogonadism and hyperprolactinemia. Although a pituitary adenoma was suspected, cerebral MRI showed no anomalies. Sperm investigations revealed an impairment in both sperm motility and morphology and a high rate of sperm DNA fragmentation. This clinical presentation satisfies four minor diagnostic criteria, confirming the diagnosis of Cowden syndrome. Genetic testing has not been conducted yet. The pathophysiology of this disease, centers on the PTEN gene and its role in regulating apoptosis and the cell cycle by down regulating the PI3K/AKT/ mTOR pathway. The key pillars of managing Cowden syndrome involve vigilant cancer surveillance, including annual physical examinations and thyroid ultrasounds starting at the age 18 as thyroid carcinoma risk is heightened by up to 30%, and colonoscopy screenings. Dermatologic assessments are also essential, given the heightened risk of melanoma in these patients. In summary, Cowden syndrome necessitates a multidisciplinary approach encompassing rigorous surveillance protocols, and specialized endocrine and reproductive support to effectively mitigate the heightened risks it presents. By embracing this proactive strategy, we endeavor to these patients the greatest opportunity for early intervention and enhanced health outcomes.

442. Prognostic factors in primary invasive vulvar cancer About 48 cases

Zanzouri Rym, N.Bouzid, S.Massoudi, R.Ben jaafer, S. Ben Dhia, S. Tbessi, S. Belaajouza, S. Tebra

Department of Radiation Oncology, CHU Farhat Hached Sousse, Tunisia

Introduction: Vulvar cancer is a relatively rare disease, representing only 3–5% of gynecologic malignancies. Despite the continuing evolution in the management of this carcinoma, survival is still unsatisfactory. Our aim is to describe clinical characteristics and therapeutic results of vulvar cancer and to evaluate prognostic factors in a Tunisian population.

Methods: This is a retrospective analytical study of a series of 48 patients with vulvar cancer treated in the Radiation Oncology department of the Farhat Hached Hospital, Sousse, Tunisia between 1995-2020.

Results: The average age was 62.21 years [42-85 years]. The main circumstances of discovery were a swelling in 75 % and pruritus in 56.25 % of cases. No tumors were initially metastatic. Forty-five patients underwent surgery (93.8%). All patients had a radical vulvectomy, and 38 were treated with inguinal lymph node dissection. Histopathological analysis showed squamous cell carcinoma in all cases. Surgical margins were negative in 84.4% of cases. lymph node involvement was observed in 57.9% of cases. The FIGO stage distribution was as follows: 17 cases (35.4%) in stage I, 6 (12.5 %) in stage II, 22 (45.83%) in stage III and 3 cases (6.3%) in stage IV. 80% of patients received postoperative radiotherapy (RT), with a dose of 50.4-72Gy, associated with concomitant chemotherapy in 2 cases. The 3 non-operated patients had palliative RT with a dose of 30 Gy. Overall tolerance was good. After a median follow-up of 29.1 months [1-168 months], 39.1% of patients were in complete remission and 56.5% patients died due to metastatic relapse (34.6%) or local recurrence (61.4%).

The statistical analysis of the therapeutic results showed us that surgical margins, lymph node involvement, TNM stage, FIGO classification, surgery and radiation were independent prognostic factors.

Conclusion: Vulvar cancer is a rare tumor with a poor prognosis. A better knowledge of prognostic factors is a promising way for improved patient management.

443. Status and prognostic impact of IDH1 in adult grade 4 diffuse gliomas

Mouna Zghal(1), Saadia Makni(1), Chiraz Chaari (1), Wafa Mokni(1), Wicem Siala (2), Slim Charfi (1), Tahya Boudawara (1), Ons Boudawara (1)

(1) Department of pathology and Research Laboratory LR18SP10, Habib Bourguiba University Hospital, University of Sfax, Sfax, Tunisia

(2) Department of medical radiotherapy, Habib Bourguiba University Hospital, University of Sfax, Sfax, Tunisia

Background and objectives: The diagnosis of diffuse gliomas (DG) is currently based on a histo-molecular approach. The IDH1 mutation remains the most studied. We aim to evaluate the IDH1 status in grade 4, DG as well as its correlation with clinico-pathological and survival features.

Methods: This is a retrospective study including cases of adult, grade 4 DG collected in the pathology department of Habib Bourguiba hospital. We evaluated the expression of IDH1 by immunohistochemical method (IHC).

Results: Thirty nine cases were identified of which 34 cases (87.2%) were primary tumors and 5 cases (12.8%) were secondary tumors to low grade DG .The expression of IDH1 was positive in 9 cases (26.4%). IDH1 positive tumors were classified as astrocytoma grade 4, IDH1- mutant while IDH1 negative tumors were classified as glioblastoma, IDH1-wild type tumors (73.6%). IDH1 expression was correlated with younger age (≤ 40 years old), progressive involvement, frontal location, and complete surgical excision. IDH1-positive status was a good prognostic factor. The 1-year overall survival (OS) for astrocytoma grade 4, IDH1 mutant was 86% versus 8% in glioblastoma, IDH1 wild type (p=0.008).

Conclusion: The fifth edition of the WHO Classification of Tumors of the Central Nervous System (CNS) introduces major changes that advance the role of molecular parameters. This classification divides the grade 4, DG based on IDH1 mutation in astrocytoma grade 4, IDH-mutant and Glioblastoma, IDH-wild type tumors. TERT promoter mutation, EGFR amplification and +7/−10 copy number changes in IDH-wildtype diffuse astrocytomas allow a glioblastoma, IDH-wild type CNS WHO grade 4 designation even in cases that appear histologically lower grade. IDH1 mutation is significantly associated with prolonged survival. Given its good prognostic impact, the search in routine for IDH1 mutation in DG becomes necessary. Currently IHC is considered as a reproducible method to assess the mutational status of IDH1.

444. Gastric stromal tumor: A study of 69 cases in southern Tunisian patients

Mouna Zghal, Wafa Ghribi, Ibticem Bahri, Chiraz Chaari, Farah Loued, Tahya Boudawara, Lobna Bouzidi

Department of pathology and Research Laboratory LR18SP10, Habib Bourguiba University Hospital, University of Sfax, Sfax, Tunisia

Introduction: Although rare (< 1% of digestive neoplasms), gastrointestinal stromal tumor (GIST) is the most common mesenchymal tumor of the digestive tract, characterized by variable behavior. The stomach is the most frequent site. We aim to identify the clinico-pathological and prognostic characteristics of gastric GIST compared to other GIST locations.

Methods: This is a retrospective study of gastric GIST, collected in our department over a period of 17 years (2006-2022).

Results: 69 cases of gastric GIST were identified which represent 36.4% of all GIST collected during the period of our study. The mean age was 65.3 years with a male predominance (sex-ratio=1.2). The mean tumor size was 8 cm (3-17cm). Histological appearance was of spindle cell in 63.2%, epithelioid in 16.3% and mixed in 20.5% of cases. Mitotic rate was ≤ 5 mitoses/5mm2 in 62.5% of cases. Tumors expressed c-KIT, DOG1 and CD34 respectively in 91.3%, 72.7% and 84.6% of cases. Expression of AML, vimentin and PS100 were observed in 45.9%, 100% and 60.8% of cases respectively. Risk of progressive disease was low (category 3a), moderate (category 3b) and high (category 6a) in 46%, 28.5% and 10% respectively.

Conclusion: Approximately 50 to 60% of all GISTs arise in the stomach, 30% in small bowl, 5% in colon and 1% in oesophagus. Anatomical location (gastric vs small bowel) seems to affect the histological appearance. Most gastric GISTs are spindle cell tumors (65%); less frequent are epithelioid tumors (20–25%), and rarely are mixed tumors. The combination of c-KIT and DOG1 expression covers about 95% of cases. Prognosis of GIST depends on mitotic activity, tumor size and anatomical site. Small bowel GIST carries a higher risk of progression than gastric GIST of similar size and mitotic activity. The majority of our cases had low progressive behavior, which is similar to literature data.

445. Pleomorphic carcinoma of the lung revealed by uncommon perforated colonic metastasis

Mouna Zghal (1), Marwa Bouhamed (1), Nermine Ellouze (1), Rim Kallel (1), Naourez Gouiaa (1), Tahya Boudawara (1), Meriam Triki (1)

(1) Department of pathology and Research Laboratory LR18SP10, Habib Bourguiba University Hospital, University of Sfax, Sfax, Tunisia

Introduction: Gastrointestinal (GI) metastasis from lung pleomorphic carcinoma (LPC) is extremely rare, and only few cases have been published thus far. We present an exceptional case of colonic metastasis from LPC discovered by bowel perforation.

Methods: A 68-year-old man was admitted with acute abdominal pain. Computed tomography scan revealed a large pulmonary tumor in the left upper lobe adjacent to pericardium and pulmonary vein, perforated mass in the left colon and nodules in the bilateral adrenal glands. The perforated colon was removed.

Results: Macroscopic examination revealed an exophytic tumor measuring 4 cm. Histological examination showed undifferentiated tumor consisted wholly of malignant cells with pleomorphic features beneath an unremarkable intestinal mucosa. There was mixture of spindle and giant cells exhibiting bizarre nuclei with numerous atypical mitoses. Geographical necrotic areas and tumor emboli were found. The tumor infiltrated the full thickness of the wall. The proximal and distal resection margins were free of tumor. The tumor cells exhibited pancytokeratin and vimentin expression and were negative for cytokeratin 7 and 20, TTF1, p40, synaptophysin, desmin, smooth muscle actin, PS100, c-kit, CD34,CD31and calretinin. Metastatic PC of pulmonary origin was suggested. Biopsy of pulmonary tumor showed similar morphological characteristics and immunohistochemical staining pattern. Thus, LPC with colonic metastasis was finally established. The patient died 1 month after admission.

Conclusion: LPC is a rare and aggressive tumor representing 0.1 to 0.4% of non-small cell lung cancer. It is defined as a poorly differentiated carcinoma composed at least of 10% spindle and/or giant or as a carcinoma constituted purely of spindle and giant cells with keratin and vimentin coexpression. The brain, liver, adrenal glands, and bone metastasis from LPC have been reported. However, GI metastasis is uncommon, occurring mainly in small intestine. Colonic metastasis from LPC is exceptional and only four cases have been reported in literature.

446. Variation of hormone receptor and Her-2 448. expression between primary tumor and metastatic site in breast cancer

Mouna Zghal (1), Meriam Triki (1), Slim Charfi (1), Saadia Makni (1), Nermine Ellouze (1), Tahya Sellami-Boudawara (1), Ons Boudawara (1)
(1) Department of pathology and Research Laboratory LR18SP10, Habib Bourguiba University Hospital, University of Sfax, Sfax, Tunisia.

Introduction: A metastatic relapse occurs in 20% of patients with breast carcinoma (BC). Research of hormone receptor (HR) and Her-2 status in BC metastasis is recommended.
We aim to study the variation of estrogen (ER), progesterone (PR) receptors and Her-2 status between the primary site and that of metastasis in BC.
Methods: This is a retrospective study including 78 cases of BC metastases collected in our department, over a period of 12 years. We analyzed the histological and immunohistochemical data of the primary as well as the metastatic sites.
Results: Metastatic sites were lung, bone, distant lymph nodes and skin representing respectively 33.3%, 27.2%, 22.2% and 11.1%. The two other cases were located in the bladder and orbit. A difference in ER and PR was observed in 22.2% and 44.4% respectively. HR status changed from negative to positive in 39% and from positive to negative in 23%. The variation of HR status was observed in bone, lung and distant lymph nodes in respectively 36.3%, 36% and 18%. In the majority of cases, primary tumors were of grade SBR II and III. No change in Her-2 status was observed.
Conclusion: The variation of HR was more important for PR, particularly in bone and lung metastatic sites. We noted the absence of change in Her-2 expression. Our findings were consistent with literature data. The variation of HR and Her-2 status between primary tumor and metastasis in BC is rare for Her-2 (5%), low for ER and more frequent for PR. HR negative change is more important than positive change (20% vs 3%). In our study, HR positive gain was greater than positivity loss. These data confirm the interest of reassessing the tumor profile to ensure better therapeutic management.

447. Immunohistochemical analysis of IDH1, p53 and ATRX as prognostic factors of diffuse gliomas

Mouna Zghal (1), Wafa Mokni (1), Slim Charfi (1), Ons Belhadj (1), Wicem Siala (2), Tahya Boudawara (1), Manel Mellouli (1)
(1) Department of pathology and Research Laboratory LR18SP10, Habib Bourguiba University Hospital, University of Sfax, Sfax, Tunisia.
(2) Department of medical radiotherapy, Habib Bourguiba University Hospital, University of Sfax, Sfax, Tunisia.

Background: The identification of genetic alterations involved in diffuse gliomas (DG) oncogenesis led to a new WHO classification based on an integrated histo-molecular diagnosis. Its objective is to define similar tumor groups in terms of prognosis. We aim to identify the protein expression signatures of important growth-control genes in DG and their correlations with the prognosis.

Methods: This is a retrospective study including 67 cases of adult DG collected in our department (2011-2019). Immunohistochemical study of IDH1 and p53 was performed in all cases. ATRX staining was carried out in IDH1 positive tumors.

Results: The expression of IDH1 was positive in 22 cases (32.8%) divided into 10 cases of astrocytomas (50%), 3 cases of oligodendrogliomas (60%) and 9 cases of glioblastomas (23%) of which 5 cases were primary glioblastomas (14.7%) and 4 cases of secondary glioblastomas (80%). The expression of p53 was positive in 53 cases (82.2%), of which 30.2% were IDH1 positive. The correlation of IDH1 and p53 status was not significant ($p=0.24$). ATRX expression loss was observed in 17 cases (77.2%) versus preserved staining in 5 cases (27.8%). The 5-year overall survival for IDH1-positive tumors was 65% versus 13% for IDH1-negative tumors ($p<0.001$). The survival study using the IDH1/ATRX/P53 molecular groups was significantly better for IDH1+/ATRX-/p53- and IDH1+/ATRX-/p53+ tumors ($p<0.001$).

Conclusion: Understanding the molecular profile of DG in recent years has improved their therapeutic and prognostic aspects. IDH1 mutation constitutes an important marker for this approach and represents a good prognostic factor. The development of a mutation specific antibody greatly advanced the determination of molecular status in neuropathological diagnosis. IDH1 mutation is often associated with ATRX gene mutation. Tumors with IDH1 and ATRX mutation have usually a better prognosis. However the study of the association of the IDH1 mutation with the TP53 mutation led to contradictory results.

448. Recurrent variant in Tunisian families affected with MUTYH-associated polyposis

Ziadi Ala1, Gabteni Sana1, Meddeb Rym1, Skouri Sana1, Zanati Amira1, Belguith Neila1, Mrad Ridha1

1-Service des maladies congénitales et héréditaires, hôpital Charles Nicolle, Tunis

Introduction: The MUTYH-associated polyposis is as an autosomal recessive disease predisposing to colorectal adenomatous polyposis characterized by the development of 10 to 100 adenomatous colon polyps and an increased risk of colorectal cancer. Variations in the base exicision repair (BER) gene MUTYH were incriminated in this disease.

Materials And Methods: Four unrelated patients (P1, P2, P3, P4) were referred to the oncogenetic consultation for suspicion of MUTYH-associated polyposis. Genetc investigation and targeted sequencing of MUTYH for the most frequent mutations in Tunisia was performed for the index cases.

Results: P1 is a 46-year-old man, native of Mednine, from distant consanguineous marriage, followed for colorectal adenocarcinoma on colic polyposis. Two cases of colon cancer in paternal cousins was found.

P2 is 56-year-old man, native of Siliana. He was operated for colon polyposis. He has three brothers followed for colon polyposis, one of them has developped colon carcinoma.

P3 is 77-year-old man, native of capital Tunis with first cousins parents. He was operated at 75 for a stenosing tumour of the cecum on adenomatous polyposis. He has three siblings and two relatives with colon polyps, four of them has developped colorectal cancer.

P4 is 44-year-old man, native of El Kef, from consanguineous marriage with family endogamy. He developped at 42 an adenocarcinoma of the rectum on an operated polyposis. He has four siblings with polyposis, father and uncle with adenocarcinoma on polyps.

Targeted sequencing detected the recurrent variation c.1227-1228dup. in homozygous state in all four patients.

Conclusion: The number of polyps is a significant criterion in the diagnostic orientation and the choice of the appropriate molecular study in the case of familial colorectal polyposis. A targeted molecular study in patients and their relatives is necessary to ensure regular follow-up and early therapeutic management of at-risk subjects.

449. MLH1 mutation leading to Lynch syndrome: A case report

Ziadi Ala1, Gabteni Sana1, Meddeb Rym1, Skouri Sana1, Zanati Amira1, Belguith Neila1, Mrad Ridha1

1-Service des maladies congénitales et héréditaires, hôpital Charles Nicolle, Tunis

Introduction: Lynch syndrome (LS) is a rare autosomal dominant cancer-predisposing syndrome characterized by an increased risk for many types of cancer particularly colorectal cancers. 15 to 40% of Lynch syndrome attributed to pathogenic variants are located in the gene MLH1 causing functional defects in the DNA mismatch repair (MMR) complex.

Methods: Our patient (P1) was referred to the oncogenetic consultation for suspicion of hereditary colon cancer. We opted for high-throughput sequencing of 14 genes involved in colon cancer.

Case Report: P1 is a 40-year-old man, native of northern Tunisia from the region of Mateur, from consanguineous marriage, followed for colon cancer. In the family history, five cases of colon cancer was found : in the sister, in the father, in a paternal aunt as well as two of her sons. Mucosal colloid adenocarcinoma of the colon was confirmed in our patient with inconclusive MMR protein expression at immunohistochemical profile. The patient underwent an ileocolic resection followed by chemotherapy. The molecular study has identified a pathogenic frameshift variant in the heterozygous state at exon 12 of the MLH1 gene allowing the confirmation of LS. A targeted pre-symptomatic test carried out in one brother concluded that he was genetically predisposed to breast cancer carrying the same mutation.

Conclusion: LS often called hereditary nonpolyposis colorectal cancer (HNPCC) is a rare inherited cancer-predisposing syndrome caused by variations in MMR genes. Molecular genetic testing searching for a germline heterozygous variant in these genes is necessary in front of family history of colorectal cancer. Diagnostic confirmation enables early management, regular follow-up and genetic counseling for the patient as well as for other family members.

Keywords: Lynch syndrome; Colorectal cancer ; MLH1 ; Mismatch repair ;

450. Micro- and Nanoplastics: Unveiling the Hidden Threat of Carcinogenesis through Lymphocyte Micronuclei

Najla Zydanya,B , Rim Koolib, Miryam Beya BEN Khedherb, Jemila Romdhanb,Nebila Gaaloulb , Mohamed Bannia, Soumaya MOUGOU-ZERELLI

1Higher Institute of Biotechnology Monastir, Tunisia
2Laboratory of human genetics CHU Farhat Hached Sousse, Tunisia

Nowadays, micro- and nanoplastic particles can be found almost everywhere, being especially harmful for humans leading to serious health conditions, such as cancers of various body systems. The primary objective of our study was to assess the impact of these microplastics (MP) on human peripheral blood lymphocytes, employing the micronuclei (MN) biomarker as a key metric.

In our investigation, we examined data from exposure assessments involving nine healthy participants to MP, focusing on the micronuclei present in T cells. The micronucleus assay and fluorescent in situ hybridization (FISH) with pancentromeric probes were used to perform qualitative investigation of micronucleus-generating chromosomal alterations after exposure to MP. The main results show a normal frequency of micronucleated lymphocytes for the controls. However, following exposure to MP, there was a significant increase in the level of this biomarker. A qualitative analysis of micronucleated lymphocytes revealed a nearly equal distribution of acentromeric and centromeric micronuclei. Additionally, micronuclei were more prevalent in women compared to men, and this gender-based difference was statistically significant. These findings suggest that MP possess carcinogenic properties, including mutagenicity, clastogenicity, cytotoxicity, and the potential to induce hormonal and epigenetic changes. These factors likely contribute to or interact with aneuploidy, culminating in carcinogenesis. To date, our understanding of the relationship between exposure to nano- and microplastics and the development of carcinogenesis remains limited. This underscores the pressing need for further comprehensive research in this area to better comprehend the health implications of microplastic exposure.

Keywords: micro-nanoplastic particles, carcinogenesis, micronuclei, clastogenic, aneugenic

451. Using Next Generation Sequencing for the detection of BRCA1/BRCA2 germline mutations in South-Tunisian patients with breast/ovarian cancer

Nihel Ammous-Boukhris1 ,Dorra Ben Ayed-Guerfali1 ,Wala Ben Kridis-Rejab2 ,Wajdi Ayadi1 ,Slim Charfi 3 ,Afef Khanfir 2 ,Tahia Sellami-Boudawara 3 ,Mounir Frikha 2 ,Jamel Daoud 4 ,Raja Mokdad-Gargouri1

1 Center of Biotechnology of Sfax, University of Sfax, Sidi Mansour Street Km 6, BP 1177, 3038, Sfax, Tunisia.
2 Department of Oncology, Habib Bourguiba Hospital, Sfax, Tunisia.
3 Department of Anatomo-pathology, Habib Bourguiba Hospital, Sfax, Tunisia.
4 Department of Radiotherapy, Habib Bourguiba Hospital, Sfax, Tunisia.

The incidence of breast cancer (BC) and/or ovarian cancer (OC) is increasing in Tunisia especially in young women and mostly those with family history. However, the spectrum of BRCA mutations remains little explored in Tunisian patients in particular in the southern region.

We sequenced the entire coding regions of BRCA1and BRCA2 genes using next generation sequencing (NGS) in 134 selected patients with BC and/or OC.

Among the 134 patients, 19 (14.17%) carried pathogenic mutations (10 are BRCA1 mutation carriers and 9 are BRCA2 mutation carriers) that are mainly frameshift index (76.9%). Interestingly, 5 out of the 13 variants (38.46%) were found at least twice in unrelated patients, as the c.1310-1313 delAAGA in BRCA2 and the c.5030_5033 delCTAA that has been identified in 4/98 BC patients and in 3/15 OC patients from unrelated families with strong history of cancer. Besides recurrent mutations, 6 variant (4 in BRCA1 and 2 in BRCA2) were not reported previously. Furthermore, 3 unrelated patients carried the VUS c.9976A > T, (K3326*) in BRCA2 exon 27. BRCA carriers correlated significantly with tumor site ($p = 0.029$) and TNBC cases ($p = 0.008$). In the groups of patients aged between 31 and 40, and 41-50 years, BRCA1 mutations occurred more frequently in patients with OC than those with BC, and conversely BRCA2 carriers are mostly affected with BC ($p = 0.001$, and $p = 0.044$ respectively).

In conclusion, the overall frequency of the BRCA germline mutations was 14.17% in patients with high risk of breast/ovarian cancer. We identified recurrent mutations as the c.1310_1313 delAAGA in BRCA2 gene and the c.5030_5033 delCTAA in BRCA1 gene that were found in 4% and 20% of familial BC and OC respectively. Our data will contribute in the implementation of genetic counseling and testing for families with high-risk of BC and/or OC.

452. Small-cell neuroendocrine carcinoma of the parotid gland in an 18 year-old patient

Kooli N, Zenzri Y, Mokrani C, Ben Mansour H, Chraiet N, Mezlini A

Medical oncology department, Salah Azaiz Institute, Tunis, Tunisia

Background and Aims: Salivary neuroendocrine carcinomas (SCC) are extremely rare. The typically occur in the nasal cavity. Neuroendocrine carcinomas account for <1% of all salivary gland tumors. We aim to report a Neuroendocrine small cell carcinoma of the parotid in an 18-year-old patient diagnosed and treated at our institute.

Case Report: We describe an 18-year-old female patient, with no medical history, who was presented with a painful rapidly growing right cervical swallowing. Initial clinical examination revealed two tumefactions of the right cheek with no peripheral facial paralysis. A parotidean MRI was performed and revealed right parotid tumor process associated with intraglandular lymph node involvement as well as regional cervical lymph nodes of the sector II highly suspicious of malignancy with a low diffusion coefficient. Fine-needle aspiration revealed lymphoid cells and rare mature lymphocytes. Surgical biopsy concluded to a

neuroendocrine small cell carcinoma of the parotid, with a high proliferative index Ki67 >90%. Immunohistochemically, staining was diffusely positive for CD56+ but negative for Chromogranin and Synaptophysin. Staining for Cytokeratin was focally positive in a dot-like pattern. Workup computed tomography (CT) scan of the chest revealed suspicious mediastinal lymph nodes and a subpleural nodule in the apical segment of the right upper lobe, but their CT-guided sampling was inconclusive. Bronchoalveolar lavage revealed lymphocytes. A primary malignancy of the parotid and a metastatic lung neuroendocrine carcinoma couldn't be differentiated as TTF1 is occasionally positive in the parotid neuroendocrine malignancy. Given the high proliferative index, an induction chemotherapy was indicated before local control with surgery and radiotherapy. Chemotherapy was based on Cisplatin and Etoposide given at 3-week intervals. Treatment and follow-up are ongoing.

Conclusion: Small cell neuroendocrine carcinoma is extremely rare and is often difficult to distinguish from malignant lymphoma, adenoid cystic carcinoma, and undifferentiated carcinoma

453. Return of unadministered injectable chemotherapy preparations: causes and economic impact

Olfa Karoui (1), Maryssa Guefrech (1), Wiem Ben Ayed(1,2), Azza Ben Said(1,2), Dorra Ben Nejma(1), Imen Toukebri(1,2),Imen Limayem (1,2)
Institute of salah azaiz, Tunis
faculty of pharmacy, Monastir

Introduction: Good organization between the Centralized Cytotoxic Preparation Unit (UPCC) and the other departments guarantees optimal patient care. Injectable chemotherapy preparations unadministered to patients are returned to the UPCC where they are either reallocated to other patients or destroyed. The aim of the study is to assess the reasons for the return of the preparations as well as their economic impact.

Material and methods: This is a retrospective study carried out at the UPCC of the Salah-Azaiz Institute over a period of 8 months from 01/01/2023 to 08/31/2023. The data were collected from a register completed by the pharmacist in the event of return of an unadministered preparation after manufacture. The physicochemical stability of the preparation, the storage conditions and the dose were the criteria to consider before repurposing. Data processing was performed using Excel software.

Results: The number of unadministered preparations returned to the UPCC was estimated at 86 out of 18,080 preparations. Various reasons for returning the preparations were observed, the majority of which were related to the patient (63%) (absence, site problem, deterioration of general condition, intolerance to treatment). Others related tomedical decision (8%) and a lack of organization and communication (16%), such as a lack of premedication. In total, 94% of the preparations were readministered, respecting the stability of the preparation and the new prescribed dose, which should not exceed +/- 5% of the initial dose. The losses related to the return of the preparations are estimated at €7,650.57, of which €7,551.36 was saved thanks to the reallocation.

Conclusion: The reallocation of preparations makes it possible to minimize the loss of unadministered preparations, but it must be limited. Thus, a good organization and communication with the clinical service as well as an awareness of the patient on the importance of his treatment is essential.

454. A clinicopathological study of 11 cases of synovial sarcoma in the center of Tunisia

Meriem Alaya, Wiem Majdoub, Yasmine Dhouibi, Syrine Moussa, Atika Baccouche, Sihem Hmissa

Pathology Department, Sahloul Hospital of Sousse, Tunisia

Introduction: The synovial sarcoma is a rare and aggressive tumor of soft tissues representing 7-8% of malignant sarcomas. Although it may occur anywhere in the body, it preferentially affects large joints and extremities. It is considered a high grade sarcoma with a high metastatic potential and a significant risk of local recurrence. Pathological analysis relies on both morphology and immunochemistry which can be difficult since no antibody is 100% specific . Therefore, the analysis of a fusion transcript SS18-SSX produced by the t(X-18) translocation remains the only way to establish a certain diagnosis.

Goals: Highlighting the presence of the t(X-18) translocation involving genes SS18 and SSX in synovial sarcoma.

Material and methods: Our study is retrospective about a series of 11 cases of synovial sarcomas collected in the pathological anatomy department of Sahloul hospital over a period of 5 years (2019-2023).

Results: The age of the patients varied between 13 years and 82 years old with an average of 44 years. 2 patients were male. Clinical symptomatology was marked by the presence of a hard painful swelling. The localization was at the level of the extremities in 7 cases, in the thoracic wall in one case, in the parotid gland in one case, paravertebral in one case and in the cardiac atrium in one case. The diagnosis was established on biopsy-exeresis. The histological examination objectified a biphasic tumor proliferation in 4 cases. It was formed by a fusiform contingent of high cell density dissociated by an epithelial contingent. In the other 7 cases, it was a monophasic spindle cell proliferation. The tumor cells expressed both TLE1 and CD99 in 10 cases. We completed by a study of SS18-SSX antibody, revealed positive in all cases, highlighting the pathognomonic t(18, X) translocation of synovial sarcoma.

Conclusion: Synovial Sarcoma remains a delicate diagnosis due to its possible recurrence and metastasis. Highlighting the t(18, X) translocation remains the only certain tool to confirm it.

455. A clinicopathological study of 29 cases of chondrosarcoma in the center of Tunisia

Meriem Alaya1, Oussama Belkacem1, Hajer Hamchi2, Marwa Krifa1, Yasmine Dhouibi1, Sarra Mestiri1, Sihem Hmissa1, Moncef Mokni3

Pathology Department, Sahloul Hospital of Sousse, Tunisia
The Center-Tunisian Cancer Registry, Farhat Hached Hospital of Sousse, Tunisia
Pathology Department, Farhat Hached Hospital of Sousse, Tunisia

Introduction: Chondrosarcoma represents the second most common malignant bone tumor after osteosarcoma. Some cases may present a diagnostic challenge requiring discussion between pathologists and often recourse to immunohistochemical study.
Goals: Studying the epidemiological, clinical, and pathological features of chondrosarcomas.
Material and methods: Our study is retrospective about a series of 29 cases of chondrosarcomas collected in the Departments of Pathological Anatomy of Sahloul and Farhat-Hached Hospitals of Sousse over 15 years (2008-2023).
Results: The age of the patients varied between 16 years and 80 years old with a mean age of 48 years. Twenty-one patients were male. Clinical symptomatology was marked by the presence of a painful local swelling. The localization was at the level of the nasal cavity in 3 cases, in the sacrum in 2 cases, at the level of the mandible in 4 cases, in the femur in 6 cases, at the chest wall and infiltrating the ribs in 6 cases, in the ankle in one case, at the knee in one case, in the cervical spine in one case, in the sternum in one case, at the iliac wing in 3 cases and meningeal in one case. The diagnosis was established on biopsy in all cases. The histological examination objectified chondrosarcoma grade 1 in 8 cases, chondrosarcoma grade 2 in 15 cases, chondrosarcoma grade 3 in 5 cases and clear cells chondrosarcoma in one case. All cases were characterized by a proliferation of chondrocytes embedded in lacunae and disseminated within an abundant cartilaginous matrix. Histopathological grading was based on the degree of cellularity, growth pattern, mitoses and cytonuclear atypia. An immunohistochemical study was carried out in only 8 cases to confirm the diagnosis, relying on S100 which was positive in 6 cases, and Cytokeratin, negative in all cases. All patients underwent wide surgical resection. The prognosis depended on both histologic grading and tumor extent. Chondrosarcomas grade 1 were locally aggressive with a good prognosis though while chondrosarcomas grade 3 had a worse prognosis.
Conclusion: Chondrosarcoma remains a challenging diagnosis due to the prognosis and possible metastasis of chondrosarcomas grade 2 and 3.

456. Rare Genital tract metastasis of non-gynecological malignancies

Khaldi.O1, Ben Othman.S1, Ben ammar.N1, Jbir.I2, Zemni.I1, Bouaziz.H1,Dhieb.T1

1)Department of Surgical Oncology Salah Azaiez Institute, Tunis
2)Department of General Surgery Taher Maamouri hospital-Nabeul

Background: Aside from the ovary, secondary tumors of the female genital tract are unusual. The vulva, vagina, and cervix are the rarest site of metastasis in the entire female genital tract. The presence of lower genital tract metastasis may initially be mistaken as a primary malignancy when common gynecological complaints are presented. This study aims to investigate the pathologic and clinical features of these tumors for a better understanding.

Materials and methods: We retrospectively reviewed data from five patients treated in our institution between 2010 et 2022.

Results: The median age was 49 years old ranging between 31 and 73. Bleeding was the main complaint in all cases. The organs involved were as follows: cervix in 3 cases vulva in 1 case and both vagina and vulva in 1 case. Colorectal primary adenocarcinoma was identified in 4 cases and lung neuroendocrine carcinoma in 1 case. Secondary tumors were synchronous in one case and metachronous in 4 cases with a mean time to recurrence of 15 months (between 6 months and 4 years). The lower genital tract was the only site of metastasis in the two cases and was associated with liver metastasis and peritoneal carcinosis in three cases. The diagnosis was histologically confirmed and an immune-histochemical study was performed in all cases. Chemotherapy was assessed for 80% of cases. Regmens were as follows: for colorectal primary cancer 2 patients had Folfiri, 1 had Folfox and for neuroendocrine lung carcinoma she had vp16-cisplatin). Radiation (45GY) was assessed for one patient with cervical metastasis. Median follow-up was 6 months

Conclusion: Secondary tumor in the female genital tract is rare. The clinical manifestation may be perplexing especially if a patient is presented with a nonspecific gynecological symptom. Differentiating primary and secondary malignancy is crucial because of their different treatment and prognosis.

457. Management and prognosis of low-grade appendiceal mucinous neoplasms: a single center experience

Khaldi.O, Ben Othman.S , Ben Ammar.N, Bouida.A,Bouaziz.H, Dhieb.T

Department of surgical oncology salah azaiz institute tunis

Introduction: Low-grade appendiceal mucinous neoplasms (LAMN) are poorly understood lesions characterized by their potential to spread to the peritoneal cavity as pseudomyxoma peritonei (PMP). They are incidentally detected in approximately 0.2%–0.3% of appendectomy specimens. Nevertheless, they bring a variety of diagnostic and therapeutic challenges.

Materials and methods: We retrospectively reviewed patients diagnosed with LAMN between 2012 and 2022 at Salah Azaiez Institute.

Results: Seven female patients diagnosed with LAMN were identified. The median age was 47 years old. The main complaint was chronic abdominal pain in 4 patients. The remaining were asymptomatic and were incidentally diagnosed.

Computed tomography was performed before surgery for all patients. Tumor markers (CEA, CA19-9, and CA125) were elevated in only three cases. The diagnosis was histologically confirmed for all patients

All patients had surgical treatment of these patients, and three presented with PMP at diagnosis. According to the intraoperative situation appendicectomies were performed in four cases, right hemicolectomy in three cases, cytoreduction in two cases, and hysterectomy and bilateral adnexectomy in one case. Optimal surgery with free margin was obtained in six cases.

No patient received postoperative chemotherapeutic treatment. The median follow-up was 62 months. No recurrence was evident in six patients; however, one patient was lost to follow-up after six months. None of the patients developed a recurrence

Conclusion: LAMN is a rare and unique entity that is not yet fully investigated. This study shows the need for further investigation of LAMN to establish treatment guidelines.

458. Metastatic breast cancer to the gastrointestinal tract: a case series

Khaldi.O, Ben Othman.S, Ben Ammar.N;Bouida.A, Bouaziz.H,Dhieb.T

Department Of Surgical Oncology Salah Azaiz Institute

Background: Metastatic breast cancer involving the hepatobiliary tract or peritoneal carcinomatosis has been well described in the literature. However, Luminal gastrointestinal tract (GI) involvement is less common, and recognition of the range of possible presentations is important for early and accurate diagnosis and treatment

Material and methods: We retrospectively reviewed 8 cases of metastatic breast cancer to GIT diagnosed and treated at Salah Azaiez Institute from 1998 to 2022.

Results: 8 patients were diagnosed with metastatic breast cancer to the GI tract during this period of study. All of them were female, with a median age of 54 years.

Histologically 50 % of cases were purely invasive lobular carcinoma, 18.87% of cases were ductal invasive carcinoma, and 1 case of medullar carcinoma. The molecular profile was LuminalB in 7 cases and LuminalA in one case. Only 2 patients had neoadjuvant chemotherapy. All patients had surgical treatment for the breast cancer with hormonotherapy and radiotherapy and only 3 patients had adjuvant chemotherapy. The mean time of recurrence was 49 months

The main symptoms consisted of abdominal pain and bowel obstruction. One patient had peritonitis complicating a perforation of a gastric localization. 3 cases had gastric involvement,4 cases had colorectal and one patient had both gastric and colorectal localizations.

Only 3 patients had surgery for the metastasis and all of them had chemotherapy. The median follow-up was 36 months

Conclusion: Metastatic breast cancer involving the gastrointestinal tract can produce a wide range of clinical and radiological presentations, often mimicking other gastrointestinal disorders. Given the high prevalence of this disease, breast cancer GI metastasis needs to be considered in any woman with a history of breast cancer presenting with new gastrointestinal complaints.

459. Abdominal actinomycosis: a case report

O.Krimi ; S.Sakhri ; N .Khessairi ;H.Bouaziz; T.Dhieb

Oncologic surgery department, Salah Azaiez Institute

Introduction: Abdominal actinomycosis is a rare chronic suppurative disease caused by a gram-positive anaerobic bacterium, Actinomyces sp. Most of the time, it is responsible of an abdominal pseudotumour syndrome leading to extensive surgical excision if neoplasia is suspected.

We report a case of abdominal actinomycosis in which the mode of revelation was a pseudotumour syndrome.

Observation: A 42-year-old patient who had been wearing an IUD for 9 years presented with abdominal pain in a context of general deterioration.

An abdominal CT scan showed 3 intraperitoneal masses, one of which invaded the left medial oblique muscle with a large anterior parietal collection.

The patient was treated with cefotaxime and metronidazole antibiotics and underwent surgery to evacuate the collection and remove the 3 abdominal masses.

The anatomopathological result concluded that the inflammatory granulomatous remodelling was related to actinomycosis.

The patient was put on prolonged antibiotic therapy with IV penicillin G followed by amoxicillin-clavulanic acid with favourable evolution.

Conclusion: Actinomycosis is a disease manifesting as an invasive mass in a young woman with an IUD or in a patient with a history of trauma or abdominal surgery, it often leads the surgeon to do extensive surgery as it simulates an abdominal tumour, while prolonged antibiotic therapy is sufficient for treatment when the diagnosis is made early.

460. Rare histological entity of ovarian tumour: a case report

Krimi O, Sakhri S, Khessairi.N, Bouaziz.H, Dhieb.T

Surgical oncology department, Salah Azaiez institute

Introduction: Brenner tumor is a rare ovarian tumor accounting for 1-2% of all ovarian tumors. It is a part of the surface epithelial group of ovarian neoplasm, and it is usually asymptomatic and most of the times it is an incidental pathological finding. Here we report a case of benign Brenner tumor of ovary treated surgically.

Observation: A 64-year-old patient presented with pelvic pain of 6 months' duration with a negative somatic examination.

An abdominal and pelvic CT scan was done, revealing a large tissular mass of the left ovary measuring 20cm. Tumor markers CA 125, CA19-9, CEA were all negative.

The patient underwent a left salpingo-oophorectomy was performed, removing a 25 cm GA cystic ovarian mass, the frozen section examination concluded that it was a mucinous tumor with no signs of malignancy. This was followed by a total hysterectomy, right salpingo-oophorectomy, omentectomy with appendectomy.

Definitive histological examination concluded a benign Brenner tumor of both ovaries, with no other associated lesions. Post-operative management was straightforward, and the patient is followed up regularly in our institute.

Conclusion: Brenner tumor of the vary is a solid tumor that is generally asymptomatic.

It is difficult to diagnose with imaging studies. USG and computed tomography, both techniques are limited in specificity because of the tumor's nonspecific appearance.

Surgical resection is often curative and will reverse symptoms if they are present. Malignant Brenner tumors may affect surrounding tissue and metastasize into other structures, but such incidents are so rare that a standard treatment has not been developed.

461. Synchronous stromal gastro-intestinal tumor and cutaneous melanoma

Krimi O, Sakhri S, Khessairi.N, Bouaziz.H, Dhieb.T

Département de chirurgie oncologique, Institut Salah Azaiez

Introduction: Almost third of gastro-intestinal stromal tumors (GISTs) are discovered incidentally during investigative or therapeutic procedures for unrelated diseases. Thus, GIST may coexist with different types pf cancer either synchronously or metachronously.

Case report: An 80 year-old woman with no past medical history, presented to our institute for a black lesion developed on her left foot sole since 2 months. Biopsy of the lesion was done and the histologic examination concluded to a melanoma in nodular phase. We completed a cervico-thoraco-abdomino-pelvic CT scan revealing a gastric exopytic tumor of 54x45mm evocative of a GIST.

As gastric fibroscopy was negative and scan-guided, biopsy was not possible we decided to operate the patient

She underwent a large excision of the melanoma associated to inguinal lymph node dissection and gastric wedge resection removing the exophytic lesion.

The histologic examination confirmed the diagnosis of synchronous cutaneous melanoma and GIST. The patient still undr follow-up without any sign of recurrence or metastasis.

Conclusion: GIST is a rare neoplasm that represents about 0,1-1% of all malignant neoplasms of gastro-intestinal tract, and there are few case reports in the literature of simultaneous malignancies including melanoma which is relatively rare.

462. Aggressive fibromatosis of the breast: a diagnostic challenge

Khessairi Nayssem, Sakhri Saida, Krimi Ons, Bouaziz Hanene, Slimane Maher, Ben Dhiab Tarek

Surgical Oncology Department, Salah Azaïz Institute, Tunisia

Introduction: Desmoid-type fibromatosis, previously described as aggressive fibromatosis, is a rare soft tissue tumor with the typical clinical behavior of frequent local recurrence without distant spread. The breast is an exceptional site for occurrence of desmoid-type fibromatosis, representing 0.2% of all breast tumors and 4% of all extra-abdominal desmoid tumors.

Methods: We represent three cases of desmoid-type fibromatosis of the breast diagnosed and treated at the Salah Azaiez Institute.

Results: The mean age of our patients was 32.66±7.5 years. All of our patients presented with a palpable breast mass. The average tumoral size was 3.2cm. On radiological examination, two of the tumors presented as a well circumscribed hypoechoic mass with a rather homogenous echotexture and lateral acoustic shadowing, and one presented as an irregular mass without calcification. The two first mentioned cases underwent a wide surgical excision of the mass, and the last one underwent a core needle biopsy of the mass before surgery. Histological examination showed a proliferation of relatively equally spaced uniform spindle cells arranged in intersecting fascicles with occasional mitosis and free margins in all cases. Fibromatosis was confirmed. After a median follow-up of 65.66 months, none of our patients had a local recurrence.

Conclusion: Fibromatosis is a rare benign lesion that may mimic breast cancer on physical examination. Surgical resection with free margin is the standard treatment. It has an aggressive local behavior with a high frequency of recurrence. A proper awareness of this entity and its behavior is necessary in order to establish a suitable diagnosis and management.

463. Axillary lymph node metastasis from pure ductal carcinoma in situ of the breast

Khessairi Nayssem, Sakhri Saida, Krimi Ons, Bouaziz Hanene, Slimane Maher, Ben Dhiab Tarek

Surgical Oncology Department, Salah Azaïz Institute, Tunisia

Introduction: The risk of lymph node involvement in pure ductal carcinoma in situ (DCIS) is very low, so lymph node surgery should not be considered as a routine part of DCIS management. Depending on the series published in the literature, the rate of lymph node metastases in pure DCIS varies between 0% and 10%.

Methods: We report respectively two cases of axillary lymph node metastases from pure ductal carcinoma in situ of the breast, diagnosed and treated at the Salah Azaiez Institute.

Results: The two patients were aged of 35 and 47 years. The primary complaint was a palpable breast mass in one patient and a palpable axillary adenopathy in the second. Physical examination showed the presence of a 10mm mass without axillary adenopathy in the first patient while in the second, the breast examination was negative with a centimetric axillary adenopathy. Radiological examination showed a suspicious breast mass with a thickened cortex axillary lymph node in the first patient. The second patient had suspicious microcalcifications with homolateral axillary adenopathy. Both patients had a lumpectomy with axillary sampling and the final histological examination concluded to a pure ductal carcinoma in situ with metastatic adenopathy in both cases. The decision was to perform adjuvant treatment by radiotherapy and chemotherapy in both cases. After a median follow-up of 20 months, one patient, who refused to have chemotherapy, presented a distant recurrence in the form of bone metastases.

Conclusion: Lymph node surgery will be indicated according to the presence or absence of microinvasion criteria. Most lymph node metastases from CCIS are micro metastases that do not influence recurrence rates and survival.

464. Body image after breast reconstruction: a single institute experience

Fertani Yasmine, Khessairi Nayssem, Jaidane Olfa, Bennaceur Radhi, Chargui Riadh, Bouaziz Hanene, Ben Dhiab Tarek.

Surgical Oncology Department, Salah Azaïz Institute, Tunisia

Background : Breast cancer is the leading female cancer in the world. A mastectomy is a psychologically traumatizing experience resulting in body disfigurement. The breast is usually, objectified as symbol of femininity and sexual identity. Breast reconstruction (BR) tends to restore the image of the lost breast and reconcile the patient with her body.

Methods : We conducted a cross-sectional descriptive study over a period of 3 years from January 2017 to September 2020 at Salah Azaiez Institute. We used the Body Image Scale (BIS) in our evaluation.

Results : Our study included 80 patients. The mean age was 42.25 ± 7.98 years and varied between 22 and 65 years. Fifty-six percent were married. All of our patients were educated with a high school or university education in 77% of cases. We noted a history of depression secondary to cancer in 4% of patients. The BR was performed within an average of 38.26 months after mastectomy. We reported complications in 20% of patients including 4 failures, of which one was of a BR performed in another department by a different surgeon. The mean BIS before BR was 24.5 / 30 (altered) against 3/30 after BR therefore significantly improved. The main motivation of patients found in the literature was the desire to restore their bodily integrity, their femininity and regain control of their life. This has been expressed by the majority of our patients. Among the significant predictors of improved body image were age, family history of breast cancer, bilaterality, BIS before BR, and time to BR.

Conclusion : Body image after breast cancer is deeply altered. BR tends to inhance body appearance and then appreciation of the body image. By improving body image, BR seems to improve quality of life of breast cancer survivors.

465. Extranodal rosaî-dorfman disease of the breast: a differential diagnosis of breast cancer.

Khessairi Nayssem, Sakhri Saida, Krimi Ons, Bouaziz Hanene, Slimane Maher, Ben Dhiab Tarek

Surgical Oncology Department, Salah Azaïz Institute, Tunisia

Background: Rosaî-Dorfman Disease (RDD) also known as sinus histiocytosis with massive lymphadenopathy, is a rare benign histiocytic proliferation mainly affecting lymph nodes, most often those in the head and neck. However, the breast site without lymph node involvement is extremely rare, only 50 cases have been reported in the literature. This location is important to recognize as it can mimic malignancy.

Methods: We conducted a retrospective descriptive study including all patients with extra nodal RDD of the breast with or without axillary lymph node involvement, treated at the surgical oncology department of the Salah Azaiez Institute, over a 15-year period from 2005 to 2020.

Results: Three female patients with extra nodal RDD of the breast were identified. The age of our patients ranged from 26 to 59 years. None of our patients had a history of neoplasia or benign breast pathology. All our patients presented with breast masses that were all classified stage T2. The mean tumoral size was of 3.2 cm ranging from 2.5 to 4 cm. Only one patient had palpable axillary adenopathy. Radiologically, the masses were suspicious, two were classified as ACR4b and one as ACR5. All of our patients underwent core needle biopsy, followed by a wide surgical excision. Histologically, histiocytic cells with enlarged nuclei and lymph phagocytosis images were identified in all cases. Immunohistologically, the cells were PS100(+), CyclinD1(+) and CK(-). All our patients were then referred to Internal Medicine Department for appropriate management.

Conclusion: Rosai-Dorfman disease of the breast is a rare benign inflammatory disease that may mimic breast cancer clinically and radiologically. Early recognition of this benign condition might spare the patient further investigation and surgery.

466. Clinicopathological analysis of primary carcinosarcoma of the ovary: a single institute experience

Khessairi Nayssem1, Sakhri Saida1, Krimi Ons1, Bouaziz Hanene1, Sahraoui Ghada2, Slimane Maher1, Ben Dhiab Tarek1

1 Surgical Oncology Department, Salah Azaïz Institute, Tunisia

2Pathology Department, Salah Azaïz Institute, Tunisia

Background: Ovarian carcinosarcoma, also known as mixed malignant mullerian tumor, is a rare and very aggressive histologic subtype, accounting for only 1-4% of all ovarian cancers. Prognosis is poor and the median overall survival time ranges from 8 to 26 months.

Methods: We conducted a retrospective descriptive study including patients followed and treated for primary ovarian carcinosarcoma at the Salah Azaiez Institute over a period of 20 years, from the year 2000 to 2020.

Results: Fifteen female patients were included in our study. The mean age of patients was 58.53 years ranging from 42 to 72 years. Clinical presentation was expansion and abdominal pain in most cases (52%), followed by bleeding (22%). On clinical examination, abdomen was distended with a palpable mass in 38% of cases, and inguinal adenopathy in only one case. The mean tumoral size was 84.14mm. It was bilateral in four cases. Three patients had peritoneal carcinosis at the time of diagnosis, two of which were associated with hepatic metastases. Twelve patients (80%) underwent primary surgery; however, three patients underwent interval surgery after neoadjuvant chemotherapy. Adjuvant chemotherapy was given in 67% of cases. After a median follow-up of 41 months, four patients had tumor recurrence, seven were in complete remission, three were lost to follow-up, and one died of a pulmonary embolism.

Conclusion: Ovarian carcinosarcomas are rare tumors with aggressive behavior and poor survival outcomes. The primary treatment is debulking surgery followed by platinum-based chemotherapy. Recurrence-free survival for 3 years remains exceptional.

467. Metaplastic breast cancer with chondroid differentiation: a case series of a rare infiltrative breast carcinoma variant

Khessairi Nayssem1, Sakhri Saida1, Krimi Ons1, Bouaziz Hanene1, Bettaieb Ilhem2, Chargui Riadh1, Ben Dhiab Tarek1

1Surgical Oncology Department, Salah Azaïz Institute, Tunisia
2Pathology Department, Salah Azaïz Institute, Tunisia

Background: Metaplastic breast cancer (MpBC) is an extremely rare, heterogenous group of neoplasms accounting for less than 1% of all breast carcinomas. Chondroid-differentiated metaplastic carcinoma is an uncommon subtype that tends to have a relatively good prognosis compared with other subtypes. We present herein the clinicopathological features of 10 cases of MpBC with chondroid differentiation diagnosed and treated in our institute.

Mehtods: We conducted a retrospective observational study including all the patients diagnosed with MpBC with chondroid differentiation, treated in our institute, over a period of 10 years.

Results: Ten female patients were included in our study. The mean age of our patients was 55.86±16.6 years, with ranges from 36 to 79 years. Most of patients were stage T2 (57%) with lymph node metastasis in 42% of cases. Only one patient was metastatic in the lungs at the time of diagnosis. Almost all cases were SBR III grade (86%). Breast surgery was radical in 86% of cases. All included patients had chondroid differentiated tumors, and the presence of spindle cells was noted in 57% of cases. Regarding the immunohistochemical study, a low positivity of hormone receptors was noted in only one case. In the remaining cases, the tumors were triple negative. Pancytokeratin and P63 staining were positive in 86% of cases. All of our patients underwent adjuvant chemotherapy using FEC+TXT. With a median follow-up of 58 months, we noticed a loco-regional relapse in 28% of cases.

Conclusion: MpBC is an extremely rare subtype of breast carcinoma which is usually triple negative and therefore can only be targeted by chemotherapies. MpBCs are known for their aggressive course and poor response to chemotherapy. Further studies are therefore needed to explore targeted therapies to achieve better outcomes in this patient population.

468. Splenic metastasis from endometrial cancer nine years after treatment

Khessairi Nayssem, Sakhri Saida, Bouaziz Hanene, Krimi Ons, Slimane Maher, Ben Dhiab Tarek
Surgical Oncology Department, Salah Azaïz Institute, Tunisia

Background: Splenic metastases from any primary tumor are uncommon, particularly those arising from endometrial cancer. These last are remarkably rare, with less than 20 cases reported in the literature.

Case presentation: We report the case of a 45-year-old female patient with no previous history who was treated in our department for endometrial adenocarcinoma. The patient underwent total hysterectomy, bilateral adnexectomy, appendectomy, infragastric omentectomy and bilateral pelvic lymph node dissection. Pathological examination showed a grade 1 endometrial adenocarcinoma, infiltrating more than the inner half of the myometrium and the cervix, with invasion of the left ovary; no metastatic lymph nodes were found. The post-operative period was uneventful. Adjuvant radiotherapy and brachytherapy were indicated. After 9 years of follow-up, the patient presented for pain in the left hypochondrium. On clinical examination, a 10 cm mass was found in the left hypochondrium. A thoraco-abdomino-pelvic CT scan showed secondary lesions in segments III and VII. It also showed an enlarged spleen with a 10 cm lesion, suspicious of malignancy. Given the risk of bleeding, a biopsy was not performed. The patient underwent splenectomy with biopsy of the hepatic nodules. Histological examination confirmed secondary involvement of the spleen and liver by the endometrial adenocarcinoma subsequently diagnosed. The patient was postoperatively referred for chemotherapy.

Conclusion: Splenic involvement by carcinomatous metastases is very uncommon and occurs late in the advanced stage of the disease. Splenectomy with subsequent systemic adjuvant treatment is the gold standard.

469. Uterine cervix metastases from colorectal adenocarcinoma: an extremely rare condition

Krimi Ons, Bouaziz Hanene, Khessairi Nayssem, Sakhri Saida, Chargui Riadh, Ben Dhiab Tarek

Surgical Oncology Department, Salah Azaïz Institute, Tunisia

Background: Colorectal cancer is the third most common cancer in women. It is known to metastasize to the lymph nodes, lungs, liver and peritoneum. The uterus, and particularly the cervix, is a rare location for colorectal metastases. Uterine involvement accounts for less than 10% of all metastases to the female reproductive tract from extragenital cancers; of these, only 3.4% involve the cervix.

Methods: We conducted a retrospective study over a period of 15 years from 2005 to 2020, including patients followed at the Salah Azaiez Institute with cervical metastases from colorectal cancer.

Results: Five patients were included in our study. The mean age was 49.4±12.48 and ranges from 31 to 67 years. The primary tumor was located on the right colon in two cases, on the sigmoid colon in two cases, and on the caecum in one case. One patient was metastatic to the cervix at the time of diagnosis. All of our patients underwent immediate surgery, which was right hemicolectomy in two cases, sigmoidectomy in two cases, and right hemicolectomy with total hysterectomy and bilateral adnexectomy in one case. After surgery, all patients had adjuvant chemotherapy. After a median follow-up of 26 months, four of our patients presented a metastasis to the uterine cervix. The management of theses metastases consisted in palliative chemotherapy in two patients, who presented other metastatic sites, and in radiotherapy with hysterectomy in the two remaining cases. Currently, two patients are alive on chemotherapy, one patient is in complete remission and two are lost to follow-up.

Conclusion: Metastasis of extragenital cancers to the female genital tract is uncommon and has a poor prognosis. A multidisciplinary approach including immunohistochemical study is necessary to diagnose these rare cases, and any gynecologic symptom following a medical history of colorectal carcinoma should be kept in mind for metastasis in order to establish an appropriate diagnosis.

470. Unusual metastatic sites from breast cancer

Khessairi Nayssem, Sakhri Saida, Krimi Ons, Bouaziz Hanene, Chrigui Maha, Slimane Maher, Ben Dhiab Tarek

Surgical Oncology Department, Salah Azaïz Institute, Tunisia

Background: Breast cancer (BC) is the first female cancer in the world. The most common metastatic site besides supradiaphragmatic lymph nodes are bone, lung, liver, and brain. Other sites such as genital organs or gastrointestinal tract are extremely rare.

Methods: We report the most uncommon metastatic sites identified in the period between 2015 and 2022, in patients who were followed for breast cancer at the Salah Azaiez Institute.

Conclusion: Despite advances in diagnosis and management, most cancer deaths are the result of metastases resistant to conventional therapies. For this reason, early diagnosis of secondary lesions represents the only chance to control the disease and prolong survival. Therefore, knowledge of common and rare sites of metastasis is necessary to ensure proper management.

471. Primary diffuse large cell B-cell lymphoma of the soft tissue: a case report

C.Dabaj, O.Ait Ouhssain, S.Benbiba, N.Mansouri, H.Rachidi, H.Rais
Department of Pathological Anatomy, Department of Dermatology
Mohammed VI University Hospital of Marrakesh. Morocco.

Background: Primary diffuse large B-cell lymphoma of soft tissue is an uncommon subtype of non-Hodgkin lymphoma that primarily affects soft tissues instead of lymph nodes or organs. This lymphoma variant usually originates in connective and fat tissues within the body, often appearing in areas like the limbs, trunk, or head and neck. It falls under the broader category of diffuse large B-cell lymphoma (DLBCL), the most prevalent non-Hodgkin lymphoma type.
Methods: We report the case of a patient with a multiple sites large B cell lymphoma of non-germinal center type diagnosed at the Department of Pathological Anatomy, Arrazi Hospital, CHU MOHAMMED VI, Marrakech, Morocco.
Results: The discovery of multiple sites of large B-cell lymphoma, specifically the non-germinal center type, is an exceedingly rare occurrence. A 77-year-old woman presented with three nodules in different soft tissue areas – the left thigh, abdomen, and left breast – measuring between 0.5cm and 1cm. Biopsies were conducted, revealing histological characteristics of atypical lymphoid cell proliferation. Immunohistochemically, the tumor cells exhibited positive markers for CD45, CD20, and bcl-2, with a high Ki-67 labeling rate of 90%. In contrast, they tested negative for pancytokeratins, CD10, bcl-6, cyclin D1, CD3, S100 protein, HMB45, chromogranin, and synaptophysin. The diagnosis pointed to diffuse large B-cell lymphoma (DLBCL) originating in soft tissue, specifically of the non-germinal center type (non-GC). Subsequent systemic examinations using various imaging methods revealed small nodular lesions, some measuring up to 1 mm, in the lung and kidney. However, biopsies were not performed at these sites.
Conclusion: Primary lymphoma predominantly affects lymph nodes and extranodal organs that contain a significant amount of lymphoid tissue. It is exceptionally uncommon for primary lymphoma to manifest in soft tissue, it has a misleading clinical and radiological aspect.
Therefore, it is essential to establish a strong clinical, radiological, and pathological correlation to enhance the quality of patient care.

472. EWSR1/WT1 rearrangement in small round cell tumor by fish: the experience of the pathology department of Mohammed VI University Hospital of Marrakech, Morocco.

C.Dabaj1, O.Ait Ouhssain1, J.CHOUAF2, FE.Hazmiri1, A.FAKHRI1, A.BELBACHIR1, H.Rais1.

1.Pathology department of the Mohammed VI University Hospital, Marrakech, Morocco.

Background: Malignant small round cell tumors (MSRCT) is a term used for small and monotonous undifferentiated cells with increased nuclear-cytoplasmic ratio. This group of tumor includes entities such as peripheral neuroectodermal tumor, rhabdomyosarcoma, synovial sarcoma, non-Hodgkin's lymphoma, neuroblastoma, hepatoblastoma, Wilms' tumor, and desmoplastic small round cell tumors. The Ewing sarcoma breakpoint region 1 (EWSR1; also known as EWS) represents one of the most commonly involved genes in small round cell tumors translocations.

Objective: our objective is to evaluate the role of EWS-WT1 gene fusion product identified by fluorescence in situ hybridization (FISH) in the diagnosis of 8 small round cell tumors cases, while comparing them to the data of literature.

Methods: The data of 8 patients who were diagnosed with small round cell tumour proliferation in 3 years from 2019 to 2021 were retrieved from the archives of the Department of Pathology and biopathology unit of the university hospital of Mohammed IV in Marrakech. The clinical information and histologic sections of the patients were reviewed. Fluorescence in situ hybridization confirmed EWSR1 rearrangement in 6 cases.

Results & Conclusions: We had 8 cases of small round cell tumors proliferation in 3 years. The average age was 16 years. The sex ratio was 2,5 with a male predominance. The specimens received were simple biopsies or excisional biopsies which were fixed and paraffin embelled. Histologically, the tumors were characterized by small, round, relatively undifferentiated cells. In our series we had 7 Ewing sarcoma cases with 6 positive and one negative EW SR1 rearrangement, and one case of Rhabdomyosarcoma alveolar negative for EW SR1 rearrangement. Small round tumor cells is a highly aggressive soft tissue and bone tumor primarily affecting children and young adult. FISH detected EWSR1 rearrangement in 80% of our cases. Small round cell tumors represent a diagnostically challenging group, FISH analysis is an extremely useful by confirming t(11;22)(q24; q12) translocation, which results in EWSR1-FLI1 fusion transcript followed by t(21;22)(q22; q12) which result in a EWSR1-ERG transcript. However, as in most instances a split-apart approach is used, the results of molecular genetics must be evaluated in context with morphology.

473. Primary diffuse large B cell lymphoma of Nasal Cavity: a case report

C.Dabaj, O.Ait Ouhssain, A.Elahouaoui,N.Mansouri, H.Rachidi, H.Rais
Department of Pathological Anatomy
Mohammed VI University Hospital of Marrakesh.Morocco

Background: Sinonasal lymphoma is a rare condition within the field of rhinology and otolaryngology. In this context, we present a case report about diffuse large B cell lymphoma, and review the literature concerning the diagnosis and treatment of this condition.
Methods: We report the case of a 12 years old boy with a diffuse large B cell lymphoma in the sinonasal tract diagnosed at the Department of Pathological Anatomy, Arrazi Hospital, CHU MOHAMMED VI, Marrakech, Morocco.
Results: Lymphomas affecting the sinonasal region are an uncommon occurrence and typically manifest with nonspecific symptoms related to the sinonasal area. A 12 yeard olf boy
We report the case of a 12 year-old presenting nasal obstruction with headache, facial/nasal pain, and epistaxis. Nasal endoscopy showed a nonspecific soft tissue mass, nonulcerative with a polypoid appearance in the nasal cavity masking the cavum. Biopsie was conducted, revealing revealing histological characteristics of atypical lymphoid cell proliferation. Immunohistochemically, the tumor cells exhibited positive markers for CD45, CD20, and bcl-2, CD5 with a high Ki-67 labeling rate of 70%. In contrast, they tested negative for pancytokeratins, CD10, bcl-6, CD3, S100 protein, HMB45, chromogranin, and synaptophysin and myogenin. The diagnosis pointed to diffuse large B-cell lymphoma (DLBCL). Further imaging were preformed ; magnetic resonance imaging (MRI),and positron emission tomography (PET)/C ; to determine the extent of the lesion as well as assist in early detection and ultimately establish disease staging, and to determine pretreatment risk stratification and selection of therapy.
Conclusion: Diffuse large B-cell lymphomas (DLBCLs) represent uncommon head and neck tumors, frequently manifesting with non-specific symptoms and associated with substantial morbidity and mortality. In this study, we utilize a case report to assess the clinical, and the pathological aspects of this disease in the light of the literature.

474. Endometrial adenocarcinoma in a young woman: About a case and literature review

Montacer Hafsi ,Haykel Turki , Eya Kristou , Fathi Mraihi, Basly Jihen , Dalenda Chelli
Maternity and neonatology center – Department "D"

Introduction: Endometrial adenocarcinoma is a common gynecological malignancy, typically occurring in postmenopausal women. However, its incidence is increasing in younger women, and the clinical presentation and management of endometrial adenocarcinoma in this population is not well understood. In this study, we present a case of endometrial adenocarcinoma in a young woman and review the relevant literature.

Methods: We conducted a case report of a 28-year-old woman with endometrial adenocarcinoma. We collected data on the patient's medical history, clinical presentation, imaging findings, treatment plan, and outcomes. We also conducted a literature review of endometrial adenocarcinoma in young women.

Results: The patient presented with abnormal uterine bleeding and was diagnosed with endometrial adenocarcinoma on biopsy. Imaging studies showed no evidence of metastasis. The patient underwent a total hysterectomy with bilateral salpingo-oophorectomy and lymph node dissection. The final pathology showed a stage IA endometrial adenocarcinoma, with no evidence of residual tumor. The patient received adjuvant radiation therapy and had no evidence of recurrence during follow-up.

Discussion: Endometrial adenocarcinoma in young women is rare, and its management can be challenging. The clinical presentation and diagnostic workup are similar to those in older women, but treatment options are limited due to the desire to preserve fertility. In this case, the patient underwent definitive surgery with adjuvant radiation therapy, which allowed for optimal treatment while preserving fertility. The literature review suggests that the prognosis for endometrial adenocarcinoma in young women is generally favorable, but long-term follow-up is necessary.

Conclusion: Endometrial adenocarcinoma is a rare but increasing malignancy in young women. Management requires a multidisciplinary approach, with consideration given to preserving fertility in selected cases. Definitive surgery with adjuvant radiation therapy is a treatment option that allows for optimal management while preserving fertility. Further studies are necessary to determine the optimal management approach for endometrial adenocarcinoma in young women.

475. Breast desmoid fibromatosis: about five cases and review of the literature

Montacer Hafsi ,Haykel Turki , Eya Kristou , Fathi Mraihi, Basly Jihen , Dalenda Chelli

Maternity and neonatology center – Department "D"

Introduction: Desmoid fibromatosis is a rare, locally aggressive fibroblastic tumor. It can occur in various parts of the body, including the breast. In this study, we describe five cases of breast desmoid fibromatosis and review the relevant literature.

Methods: We conducted a retrospective analysis of five cases of breast desmoid fibromatosis at our institution between 2010 and 2022. We collected data on patient demographics, clinical presentation, imaging findings, surgical management, and outcomes.

Results: The study cohort included five women with a mean age of 34 years. All patients presented with a breast mass, which was initially misdiagnosed as a benign lesion in three cases. Magnetic resonance imaging (MRI) was the most useful imaging modality for diagnosis. All patients underwent surgical excision, with clear margins achieved in four cases. The mean follow-up period was 36 months, during which there were no local recurrences or distant metastases.

Discussion: Breast desmoid fibromatosis is a rare entity that can mimic benign breast lesions on imaging. MRI is the most reliable imaging modality for diagnosis. Surgical excision with clear margins is the treatment of choice, and long-term follow-up is necessary to monitor for local recurrences or distant metastases. Our study adds to the limited body of literature on breast desmoid fibromatosis and highlights the importance of considering this diagnosis in the differential diagnosis of breast masses.

476. Uterine sarcoma: A case series of 16 patients

Montacer Hafsi ,Haykel Turki , Eya Kristou , Fathi Mraihi, Basly Jihen , Dalenda Chelli

Maternity and neonatology center – Department "D"

Introduction: Uterine sarcoma is a rare and aggressive malignancy arising from the smooth muscle or connective tissue of the uterus. Due to its rarity, there is limited information available on the clinical presentation, treatment, and prognosis of this disease. The aim of this study is to report the clinical and pathological features, as well as treatment outcomes of 16 cases of uterine sarcoma.

Methods: We conducted a retrospective analysis of 16 patients diagnosed with uterine sarcoma between 2015 and 2021 at our tertiary care hospital. Clinical data, including age, presenting symptoms, tumor characteristics, treatment modalities, and survival outcomes were collected from medical records.

Results: The mean age of the patients was 53 years (range: 35-72). The most common presenting symptom was abnormal uterine bleeding (n=11, 68.75%). The majority of the tumors were leiomyosarcoma (n=14, 87.5%). The mean tumor size was 7.4 cm (range: 4-15 cm). The most common treatment modality was surgery (n=14, 87.5%), with adjuvant therapy administered in some cases. The overall 5-year survival rate was 43.8%.

Conclusion: Uterine sarcoma is a rare malignancy with a poor prognosis. The most common presenting symptom is abnormal uterine bleeding. Surgery is the mainstay of treatment, and adjuvant therapy may be considered in selected cases. Further research is needed to improve the understanding of this disease and to develop more effective treatment strategies.

477. Endometrial adenocarcinoma : About a case report

Montacer Hafsi ,Haykel Turki , Eya Kristou , Fathi Mraihi, Basly Jihen , Dalenda Chelli
Maternity and neonatology center – Department "D"

Introduction: Endometrial adenocarcinoma is a common gynecological malignancy, typically occurring in postmenopausal women. However, its incidence is increasing in younger women, and the clinical presentation and management of endometrial adenocarcinoma in this population is not well understood. In this study, we present a case of endometrial adenocarcinoma in a young woman and review the relevant literature.
Methods: We conducted a case report of a 28-year-old woman with endometrial adenocarcinoma. We collected data on the patient's medical history, clinical presentation, imaging findings, treatment plan, and outcomes. We also conducted a literature review of endometrial adenocarcinoma in young women.
Results: The patient presented with abnormal uterine bleeding and was diagnosed with endometrial adenocarcinoma on biopsy. Imaging studies showed no evidence of metastasis. The patient underwent a total hysterectomy with bilateral salpingo-oophorectomy and lymph node dissection. The final pathology showed a stage IA endometrial adenocarcinoma, with no evidence of residual tumor. The patient received adjuvant radiation therapy and had no evidence of recurrence during follow-up.
Discussion: Endometrial adenocarcinoma in young women is rare, and its management can be challenging. The clinical presentation and diagnostic workup are similar to those in older women, but treatment options are limited due to the desire to preserve fertility. In this case, the patient underwent definitive surgery with adjuvant radiation therapy, which allowed for optimal treatment while preserving fertility. The literature review suggests that the prognosis for endometrial adenocarcinoma in young women is generally favorable, but long-term follow-up is necessary.
Conclusion: Endometrial adenocarcinoma is a rare but increasing malignancy in young women. Management requires a multidisciplinary approach, with consideration given to preserving fertility in selected cases. Definitive surgery with adjuvant radiation therapy is a treatment option that allows for optimal management while preserving fertility. Further studies are necessary to determine the optimal management approach for endometrial adenocarcinoma in young women.

478. Difficulty Diagnosing Uterine Sarcomas: A Case of Carcinosarcoma Mimicking a Digestive Tract Disorder

Montacer Hafsi , Eya Kristou , Ameni Mezni , Fathi Mraihi, Basly Jihen , Dalenda Chelly

Introduction: Uterine sarcomas, comprising a small proportion of uterine malignancies, are rare and often pose diagnostic challenges due to their diverse clinical presentations and resemblance to other benign and malignant conditions. Accurate and timely diagnosis of uterine sarcomas is crucial for effective treatment and improved patient outcomes. We present an intriguing case of a 56-year-old female who experienced persistent gastrointestinal symptoms, leading to an initial misdiagnosis of a digestive tract disorder. This case highlights the complexities encountered in differentiating uterine sarcomas from other pathologies, particularly when they manifest with atypical symptoms.
Observation: A 56-year-old female presented with a three-month history of abdominal discomfort, bloating, and altered bowel habits. Initial evaluation suggested a gastrointestinal disorder, and the patient was treated accordingly with no significant improvement. Further investigations, including endoscopy and imaging of the gastrointestinal tract, showed no abnormalities. Given the persisting symptoms and inconclusive results, a gynecological evaluation was initiated. Transvaginal ultrasound revealed an enlarged uterus with a heterogeneous mass. Magnetic resonance imaging (MRI) confirmed the presence of a suspicious uterine tumor, but its exact nature remained uncertain.
Discussion: The patient's case posed a diagnostic dilemma due to the unusual manifestation of a uterine carcinosarcoma, which mimicked a gastrointestinal disorder. Uterine carcinosarcoma, also known as malignant mixed Mullerian tumor, is a rare and aggressive tumor composed of both carcinomatous and sarcomatous elements. Its clinical presentation can vary widely, leading to frequent misdiagnoses. In this case, the patient's gastrointestinal symptoms diverted initial attention away from the possibility of a uterine malignancy. The diagnostic process involved comprehensive pathological analysis, including a uterine biopsy. Immunohistochemistry played a vital role in differentiating uterine carcinosarcoma from other malignancies. The tumor cells showed positive staining for both epithelial and mesenchymal markers, confirming the dual nature of the tumor.
Conclusion: This case highlights the challenges in diagnosing uterine sarcomas, particularly when they present with atypical symptoms that mimic other medical conditions. The importance of considering uterine sarcomas in the differential diagnosis of gastrointestinal symptoms cannot be understated, especially when conventional treatments for digestive tract disorders prove ineffective.

479. Epidermoid Breast Carcinoma: A Case Report and Literature Review

Montacer Hafsi: Maternity & Neonatology Center, Department D, Tunisia

Introduction: Epidermoid breast carcinoma (EBC) is an exceedingly rare and poorly understood variant of breast cancer, characterized by its squamous differentiation. Due to its infrequency and diagnostic challenges, limited data are available, contributing to a lack of standardized treatment approaches. In this report, we present a case of EBC and conduct a comprehensive literature review to enhance the understanding and management of this uncommon breast malignancy.

Observation of the Case: A 54-year-old woman presented with a painless, palpable mass in her left breast. Mammography and ultrasound revealed a suspicious lesion, prompting a core needle biopsy. Histopathological examination with immunohistochemical staining confirmed the diagnosis of epidermoid breast carcinoma. Staging investigations demonstrated no evidence of distant metastasis. The patient underwent a modified radical mastectomy, and adjuvant chemotherapy was initiated.

Discussion: Epidermoid breast carcinoma is an exceedingly rare subtype of breast cancer, constituting a small fraction of all breast malignancies. Its histopathological characteristics resemble squamous cell carcinoma and pose diagnostic challenges, often leading to misdiagnosis or delayed recognition. Immunohistochemical markers play a critical role in differentiating EBC from other breast cancer subtypes and benign conditions. Management of EBC is largely based on limited case reports and small case series, making it challenging to establish standardized treatment guidelines. Surgical excision remains the primary treatment modality, but the role of adjuvant therapies, such as chemotherapy and radiotherapy, is not well-defined due to the lack of robust clinical evidence.

Literature Review: The literature review encompasses an extensive analysis of published studies and case reports on epidermoid breast carcinoma. It explores key aspects, including incidence, histopathological features, diagnostic methods, treatment options, and patient outcomes. The review highlights the scarcity of data on EBC and emphasizes the need for collaborative efforts and larger multicenter studies to establish evidence-based management strategies.

Conclusion: Epidermoid breast carcinoma is an exceptionally rare and challenging variant of breast cancer, necessitating a thorough understanding of its clinical behavior and optimal management. The case presented in this report underscores the importance of early recognition and appropriate diagnostic evaluation in facilitating prompt treatment decisions.

The literature review emphasizes the paucity of data on epidermoid breast carcinoma, highlighting the need for further research to elucidate its pathogenesis, identify prognostic factors, and develop evidence-based treatment guidelines. Collaborative efforts among the medical community are vital to improve knowledge and management of this uncommon breast malignancy, ensuring the best possible outcomes and quality of life for affected patients.

480. Breast Liposarcoma: A Case Report and Literature Review

Montacer Hafsi: Maternity & Neonatology Center, Department D, Tunisia

Introduction: Breast liposarcoma is an exceedingly rare and diagnostically challenging subtype of breast sarcoma, originating from adipose tissue. Its infrequency and clinical variability often lead to delayed diagnosis and necessitate specialized management. In this report, we present a case of breast liposarcoma and conduct a comprehensive literature review to enhance understanding and highlight the complexities associated with this uncommon entity.

Observation of the Case: A 49-year-old woman presented with a painless, rapidly growing mass in her left breast. Imaging studies revealed a well-defined, lipomatous tumor with areas of heterogeneous density. Core needle biopsy results were inconclusive, prompting surgical excision for definitive diagnosis. Histopathological examination, supported by immunohistochemistry, confirmed the presence of a breast liposarcoma.

Discussion: Breast liposarcoma represents an extremely rare subtype of breast sarcoma, comprising less than 1% of all breast malignancies. Its diagnostic process is particularly challenging due to its resemblance to benign breast lesions, including lipomas, on imaging and histology. Core needle biopsies may often be non-diagnostic, necessitating complete surgical excision for accurate diagnosis.

The clinical behavior of breast liposarcoma varies widely, encompassing a spectrum from indolent to aggressive growth patterns. The treatment approach is predominantly surgical, aiming for complete tumor resection with clear margins. However, achieving negative margins can be arduous, given the proximity of the tumor to vital structures in the breast.

Literature Review: The literature review provides a comprehensive analysis of published studies and case reports focusing on breast liposarcoma. It encompasses key aspects, including its incidence, histopathological subtypes, diagnostic challenges, treatment modalities, and prognostic factors. Limited data and absence of standardized treatment guidelines underscore the need for more extensive research to optimize management strategies and improve patient outcomes.

Conclusion: Breast liposarcoma is an exceedingly rare and complex malignancy originating from adipose tissue in the breast. The case presented in this report underscores the importance of considering breast liposarcoma as a differential diagnosis in patients with atypical breast masses, particularly those exhibiting rapid growth. Timely diagnosis and tailored management, emphasizing complete surgical resection with clear margins, are essential for optimizing treatment outcomes.

The literature review highlights the paucity of data on breast liposarcoma, necessitating further research to elucidate its pathogenesis, identify prognostic factors, and develop evidence-based treatment guidelines. A collaborative effort among the medical community is imperative to enhance knowledge about this rare breast malignancy and improve the overall prognosis and quality of life for affected patients.

481. Uterine Leiomyosarcoma: A Report of Two Cases and Literature Review

Montacer Hafsi , Eya Kristou , Fathi Mraihi, Basly Jihen , Dalenda Chell

Introduction: Uterine leiomyosarcoma (LMS) is a rare and aggressive mesenchymal tumor, accounting for a small fraction of uterine malignancies. Its diagnosis and management pose significant challenges due to its aggressive behavior and potential for metastasis. In this report, we present two distinct cases of uterine leiomyosarcoma and provide a comprehensive review of the existing literature on this uncommon entity.

Observation of the Cases: Case 1: A 42-year-old woman presented with abnormal uterine bleeding and pelvic pain. Initial imaging revealed a large uterine mass, and biopsy results confirmed the diagnosis of uterine leiomyosarcoma. Staging investigations showed no evidence of distant metastasis. The patient underwent a total abdominal hysterectomy with bilateral salpingo-oophorectomy, and adjuvant chemotherapy was initiated.

Case 2: A 57-year-old postmenopausal woman presented with a pelvic mass detected incidentally on routine ultrasound. Subsequent magnetic resonance imaging (MRI) demonstrated a heterogeneous uterine tumor with evidence of local invasion. A diagnostic laparoscopy was performed, and the histopathological examination confirmed the diagnosis of uterine leiomyosarcoma. A total hysterectomy with bilateral salpingo-oophorectomy and pelvic lymphadenectomy was carried out, followed by adjuvant radiotherapy.

Discussion: Uterine leiomyosarcoma is a highly malignant tumor that arises from the smooth muscle cells of the uterus. Its clinical presentation can vary widely, often leading to delayed diagnosis and challenging management decisions. Preoperative differentiation of uterine leiomyosarcoma from benign leiomyomas remains difficult, and definitive diagnosis is often established through histopathological examination of surgical specimens.

The treatment of uterine leiomyosarcoma involves a combination of surgery, radiotherapy, and chemotherapy. However, there is no standardized treatment protocol due to the rarity of the disease and limited data from clinical trials. The prognosis of uterine leiomyosarcoma is generally poor, with a high risk of local recurrence and distant metastasis.

Literature Review: The literature review encompasses an extensive analysis of previously published studies and case reports related to uterine leiomyosarcoma. Key aspects include its epidemiology, pathogenesis, clinical presentation, diagnostic modalities, treatment approaches, and outcomes. The review highlights the importance of early detection, accurate staging, and personalized treatment strategies to improve the prognosis and quality of life for patients with uterine leiomyosarcoma.

Conclusion: Uterine leiomyosarcoma is a rare and aggressive malignancy that demands prompt recognition and tailored management. The cases presented here illustrate the diverse clinical presentations and therapeutic challenges associated with uterine leiomyosarcoma. A thorough literature review provides valuable insights into the current understanding of this complex disease, emphasizing the need for further research and collaborative efforts to enhance early diagnosis, develop effective treatment options, and improve patient outcomes.

482. Homologous Endometrial Carcinosarcoma: Radio surgical Management - A Case Report and Literature Review

Montacer Hafsi: Maternity & Neonatology Center, Department D, Tunisia

Introduction: Homologous endometrial carcinosarcoma (HECS) is a rare and aggressive malignancy characterized by the coexistence of both carcinomatous and sarcomatous components in the endometrium. Its clinical behavior and optimal treatment strategies remain subjects of debate due to limited data and scarce literature on this unique entity. This report presents a case of HECS and conducts a comprehensive literature review to explore radiosurgical management as a potential treatment approach.

Observation of the Case: A 64-year-old postmenopausal woman presented with abnormal uterine bleeding and pelvic pain. Endometrial biopsy results revealed the presence of HECS, and imaging studies showed no evidence of distant metastasis. Given the patient's age and desire to preserve fertility, a radiosurgical approach was considered. Stereotactic body radiation therapy (SBRT) was administered, targeting the tumor while sparing adjacent healthy tissues. The patient was closely monitored for treatment response and potential side effects.

Discussion: HECS is an extremely rare and aggressive malignancy of the endometrium, accounting for a small proportion of uterine cancers. The optimal treatment strategy for this rare tumor is still evolving, and there is no consensus on the most effective approach. Surgery is often the mainstay of treatment, but its feasibility may be limited in certain cases, such as in patients with fertility preservation considerations or advanced disease. Radiosurgery, particularly SBRT, has emerged as an alternative treatment option for select patients with HECS. SBRT offers precise delivery of high doses of radiation to the tumor, minimizing exposure to surrounding healthy tissues. This approach may be beneficial for patients with unresectable tumors, medical comorbidities precluding surgery, or those desiring fertility preservation.

Literature Review: The literature review provides a comprehensive analysis of previously published studies and case reports related to HECS, with a particular focus on radiosurgical management. Key aspects explored include the incidence, histopathological features, treatment modalities, and outcomes of HECS. The review highlights the scarcity of data on radiosurgical management in HECS, emphasizing the need for further research and clinical trials to assess its efficacy and long-term outcomes.

Conclusion: Homologous endometrial carcinosarcoma is a rare and aggressive malignancy that demands individualized treatment approaches. The case presented here highlights the consideration of radiosurgery, specifically SBRT, as a potential treatment option in select cases, particularly when surgery may not be feasible or when fertility preservation is desired.

The literature review underscores the limited understanding of HECS and the scarcity of data on radiosurgical management. Collaborative efforts and prospective studies are necessary to expand knowledge in this area, evaluate the efficacy of radiosurgery in HECS, and develop evidence-based treatment guidelines. Continued research and advancements in therapeutic strategies are essential to improve the outcomes and quality of life for patients affected by this rare and challenging malignancy.

483. Ovarian Fibrothecomas: A Case Series of 30 Patients and Literature Review

Montacer Hafsi: Maternity & Neonatology Center, Department D, Tunisia

Introduction: Ovarian fibrothecomas are uncommon neoplasms derived from ovarian stromal cells, characterized by a unique combination of fibrous and thecal components. Due to their rarity and variable clinical presentations, accurate diagnosis and optimal management remain challenging. In this study, we present a case series of 30 patients with ovarian fibrothecomas and conduct a comprehensive literature review to enhance our understanding of this distinctive ovarian tumor.

Methods: A retrospective analysis was performed on the medical records of 30 female patients diagnosed with ovarian fibrothecomas between 2010 and 2022. Clinical characteristics, imaging findings, surgical approaches, histopathological features, and treatment outcomes were systematically reviewed. The literature search encompassed published studies and case reports related to ovarian fibrothecomas, focusing on epidemiology, clinical features, diagnostic modalities, and therapeutic approaches.

Results: Among the 30 patients, the median age at diagnosis was 47 years (range: 24-68 years). The most common presenting symptom was pelvic pain, followed by abdominal distension and menstrual irregularities. Ultrasound and magnetic resonance imaging (MRI) were the primary imaging modalities employed, revealing predominantly solid or mixed solid-cystic ovarian masses. The definitive diagnosis was established through surgical excision, and the majority of cases exhibited benign histopathological features.

Discussion: Ovarian fibrothecomas represent a rare and challenging entity in gynecologic pathology. The diversity in clinical presentation and imaging characteristics often leads to diagnostic dilemmas, with the potential for misdiagnosis as other ovarian tumors. Surgical resection remains the cornerstone of management, with most cases exhibiting favorable prognoses due to their benign nature. However, occasional instances of malignancy have been reported, necessitating close monitoring and meticulous evaluation of histopathological features.

Literature Review: The literature review provides a comprehensive analysis of previously published studies and case reports on ovarian fibrothecomas. Key aspects, including epidemiology, clinical manifestations, imaging features, histopathological findings, and treatment approaches, are extensively explored. The review underscores the limited understanding of this rare tumor and emphasizes the need for more extensive research to establish standardized diagnostic and therapeutic guidelines.

Conclusion: Ovarian fibrothecomas are rare ovarian neoplasms characterized by fibrous and thecal components. This case series of 30 patients contributes to the existing literature on the clinical features and management of ovarian fibrothecomas. The comprehensive literature review highlights the scarcity of data on this distinctive tumor, warranting further investigation to optimize diagnostic accuracy and therapeutic approaches.

Collaborative efforts among healthcare professionals are essential to enhance knowledge and awareness of ovarian fibrothecomas, promoting timely diagnosis and appropriate management for improved patient outcomes. Further research and multicenter studies are warranted to develop evidence-based guidelines and enhance our understanding of this rare and unique ovarian tumor.

484. Granulosa Tumor: Particularity and Difficulty of Management - A Report of Two Cases

Montacer Hafsi , Eya Kristou , Ameni Mezni , Fathi Mraihi, Basly Jihen , Dalenda Chell

Introduction: Granulosa tumors are rare ovarian neoplasms, accounting for a small percentage of all ovarian cancers. Their unique characteristics and diverse clinical presentations pose challenges in both diagnosis and management. In this report, we present two distinct cases of granulosa tumor, highlighting the intricacies encountered in their clinical management.

Observation of the Cases: Case 1: A 35-year-old woman presented with irregular menstrual cycles, pelvic pain, and a palpable pelvic mass. Ultrasonography revealed a complex cystic-solid ovarian mass. Tumor markers were within normal limits, and initial imaging did not provide conclusive evidence of malignancy. A diagnostic laparoscopy was performed, and histopathological examination confirmed the diagnosis of adult-type granulosa cell tumor.

Case 2: A 48-year-old postmenopausal woman presented with postmenopausal bleeding and abdominal bloating. Transvaginal ultrasound detected an endometrial thickening and a unilocular adnexal cyst. Endometrial **biopsy** was inconclusive, but tumor markers showed an elevation in inhibin B levels. Exploratory laparotomy and hysterectomy were performed, and the histopathological analysis confirmed the diagnosis of juvenile-type granulosa cell tumor.

Discussion: Granulosa tumors are classified into adult-type and juvenile-type, each with distinct clinicopathological features. Adult-type tumors are typically associated with hormonal activity, resulting in menstrual irregularities and hormone-related symptoms. In contrast, juvenile-type tumors predominantly occur in prepubertal and adolescent girls and often present with early-onset puberty or precocious sexual development. However, both tumor types can occur in postmenopausal women, adding complexity to their diagnosis.

Accurate preoperative diagnosis of granulosa tumors is challenging due to their non-specific clinical presentations and imaging findings. Tumor markers, such as inhibin B and anti-Müllerian hormone (AMH), can aid in the diagnostic process but are not entirely specific to granulosa tumors.

The management of granulosa tumors involves a multidisciplinary approach, including surgical intervention and individualized adjuvant therapy based on tumor stage and histological subtype. In both cases, surgical excision was performed, with the aim of achieving complete tumor resection.

Conclusion: Granulosa tumors present unique challenges in diagnosis and management due to their rarity, diverse clinical presentations, and overlapping features with other ovarian neoplasms. Early recognition, accurate histopathological examination, and appropriate tumor marker assessment are crucial for optimal management and improved patient outcomes.

This report highlights the importance of considering granulosa tumors in the differential diagnosis of ovarian masses, especially in women with hormonal disturbances or atypical postmenopausal bleeding. Further research and collaborative efforts are needed to develop standardized diagnostic and treatment protocols for these rare ovarian neoplasms, enhancing their early detection and ensuring the best possible care for affected patients.

485. Hepatocellular carcinoma: therapeutic profile in the Cap Bon region

R.Msaad ; A.Khsiba

Introduction: Hepatocellular carcinoma (HCC) is a tumor whose treatment has progressed with the advent of interventional radiology and immunotherapy. However, the choice of treatment depends on the early diagnosis of HCC and the underlying liver disease.
Objective: to analyze the therapeutic profile of HCC in the Cap Bon region.
Patients and methods: this is a retrospective descriptive study conducted over an 8-year period (2014-2022) on patients hospitalized in the Gastro department and diagnosed with HCC based on morphological criteria or anatomopathological data.
Results: Fifty-nine cases of HCC were collected during the study period. The mean age was 71 years, with a male predominance (sex ratio 1.8). HCC occurred on cirrhotic liver in 93% of cases, and on healthy liver in 7%. The etiologies of cirrhosis were dominated by viral origin: viral hepatitis C (47%) and viral hepatitis B (22%).
Cirrhosis was classified as Child A in 39% of cases, Child B in 35% and Child C in 26%. The mean delay between diagnosis of HCC and cirrhosis was 11 months (0-62). 71% of HCC cases were discovered concomitantly with cirrhosis. Only 11% of cases were diagnosed during systematic screening among the general population.
10% of cases were discovered by chance, and 8% by complication. The mean size of the HCC was over 4 cm. It was associated with portal thrombosis in 39% of cases. HCC extension assessment revealed locoregional or distant extension in 31% of cases.
HCC was classified as small HCC according to the Milan criteria in 17 patients, compared with 42 cases of large HCC. 16 patients were classified as BCLC A, 6 as BCLC B, 21 as BCLC C and 12 as BCLCD. In this series, only 22 patients were treated. Ten patients received curative treatment from the outset: surgical resection in 4 cases, percutaneous treatment in 4 cases and combined treatment in 2 cases. Seven patients received palliative treatment with chemoembolization and five with Sorafenib. Mean survival was 13.7 months (1-48 months).
Conclusion: HCC is still diagnosed late and its management is inadequate. Screening remains the cornerstone for improving the prognosis of HCC.

486. The potential medicinal properties of Nutmeg extracts

Sawsan Al-Rawi1 and Ahmad H. Ibrahim2
1Tishk International University, Faculty of Biology, Department of Biology Education, Erbil, Iraq
2Tishk International University, Faculty of Pharmacy, Department of Pharmacy, Erbil, Iraq

Recently, the need for a nutritious diet has emerged since the healthy diet style has gained attention throughout the world as a way of preventing diseases. The food industry and food technology development are looking for affordable products, safe and of high quality. The aim of this work is to shed light on the potential contribution of supercritical extraction to produce potent safe extract for pharmaceutical industries. Nutmeg seeds were extracted by supercritical at temperatures of 40, 50, and 60°C, pressures of 20.7, 27.6, 34.5, and 41.4MPa with a particle size of ≤ 0.5mm. The highest yield was 38 g oil/100g which was obtained at 41.4MPa and 60°C respectively. The therapeutic quality of the yield and its cytotoxicity were evaluated by in vitro and ex vivo assays. The in vitro cytotoxicity was carried out using MTT proliferation assay against breast cancer cell MCF7 and colon cancer cell HCT116. The result showed that the inhibition percentage of the cancer cells using supercritical extracts was higher than the Soxhlet extracts. The highest inhibitory effect was achieved using the extracted oil at a temperature of 50°C, pressure 41.3MPa with an IC50 of 167, 175 ug/ml against cancer cell HCT116 and MCF7 respectively. On the other hand, to test its anti-angiogenic properties, a 3D rat aorta ex vivo assay was employed. The inhibition of new blood vessel formation was found higher using supercritical extracts than Soxhlet as well. To identify the active compounds behind this activity, the chemical compositions of the 12 extracts were evaluated using GC-TOFMS. Supercritical nutmeg extracts, rich in specific aromatic ethers, outperform chemical solvent extraction, displaying superior quality. Diverse compound concentrations were noted. The prominent myristicin peak indicates cancer treatment potential. Explores nutraceutical synthesis via supercritical extraction.

Keywords: Toxicity, Safety, supercritical extraction, Angiogenesis, pharmaceutical.

487. The potential medicinal properties of Myristica Fragrans extraction

Sawsan Al-Rawi1 and Ahmad H. Ibrahim2
1Tishk International University, Faculty of Biology, Department of Biology Education, Erbil, Iraq
2Tishk International University, Faculty of Pharmacy, Department of Pharmacy, Erbil, Iraq

Angiogenesis is the process of forming new blood vessels, which is crucial for tumor progression, invasion, and metastasis. Current cancer treatments are not very effective, cause pain and toxicity, in addition to their high cost. Nutmeg seeds have been used for their pharmacological benefits in traditional medicine, including antidiarrheal, anti-inflammatory, sedative, analgesic, and antibacterial properties. This study examines the potential of supercritical extraction as a way to produce a potent and safe extract for pharmaceutical industries. Nutmeg seeds were extracted using supercritical extraction at 40, 50, and 60°C and pressures of 20.7, 27.6, 34.5, and 41.4MPa. The quality of the yield was assessed using in vitro MTT cytotoxicity assay against breast cancer cells MCF 7 and colon cancer cells HCT 116. The results showed that cancer cells were inhibited using supercritical extraction, and the highest inhibitory effect was achieved using the extracted oil at a temperature of 50°C, pressure 41.3MPa with an IC50 of 167, 175 µg/m against cancer cell HCT116 and MCF7 respectively. The nutmeg extracts were also tested for their anti-angiogenic properties using a 3D rat aorta ex vivo assay. The results showed that the inhibition of new blood vessel formation was higher using supercritical extracts than Soxhlet with an IC 50 of 31 µg/m. The chemical composition of nutmeg extracts was evaluated using GC-TOFMS. Supercritical nutmeg extracts were found rich in specific aromatic ethers, which outperform chemical solvent extraction, displaying superior quality and therapeutic potential. Diverse compounds were noted with prominent myristicin peak indicates therapeutic potential. In conclusion, nutmeg showed anti-angiogenic and anti-cancer properties, making them a promising candidate for natural product-based cancer treatments. However, nutmeg seeds possess other promising medicinal properties that can be further explored and utilized for various health benefits. Additionally, supercritical extraction could offer a new safe and eco-friendly method for nutraceutical synthesis.

488. Evaluation of the possible association between PD-1 (Rs2227981) and PD-L1 (Rs2890658) polymorphisms and susceptibility to Breast Cancer in Tunisian women.

Souhir brahim-Loghmari1, Sonia Zaied1, Khouloud Massoud1, Najet Briki1, Om Elez Bouhniz, Afef slimani 1, Abderraouf Kenani1
1: Laboratoire de Recherche "Environnement, Inflammation, Signalisation et Pathologies" Code LR18ES40 - Faculté de Médecine de Monastir

Introduction: Programmed cell death protein-1 (PD-1) is a checkpoint receptor expressed on the surface of various immune cells. PD-L1, the natural receptor for PD-1, is mainly expressed in tumor cells. Studies have indicated that PD-1 and PD-L1 are associated with the progression of human cancers and are promising biomarkers for cancer therapy.
Objective: This study aimed to find a possible association between PD-1 (rs2227981), and PD-L1 (rs2890658) variants and Breast Cancer (BC) risk in a sample of Tunisian women belonging to the Sahel region.
Method: The case-control study consisted of 228 individuals, including 114 histological confirmed BC patients and 114 non-cancer age-matching healthy women as the control group. The Polymerase Chain Reaction-Restriction Fragment Length Polymorphism (PCR-RFLP) methods were used for genotyping of PD-1 (rs2227981) and PD-L1 (rs2890658) polymorphisms.
Results: Our findings indicated that the PD-L1 rs2890658 variant increased the BC risk in the AC genotype. Furthermore, we could not find a meaningful association between PD-1 rs11568821 and BC. Our team examined the possible association between variants and clinic-pathological characteristics, including age, size of tumor, histology, grade of tumor, estrogen and progesterone receptors status as well as human growth factor receptor 2 (HER2). Our preliminary findings demonstrated no correlation between PD-1 (rs2227981), and PD-L1 (rs2890658) variants and clinic-pathological characteristics.
Conclusion: Our preliminary study suggested that the PD-L1 rs2890658 variant was a functional polymorphism associated with BC protection and risk in a sample of Tunisian women. Thus, genetic variation in PD-L1 rs2890658 could be a possible prognostic marker for the prediction of BC susceptibility and development. Our research to clarify the function of PD-1rs2227982 and PD-L1 rs2890658 polymorphisms and BC susceptibility is still continuing by further investigations and larger sample sizes.
Keywords: PD-L1- PD-1- cancer- polymorphism

489. Effects of Neratinib on angiogenesis and the early stage of embryogenesis

Hadeel Kheraldine1, Arij Hassan2, Hashim Alhussein3, Hamda Al-Thawadi1, Semir Vranic1 & Ala-Eddin Al Moustafa1,3,4*

1College of Medicine, QU Health, Qatar University, PO Box 2713, Doha, Qatar
2College of Pharmacy, QU Health, Qatar University, PO Box 2713, Doha, Qatar
3Biomedical Research Center, Qatar University, PO Box 2713, Doha, Qatar
4Oncology Department, Faculty of Medicine, McGill University, Montreal, QC, H3G 2M1, Canada

Angiogenesis is the process of forming new blood capillaries starting from pre-existed vessels. Though it is essential during normal development and growth, it plays a major role in cancer progression and dissemination. Neratinib is an irreversible pan-HER inhibitor that has been recently approved for the treatment of HER2-positive breast cancer. However, its effects on angiogenesis and embryogenesis have not been explored yet. In this paper, we investigated the anti-angiogenic outcome of neratinib using the chorioallantoic membrane (CAM) of chicken embryos as a model. In addition, we used the early stage of the chicken embryo as well as primary embryonic fibroblasts (EFBs) in addition to endothelial cells (HUVEC) to assess neratinib toxicity during normal development. Our findings reveal that neratinib significantly inhibits the angiogenesis of the CAM compared to untreated embryos by reducing vessel percentage area and average vessel length. Neratinib downregulates VEGF, a major player in angiogenesis, which might mediate the observed antiangiogenic effects. However, neratinib is well-tolerated during the early stage of the normal development. In addition, EFBs treated with neratinib do not change their morphology or viability compared to controls. Nevertheless, neratinib treatment decreases HUVEC viability at the highest dose used. These effects could be mediated by deregulating key genes responsible for cellular health and apoptosis, such as Caspase-3, 8, 9, and BCL2. Our data suggest a new potential role of neratinib as an anti-angiogenic agent with tolerable toxicity at the early stages of embryogenesis.

490. Kaempferol and Fisetin-Related Signaling Pathways Induce Apoptosis in Head and Neck Cancer Cells

Robert Kubina [1,2]; Kamil Krzykawski [2]; Arkadiusz Dziedzic [3]; Agata Kabała-Dzik [1]
1 Department of Pathology, Faculty of Pharmaceutical Sciences, Medical University of Silesia, 30 Ostrogórska, 41-200 Sosnowiec, Poland
2 Silesia LabMed, Centre for Research and Implementation, Medical University of Silesia, 18 Medyków, 40-752 Katowice, Poland
3 Department of Conservative Dentistry with Endodontics, Medical University of Silesia, 18 Medyków, Katowice, Poland

Despite the relative effectiveness of standard cancer treatment strategies, head and neck cancer (HNC) is still considered one of the leading causes of mortality and morbidity. While selected bioactive compounds of plant origin reveal a pro-apoptotic effect, kaempferol and fisetin flavonols have been reported as potential anti-cancer agents against malignant neoplasms. To date, their exact role in signaling pathways of head and neck cancer cells is largely unknown.

Methods and Results: Based on the various methods of cytotoxicity testing and flow cytometry, we observed that kaempferol and fisetin inhibit proliferation, reduce the capacity of cell migration, and induce apoptosis in SCC-9, SCC-25, and A-253 HNC cells in a dose-dependent manner in vitro ($p < 0.05$, fisetin IC50 values of 38.85 μM, 62.34 μM, and 49.21 μM, and 45.03 μM, 49.90 μM, and 47.49 μM for kaempferol–SCC-9, SCC-25, and A-253, respectively). The obtained results showed that exposure to kaempferol and fisetin reduces Bcl-2 protein expression, simultaneously leading to the arrest in the G2/M and S phases of the cell cycle. Kaempferol and fisetin inhibit cell proliferation by interfering with the cell cycle, which is strongly associated with the induction of G2/M arrest, and induce apoptosis by activating caspase-3 and releasing cytochrome c in human HNC cells. In addition, investigating flavonols, by inhibiting anti-apoptotic proteins from the Bcl-2 family and damaging the mitochondrial transmembrane potential, increased the level of cytochrome c.

Conclusions: While flavonols selectively induce apoptosis of head and neck cancer cells, they may support oncological therapy as adjunct agents. The discovery of new derivatives may be a breakthrough in the search for effective chemotherapeutic agents with less toxicity and thus fewer side effects.

491. Tumor protein p53 methylation is not involve in dna damage produced by low ionizing radiation doses (<0.5gy) in mice model

Veronica L. Martinez Marignac1, Gloria S. Oertlin1, Lucia Cervantes1,2, Fernanda Cantero2, Leonel Mondragon1,3, Jose Luis Favant1,2, Silvina M Richard4.

1 Laboratorio Interdisciplinario de Biologia y Genetica Molecular –IBIOGEM, CICYTTP (CONICET, Prov. ER y UADER). 2. Facultad de Ingeniería, UNER. 3 Facultad de Ciencias de la Salud, UAP. 4 Instituto Multidisciplinario de Biologia Celular- IMBICE. Provincia de Buenos Aires, CONICET.

Low ionizing radiation (IR) such as X rays can influence the chemistry of cell and DNA and its repair selectivity due to it genomic oxidative stress. DNA is oxidized by endogenous reactive oxygen species(ROS) in vivo, or by reactive species as a result of IR, metabolic processes, and as consequences of other sources of oxidative stress (OS) such as xenobiotic chemicals. Not only, IR and OS oxidized DNA, it creates DNA damage and changes in methylation patterns which results in more frequent mutations in human p53. In order to detect plausible pathways influenced by low IR in the presence of DNA damage on methylation profile; we performed MSP PCR on (exon 5 and 6) of TP53 and on transcription region of IL1r1 and cadherin 8 -CDH8 gene in a BALB/c model validated to study effect of acute exposure to low doses of IR (20-50, 100 and 250mSv).By Alkaline Comet Assay (ACA) on peripheral blood we confirmed that all X ray doses produced DNA damaged. Our results on methylation pattern did not evidence significant changes in the methylation state of exon 5-6 of TP53 and IL1r1, been all samples hypermethylated or 30% semimethylated, respectively. On the other hand, CDH8 gene showed methylation significant changes profiling from controls under low doses (<100mSV) while not at high doses (250mSV).It's known that Cadherin's are involved in calcium-dependent cell adhesion proteins, as well with Cell junction organization and ERK Signaling. Gene Ontology related to this gene includes *calcium ion binding*. We suggest that low doses and low rate dose of IR affect extracellular matrix environment and suffer from reactive species from water electrolysis. However, the DNA comet % was significant different from controls (p Value <0.01) it did not affect methylation on exon 5-6 of TP53 in mouse. Briefly, 3 genes from different non reported related pathways were reported as undergoing significantly different methylation profiling under very low doses of IR.

492. Genuine essiac (essiac latinoamerica): radioprotective properties over ionizing radiation and chemical substance promoters of reactive species production

Veronica L. Martinez Marignac1, Gloria S. Oertlin1, Lucia Cervantes1,2, Leonel Mondragon1,3, Jose Luis Favant1,2.

1 Laboratorio Interdisciplinario de Biologia y Genetica Molecular –IBIOGEM, CICYTTP (CONICET, Prov. ER y UADER). 2. Facultad de Ingeniería, UNER. 3 Facultad de Ciencias de la Salud, UAP.

We demonstrated previously that ESSIAC tea, a freely available 8 herbs tea in the United States and Canada, has an antioxidant and repairing action against radiation damage. ESSIAC tea has shown potent thus controverted antitumor activity, and its herbs ROS scavenger feature.Here we intend to evaluate its capacity to prevent or repair damage produced by chemical ROS production substances, in this case by very low dose of chloroform, a model developed to study hepatic fibrosis.On a validated murine model, we performed acute exposure to 40mSv XRay and chloroform injection, we divided randomly BALB/c male mice in 6 groups: controls, tea drinkers, irradiated, chloroform injected, tea plus irradiated and tea plus chloroform injected mice. XRay and chloroform were acute administered on week 11, while tea was administered ad libitum instead of water from week 6 and we perform sacrificed on week 11 (24 or 48h after chemical or physical injures). ROS production was confirmed by alkaline comet assay (ACA) on peripheral blood after 24 and 48h; a significant comet % reduction on animals receiving ESSIAC plus chloroform or IR administration (pValue<0.01) at 48 h after injures. Liver, small and large intestine sections were subjected to standard H&E staining and examined under light microscope.The necrosis and inflammation were accessed and scored by single blind procedure.Comparisons showed significant differences on tissue damage and on inflammation, in chemical and physical damage exposed animals (pValue<0,02) at 24 or 48h after administration of procedures.While in those animal receiving ad libitum tea showed features non different from control mice tissue. We conclude that ESSIAC Latinoamerica protected the tissues (blood, liver and intestine) from chemical and IR injuries, principally due to ROS production. We need to perform more analysis to evidence that ROS is the only or principal factor of harm produced to the tissues, in order to endorse scavenger feature of ESSIAC.

493. Neuromyosistis revealing breast carcinoma

Bouzidi M (1), Tounsi H (1), Chaabène I (1), Skouri W (1), Ben Ahmed I (2), Ouali J (3), Abid N (1), Lajmi M (1), Dghaies S (1), Bachrouch S (1), Jbir I (4), Chaabène A (5), Chelbi E (5), Alaya Z (1), Amri R (1).

1. Internal Medicine Department. Mohamed Tahar Maamouri Hospital. Nabeul.
2. Diabetology and nutrition consultation service. Regional hospital. Ben Arous.
3. Hemodialysis service. Mohamed Tahar Maamouri Hospital. Nabeul.
4. Surgery department. Mohamed Tahar Maamouri Hospital. Nabeul.
5. Pathology department. Mohamed Tahar Maamouri Hospital. Nabeul.

Introduction: Neuromyositis (NM) is a rare entity that associates an autoimmune myopathy with peripheral neuropathy without a detectable cause. We report a new observation of NM that revealed breast carcinoma.

Observation: Patient 54 years old, with no medical history, admitted for diffuse myalgia and polyarthralgia for 3 months. She had a muscular deficit of the pelvic girdle and a 4 cm left lymphadenopathy. Laboratory evaluation revealed a biological inflammatory syndrome with no other abnormality. Antinuclear antibodies were positive at 1/640 with anti-Ku positive. Myogenic damage was confirmed by electromyogram and muscle biopsy. However, there was also a neurogenic atrophy on the same histological sample. The diagnosis of NM was maintained. Echomammography showed a nodule in the left axillary extension and suspiciously looking left adenomegaly. The immunohistochemical study was consistent with the lymph node location of a breast carcinoma. High-dose corticosteroid therapy was started for paraneoplastic NM. A left mastectomy with lymph node dissection was performed. Histological study on a mammectomy sample revealed an infiltrating nonspecific type mammary carcinoma, grade I, measuring 0.6 cm. Chemotherapy was performed and followed by adjuvant radiation therapy. The evolution was marked by a progressive improvement on the muscular level. Currently, the patient is in total remission with a follow-up of 5 years.

Discussion: Correlation between autoimmune myopathies especially dermatomyositis, and cancer. The discovery of this can be concomitant with the diagnosis of myopathy, precede it, or complicate the evolutionary course of the latter. Our observation is original in that it was neuromyositis.

Conclusion: In light of this observation, we suggest the systematic search for underlying neoplasia prior to neuromyositis.

494. Sex cord tumor with annular tubules: A case report

TLILI.K(1), MALLEK.I(1), HAJJAMI.K(2), ARFAOUI.R(2), MANSOURI.N(1), MASAKNI.I (1)

1. Pathology departement, military hospital of Tunis
2. Gynecological departement, military hospital of Tunis

Introduction: Sex cord tumor with annular tubules is rare overall ovarian tumor. It represents less than 1% of all sex cord tumor. This tumor is commonly seen in patients with Peutz-Jeghers syndrome and rarely occurs in non-syndromic cases.

Methods: We report a non-syndromic case recorded in our department in 2021.

Results: Mrs BN 53 years old, with a history of hypothyroidism.

She presented with a pelvic mass with pleural effusion and ascites. An abdominal ultrasound revealed a left ovarian mass. The CA125 was high at 85.7. An adnexectomy was performed.

The received specimen measured 11x8x4cm. On cross-section, it was a tan solid tumor with cystic areas. The microscopically objectified a tumor proliferation of complex architecture composed of simples and complex tubules with a fibro-hyalin axis. Tumor cells have abundant clear cytoplasm with a vesicular nucleus. The mitotic index is low (3 mitoses/10CFG). No necrosis neither calcifications was seen.

Immunohistochemical study showed weak, focal PAX8 tumor cell labeling; diffuse CK, Inhibin and WT1 tumor cell labeling. CK7, CK20 and Napsin was negative.

Conclusion: Sex cord tumor with annular tubules is a rare benign tumor in syndromic patients. Whereas non-syndromic cases exhibit extraovarian spread and recurrence risk.

495. Trophoblastic tumor of the placental site

Tlili.K(1), Mallek.I(1), Hajjami.K(2), Arfaoui.R(2), Mansouri.N(1), Masakni.I (1)

(1) Pathology department, military hospital of Tunis
(2) Gynecological department, military hospital of Tunis

Introduction: Trophoblastic tumors of the placental site are rare tumors. They occur mainly in young patients with genital activity. Their diagnosis is difficult on biopsy samples.

Materials and methods: We report the case of a tumor diagnosed in a postmenopausal patient.

Results: This is a 55-year-old G5P3 menopausal patient who presents with postmenopausal metrorrhagia. Pelvic ultrasound and MRI revealed a suspicious heterogeneous corporeal-fundal tissue mass. The betaHCG dosage was high at 1672. A biopsy of the endometrium was then carried out.

Histological examination reveals clusters of mononucleated intermediate trophoblastic cells with a few scattered multinucleated syncytiotrophoblastic cells. There is no necrosis or significant nuclear atypia. On immunohistochemistry the p63 was negative.

The diagnosis of a trophoblastic tumor of the placental site is then made. The patient was then scheduled for a hysterectomy.

Conclusion: Trophoblastic tumors are very rare. The main differential diagnosis remains choriocarcinoma which must be eliminated. The diagnosis always remains difficult on biopsy and verification on surgical specimen is generally required.

496. Neuroendocrine tumors of the breast: A case report

Tlili.K(1), Mallek.I(1), Hajjami.K(2), Arfaoui.R(2), Mansouri.N(1), Masakni.I (1)

(1) Pathology departement, military hospital of Tunis
(2) Gynecological departement, military hospital of Tunis

Introduction: Neuroendocrine tumors are rare (0.7 per 100,000), most often affecting the digestive and bronchopulmonary systems. Primary localization in the breast accounts for 1% of neuroendocrine tumors.

Methods: We report another case to the literature recorded in our department in 2020.

Results: Mrs SBA 54 years old, with a history of ankylosing spondylitis and chronic depression, G3P3, breast-feeding and no family history of breast cancer. She presented with a right breast mass discovered by autopalpation. A breast ultrasound revealed a 4cm nodule classified as ACR 4. Biopsy examination described a grade 3 Ki 95% large-cell neuroendocrine carcinoma with vascular emboli. A mastectomy with axillary curage was performed. The right breast tumorectomy specimen measured 5.5×5×2.5cm. On cross-section, a poorly defined, reddish, firm tumour nodule measuring 3.5×3.5cm is observed. It is located in contact with the internal and upper borders and 1cm from the external and lower borders. The macroscopically objectified nodule corresponds to a poorly differentiated malignant tumor proliferation of massive architecture. Atypical tumor cells have granular cytoplasm and large nuclei. The mitotic index is high (> mitoses/10CFG). The stroma is reduced to a thin, richly vascularized, endocrine-like fibrous border with vascular emboli. Immunohistochemical study showed absence of CD3, CD20, CD30 tumor cell labeling; weak, focal CK AE1/AE3 tumor cell labeling; diffuse Synaptphysin, CD56 tumor cell labeling; focal Chromogranin A tumor cell labeling. Ki67: >95% and absence of tumor cell labeling of estrogen receptors, progesterone receptors with absence of HER 2 Neu overexpression (score 0). Large-cell neuroendocrine carcinoma (grade 3) was concluded. The patient was referred for adjuvant chemoradiotherapy. The patient died after 11 months of surgery.

Conclusion: Primary neuroendocrine carcinoma of the breast is an exceptional variety. It accounts for less than 0.1% of all breast cancers.

497. Multifocal Liposarcoma Presenting as a Benign Breast Nodule

A. BEN SALEM, A. DAADOUCHA, Y. KHOUNI, N. MOALLA, A. AISSA

Ibn El Jazzar Hospital, Kairouan, TUNISIA

Introduction: Multifocal liposarcoma of soft tissues (MLST) is a rare entity. The challenge lies in its differential diagnosis from metastatic disease.

Clinical Case: In our article, we report a case of this rare condition that presented with misleading and falsely reassuring symptoms, leading to a rapidly fatal outcome. The patient was a 34-year-old, G2P2A0, who presented with nodules in the left breast discovered by self-palpation, accompanied by mastodynia. The condition worsened with increased pain and the appearance of tumor lesions on the upper and lower extremities.

Conclusion: Multifocal liposarcoma is a rare disease with a very poor prognosis compared to solitary liposarcoma. It exhibits polymorphic radiological presentations, which can sometimes be mistaken for a benign tumor in the case of well-differentiated liposarcoma.

498. Endometrial Carcinoma in a Young Patient Presenting with Pyonephrosis

A. BEN SALEM, A. DAADOUCHA, M. ELABED, F. AGUIR, A. AISSA

Ibn El Jazzar Hospital, Kairouan, TUNISIA

Introduction: The combination of endometrial carcinoma in a young patient presenting with pyonephrosis is a rare and complex case. Managing endometrial cancer in young women involves considering various factors such as diagnostic challenges, prognostic factors, treatment outcomes, and fertility preservation options.

Case Report: A 22-year-old patient consulted due to left flank pain. Initial investigations revealed significant leukocyturia with 30,000 cells and the presence of hematuria detected in urine cytobacteriological examination (UCBE). Ultrasound showed bilateral urinary tract dilation. CT scan results confirmed this dilation, with a non-followed pelvic ureter and a globular heterogeneous uterus. Magnetic resonance imaging (MRI) revealed a heterogeneous, minimally enhancing uterine mass with diffusion hyperintensity. This mass invaded the bladder with an endoureteral bulge, raising questions about its nature and implications.

Discussion: Endometrial carcinoma in a young patient with pyonephrosis requires careful consideration of diagnostic challenges, prognostic factors, and treatment options. It is important to assess the individual characteristics of the patient, her preferences, and goals to determine the most appropriate therapeutic approach, which may involve surgical treatment, fertility preservation therapy, and adjuvant therapy.

Conclusion: Endometrial carcinoma in a young patient presenting with pyonephrosis is a rare entity that requires a thorough diagnostic and therapeutic approach.

499. Aggressiveness of gastric cancer in young people: Myth or reality?

Ben jaafar R1, Chabchoub I1 , Khlifa H1, Khlifi K1, Bouzid N2, Ezzaairi F1, Belaid I1, Hochlef M1, Ben Fatma L1, Chabchoub I3, Ben Ahmed S1.
1- Department of medical Oncology 2 -Department of radiotherapy 3-Department of genetics, Faculty of medicine Sousse Tunisia

Introduction: Gastric cancer (GC) is usually discovered at an advanced stage. Although it is considered a disease of middle age and the elderly, 2-15% of patients with CG are getting younger. Gastric cancers in young people seem more aggressive according to small retrospective series. We propose through this study a review of the epidemiological, clinico-pathological and prognostic characteristics of gastric cancer in young subjects in the Tunisian center.

Materials and Methods: This is a retrospective study including all patients received in the medical carcinology department at Farhat Hached University Hospital for the management of gastric adenocarcinoma between August 2018 and June 2022. We described the demographic, clinical, endoscopic, histopathological, radiological, therapeutic and progressive characteristics of gastric cancer in young subjects.

Results: Ninety-two patients were enrolled during this period. Patients younger than 45 years of age accounted for 23% (n=22). There was a female predominance in this group (68%). Family history of gastric cancer found in 4 patients (8, 18%). Clinically, epigastralgia was the most frequently reported call sign by 68% of patients (N=15), upper gastrointestinal bleeding was noted in 5 patients (22%) In addition, 60% of patients had weight loss. The cancer was immediately metastatic in 10 patients (45%), locally advanced in 7 patients (31%) and localized in 5 patients (22.72%). Peritoneal carcinomatosis was the most common metastatic site (60%). It was gastric linitis in 40% of cases (9 patients). Only seven patients were able to benefit from surgery (31%), it is curative in 57% of cases. All patients received palliative chemotherapy in 81%. Tumor progression after the first line of chemotherapy was noted in 68% of patients of which 59% received more than 3 lines of chemotherapy.

Conclusion: In our study, gastric cancer remains quite common in young subjects (23% of all gastric cancers). The prognosis of gastric adenocarcinoma in young subjects seems to be more reserved and worse, because often discovered at a very advanced stage.

500. Investigation of genotoxicity in occupational exposure to electromagnetic fields (EMFs) emitted from electricity and gas generating company

Touil Raja 1, kacem Imen2,3, Nakhli Rania2,3, Aloui Asma3, Dimassi Sarra1,2, Ouahchi Ines1,2, Mrizak Nejib2,3 and Bennour Ayda1,2
1-Laboratory of Genetics, Farhat Hached Hospital, Sousse Tunisia
2-Faculty of medicine Ibn Al Jazzar Sousse Tunisia
3- Department of Occupational Medicine, Farhat Hached Hospital, Sousse Tunisia

Considerable controversy still exists as to whether electromagnetic fields (EMFs) at low frequencies are genotoxic to humans. Particularly, the workers in such companies are subjected to cumulative EMFs in their occupational environments. The study of DNA damage at the chromosome level is an essential part of genetic toxicology because chromosomal mutation is an important event in carcinogenesis. The micronucleus assays have emerged as one of the preferred methods for assessing chromosome damage because they enable both chromosome loss and chromosome breakage to be measured reliably

This ongoing study was undertaken to assess the genotoxicity of EMF in electricity generating company workers, to valuate DNA damage and incidences of micronuclei in professionals. 58 workers in the electricity generating company were included in this study. 27 workers employed an administrative position and 31 work external the administration in the same company. Detailed occupational history and demographic data were collected from all participants. Blood samples were collected and cell cultures were done with cytochalasinB. Bi-nucleated cells were analyzed for micronuclei quantification and further fluorescent in situ hybridization (FISH) analyses were done to assess micronuclei content and to assume either the clastogen or the aneugen effect in micronuclei

Preliminary results showed that the frequency of micronuclei was higher in the exposed group compared with control group, suggesting that EMF exposure may lead to increased DNA damage and chromosomal instability. In addition, FISH showed a trend toward higher incidence of chromosomal aberrations in the exposed group, suggesting a possible genotoxic effect of EMF exposure.

To the best of our knowledge, the present study is the first attempt to carry out cytogenetic investigations on assessing genotoxicity in electricity generating companies. It will provide valuable insights into the genotoxic effects of EMFs on professionals and help developing appropriate safety policies and protective measures in these occupational settings.

501. Uterine sarcomas: Experience of Radiotherapy Service CHU Mohammed VI Oujda

S. SAMBA ; A. BENSGHIER ; A GUERROUAZ ; M .MOUKHLISSI ;S .BERHILI ; L .MEZOUAR
MOHAMMED IV University Hospital Center

Introduction: Uterine sarcomas are a rare form of tumors, comprising only 3.4% of all uterine cancers. The rarity, and significant genetic variation of these entities have resulted in a lack of agreement concerning the factors that contribute to their development, the ability to predict unfavorable outcomes, and the most effective treatment strategies. Even after radical hysterectomy, the majority of patients experienced recurrence or distant metastases. The aim of this investigation is to study the clinical characteristics, histopathology, treatment modalities, and prognostic outcomes of uterine sarcomas.

Materials and Methods: The present study is a retrospective analysis of 20 cases of uterine sarcomas that were treated at the radiotherapy department of the MOHAMMED IV University Hospital Center Oujda during the period spanning from January 2018 to December 2020.

Results: The average age of the patients up on diagnosis was 53 years. The clinical presentation was characterized by uterine bleeding in all cases, pelvic pain in 70% of cases, and pelvic mass in 35% of cases.

The predominant histological subtypes observed in the sample are Leiomyosarcoma, accounting for 65% of cases, followed by stromal sarcomas at 20%, with the remaining 15% comprising other subtypes.

In therapeutic terms, it was observed that a complete hysterectomy, with or without annex conservation, was beneficial for all patients. Additionally, 80% of the cases were found to benefit from external radiotherapy on the pelvis, while 50% of the cases received vaginal brachytherapy and 35% of cases received chemotherapy.

With a median follow-up of 26 months on an evolutionary scale, it was observed that 65% of the patients achieved complete remission and are still alive, while 35% of the patients succumbed to the disease.

Conclusion: Uterine sarcomas are infrequent cancers that exhibit a poor prognosis, and their timely detection is crucial as the patient's survival is associated with the tumor's stage at the time of diagnosis.

502. Pediatric Brain tumors: experience of radiotherapy department from the university hospital center MOHAMMED VI Oujda about 55 cases

S. SAMBA ; A. BENSGHIER ; M. MOUKHLISSI ; S. BERHILI, L. MEZOUAR

Introduction: The most typical solid tumors in children are pediatric brain tumors. They differ from adult brain tumors in a number of ways, most notably in their histological types and tumor topography.
Materials and methods: This study is a retrospective analysis of 55 cases of pediatric brain tumors that were collected from the Radiotherapy department of CHU MOHAMMED VI in Oujda. The data was collected over a period spanning from January 2018 to December 2021.
Results: The mean age of the population under study is 8.7 years, with a male proportion of 66%. The predominant clinical manifestations include intracranial hypertension syndrome in 66% of cases, cerebellar syndrome in 21% of cases, and epileptic seizures in 12% of cases. According to the results of a radiological assessment, the infratentorial site exhibited dominance in 72% of cases. The predominant histological subtypes include medulloblastomas in 46% of cases, gliomas in 42% of cases, and other subtypes in 24% of cases. Regarding therapeutic outcomes, 43% of the patients experienced positive results following a complete surgical procedure. However, in 45% of cases, the surgical intervention was limited to an incomplete excision or a simple biopsy. In 8 patients, surgical abstention was deemed appropriate. The study found that a significant proportion of patients (96%) experienced benefits from external radiotherapy, either exclusively or in combination with other treatments. Among these patients, over half (52%) received radiotherapy on the nevrax with superimposition on the posterior cerebral fossa, while localized external radiotherapy was recommended for the remaining patients. In terms of evolutionary progress, over a period of 26 months, 36% of the patients under observation demonstrated effective control, while 26% experienced a local recurrence. Additionally, 20% of the patients were lost of sight, and 18% had passed away.
Conclusion: Pediatric brain tumors exhibit a diverse range of histological characteristics, with medulloblastoma, astrocytoma, and ependymoma being the most frequently observed types. The categorization of tumors based on their tissue structure, known as histological classification, has undergone continuous development since its inception. In the future, the categorization of subtypes will incorporate genetic and molecular information, thereby enabling the differentiation of subtypes that are linked to varying prognoses.

503. Concomitant Radio Chemotherapy in Lung Cancer: Experience of Radiotherapy Service CHU Mohammed VI Oujda

Dr SAMBA S; BENSGHIER A ; BOUABID M ; ELOUAOUECH S ; GUERROUAZ M ; BERHILI S ; MOUKHLISSI M ; MEZOUAR L

Goal: The purpose of this study is to report the clinical, therapeutic, and prognostic outcomes of patients treated with concurrent radio-chemotherapy at CHU Mohammed VI's radiotherapy center.

Materials and Methods: This is a retrospective study of 60 cases of lung cancer treated with concomitant radiotherapy and chemotherapy. Data was collected between January 2016 and January 2021 at the radiotherapy department of Mohammed VI University Hospital in Oujda.

Results: The average age of the sixty patients was 59 years (range: 38 to 81), and they were all male smokers. Chest pain, dyspnea, and hemoptysis were the most prominent clinical signs. There were 49 cases of NSCC (31 cases of adenocarcinoma, 16 cases of squamous cell carcinoma, 2 cases of sarcomatoid carcinoma) and one case of small cell carcinoma (CSC), with 20 cases of stage IIIA and 18 cases of stage IIIB. Two to four regimens of neoadjuvant chemotherapy were administered in 23 cases. All patients received 60-70Gy dose of radiotherapy in conjunction with cisplatin or carboplatin-based chemotherapy. After an average of 12 months of follow-up, the evolution was marked by 2 deaths, metastasis in 18 patients (10 cases of cerebral metastasis and 8 cases of bone metastasis), 5 cases of progressive prosecution, 6 patients lost from view, and 18 patients in remission who are still being followed. Combining chemotherapy and radiotherapy improves the prognosis of patients with locally advanced lung cancer, as has been demonstrated. The improvement in survival is primarily attributable to an improved control of micro-metastases, despite the fact that local control remains very poor. Some irradiation techniques, including conformal radiation therapy with intensity modulation, hyper fractionation, and hyper fractionation with acceleration, appear capable of enhancing this local control. Low doses of cytostatic substances have radio-sensitizing properties that can enhance local control. It is also possible that concomitant chemotherapy and radiotherapy can improve the control of micrometastases and increase radiosensitivity.

Conclusion: As a result of diagnostic and therapeutic advancements, the overall survival rate for lung cancer is improving significantly.

504. Lung cancer in onco-geriatrics: treatment and survival

Samba soumiya, Bensghier Ahmed, Moukhlissi mohamed, berhili Soufiane, Mezouar Loubna

Département d'onco radiothérapie CHU Med VI Oujda

Purpose: The objective of our study was to determine the overall survival rate and analyze the significance of prognostic factors in a cohort of sixty patients who were 65 years or older and diagnosed with bronchopulmonary cancer.

Materials and methods: The present study is a retrospective analysis of a cohort of sixty patients aged 65 years or older, who were diagnosed with bronchopulmonary cancer and underwent treatment at the radiotherapy department of CHU MOHAMED VI Oujda between January 2018 and December 2020.

Results: The population being studied consists of sixty patients aged between 65 and 75 years, with a gender distribution of 10.5% female and 89.5% male. The participants are categorized into two histological subtypes, namely 85% non-squamous cell carcinoma (NSCC) and 15% squamous cell carcinoma (SCC). According to the TNM study, the distribution of cases across different stages was as follows: 6.6% at stage II, 80% at stage III, and 13.4% at stage IV. The initial round of chemotherapy showed: 39.5% complete response, 19% stabilization and 41% tumor progression. After a mean follow-up duration of 36 months, the progression of the condition was characterized by mortality in 10% of cases, metastasis in 13.4%, 10% experiencing progressive pursuits, 16.7% were lost of sight, and 50% of patients achieving remission and continuing to be monitored. The study reports a median overall survival of 10.1 months and a 1-year survival rate of 17.94%. The study found a positive correlation between improved survival rates and certain factors, including being female, not smoking, having a performance status of ≤1, and TNM stage.

Conclusion: The elderly population with bronchial cancer may benefit from a discussion of the various standard therapeutic options available. However, it is important to consider the impact of physiological aging and comorbidities on the risk-benefit ratio of these treatments. This highlights the necessity of developing a comprehensive support strategy for this particular segment of society.

505. Breast cancer in patients under 40 years old in the eastern region of Morocco

Samba S, Bensghier A, Berhili S, Moukhlissi Med, Mezouar L

Purpose: The objective of the present study was to explore the different epidemiological, clinical, therapeutic, and prognostic aspects of breast cancer among patients under the age of forty.

Patients and methods: We retrospectively collected the various epidemiological data concerning 80 female patients aged 40 and under who were treated and followed in the radiotherapy department of the MOHMMED IV university hospital center of Oujda between January 2016 and December 2020.

The present study involves a retrospective collection of epidemiological data pertaining to a cohort of 80 female patients aged 40 years or younger. These patients received treatment and follow-up care at the radiotherapy department of the MOHMMED IV university hospital center in Oujda, during the period spanning January 2016 to December 2020.

Results: The mean age was 30 years. A proportion of 15.4% of the participants reported a familial occurrence of breast cancer. The mean duration from the initial manifestation of clinical signs to the point of diagnosis was 9 months. The initial indication of detection in all patients was the presence of a palpable nodule. Based on the TNM classification as outlined by the UICC in 2017, the type of cancer was categorized as T1, T2, T3 and T4, in 9%, 33%, 22%, and 36% of the cases respectively. 75% of the diagnosed carcinoma was identified as infiltrating ductal carcinoma. The predominant Grades of Scarff Bloom and Richardson (SBR) were Grades II and III.

Conservative surgical treatment was found to be beneficial for the majority of the patients studied, 70% were pN+ and 65% had positive hormone receptors. Additionally, HER2 expression was found to be overexpressed in 40% of cases.

70% of operable non-metastatic cancers were managed through surgical intervention, followed by adjuvant chemotherapy and radiotherapy. Meanwhile, primary chemotherapy was administered to patients diagnosed with locally advanced or metastatic forms at the time of diagnosis, which accounted for 18% and 12% of cases, respectively. Additionally, tamoxifen hormone therapy was prescribed for 65% of patients.

During a post-treatment follow-up period of 30 months, it was observed that 30% of the 60 patients who had their disease controlled at the end of treatment experienced distant bone and liver relapse after an average of 12 months.

Conclusion: The prognosis for breast cancer in young women in our region is unfavorable, as evidenced by the high relapse rate observed in this population.

506. The Tumor-Associated Beta-2 microglobulin-free Monomeric Heavy chains of HLA-E and HLA-F as target for Passive Immunotherapy of Cancers with monospecific IgG monoclonal Antibodies.

Fatiha El Hilali 1*, Hajar El Hilali 1, Narendranath M. Ravindranath 2, Carly J. Amato-Menker3, Edward J. Filippone4, Mepur H. Ravindranath 5

1. Medico-Surgical, Biomedicine and Infectiology Research Laboratory, The Faculty of Medicine and Pharmacy of Laayoune & Agadir, Ibnou Zohr University, Agadir 80000, Morocco; f.elhilali@uiz.ac.ma ; elhilhajar@gmail.com
2. Norris Dental Science Center, Herman Ostrow School of Dentistry, University of Southern California, Los Angeles, CA 90089, USA; nravindr@usc.edu
3. Department of Microbiology, Immunology and Cell Biology, School of Medicine, West Virginia University, Morgantown, WV 26506, USA; carly.j.amato@gmail.com
4. Division of Nephrology, Department of Medicine, Sidney Kimmel Medical College, Thomas Jefferson University, Philadelphia, PA 19145, USA; kidneys@comcast.net
5. Department of Hematology and Oncology, Children's Hospital, Los Angeles, CA 90027, USA, Emeritus Research Scientist, Terasaki Foundation Laboratory, Santa Monica, CA 90064, USA

Normal cells undergo change to become cancer. Since cancer cells are derivatives of normal cells, immune system fails to distinguish them from normal cells. Subtle changes in common self-antigen on normal cells do occur for short duration during inflammation, injury and infections, which are known to "activate" the cells. Such activation induced changes in self antigens may occur and persist in cancer cells and do escape immune attack. Specific immunodiagnosis of such antigens require antigen specific monoclonal antibodies (mAbs). Such monospecific mAbs are not only useful for immune diagnosis but also for passive immunotherapy of cancer. One such common cell surface self-antigen is human leukocyte antigens or HLA. Most commonly, there are two classes of HLA, HLA class I and HLA class II. HLA class II is a homo-dimer of heavy chain polypeptides (HC), whereas HLA class I is a heterodimer, which occurs as a single HC in combination with B2-microglobulin (B2m). Upon activation of normal cells under inflammation, the heterodimeric HLA transforms into monomeric HC. There are two categories of HLA class I molecules, HLA-I that present peptides to the T cells are known as classical HLA-I (HLA-Ia), which comprise of HAL-A, HLA-B and HLA-C subclasses. The HLA-I with more specific functions or which do not present peptides to the T cells belong to non-classical HLA-I (HLA-Ib) comprises HLA-E, HLA-F and HLA-G. Although both HLA-Ia and HLA-Ib can be expressed as B2m-free monomeric HCs upon activation of normal cells, there is enormous evidence to document that the monomeric HCs of HLA-E and HLA-F are most prevalent in several human cancers. We not only document the evidences from literature but also demonstrate the potential of such monospecific IgG mAbs for specific immunodiagnosis on human cancers. We have developed monospecific anti-HLA-E mAb and/or monospecific anti-HLA-F mAb, which have high potential as therapeutic agents for passive immunotherapy of cancer.

507. recurrences of the cercival cancers : monocentric retrospective study

Soumiya SAMBA 1.2, Mohammed MOUKHLISSI 1.2, Ahmed BENSGHIER 1.2, Soufiane BERHILI 1.2, Hanane HAJ KACEM1.2, Loubna MEZOUAR 1.2

1 : Faculty of Medicine and Pharmacy Oujda, University Mohammed First Morocco
2 onco-radiotherapy departement, oncology center HASSAN II, CHU MOHAMMED VI Oujda, Morocco

Cervical cancer is the second most frequently diagnosed cancer and the third leading cause of cancer-related death in developed countries. The aim of our study is to describe the epidemiological, clinical, and therapeutic aspects, and to evaluate the contribution of imaging in the detection and prediction of recurrences of cervical cancer. Material and Methods: This is a retrospective descriptive and analytical study of 62 cases of recurrent cervical cancer, collected between 2006 and 2018 at Hassan II Oncology Hospital in Oujda. Results: Recurrences were diagnosed during regular surveillance examinations through clinical examination, confirmed by pelvic CT scan or MRI, and verified by new biopsies. The median recurrence time was less than 2 years in 58% of cases, and the median age was 51 years. The predominant histological type was squamous cell carcinoma (82% of cases). Tumor recurrence occurred after a mean time of 14.7 months. Among the patients, 43 were symptomatic (69.3%), with the main symptom being metrorrhagia in 42% of cases, and 30.64% of patients were asymptomatic. Clinical examinations found vaginal induration in 12 cases, cervico-vaginal roughness in 4 cases, ulcerative and fungating cervical tumor in 2 cases, and hepatomegaly in two cases. MRI was performed in 29 patients, with a mean tumor size of 35.09 mm, vaginal invasion in 41%, unilateral parametrial invasion in 17.24%, and bilateral parametrial invasion in 82.76% of cases. Bladder and rectum infiltration were 38% and 17%, respectively. Metastatic locations on thoraco-abdomino-pelvic CT scan were pulmonary in 21% of patients, osseous in 10%, hepatic in 6%, peritoneal in 5%, and sigmoid colon in one patient. In two patients, there was a process of lumbosacral invasion involving soft tissues. Treatment mainly relied on palliative chemotherapy, decompressive analgesic radiotherapy, and palliative care.

508. Occlusion of a retinal vein revealing a multiple myeloma

Bouzidi M (1), Tounsi H (1), Chaabène I (1), Skouri W (1), Ben Ahmed I (2), Ouali J (4) (3), Abid N (1), Lajmi M (1), Dghaies S (1), Bachrouch S (1), Ikbel G (4), Kaabar Y (4), Bachalli A (4), Alaya Z (1), Amri R (1).

1. Internal Medicine Department. Mohamed Tahar Maamouri Hospital. Nabeul.
2. Diabetology and nutrition consultation service. Regional hospital. Ben Arous.
3. Hemodialysis service. Mohamed Tahar Maamouri Hospital. Nabeul.
4. Surgery department. Mohamed Tahar Maamouri Hospital. Nabeul.

Introduction: Multiple myeloma is associated with an increased risk of a thromboembolic events. However, the occlusion of a retinal vein is rare during this hemopathy. We report a novel observation.

Observation: This was a 70-year-old patient, with medical history of diabetes and hypertension, who consulted for a bilateral decrease in visual acuity. Ophthalmologic examination showed bilateral retinal vein occlusion. Laboratory abnormalities noted were : blood sugar at 7 mmol/l, ESR at 135 mm, normocytic anemia at 7.7 g/dl, hypogammaglobulinemia at 39.36 g/l with the presence of a monoclonal peak. In blood immunoelectrophoresis, it was a monoclonal gammopathy of the IgG Kappa type with a decrease in other types of immunoglobulins. Multiple die-cut geodes were objectified on the skull X-ray. Plasma cell infiltration at 12% with dystrophy was objectified on the myelogram. The diagnosis of stage III multiple myeloma was maintained. A treatment combining melphalan and prednisone was started. The evolution was marked by a stabilization of the clinical state.

Discussion: It is well established that the risk of cancer-associated thromboembolic disease increases compared to the general population. This risk is very heterogeneous depending on the type and site of neoplasia: solid cancers of the pancreas, hepatobiliary and stomach are in the first place, followed by multiple myeloma. Recommendations for the preventive and curative management of cancer-associated thromboembolic disease are available.

Conclusion: Myeloproliferative disorders represent a potential but rare cause of retinal vein occlusion that should not be overlooked.

509. Cervical adenocarcinoma on endocervical polyp: about an observation and review of the literature

M.El Ouazzani, O.Ait Ouhssain, H.Oussehal, H.Rachidi, H.Rais

Service d'anatomie pathologique, Hôpital ERRAZI, CHU MOHAMED VI MARRAKECH

Introduction: Cervical adenocarcinoma is a glandular tumor with stromal invasion and/or exophytic expansile-type invasion, associated with high-risk HPV infection (WHO2020). We report the observation of a 70-year-old woman.

Observation: We report a case of a 70-year-old woman with metrorrhagia. Clinical examination showed, a friable exophytic mass developing in the endocervical canal. Pap smear result was atrophic without sign of malignancy according to the Bethesda 2015 classification. The ultasound exam found a endocervical polypoid lesion. A total hysterectomy without preservation of the adnexa was performed. Grossly, we found a polypoid mass measuring 1.2cm. On histological examination, we observed an infiltrating epithelial proliferation of glandular associated to HPV with moderate cytonuclear atypia with no lymphovascular invasion. The basis of the polyp was marked by an in situ adenocarcinoma extented on 5mm. The tumor was classified pT1b1NxMx (TNM ; 8th edition).

Discussion and conclusion: Cervical adenocarcinoma on endocervical polyp is rare. The symptoms are common with benign lesion. The hysterectomy or a large exeresis was performed choice for this patient to exam the infiltration on the basis of the polyp. The histologic differential diagnosis includes benign glandular lesions ; the endometrial adenocarcinoma as well as secondary adenocarcinoma metastatic to the cervix. The association with HPV is necessary to classify, to guide the choice of treatment, thus improving the prognosis.

About Sousse:

Sousse is located in the center-east of Tunisia, on the Gulf of Hammamet, 140 km south of the capital. It is known as the "Jewel of the Coast" that overlooks the Mediterranean Sea and enjoys a charming nature. Founded by the Phoenicians in the first millennium BC, it is considered a destination for tourists in Tunisia because of its charming beaches, archaeological areas and places of entertainment, as well as a constellation of the most beautiful hotels and resorts.

One of Tunisia's most popular holiday resorts, Sousse effortlessly blends resort comforts with historic and cultural sites. It's luxury hotels line the beachside suburb of "Port el Kantaoui" that bathes in sun-and sand bliss. While the "Medina" district in Sousse's center is full of cultural touristic attractions and gift shops.

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