INTERNATIONAL ACADEMY OF PATHOLOGY

TURKISH DIVISION AND ARAB DIVISION

JOINT MEETING

Susesi Hotel & Convention Center **Belek / ANTALYA / TÜRKİYE**

16-19 November 2024

INVITATION OF THE PRESIDENTS

Dear colleagues,

It's our great pleasure to announce that the Turkish and the Arab divisions of International Academy of Pathology are organizing a joint scientific meeting between 16-19 November 2024 in Antalya, Turkey, Susesi Hotel. During the 3 day scientific program, mainly recent advances on breast pathology, hematopathology, cytopathology, uropathology, neuropathology, gastrointestinal pathology, endocrine pathology topics will be discussed in detail by international pathologists and experts. We are committed to offer you a very rewarding scientific experience to enrich your knowledge, but also enable you to meet well recognized experts in their respective fields and interact with colleagues from different parts of the world. The Congress will also offer a pleasant social agenda where you ties will have a fascinating opportunity to relax in a very pleasant environment at the congress venue, visiting Antalya and its historic and natural surroundings while enjoying the delightful and delicious Turkish cuisine.

On behalf of Joint Meeting organizing committee, we will be pleased and honored to welcome you in Antalya in November.

Kind regards,

Prof. Işınsu Kuzu
IAP Turkish Division

Prof. Mehdi Karkouri
IAP Arab Division

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Zaher Chakhachiro

SCIENTIFIC PROGRAM

16 NOVEMBER 2024

Hall 1	
09:00-15:00	Registration
15:00-16:30	Breast Pathology, Issam Abd-Alsamad Memorium Session Chairs: **Sıtkı Tuzlalı, Mehdi Karkouri**
15:00-15:30	Pathology of Breast Carcinomas After Neoadjuvant Chemotherapy (Biopsy Management and Evaluation of Response)-**Magali Triki Lacroix**
15:30-16:00	An Overview of the Molecular Diagnostics of Breast Cancer **Emad Rakha**
16:00-16:30	Immunohistochemistry in Breast Pathology and Pittfalls **Sıtkı Tuzlalı**
16:30-17:00	Coffee Break
17:00-18:30	Cytopathology Chairs: **Hunaina Alkindi, İlkser Akpolat**
17:00-17:30	Pancreas FNA and Resection Correlation-**Ibrahim Khalifeh**
17:30-18:00	Molecular Cytopathology of the Lung - **Peter B. Illei**
18:00-18:30	FNA Cytology of Nonsmall Cell Carcinoma of the Lung **İrem Onur**
16:00-18:00	Hall 2: IAP ARABIC DIVISION COUNCIL MEETING
18:30-19:30	Opening Ceremony

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Hall 1	
08:30-13:00	Pathology of Urinary Tractus and Male Genital Organs Chairs: **Dilek Ertoy Baydar, Ghazi Zaatari**
08:30-09:00	Molecular Classification in Urothelial Carcinomas **Hikmat A. Al-Ahmadie**
09:00-09:30	What Are the Possible Novel Tumor Subtypes That May Be Added to the List in the Next WHO Classification of Renal Tumors?-**Wael Sakr**
09:30-10:00	Risk Stratification in Non-Invasive and Superficially Invasive (Non-Muscle Invasive) Urothelial Carcinoma **Hikmat A. Al-Ahmadie**
10:00-10:30	Coffee Break

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10:00-10:30	Coffee Break
10:30-11:00	What is New in the Prostate Tumor Pathology?-**Wael Sakr**
11:00-11:30	ISUP/GUPS 2024 Expert Opinions on Testicular Sex Cord Stromal Tumors-**Mahmut Akgül**
11:30-12:00	Non-Neoplastic Kidney Pathologies in Tumor Nephrectomy Materials-**Dilek Ertoy Baydar**
12:00-13:00	Lunch
13:00-16:30	Pathology of Gastrointestinal and Hepato-Pancreato-Biliary System Chairs: **Funda Yılmaz Barbet, Ismail Matalka**
13:00-14:00	Recently Established and Emerging Mesenchymal GI Neoplasms-**Abbas Agaimy**
14:00-15:00	Dysplasia in Pancreatobiliary System-**Volkan Adsay**
15:00-15:30	Coffee Break
15:30-16:30	Difficult GI Cases: Undifferentiated GI Malignancies Including Metastases-**Abbas Agaimy**
16:30-17:30	Oral Presentations

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Hall 1	
08:30-12:00	Neuropathology Chairs: **Önder Öngörü, Manal El Mahdy**
08:30-09:15	Evauation of Molecular Pathologic Findings in the Diagnosis of Brain Tumors-**Tarik Tihan**
09:15-10:00	The Asian Oceanian Society of Neuropathology guidelines for Adapting Diagnostic Approaches for Practical Taxonomy in Resource-Restrained Regions (AOSNP-ADAPTR) **Maysa Al-Husaini**
10:00-10:30	Coffee Break
10:30-11:15	Algorithmic Approach to the Diagnosis of Adult Glioma **Eyas Hattab**
11:15-12:00	Diagnostic Approach to Hereditary Central Nervous Tumors in Surgical Neuropathology Practice-**Melike Pekmezci**
12:00-13:00	Lunch

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13:00-16:30	The New Hematolymphoid Classification(s) in 2024 What is New? A Practical Diagnostic Approach on Case Examples Chairs: **Işınsu Kuzu, Zaher Chakhachiro**
13:00-13:45	The Differential Diagnostic Spectrum of Splenic Lymphomas Involving Bone Marrow-**Işınsu Kuzu**
13:45-14:30	Agressive B cell Lymphomas - High Grade or Large Cell? **German Ott**
14:30-15:00	Coffee Break
15:00-15:45	Diagnostic Challenges in T Cell Lymphomas-**Zaher Chakhachiro**
15:45-16:30	Myeloid Neoplasms (AML, MPN, MDS, and myeloid Sarcoma) **Sanam Loghavi**
16:30-17:30	Oral Presentations

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Hall 1	
08:30-12:00	Endocrine Pathology Chairs: **Serpil Dizbay Sak, Omar Jaber**
08:30-09:00	Prognostic and Predictive Factors in Pituitary Adenomas: With a Special Emphasis on High-Risk Adenomas **George Kontogeorgos**
09:00-09:30	Overview of the New Thyroid Tumor Classification **Manuel Sobrinho Simões**
09:30-10:00	Overview of the New Parathyroid Tumor Classification **Serpil Dizbay Sak**
10:00-10:30	Coffee Break
10:30-12:00	Slide Seminar on Endocrine Pathology Chairs: **Serpil Dizbay Sak, Omar Jaber**
10:30-11:00	**Manuel Sobrinho Simões**
11:00-11:30	**Serpil Dizbay Sak**
11:30-12:00	**George Kontogeorgos, Eleni Thodou**
12:00-13:00	CLOSING CEREMONY

ORAL ABSTRACTS

[OP-01]

Molecular Profiling of Gastrointestinal Stromal Tumors (GIST): King Hussein Cancer Center Experience

Yazan Talab[1], Razan Abu Khashabeh[1], Farah Alul[1], Nabil Hasasna[1], Ruba Alabweh[1], Osama Alsmadi[1], Anas Al Okaily[1], Iyad Sultan[3], Sameer Yaser[2], Maysa Al Hussaini[1]

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Background: Gastrointestinal Stromal Tumors (GISTs) are primarily driven by KIT mutations. Exon 9 variants respond to Tyrosine Kinase Inhibitors (TKIs) but are associated with primary resistance, while exon 11 mutations generally show better responsiveness. PDGFRA mutations are typically responsive, except for D842V in exon 18. Rare mutations in other genes might also be resistant to TKIs but may be targetable with novel medications.
Methodology: A retrospective analysis on GIST cases at KHCC, with molecular testing records at the CTAG department from 2017 to May 2024. The study was approved by the KHCC IRB (24 KHCC 132). Data collected included demographics, tumor sites, and tumor progression rates during treatment. Immunohistochemical review of CD117, DOG1, and CD34 confirmed the diagnoses. Molecular profiling via next-generation sequencing (NGS) utilizing illumina TruSeq® Amplicon-Cancer Panel kit to identify mutations in KIT, PDGFRA, and 46 other genes.
Results: The cohort comprised 38 patients, with a median age of 51 years (59% male). Tumors were predominantly located in the stomach (64%), and small intestine (26%). Molecular profiling revealed that 11 patients (28%) had KIT mutations (all in exon 11 except for one in exon 9), three patients (7.7%) had PDGFRA mutations (2 in exon 18 and 1 in exon 12), 1 patient (2.6%) had a BRAF V600E mutation, 1 patient (2.6%) had a PIK3CA mutation, and 1 patient (2.6%) had an APC mutation. The BRAF V600E mutation is targetable with Dabrafenib, while the PIK3CA mutation could be targeted with Alpelisib. No mutation identified in 7 (18%) individuals. Nine patients (23%) experienced disease progression or resistance, which might be attributed to secondary resistance mechanisms or the presence of a primary Imatinib-resistant PDGFRA and BRAF mutations.
Conclusion: GISTs might harbor non-conventional mutations that could affect management strategies. These data highlights the need for identifying resistance mechanisms and exploring novel therapies.

Keywords: GIST, Molecular, BRAF

[OP-02]

Are you still using conventional method for non neoplastic cholecystectomies? Then you are missing 3 occult dysplastic lesion in every 100 cholecytectomies. A novel intensive method is the solution

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Objective: In this study, we analyzed a more effective sampling method that does not increase the routine workload for detecting occult dysplasias and neoplasms in non-neoplastic cholecystectomies.
Materials-Methods: We evaluated 3,010 cases that were sampled using the conventional method (CM) and 654 cases sampled using the routine operative (RO) method. We compared the capacity of both methods to detect occult neoplastic lesions. Histopathological assessments categorized cases into low-grade and high-grade dysplasias, and carcinomas. Statistical analyses were conducted using Fisher's Exact Test, Chi-Square Test, and Mann-Whitney U Test.
Results: The rate of low-grade dysplasia (LGD) in the 654 cases that were sampled by the RO method was 6.6%, while it was 3.3% in the 3,010 cases sampled by the CM method. There was a significant statistical difference in the detection rates of total neoplasia and low-grade dysplasia between the two groups (p: 0.0002 and 0.000136, respectively).
Conclusion: Our results showed that detection rate of RO method for dysplasia is twice as high as CM method. This suggests that, with CM, dysplasia may be missed in three cases out of every hundred cholecystectomies. RO is an excellent alternative for sampling non neoplastic cholecystectomies. Laboratory workload of two methods are same. Our results, along with similar literature data, indicate CM should be discontinued. RO method is significantly more effective than CM in detecting low-grade dysplasia and overall occult neoplasms. CM may be considered in cases where the RO method cannot be used due to reasons such as loss of wall elasticity or fibrous degeneration. Otherwise, CM should remain the standard of care for all non-neoplastic cholecystectomy cases.

Keywords: Non neoplastic cholesystectomy, Biliary Intraepithelial Neoplasia, Gallbladder sampling

[OP-03]

Expression of Neuroendocrine Markers and Its Relationship with Histopathological Features in Gastric Adenocarcinomas Following Neoadjuvant Therapy

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Introduction and Aim: In gastric cancer, although morphological findings of secondary to neoadjuvant therapy (NeoAT) have been identified in tumor cells, stroma, and inflammatory cell responses, features defined in neuroendocrine marker expression are insufficient. Moreover, the presence and significance of neuroendocrine marker expression in tumors following NeoAT have not been sufficiently studied. This study aims to investigate the presence of neuroendocrine marker expression in gastric carcinomas (GC) following NeoAT and its relationship with histological features.
Materials-Methods: Forty-six patients who received NeoAT for GC were included in the study who had both pre-treatment endoscopic biopsy and post-treatment gastrectomy materials. The biopsy materials were re-evaluated for histological type and cERBB2 expression, while the gastrectomy materials were assessed for tumor stage (ypT and ypN), lymphovascular invasion (LVI) and perineural invasion(PNI), surgical margin, Mandard regression score(MRS), and Chromogranin-A, Synaptophysin expression.
Findings: 30(65.2%) tumors were adenocarcinoma. Only 4 (8.7%) tumors showed cERBB2 expresssion and all tumors were MSI-Low .In gastrectomy specimens, ypT0,ypT1,ypT2,ypT3,and ypT4 were found in 2, 6, 5, 10, and 23 tumors; respectively. ypN0, ypN1, ypN2,and ypN3 were found in 10, 6, 12, and 18 tumors;respectively. According to Mandard's, the number of tumors with complete_response (MRS1), partial_response (MRS2), moderate_response (MRS3), minimal_response (MRS4) and no response (MRS5) were 2, 14,13,5, and 12; respectively. Thirteen (28.3%) tumors expressed neuroendocrine marker(NED+). Only two of them were also NED+ on endoscopic biopsy. 23.1% of NED+ tumors were ypT1, while this rate was 9.7% for NED- tumors. For ypT4, the rates were 30.8% and 61.3%,respectively. ypN0 was detected in 30.8% of NED+ tumors and in 12.9% of NED- tumors.7.7% of MRS5 tumors and 38.5% of MRS2 tumors were found to NED+.
Discussion: NED+ tumors had a lower tumor stage, fewer lymph node metastases, and a better regression score. Neuroendocrine differentiation was present in approximately one-third of tumors folowing NeoAT. This finding suggests that NE expression is associated with a good treatment response and should be further investigated as potential candidates for postoperative patient management.

Keywords: gastric carcinoma, neoadjuvant therapy, neuroendocrine differentiation

[OP-04]

Clinicopathologic Factors Affecting Lymph Node Count and the Effect of Metastatic Lymph Node Ratio on Prognosis in Colorectal Cancer Patients

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Background: Accurate evalution of lymph nodes is crucial in predicting the future outcomes in colorectal cancer (CRC). Increased number of surgically resected lymph node counts (LNC) is associated with improved prognosis while the increased number of metastatic lymph nodes worsens the outcome. We aimed to identify the factors influencing higher-LNCs and the impact of metastatic lymph node ratio (MLNR) on survival.
Methods: We conducted a retrospective study on 989 CRC resection specimens (221 right colon, 768 left colon). Cases were divided into four categories according to MLNRs as MLNR0:(without metastases), MLNR1:(<0.20), MLNR2:(0.20-0.50) and MLNR3:(>0.50) and into two LNC groups as “lower-LNC”(<12) and higher-LNC(>=12).
Results: The median number of lymph nodes was 14 (Range:5-198). Lower-LNCs were observed in 346 cases (35.0%), particularly in left colon. In univariate analysis, younger age ($p<0.001$), larger tumor diameter ($p<0.001$), increased pN category ($p<0.001$), right colon localization ($p=0.003$), presence of Crohn's-like lymphocytic reaction ($p=0.006$) and absence of satellite nodules ($p=0.016$) were significantly associated with higher-LNCs. Tumors were pT4 stage in 86 cases, pN2 stage in 178 cases. The overall survival rate was 50.6%, while the 1, 3 and 5-year cumulative survival rates were 0.891, 0.721 and 0.612, respectively. The overall survival was higher in cases with higher-LNCs (53.5% vs 45.1% in lower-LNCs, Log-Rank=10.559, $p<0.001$). The overall survival rate of cases without metastatic LN was 61.2% while the rates were 47.7%, 34.0% and 26.4% respectively for MLNR1, MLNR2 and MLNR3 groups. The mortality rates also ascociated with MLNR (Log-Rank=135.141, $p<0.001$) and life expectancy decreased as the MLNR is increased ($p<0.01$).
Conclusions: MLNR may provide a better prognostic prediction compared to pN status, mainly in cases with lower-LNCs. The rate of MLNs has a potential to be an independent predictor of survival and can be incorporated into current staging and therapeutic decision-making.

Keywords: Colorectal Cancer, Metastatic Lymph Node Ratio, Prognosis

[OP-05]

Clinicopathological Differences in 'Young' Gastrointestinal Cancers: A Comparison Between Patients Under and Over 50 Years of Age

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Background: Gastrointestinal (GI) cancers are typically observed in the 6th-7th decades. However they may occur at an earlier age mostly due to hereditary syndromes. We searched the histopathological features of GI cancers in patients under and over 50 years-old.
Methods: A total of 423 resection samples of patients under 50 years of age (88 stomach, 335 colon) and 423 control cases examined in two reference centers were included in the study The control group was randomized by including the subsequent resection following the study case. The two groups were statistically compared in respect to tumor localization, gender, tumor (pT), lymph node (pN) stages, lymphovasculary (LVI) and perineural invasion (PNI), using parametric and non-parametric tests.
Results: The mean ages for early-onset gastric and colon cancers were 44.08±5.8 y.o and 41.72±6.5 y.o respectively, compared with 58 and 65.6 years for cases over 50 y.o. (p=0.01). The female/male ratio was 24/64 and 154/181 for gastric and colon cancers, and the female cancers were more frequent than in control groups (27.3% vs 14.8% for stomach, p=0.042 and 46% vs 35.5% for colon, p=0.06). Stomach tumors were mosty located in antral-pyloric region (46%), showed tubulary adenocarcinoma (51.1%); T4 (46.6%) and N3 tumors (40.9%), PNI (65.3%), LVI (65.9%), mucinous (12.5%) and signet-ring cell (18.2%) component. Gastroesophageal junction and cardia tumors were less frequent than control group (21.6% vs 31.8%, p=0.043, chi-square). Colon tumors were mostly located in left colon (72.4%), showed T3 (70.4%), N0 (39.6%) tumors, satellit deposits (10%), PNI (36%), LVI (46.7%), mucinous histology (10.6%). LVI was less frequent (41% vs 51.6%, p=0.007); N0 tumors were more frequent than control group (43.3% vs 35.8%, p=0.05, chi-square).
Conclusions: The early-onset GI cancers show slightly different clinicopathological features compared to their older-age counterparts. The reasons for increased female cancers under 50-y.o in both stomach and colon deserves further investigation.

Keywords: Colon Cancer, Stomach Cancer, Young-onset

[OP-06]

Determination of the population-based data of mismatch repair deficiency in gastrointestinal and endometrial cancers using MSH-2, MSH-6, PMS-2 and MLH-1 immunohistochemical stains; a university hospital experience with a large case series

Yasemin Akca

Gaziantep University Medical Faculty Pathology Department

Aim of the study: Research on mismatch repair (MMR) deficiency is increasingly important for treatment decisions and prediction of treatment response in various types of cancer. In this study, we aimed to investigate the population-based incidence and epidemiological data regarding MMR deficiency status in our clinical practice and compare them with international data considering the current literature.
Material-Method: Biopsy reports of 542 patients diagnosed with carcinoma in our laboratory between March 2018 and March 2024 and treated with MSH-2, MSH-6, PMS2 and MLH-1 staining using immunohistochemical methods were reviewed using our hospital information system and evaluated regarding incidence, gene profile, age, sex and localisation in different cancers, and the results were compared with international data.
Results: In our study, 380 of the 542 patients we investigated had colon, 70 had endometrium, 50 had stomach, 10 had oesophagus, 10 had ampullary carcinoma, 5 had pancreas, 6 had gallbladder carcinoma, and 11 had other regions carcinomas like prostate, bladder, and cervix. We detected MMR deficiency in a total number of 90 (16.6 %) in 542 patients, also 70 (18.42 %) in 380 patients with colon cancer, 14 (20%) in 70 patients with endometrioid carcinoma, 5 (10%) in 50 patients with stomach carcinoma, 1 (10%) in 10 patients with ampullary carcinoma. MMR deficiency was not observed in 21 non-colonic GIS malignancies. The rates were determined to be close to international data. In addition, 36 PMS-2 and MLH1, 16 MSH-2 and MSH6, and 8 PMS-2, 4 MLH-1, 2 MSH-6, and 4 MSH-2 MSH-6 PMS 2 ve MLH 1 deficiency were observed in colon carcinomas, while PMS-2 and MLH-1 defects were observed in all endometrioid carcinomas and non-colonic GIS malignancies. In colon carcinomas, right colon localisation was detected more frequently, compatible with international data. In addition, it was noted that mutations in the endometrium were more common in those over the age of 60. Lastly, we detected that 6 patients also had other organ malignancy in our hospital information system.
Discussion: Our results show similarities with international rates and gene profiles, except for some minor differences. In addition, our study includes data on various non-colorectal GI malignancies and is considered worthy of presentation here.

Keywords: MMR Deficiency, colon carcinoma, endometrial carcinoma

[OP-07]

Prediction of Mismatch Repair Status in Colorectal Cancer from Clinicopathologic Data: A Machine Learning Approach Using Text Mining and Arbitrary Data Generation

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Background: Screening for mismatch repair (MMR) status is currently recommended for all colorectal cancer (CRC) patients, however this could lead to increased workload for pathology laboratories. We aimed to develop a machine learning model(MLM) to predict MMR status of tumors from clinicopathological data and check its utility for selecting cases to undergo immunohistochemical studies.
Methods: Using the PubMed API for Python, abstracts containing the keywords “MMR” and “CRC” were extracted and text mining algorithms were used to calculate the frequency and co-occurrence of specific keywords in the abstracts. The importance of each feature was quantified using the term frequency-inverse document frequency (TF-IDF) method, and arbitrary data of 25 main features were generated based on these importance-ratios (IRs).
An MLM, LbfgsMaximumEntropyMulti, was trained to predict MMR status in patients excluding immunohistochemistry techniques. A dataset of 1160 real CRC patients from Ege University, Department of Pathology (including 124 deficient-MMR) and 158 records with multiple "missing" features was used to test the model.
Results: TF-IDF was conducted on total of 9985 abstract and IRs for 25 categorized features were calculated. Using Calculated IRs an arbitrary dataset of 700,000 records, including 200,000 cases with deficient-MMR, was generated, with each feature experiencing a random 2% data omission. The LbfgsMaximumEntropyMulti model, using Cost-Frugal-Tuner, achieved a MacroAccuracy of 0.8724. Testing on an external dataset of 1,160 CRC patients from Ege University, demonstrated an overall prediction accuracy of 89.13%. Particularly, stable-MMR cases were predicted with 93.61% accuracy. The model also maintained an accuracy of 84.27% in records with multiple missing data points.
Conclusions: Our MMR-predicting MLM reached high prediction accuracy of 89.13%. The higher prediction accuracy of MMR in patients with missing clinicopathologic data (84.27%) is also noteworthy. These findings suggest that our MMR-predicting MLM could provide added value as an automated screening tool for selecting patients for confirmatory immunhistochemistry testing.

Keywords: Colorectal Cancer, Machine Learning Model, Mismatch Repair Status

[OP-08]

High prevalence of KDM6A expression loss in urinary bladder cancer: A tissue microarray analysis of 21,280 tumors from 149 tumor types

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Background: KDM6A, also known as UTX (ubiquitously transcribed X chromosome tetratricopeptide repeat protein) is an epigenetic regulator constituting a critical part of the COMPASS-like complex. KDM6A mutations occur commonly in cancer. As these are often truncating, and because X chromosome genes have only one active gene copy, many KDM6A mutations incur a complete expression loss which can be exploited diagnostically and therapeutically.
Methods: To learn more on the prevalence and diagnostic utility of KDM6A expression loss, a tissue microarray containing 21,280 samples from 149 different tumor entities and 608 samples of 76 different normal tissue types was analyzed by immunohistochemistry (IHC).
Results: In normal tissues, KDM6A staining was ubiquitously seen in nuclei. In cancer, KDM6A staining was lost in 929 (5.5%) of 16,948 interpretable tumors. KDM6A loss predominated in urothelial carcinomas (up to 36%) but occurred in less than 5% of cases in >50 further tumor entities including carcinomas of the ovary and the endometrium, malignant melanoma, and bilio-pancreatic cancers. In the bladder, KDM6A loss decreased from pTa G2 (low grade; 36% positive) to pTa G3 tumors (p=0.0004). In >500 pT2-4 urothelial carcinomas treated by cystectomy, KDM6A loss was unrelated to pT, pN, grade, L-status, V-status, and overall survival (p>0.1). A comparison with sequencing data revealed that a KDM6A expression loss occurred in all 10 male and in 74% of 23 female patients with a truncating KDM6A mutation. However, a truncating KDM6A mutation was only found in 75% of male and in 81% of female patients with KDM6A expression loss.
Conclusions: It is concluded that KDM6A expression loss occurs in many tumor entities but predominates in urothelial neoplasms. Especially in the bladder, KDM6A IHC may represent a useful tool for the objective distinction of neoplastic from non-neoplastic cells in follow-up examinations of patients with KDM6A deficient cancers.

Keywords: Immunohistochemistry, KDM6A, Urinary Bladder Cancer

[OP-09]

Diagnostic and prognostic utility of MTAP immunohistochemistry in human cancer: A tissue microarray study on 37,535 tumors from 149 different tumor types

Şeyma Büyücek[1], Maximilian Lennartz[1], Sebastian Dwertmann Rico[1], Guido Sauter[1], Ronald Simon[1], Stefan Steurer[1], Lukas Bubendorf[2], Henning Plage[3], Thorsten Schlomm[3], Margit Fisch[4], Martina Kluth[1], Natalia Gorbokon[1]

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Background: S-methyl-5'-thioadenosine phosphorylase (MTAP) is encoded by the MTAP gene located at 9p21 and is often homozygously deleted in cancer. MTAP deficiency results in a critical vulnerability of cancer cells towards drugs targeting multiple pathways. Since MTAP is ubiquitously expressed and homozygous MTAP deletions result in complete expression loss, MTAP immunohistochemistry (IHC) can be used for its detection.
Methods: To determine the prevalence of MTAP deficiency in cancer and to assess the diagnostic and prognostic utility of MTAP IHC, tissue microarrays containing 37,535 samples from 149 different tumor entities were analyzed by IHC and fluorescence in-situ hybridization (FISH).
Results: At least one case with complete MTAP expression loss was observed in 83 of 149 tumor categories. MTAP staining was most commonly lost in neuroendocrine neoplasms (up to 80%), Hodgkin's lymphoma (50.0%), mesothelioma (32.0-36.8%), bilio-pancreatic adenocarcinomas (17.9-40.5%), and urothelial neoplasms (10.5-36.7%). FISH validation identified homozygous 9p21 deletions in 95-100% of cases with MTAP expression loss in most tumor categories. However, neuroendocrine tumors, Hodgkin's lymphomas, and other lymphomas mostly lacked 9p21 deletions. MTAP deficiency was significantly linked to unfavorable tumor phenotype in hepatocellular carcinoma, neuroendocrine tumors, and squamous cell carcinomas ($p<=0.05$). In 1,907 urothelial carcinomas of the bladder treated by cystectomy, MTAP loss was an independent predictor of poor prognosis ($p<0.0001$). In prostate cancer, MTAP loss occurred in <1%, but high MTAP expression was linked to poor prognosis in 4,561 ERG negative tumors.
Conclusions: Given the exclusive occurrence of homozygous 9p21 deletions and complete MTAP expression loss in neoplasms, it is concluded that MTAP IHC has high diagnostic utility for the distinction of neoplastic disease in many applications including flat urothelial lesions as well biopsies from lung, pancreas, bile ducts, thorax and other sites as a tumor marker. In addition, MTAP expression status has diagnostic and prognostic role in many tumor types.

Keywords: Fluorescence in-situ hybridization, Immunohistochemistry, MTAP

[OP-10]

Programmed Death Ligand-1 (PDL1) Expression in Testicular Germ Cell Tumors with Somatic-Type Malignancies

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Objectives: Somatic-type malignancies (SMs) arising from testicular germ cell tumors (GCTs) are rare, seen in 3–6% of GCTs, and generally believed to result from transformation of teratomatous elements. SMs are usually resistant to chemotherapy targeted at GCT and have a dismal prognosis in metastatic sites if not totally resectable. In this study, we aimed to evaluate PD-L1 staining in SMs as an indicator of potential benefit for immunotherapy targeting the PD-1/PD-L1 axis.
Material &Methods: Archival investigation of our pathology department of a tertiary-care center revealed 14 resections with SM from 12 patients who underwent orchiectomy for GCTs and subsequent retroperitoneal metastatectomy (RM) between 2000 and 2016. Tissue microarrays were constructed and 4 µm sections were used for immunohistochemistry in two platforms: Dako Link 48 (clone 22C3) and Ventana BenchMark (clone SP263). The combined positive score (CPS) was calculated for each case and any value above 1% in either platform was considered positive.
Results: SM was in testis primary in 2/14, in retroperitoneum in 7/14, in visceral organs (lung and kidney) plus retroperitoeum in 2/14, and at distant sites (brain, axilla, neck) without retroperitoneum in 3/14 patients. The most common histological type of SMs was sarcoma (n=6) followed by adenocarcinoma (n=3, one being mucinous), embryonic-type neuroectodermal tumor (ENT) (n=2) and Wilms tumor (n=1). PD-L1 positive staining was detected in 6 of the 14 cases (43%). These were 2 adenocarcinomas (mucinous adenocarcinoma was negative), 2 sarcomas, 1 ENT, and the Wilms tumor.
Discussion: Our study shows that significant number of the GCTs with SM express PD-L1. This opens a window that anti-PD-L1 directed immunotherapy may be listed among the treatment options for patients having these tumors, particularly at advanced stages where complete surgical removal may not be possible.

Keywords: PDL-1, Somatic-Type Malignancies, Testicular Germ Cell Tumors

[OP-11]

Correlation between clinicopathological features and prognosis of translocation-type renal cell carcinomas

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Background: Translocation-type renal cell carcinomas (t-RCCs) are recently described renal tubule epithelial tumors. Translocations of TFE3 (Transcription Factor Binding To IGHM Enhancer 3) and TFEB (Transcription Factor EB) genes, two members of the microphthalmia-associated transcription factor (MiTF) family, and oncogenic activation as a result of their fusion with different partner genes play a role in their pathogenesis. The clinical-pathological spectrums of these tumors and the relation between clinicopathologic findings and prognosis have not yet been fully determined.
Methods: In this study, archival slides of all renal cell carcinomas with an unclassified or unusual morphology, which were excised between 2000-2018 in a tertiary care university hospital were reviewed for the potential to be t-RCCs. The suspected cases were stained for TFE3 and TFEB immunohistochemically. The diagnosis of t-RCC was confirmed by fluorescence in-situ hybridization. Total 35 cases showed rearrangement of either TFE3 (n=32) or TFEB (n=3). Clinical, histomorphological and immunohistochemical features of these cases were noted, and their correlation with the clinical outcome was investigated.
Results: In our study, pathological stage (pT) and parameters determining pT (tumor size, perirenal fat, renal sinus, renal vein and adrenal invasion), positive surgical margins, lymphovascular invasion, necrosis, cytoplasmic eosinophilia, and lack of psammomatous calcifications and hyaline cores affected both overall and disease-free survival negatively. Additionally, pelvicalyceal involvement was associated with reduced overall survival, while age, type of surgical procedure, infiltrative pattern, solid architecture and intense intratumoral inflammation were correlated with short disease-free survival.
Conclusions: In addition to well-known factors affecting prognosis in RCCs, microscopic variables (cytoplasmic staining properties, psammomas, hyaline cores, growth pattern and associating inflammation) are also significant to predict disease progression and survival in t-RCCs. These features may be used to develop a novel histological grading system that can be implemented to pathological evaluation of these tumors in the future.

Keywords: tRCC, TFE3, prognosis

[OP-12]

Lysine-specific histone demethylase 1 (lsd1) expression in malignant phyllodes tumours: clinical relevance and prognostic significance

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Background: Phyllodes tumours (PTs), a fibroepithelial neoplasms of the breast, accounts for 1% of all breast tumours. Classification into benign, borderline & malignant require incorporation of histological features like stromal cell atypia, hypercellularity, mitoses overgrowth, and tumour borders. Histological classifications not always reflect tumour behaviour, making clinical management challenging.
LSD1 through FET family oncogene transcription factors, promotes numerous sarcoma through loss of cell polarity, disrupting intercellular adhesion and increases invasiveness. LSD1 is overexpressed in sarcomas supporting its role as driver in the development sarcomas and promising targets for new therapeutics.
Aim: 1. Immunohistochemical expression of LSD1 in malignant PTs (MPTs).
2. Correlation of LSD1 expression with clinico-histological parameters, disease progression and survival outcomes.
Design: 83 MPTs were diagnosed in our department between Jan 1992 to October 2017. Utilizing 2mm tissue microarray, immunohistochemistry was performed. Nuclear LSD1 expression in stromal and epithelial cells analysed and correlated. Disease-free survival (DFS), metastasis-free survival (MFS) and disease-specific survival (DSS) were defined as the time from diagnosis to the date of local recurrence, metastasis or death, or the date of last follow up. Statistical analysis was performed using SPSS Windows, analysis was done using Chi-square or Fisher exact test, DSS, DFS, DSS were estimated with Kaplan-Meier analysis.
Results: The patients ag & ethnicity, tumour stromal cell hypercellularity, overgrowth, atypia, mitoses and margins were analyzed. Nuclear LSD1 expression in stromal cells was noted in 67 tumours. Statistically significant correlation was observed with permeate margins (p=0.009). LSD1 expression did not effect survival outcomes (DFS, MFS & DSS). Epithelial cell expression did not reach the statistical threshold of 50% for further analysis.
Conclusion: LSD1 expression corelated with the aggressive feature of MPTs and may provide insight in the biological behaviour of the tumour. It may serve as new paradigms in clinical and therapeutic management of MPTs.

Keywords: phyllodes tumour, breast, immunohistochemistry

[OP-13]

Male breast cancer: Experience of the pathology department at Mohamed VI Universty Hospital in Marrakesh

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Male breast cancer is a rare condition, accounting for approximately 1% of all breast cancers and less than 1% of all male neoplasms. Its rarity often leads to delayed diagnosis. Management is multidisciplinary and primarily follows that of female breast cancer.
The aim of this study is to identify the epidemiological and pathological characteristics of this poorly understood condition. This study is based on a descriptive retrospective analysis of 18 cases collected from the pathology departments of Mohammed VI University Hospital in Marrakech over an 18-year period from 2005 to 2023. Our series includes a total of 18 patients aged between 28 and 66 years, with a mean age of 55 years. Palpation of axillary lymph nodes was frequent (60%). Breast ultrasound was the most requested examination. The received specimen were simple breast biopsies, lumpectomies, or mastectomies. For histopathological analysis, 14 cases were non-specific type infiltrating breast carcinomas, 2 were phyllodes tumors, 1 was a tubular breast carcinoma, and 1 was a ductal carcinoma in situ. Among these carcinomas, 57% were classified as SBR II, 28% as SBR I, and 14% as SBR III. In situ carcinoma was found in 2 cases of infiltrating breast carcinomas. Vascular emboli were found in 80% of cases. Lymph node dissection was negative for all 18 cases studied. Immunohistochemical study showed that 38% were classified as Luminal B, 32% as Luminal A. Male breast cancer is a rare condition, the pathophysiology of which is still unclear. Hormonal and genetic factors have been implicated. It is often diagnosed at an advanced stage, leading to a poor prognosis. All histological varieties can be seen in men, with a predominance of non-specific type infiltrating breast carcinoma. Hormone receptors are often positive. Various therapeutic options will be discussed based on histological type, SBR grade, and prognostic elements.

Keywords: Male, Breast, Carcinoma

[OP-14]

Aspiration cytology of uterine adnexal cystic masses: a multicenter retrospective study of 323 cases

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Background: The objective was to assess the efficacy of cyst-aspiration cytology and to elucidate its impact on clinical management.We investigated cystic lesions, excluding solid ones for a cyto-histopathologic correlation& imaging and serological data.This is one of the largest adnexial-cyst-aspiration series in English literature.
Methods: The electronic archives of 3 hospitals were retrospectively searched(2019-2024) for adnexal cystic FNAs. Both intraoperatively and reoperatively (transvaginal, transabdominal) collected cyst-aspirations were included.The cyto-histopathological comparison was made when possible. Risk of malignancy(ROM) for different categories of cytology results,and diagnostic performance was measured.
Results: Totally, 328 cyst-aspirations of 323 patients were investigated.The youngest case was two-days old, ranging to the eldest of 83 yo; the average age was 35±12,3.Of all cystic-lesions 297 (90,5%)were ovarian, and 31 (9,5%) were extra-ovarian lesions.FNAC results were;“negative for a malignancy”-311 (94,8%)cases,“atypical”-9 (2,7%)cases,“suspicious for malignancy”-5 (1,5%)cases and “malignant”-3 (0,9%)cases.In 56% of the cases reported as “negative for malignancy”;cyst-lining cells (epithelial/luteal) were found in 85 cases(25,9%) and the smears were predominantly hypocellular.The cyst-fluid either contained only non-diagnostic cell groups such as histiocytes, peripheral-blood elements or was acellular. Histopathology results were obtained for 90 cases (27,5%) and compared with the cytopathologies. Malignancy (4 malignant,10 borderline tumors) was detected in 15.5% (14/90) of cases and all of them were ovarian. In calculating ROM rate, borderline tumors were considered malignant.The ROM was 7.6% (6/79) in cases reported as “negative for malignancy”, 50% (2/4) for “atypical”, 80% (4/5) for “suspicious for malignancy” and 100% (2/2) for “malignant” cases. Specificity(98%), sensitivity(50%), NPV(92%), PPV(86%), accuracy (92%) of cytology was calculated by excluding the “atypical”cases.
Conclusion: Although sensitivity is low, jointly with serum CA-125 levels and imaging data; the diagnostic validity of FNAC is raised for the selective groups; in pediatric patients&young females with low serologic values, to avoid unnecessary operative interventions, saving resources. Serologic, sonographic and cytologic findings could be used as triple-approach model at first-step.

Keywords: Adnexal cyst, ovarian cyst, fine needle aspiration cytology

[OP-15]

Mmunhistochemical Evalution of CD133 and Nestin Expression In Meningiomas and Their Correlation with Histological Grade and Prognostic Factors

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Purpose: Nestin and CD133 are defined as cancer stem cell markers in the literature for various tumors. However, data showing the relationship between Nestin and CD133 expression with prognostic and predictive factors in meningioma cases are limited. This study aims to assess the expression of Nestin and CD133 in meningioma cases and investigate their relationship with tumor proliferation index and other prognostic factors.
Material-Methods: A total of 183 intracranial meningioma cases diagnosed in the Pathology Department of Ankara Training and Research Hospital between 2010-2022 were included. Cases were reevaluated according to the 2021 World Health Organization (WHO) Classification of Tumors of the Central Nervous System. Immunohistochemical staining with Nestin and CD133 antibodies was applied to paraffin blocks, and expression levels were assessed.
Results: The positivity rates for Nestin and CD133 in cases were 52% and 48%, respectively. It was determined that Nestin expression is significantly associated with high tumor grade ($p<0.001$), presence of brain invasion ($p=0.002$), high proliferation index ($p<0.001$), and high mitotic count ($p<0.001$). CD133 expression, on the other hand, was found to be significantly associated with male gender ($p<0.001$), high tumor grade ($p<0.001$), presence of brain invasion ($p=0.002$), presence of necrosis ($p<0.001$), high proliferation index ($p<0.001$), and high mitotic count ($p<0.001$). Additionally, a significant correlation was found between Nestin and CD133 positivity ($p<0.001$). The median follow-up is 86 months (range, 3-185 months). The 10-year overall survival rate is 78%, and in multivariate analysis, CD133 positivity (HR: 1.4, 95% CI: 0.1-0.9, $p=0.04$) was identified as a significant independent negative prognostic factor for overall survival.
Conclusion: Both Nestin and CD133 positivity are associated with adverse prognostic factors for intracranial meningiomas. Additionally, CD133 positivity is a negative prognostic factor for overall survival.

Keywords: CD133, meningioma, nestin

[OP-16]

DNA Methylation Profiling of CNS Tumors at King Hussein Cancer Center

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Background: DNA-methylation-profiling is increasingly used in the classification of tumors. King Hussein Cancer Center recently started implementing methylation profiling for CNS tumors.
Methods: DNA-methylation-profiling conducted on 122 CNS tumors from 117 patients. The median age was 28.3 years with 70 (57.4%) adults, and 68 (55.7%) males. Calibrated score (CS) >=0.9 was considered an optimal score for a definite diagnosis by the classifier. Concordance with the histopathology-based diagnosis was performed. Discordance was categorized as major if resulted in a change of the entity and/or grade that impacts management, otherwise it was considered minor. Counts with frequencies and percentages are used to present the data.
Results: There were 94 (77.0%) concordant cases at the level of the methylation family, regardless of the CS. However, within the 0.9 CS (n=62), there were 51 (82.3%) concordant cases. The 11 (17.7 %) discordant cases included 8 cases (9.1%) with major change in the histopathology-based diagnosis, 2 of which are recent entities, one (0.8%) with minor change in the histopathology-based diagnosis, and 2 (1.6%) in which the methylation classifier yielded the wrong diagnosis. Regardless of the CS, there were 63 (51.6%) gliomas, 2 of which were unclassifiable. There were 54 (85.7%) concordant glioma cases, 7 (11.1%) discordant cases including 5 gliomas incorrectly reclassified as control tissue/ inflammation. There were 3 cases (2 patients) of high-grade astrocytoma with piloid features. Glioneuronal tumors (n=6, 4.9%) had 2 discordant cases, including the newly described glioneuronal tumor with ATRX-alteration, kinase-fusion and anaplastic features. There were 19 (15.6%) ependymomas, including 16 (84.2%) concordant cases. Embryonal tumors (n=16, 13.1%) were concordant in 14 (87.5%) cases. The two discordant cases were PLAG amplified tumor, a newly described entity, and BCOR-altered tumor in an adult patient.
Conclusions: Our initial experience shows a good concordance rate between the initial histopathology-based diagnosis and the methylation profiling.

Keywords: CNS tumors, DNA methylation profiling, Molecular classification

[OP-17]

Utilizing vimentin immunohistochemical stain as a diagnostic tool to differentiate oligodendrogliomas from astocytomas in the setting of limited molecular resources

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Background: Astrocytomas and oligodendrogliomas are frequent brain tumors, with distinct clinical characteristics. Diagnosis is based on morphology, immunohistochemistry (IHC) and molecular studies. Our aim is highlighting the value of vimentin IHC in differentiating both entities in limited resources settings.
Methods: This is retrospective study. Cases of oligodendrogliomas and astrocytic gliomas tested for 1p/19q co-deletion by fluorescence in-situ hybridization (FISH) from 2017 to Feb-2024 at King Hussein Cancer Center (KHCC) were retrieved. Vimentin IHC was performed on each case. FISH result for 1p/19q co-deletion was retrieved from electronic medical records (EMR). Correlation and comparison between FISH results and vimentin IHC was performed. Positive-predictive value (PPV) and negative-predictive value (NPV) were calculated.
Result: 116 cases of brain tumor fulfill the criteria; 65 were diagnosed as oligodendrogliomas with positive 1p/19q co-deletion by FISH and 51 case were diagnosed as astrocytic gliomas (pilocytic astrocytoma n=1, diffuse astrocytoma n= 13, anaplastic astrocytoma n= 11, and glioblastoma n=26) with negative 1p/19q co-deletion. Among oligodendroglioma cases, 89.3% (n=58) were negative for vimentin with only 10.7% (n=7) positive cases. For astrocytic gliomas, 86.3% (n=44) were positive for vimentin while 13.7% (n=7) were negative. The positive-predictive value (PPV) of negative vimentin IHC in diagnosis of oligodendrogliomas (cases positive for 1p/19q co-deletion and negative vimentin IHC) is 89.2%. On the other hand, negative-predictive value (NPV) of positive vimentin staining in diagnosis of oligodendrogliomas (case negative for 1p/19q co-deletion and positive vimentin IHC) is 86.2%. This means negative vimentin staining is highly reliable indicator for diagnosis of oligodendrogliomas. Conversely positive vimentin staining is more likely seen in astrocytic gliomas.
Conclusion: Vimentin IHC is a valuable, cost effective and resource saving method that helps in differentiating oligodendrogliomas from astrocytic gliomas, in the setting of limited resources facility where molecular testing might not be feasible, which may affect management strategy.

Keywords: Vimentin immunohistochemistry, FISH for 1p/19q co-deletion, oligodendroglioma and astrocytoma

[OP-18]

Outsourcing of molecular testing for central nervous system tumors in the era of integrated molecular diagnosis: An experience from King Hussein Cancer Center

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Background: Diagnosis of central-nervous-system (CNS) tumors requires molecular stratification, in addition to clinical, radiological, histopathological, and immunohistochemical findings. This is challenging in low-and-middle-income-countries (LIMC).
Methodology: This is a retrospective study of CNS tumor patients outsourced from King Hussein Cancer Center (KHCC) in Jordan to SickKids Hospital in Canada from November 2021 until December 2023 for further molecular stratification by 4 tests. Various demographics and statistics were analyzed, focusing on implications of outsourcing in patient management.
Results: One-hundred-twenty-nine samples were considered for outsourcing, mostly pediatric (n= 97; 87%) with male prevalence (n=62; 56%). Reports were received for 119 (94%), of which 107 (90%) included final diagnoses and 12 (10%) showed indeterminate results. Failure to send 10 samples due to block unavailability or financial limitation (8%). Based on molecular testing, average turnaround-time (TAT) and total cost were calculated as follows: Medulloblastoma-subgrouping (n=56; 47%),TAT 49 days, cost 27,160JD; Tru-Sight Pan-Cancer RNA-Sequencing (n=52; 44%), TAT 68 days, cost 85,904JD; Low-Grade Fusion Analysis (n=8; 7%), TAT 42 days, cost 4,000JD; and C19MC by fluorescence in-situ hybridization (FISH) (n=3; 2%), TAT 38 days, cost 1,500JD. Concordance with pathologic diagnosis was seen in 102 cases (95%), while 4 reports changed the diagnosis (4%), of which 3 were major and involved following: BCOR-sarcoma to undifferentiated solitary-fibrous-tumor with NAB2::STAT6 fusion; supratentorial ependymoma to pilocytic astrocytoma with JAKMIP2(exon 20)::BRAF(exon9) fusion; and pediatric-type diffuse high-grade glioma, H3-wildtype, with NRASp.Q61K and NF1.pV33Sfs*9 SNVs, common in low-grade glioma; however, clinical course remained in favor of original pathologic diagnosis. Twenty-seven cases were candidates for targeted treatment (25%) based on molecular results.
Conclusions: Outsourcing molecular testing provides comprehensive assessment of CNS tumors in LIMC. Challenges include cost, long TAT, potential loss of specimens and other technical issues. However, providing targeted treatment, especially for low-grade glioma cases, is a notable benefit.

Keywords: LIMC outsourcing, CNS tumors, molecular testing

[OP-19]

Diffuse leptomeningeal glioneuronal tumor: A small case series of a rare entity

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Background: Diffuse leptomeningeal glioneuronal tumor (DLGNT) is a rare entity that commonly involves the leptomeninges diffusely. Mostly affects pediatric patients, male predominance was identified. Herein, we aimed to share the clinical, histomorphological, molecular features of 3 cases.
Methods: Between 2005-2023, 6 excision materials of 3 patients were diagnosed with DLGNT in our center. Demographic and clinical data of the patients obtained from the hospital records. All histological preparations of the cases were re-evaluated.
Results: Among all cases, mean age was 17 (range:7-29 years). One of them was male, 2 were female. The youngest male patient had walking difficulty, the others had symptoms of increased intracranial pressure. On radiological imaging all cases had diffuse leptomeningeal enhancement and thickening along the spinal cord. Also, the oldest female patient had serebellopontin mass; the youngest male patient had spinal mass. On H&E sections, the histomorphological findings were similar and they had monomorphic oligodendrocyte-like tumor cells with uniform, medium-sized round nuclei. Immunohistochemically all cases were positive for Olig2, negative for IDH1, p53 and ATRX was positive. In FISH analysis, 1p deletion were detected in all cases. We also detected the same *NF1* variant(p.L792F) in 2 of 3 cases. The youngest male patient had additional *MAP2K1* variant (p.K57_Q58delinsR*). During follow-up, 2 female cases deceased in the 3rd year after diagnosis.
Conclusion: DLGNT is indolent in some patients, aggressive in others. Because these neoplasms do not yet have a defined grade, prediction of aggressiveness is inaccurate, therapy choices are individualized according to clinical, histopathological, molecular characteristics. Although KIAA1549: BRAF fusion which is the most common *MAPK* alteration could not be investigated we found a *MAP2K1* variant (p.K57_Q58delinsR*) in one case, which is likely pathogenic by NGS. There is no proven data in the literature regarding this variant in DLGNT. Further data is needed to understand this rare tumor.

Keywords: glioneuronal tumor, leptomeninx, neuropathology

[OP-20]

Loss of p16 expression on immunohistochemistry is a cost and time effective surrogate of CDKN2A Alteration in adult astrocytoma

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Introduction: According to World Health Organization's (WHO) most recent categorization patients with CDKN2A mutations behave aggressively, even in the absence of microvascular proliferation and necrosis, and thus qualify as grade 4 tumors.
Objective: To look for p16 deficiency on Immunohistochemistry in adult astrocytoma as a cost and time effective surrogate of CDKN2A mutation in gliomas.
Materials and Methodology: This cross-sectional study included 63 cases of adult astrocytoma. The nuclear reactivity of the p16 was considered positive.
Results: Age range was 18-70 years. Of the 63 patients, 39 (61.90%) were male and 24 (38.10%) were female. Among the different histological grades of astrocytoma included in our study, 37 (58.70%) were grade 2 astrocytoma, 7 (11.10%) were grade 3 astrocytoma, and 19 (30.20%) were grade 4 astrocytoma. As long as the loss of p16 was observed, we found that there was a complete loss of p16 expression in 9 (14.30%) cases, focal p16 expression in <5% of tumor cells was observed in 14 (22.20%), while 40 (63.49%) cases showed retained/over expression of p16 in > 5% of tumor cells. When this loss of p16 expression was compared to different histological grades, we found that out of the 9 cases in which there was complete loss of p16 expression, 3 were grade 2 astrocytoma, and 6 were grade 4 astrocytoma. In cases with focal retained expression of p16, 9 cases were grade 2 astrocytoma, 1 was grade 3 astrocytoma, and 4 were grade 4 astrocytoma.
Conclusion: Study concluded the loss of p16 expression in low-grade as well as high-grade astrocytoma, warrants reflex testing/screening for p16 in every case of astrocytoma irrespective of its histological grade. Ideally, CDKN2A genetic testing should be performed but at rock bottom patients in which there is loss of p16 expression should be referred for genetic testing for CDKN2A

Keywords: Astrocytoma, CDKN2A, World Health Organization

[OP-21]

Evaluation of CD30, BCL-2 and C-MYC Protein Expression, BCL-2 and C-MYC Translocation in Diffuse Large B Cell Lymphoma (Not Otherwise Specified, NOS)

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Background: The classification of diffuse large B cell lymphoma has been updated twice in the last decade in the 4th and 5th editions of the WHO classification of haematolymphoid tumors. Despite attempts to homogenize, 'DLBCL, NOS' is still a very heterogeneous group of cases today.
Methods: In our study, cases diagnosed with DLBCL between 2018-2020 in ESOGÜ, Department of Pathology were screened. BCL2, BCL6, MYC gene abnormalities were evaluated with FISH in cases with histological diffuse large B cell lymphoma morphology. DLBCL-MYC/BCL2/BCL6 and DLBCL-MYC/BCL6 dual and triple rearrangement were detected in 3 cases and were excluded from our case series for homogenization. 45 cases included in the ''DLBCL, NOS'' category were divided into molecular subtypes according to the Hans algorithm. CD30, BCL2, BCL6, MYC protein expressions, double expression status were evaluated and the statistically significant relationship between gene abnormalities detected with FISH was investigated.
Results: Correlation was investigated between BCL2, BCL6, MYC gene abnormalities detected by FISH and protein expressions, but as reported in the literature, no significant result was found ($p>0.05$). Positivity was detected in two more cases with BCL2 SP66 clone, but no statistically significant difference was found in terms of sensitivity then BCL2 Clone124. BCL2 expression frequency in nodal lymphomas and BCL2 and double expression frequency in Non-GCB type were found to be high ($p<0.05$). MYC gene abnormalities were observed less frequently in cases with CD30 expression. Ann-Arbor stage and LDH levels were found to be high in cases with MYC translocation and copy number increase ($p<0.05$). Frequent association was observed in BCL2, BCL6 and MYC copy number increases ($p<0.05$).
Conclusions: DLBCL, NOS cases are a very heterogeneous entity, so it is thought that knowing these factors in daily practice will be useful in terms of predictability of prognosis and treatment planning.

Keywords: CD30 expression, Diffuse large B cell lymphoma, not otherwise specified (NOS)

[OP-22]

Development of deep learning-based artificial intelligent image analysis model for thyroid papillary carcinoma diagnosis

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Background: Papillary thyroid carcinoma (PTC), the most prevalent form of thyroid cancer, presents a diagnostic challenge due to the difficulty in distinguishing between benign and malignant lesions, especially in cases with borderline nuclear atypia. This hurdle has spurred research into deep neural networks for image classification. However, these networks often require extensive datasets, a limitation this study addresses. This project aims to develop a deep-learning image analysis model using a limited dataset from our lab. The study involves analyzing histopathological images from 300 PTC patients using a deep neural network with human supervision to enhance accuracy. Initial results are promising. A seven-layer deep neural network was trained on a dataset of 21 pre-annotated images, subdivided into 2163 smaller images. Histopathologists then categorized them as either malignant or benign. The resulting validation accuracy is 99.39%. These findings suggest that the model can aid pathologists in diagnosing borderline lesions, potentially leading to improved diagnostic accuracy and reduced screening time.
Methods: This cross-sectional study focuses on PTC diagnosed at Sultan Qaboos University Hospital between 2021 and 2022. This research proposes a novel, human-assisted, semi-automated deep learning approach that mimics the human training process. This will involve utilizing Matlab and Python with their deep learning toolboxes, with a primary focus on quantitative analysis of the generated data.
Results: A simple deep-learning neural network, is developed in the Matlab application and trained using 2163 pre-annotated images obtained from the 21 histopathology images. A histopathologist team carried out the annotation process. The resulting validation accuracy is 99.39%.
Conclusion: This article describes a research proposal for developing software using a novel deep-learning neural network to assist pathologists in the diagnostic process. It also discusses an initial binary decision deep-learning neural network structure and its validation accuracy. The initial study's promising results predict the project's successful completion.

Keywords: Papillary carcinoma, image analysis, artificial intelligence

[OP-23]

Can a histopathologist predict the diagnosis of a thyroid tumor based on micro computed tomography images? Results of a survey with 70 participants on four thyroid tumors

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Histopathology is the primary method used in tumor diagnosis. However, various characteristics of tumors can also be evaluated through radiological methods. Here, we aimed to investigate to what extent it is possible to diagnose and define the pattern of thyroid tumors using micro computed tomography (micro-CT).

Methods: This study compared three imaging modalities on four thyroid tumors: 1. classical papillary carcinoma, 2. follicular variant papillary carcinoma, 3. medullary carcinoma, and 4. poorly differentiated carcinoma (PTC/PTC-FV/MC/PDTC). Hematoxylin-eosin (HE) stained, micro-CT block (BS) and synchrotron (SS) scanned images of four tumors were integrated to a 24-question multiple-choice survey, which was shared via social media platforms (WhatsApp, X). Tomographic scans were recorded in cone beam geometry with an effective pixel size of 10 µm (Histomography GmbH-Germany). Samples were scanned at the synchrotron with a parallel beam setup, achieving a voxel size of 650 nm (GINIX endstation, P10 beamline, DESY, Hamburg). A total of 70 pathology residents and specialists examined the images and marked the tumor diagnosis or predominant pattern choosing from the options provided.

Results: Out of 70 participants, 62.9% were experienced pathologists and 47.1% indicated a specific interest in thyroid pathology. Out of the 560, 546 and 553 responses for HE, BS and SS based images, 70.2, 66.5 and 73.1% were correct respectively. However, no significant relationship was found between the type of image and the correct response rate (Pearson Chi-Square p=0.059). Participants gave more accurate answers to the questions probing the tumor pattern, than to the questions probing the tumor diagnosis (p=0.00). With the same test, correct response rate showed a significant relationship with experience in pathology (p=0.012), with the tumor type (p=0.00) (highest for PTC, lowest for MC); but not with having an interest in thyroid pathology (p=0.888).

Conclusion: Although radiological methods do not achieve image resolution comparable to HE, a histopathologist who is knowledgeable about the microscopy of tumors and aware of the diagnostic possibilities, can make fairly consistent predictions about the patterns and types of thyroid tumors by examining images obtained through a radiological method.

Keywords: Micro computed tomography, Thyroid, Imaging

[OP-24]

DOING THE BEST WITH LIMITED OPPORTUNITIES: Rapid On-site Evaluation

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In recent years, with the widespread use of imaging technologies, the detection rate of thyroid nodules has increased. Although most nodules are benign, approximately 7-15% will be malignant, so additional workup is important. Ultrasound-guided fine needle aspiration (FNA) has become the standard diagnostic method for thyroid nodule examination due to its rapidity, low complication rate, and cost-effectiveness. The Bethesda Thyroid Cytopathology Reporting System (BTCRC) is used for cytological reporting.

However, 2–20% of thyroid nodule samples are inadequate for examination due to the low number of evaluable thyrocytes in the sample and are therefore classified as nondiagnostic (BSRTC category I). In this case, it causes repeat FNA, longer waiting time, increased healthcare expenses, and unnecessary uncertainty, anxiety and psychological stress in patients.It has been recommended to perform rapid on-site evaluation (ROSE) to reduce the rate of non-diagnostic findings and the frequency of repeated FNA. The aim of the study was to show that ROSE could prevent unnecessary repeat FNAs, especially in primary care hospitals with limited resources.

The study covered 969 FNABs while the surgery service performed standard FNAB on 186 thyroid nodules, the radiology service performed ROSE and FNA on 783 thyroid nodules. Use of ROSE resulted in a reduction of nondiagnostic BSRTC category I findings with standard FNAB from 108/186 (58%) to 36/783 (4.5%).The other most significant change in cases undergoing ROSE relative to the standard method was an increase in the number of BSRTC category II cases (33% vs. 83%). In the other diagnosis category, an increase was observed in BSRTC VI (0% vs. 3.2%).

ROSE, which is performed in cooperation between the radiologist and the pathologist, resulted in reaching a higher number of patients, FNABs that are sufficient to make a diagnosis, and the prevention of repeat procedures.

Keywords: Rapid On-site Evaluation, FNA, ROSE

[OP-25]

Thyroid Lymphomas: A Comparison of Fine Needle Aspiration Cytology with Biopsy and Thyroidectomy

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Background: Thyroid lymphomas, accounting for 0.5-5% of thyroid malignancies, predominantly present as diffuse large B-cell lymphoma (DLBCL) and extranodal marginal zone lymphoma of mucosa-associated lymphoid tissue (MALT lymphoma).Accurate diagnosis of thyroid lymphomas is crucial for guiding treatment and avoiding unnecessary surgical interventions. Fine-needle aspiration cytology (FNAC), core-needle biopsy (CNB), incisional-biopsy, or thyroidectomy may be used for diagnosis. This study evaluates the diagnostic performance of FNAC compared to histological diagnoses obtained through more invasive procedures and emphasizes the clinical significance of immunohistochemistry via cell-block techniques.

Materials-Methods: The study included 57 patients diagnosed with thyroid lymphomas at four hospitals: Haseki Training and Research Hospital, Kayseri City Hospital, Başakşehir Çam ve Sakura City Hospital, and Ege University Faculty of Medicine. FNAC findings were compared to histological diagnoses obtained through biopsy or thyroidectomy specimens, focusing on diagnostic concordance and the role of adjunct techniques like immunohistochemistry.

Results: Various histological subtypes were identified, including DLBCL(n=35), Burkitt lymphoma(n=3), follicular lymphoma(FL) (n=2), Hodgkin lymphoma(HL)(n=6), MALT lymphoma (n=5), small lymphocytic lymphoma(n=2) ,FL and DLBCL(n=2), ALK-positive anaplastic large-cell lymphoma(ALCL)(n=1) and B-cell lymphoma with features intermediate between DLBCL and Burkitt lymphoma(n=1). Definitive diagnoses were established through incisional-opsy(n=9),lobectomy(n=7), thyroidectomy(n=25), tru-cut biopsy(n=14), and cytology(n=2).

FNAC was performed in 22 cases prior to histological diagnosis, yielding specific lymphoma diagnoses in only 4 cases(1 CLL, 2 DLBCL, 1 HL).

Two cases were identified as malignant lymphoma, but further biopsy was required for definitive diagnosis (1 ALK-positive ALCL,1 DLBCL). Nine cases were reported as “suspicious for lymphoma”on FNAC. Other FNAC results included nondiagnostic (n=2), benign cytology(n=2), atypia of unknown significance (n=1) and malignant-papillary carcinoma(n=1), with the latter co-existing with papillary thyroid carcinoma. Two cases (1 FNAC,1 tru-cut) were misinterpreted as suspicious for anaplastic carcinoma.

Conclusion: FNAC alone is often insufficient for the accurate diagnosis and histological classification of thyroid lymphomas. While it plays a role in initial evaluation, its diagnostic limitations, particularly in differentiating lymphoma subtypes, underscore the importance of supplementary techniques. The use of cell-blocks for immunohistochemical studies enhances diagnostic accuracy, potentially guiding treatment decisions and preventing unnecessary radical surgeries. Accurate subtyping of thyroid lymphomas through biopsy is critical, especially in distinguishing lymphomas from epithelial thyroid malignancies.

Keywords: Fine Needle Aspiration, Incisional biopsy, Thyroid Lymphomas

[OP-26]

The diagnostic role of α- smooth muscle actin in superficial invasive laryngeal squamous cell carcinoma

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Background: The diagnosis of superficial invasion in laryngeal squamous cell carcinoma (LSCC) is a pathological major challenge as it's confirmation is based on histomorphologic features especially in presence of differentials and in absence of reliable immunohistochemical markers. Despite focusing on study of tumor cells, the study of cancer associated fibroblasts (CAFs) in tumor microenvironment (TME) will help to understand the participation of the tumor stroma in tumor development, progression and invasion differentiating it from other premalignant and benign lesions whose features overlap with superficial invasive LSCC causing diagnostic dilemma. CAFs are characterized by expression of α-smooth muscle actin protein (α-SMA) which is used to detect mesenchymal cells in TME.
Objective: To assess the diagnostic role of α-smooth muscle actin immunohistochemical expression in superficially invasive laryngeal squamous cell carcinoma.
Methods: The current study was conducted retrospectively on 108 cases of laryngeal biopsies as archived formalin fixed paraffin blocks.The cases were divided into 4 groups; Group 1: 32 superficial invasive LSCC cases, Group 2: 20 Laryngeal high grade dysplasia/Squamous intraepithelial lesion (HGD/SIL) cases, Group 3: 36 Pseudo epitheliomatous hyperplasia(PEH) cases and Group 4: 20 invasive LSCC cases. The histopathological data were re-examined microscopically by at least two authors. After then, α-SMA expression was evaluated in different groups, followed by statistical evaluation of the obtained results.
Results: Immunoreactivity of α-SMA was expressed in 87.5% of superficial invasive LSCC cases and 100% of invasive LSCC cases, while no reactivity was observed in all cases of HGD/SIL group, and rarely in PEH group (5.6%). There was significant correlation between alpha SMA and both stromal changes and percentage of TILs in superficial invasive LSCC..
Conclusion: Alpha SMA is a potentially valuable marker for labelling CAFs playing a reliable role in confirming the invasion for superficial invasive LSCC and differentiating it from HGD/SILs and PEH cases.

Keywords: Superficial invasive LSCC, CAFs, α-SMA

POSTER ABSTRACTS

[P-01]

Apocrin Carcinoma of Breast: A Mini Case Series

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Background: The breast carcinoma classification was updated in the 2019 WHO Classification of Breast Tumors. 'Carcinoma with apocrin differentiation' is included in the special type of breast cancer subgroup. It is a rare type, accounting for less than 1% of all breast malignancies. In our presentation, the clinical, histopathological and immunohistochemical features of four cases diagnosed with 'Carcinoma with apocrin differentiation' were examined.
Methods: Our study included 3 cases diagnosed at 'Eskişehir City Hospital' and 1 case diagnosed at 'Kütahya Evliya Çelebi Research Hospital' in 2023 and 2021. Two of the cases were total mastectomy and axillary dissection specimens, and the other two were segmental mastectomy specimens.
Results: 'Carcinoma with apocrin differentiation' cases were 74, 72, 54 and 34 years old, with a mean age of 59. Tumor diameters ranged from 3.5 cm to 1.5 cm. Three of the cases had a nuclear grade and 'Nottingham combined histologic grade' of 2. Another case had a nuclear grade and 'Nottingham combined histologic grade' of 3. All cases had ductal carcinoma in situ. Additionally, papillary apocrine metaplasia was generally observed around the tumor. Estrogen receptor and Progesterone receptor immunohistochemical markers were negative in all cases, and Androgen receptor and GCDFP15 were positive. Cerb B2 was positive in two of the cases. KI-67 proliferation indices ranged from 15-55%, with a mean of 35%. Lymphovascular invasion was observed in three of the cases. Two cases had one axillary lymph node metastasis. The sentinel lymph node of the other case was negative. No distant organ metastasis was detected in the PET-CT scans of the cases at the time of diagnosis.
Conclusions: Prognosis varies according to histological types in breast carcinomas. Therefore, it is important to know the types of breast carcinomas in the 'special type of breast cancer' category and to make a correct diagnosis.

Keywords: Apocrin carcinoma, Breast, Carcinoma with apocrin differentiation

[P-02]

Encapsulated Papillary Carcinoma of Breast: A Rare Case Report

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Introduction: Encapsulated papillary carcinoma is a rare type among papillary lesions of the breast. This lesion accounts for less than 0.5-1% of all breast carcinomas. It is usually observed in postmenopausal women and has a very good prognosis. In our presentation, the histopathological and clinical features of a case of encapsulated papillary carcinoma are examined.
Case: Our case is a 92-year-old postmenopausal woman who applied to the general surgery clinic with a complaint of a mass in her right breast. Breast USG revealed a thick-walled cystic lesion of 5.5 cm in diameter in the upper outer quadrant of the right breast. PET-CT showed increased F-18 FDG uptake (SUV max: 11.30) in the lesion. Tru-cut biopsy was reported as an atypical papillary lesion. Excision was recommended for definitive diagnosis. Later, right segmental mastectomy and sentinel lymph node excision were performed. Sentinel lymph node frozen section was performed and no metastasis was detected. Thick-walled cystic lesion and papillary structures around the wall towards the cyst were observed in the right segmental mastectomy material. The diameter of these papillary structures was 2.5 cm in some areas. No myoepithelial layer was observed around and inside the cystic lesion with P63, CK5/6 and Calponin immunohistochemical markers. Nuclear grade: 2 was detected. Estrogen Receptor and Progesterone Receptor were 95-100% strongly positive. Cerb B2 was negative (score 1). Ki-67 proliferation index was 15%. GATA3, Mammoglobin were positive, TTF1 and PAX8 were negative, which were applied to confirm the origin. Our case was reported as encapsulated papillary carcinoma (pTis) with these findings.
Conclusion: Diagnostic difficulties are experienced in papillary lesions of the breast, especially in tru-cut biopsies, and excisional biopsy is recommended for definitive diagnosis. A good knowledge of the histological and clinical features of encapsulated papillary carcinoma will help us in making the diagnosis.

Keywords: Encapsulated papillary carcinoma, Papillary lesions of the breast, pTis

[P-03]

Invasive Solid Papillary Carcinoma of the Breast: An Uncommon Case Report

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Introduction: Solid papillary carcinoma is a rare papillary lesion of the breast with a good prognosis. Its incidence among breast malignancies is less than 1%. Invasive ductal carcinoma focus may accompany solid papillary carcinomas. In such cases, grading and clinical management of the patient are planned according to the focus of invasion. In our presentation, the histopathological, immunohistochemical and clinical features of a solid papillary carcinoma case with a focus of invasion are examined.
Case: Our case is a 54-year-old female patient who applied to the general surgery clinic with a complaint of a mass in her left breast. A BIRADS 3 lesion of 1.1 cm in diameter was observed in breast USG. A tru-cut biopsy was performed on the lesion, reported as a papillary lesion, and excision of the lesion was recommended. No metastasis was detected in the sentinel lymph node. A papillary lesion with a solid growth pattern and fibrovascular core was observed in the left segmental mastectomy material. No myoepithelial cells were observed in the lesion and around the lesion with P63, Calponin, CK5/6, CK14, 34BE12 immunohistochemical markers. Synaptophysin is focally positive in the papillary lesion. Two invasive ductal carcinoma foci of 0.5 and 0.2 cm in diameter were observed around the papillary lesion. In these microscopic invasive foci, 'nuclear grade 2' and 'Nottingham Combined Histologic Grade 1' were detected. ER, PR were observed to be 95-100% positive in both solid papillary lesion and invasive foci. Cerb B2 was negative (score 0). KI-67 index was 5-10%. Our case was reported as invasive solid papillary carcinoma with these findings.
Conclusion: Due to the histological and morphological features of the lesion, it is very difficult to evaluate for invasion. In order not to miss invasion in these lesions, it is important to know their histopathological features well.

Keywords: Solid papillary carcinoma, Invasive solid papillary carcinoma, Papillary lesions of the breast

[P-04]

Mucinous Carcinoma with Extensive Signet Ring Cell Differentiation: A Rare Case

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Background: Breast cancers that present with mucin include mucinous carcinoma and carcinoma with signet ring cell differentiation. The former shows extracellular mucin and the latter shows intracellular mucin. We report a case of primary breast carcinoma includes both extracellular and intracellular mucin.
Methods: A 74-year-ol women presented with a palpable mass at the left breast. First tru-cut biopsy then a lumpectomy specimen was sent for examination. A poor circumscribed solid lesion, 2,5 cm in great diamater was found.
Results: Microscopically most of the tumor consisted of mucinous components and less of solid islands. In the mucinous component, there were tumor cell clusters floating in the mucin pool. Many tumor cells were seen as signet ring cell with the tumor nucleus pushed into a corner by abundant inracellular mucin. In the solid component there were focal signet ring cell differantition too. There was also a ductal carcinoma in situ (DCIS) component. The DCIS component showed a significantly high nuclear grade.
By immunohistochemistry tumor cells were negative for ER, PR, positive for HER2 (3+) with a Ki67 labeling index of about %30. In addition tumor cells were positive for Gata-3, GCDFP-15 and Cytokeratin7, E-Cadherin, MUC-1. Tumor mucin was positive for histochemical Mucicarmine and Alcian Blue. Two lymph nodes were sent for frozen section, no metastasis was noted.
Conclusions: Primary breast carcinoma with signet ring cell differentiation is very rare and should be distinguished from metastasis. In this case immunhistochemistry and DCIS supported primary breast origin. However; this case is mucinous carcinoma with signet ring cell differentiation but it has features (high grade nuclear pleopmorphism, ER-PR negativity and HER2 positivity) that differs from typical mucinous carcinoma.

Keywords: Breast, Mucinous carcinoma, Signet ring cell

[P-05]

Breast cancers and molecular profile in Algeria

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Background: Breast cancer is the most common cancer worldwide, and the fourth leading cause of cancer death. Almost patients are women.
Methodology: A retrospective study carried out on 267 patients with breast cancer over a period of 3 years (2021-2023) Results: Our study reveals the predominance of breast cancer in women, the range age most involved is 40-59 years old. right breast cancer is the most common specially right-upper quadrant, and 52% of cases are diagnosed in tumoral stage T2. 71% of cases are nonspecific infiltrating carcinoma (NSIC) with an utmost common SBR grade II which represents 86%. The doublet ER+PR+ is found in 68% of cases and hormone receptor are negative in 27% patients, almost cases are HER2 negative and Ki67 expression is over cut-off in the majority of cases.
Discussion: Compared to literature our population is younger with a most involved rang age 40-59 years old.
Breast cancer is more common in women and this fact is directly related to the steroid hormones' stimulation.
NSIC is the predominant histology in our series and the grade II SBR is the most common, these results join the literature. In our population luminal B is the first molecular group and this fact is concordant to literature.
In general, HER2 is positive in 20-25% of patients in all collected series, in our study only 9% of cases are HER2 positive. We know that prognostic is very bad in triple negative breast cancer with Ki67 upper to 14%, and this group represents 22%, however the Ki67 upper to 14% is found in 72%.
Conclusion: This study allowed us to establish a molecular classification, luminal B phenotype are tumors with a poor prognosis. Histology combined to immunochemistry can facilitate the determination of molecular phenotype to improve breast cancer management and enhance treatment response.

Keywords: molecular, luminalA, luminalB

[P-06]

Prognostic value of high tumor-stroma ratio in estrogen receptor-positive breast cancer

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Background: In breast cancer, attention has focused on the poor prognostic value of the tumor-stroma ratio (TSR), which was demonstrated in the triple-negative subtype. However, there is little available data for other carcinoma types. Our study aimed to determine the prognostic value of TSR in estrogen receptor (ER)-positive invasive breast carcinomas.
Methods: TSR was analyzed in hematoxylin and eosin-stained surgical specimens from patients with EP-positive breast carcinomas. Tissue from the most invasive tumor was chosen, and percentage scores were given per 10-fold per image field. Tumors with a low ratio had >=50% of stroma, while tumors with a high ratio had <50% of stroma.
The association between TSR and prognostic histopathological parameters, including tumor size, grade, mitotic activity index, lymph-node status, vascular invasion, and HER2 status, was examined.
Results: Our study included 70 patients, all with carcinomas of no specific type, with an average age of 65 years. The average tumor size was 3.5 cm, and the modified SBR grade was mainly II in 78.5% of cases and grade III in the remainder. The tumors were predominantly of luminal A type in 64.2% of cases. Sixty percent of tumors had a high ratio, and 40% had a low ratio. Tumors with a high ratio showed significant correlation with large size (p=0.02), grade III (p=0.045), presence of vascular invasion (p=0.0034), and lymph node metastasis (p=0.0012). No significant association was found with the mitotic activity index and HER2 status.
Conclusion: Our study demonstrates that a high TSR was associated with poor histopathological parameters in EP-positive breast carcinomas, similar to the triple-negative subtype. These results may have therapeutic implications, suggesting the need to tailor treatments for patients with ER-positive invasive breast carcinomas based on the TSR. Standardizing the evaluation of this parameter is important for its inclusion in reports of breast carcinomas.

Keywords: Breast cancer, prognosis, Luminal

[P-07]

Importance Of Breast Cancer Molecular Subtypes In Breast-Conserving Treatment Of Women Who Have Received Neoadjuvant Chemotherapy

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Background: Neoadjuvant chemotherapy (NCT) can increase the chances of breast conserving treatment (BCT) in patients eligible for mastectomy. Receptor status has led to classification of breast cancer subtypes. The aim of this study is to identify the potential for NCT to downstage disease on each molecular subtype of breast cancer, allowing BCT in patients who otherwise might require mastectomy.
Methods: A retrospective study was conducted between January 2013 and June 2019 in 84 women with operable breast cancer at the Hospital University Cancer Centre of Sidi-Bel-Abbes (Algeria). Univariate analysis was performed. The overall survival (OS) and the disease free survival (DFS) were calculated using the Kaplan-Meier method. The 5-year survival was analyzed according to tumour subtypes evaluated after NCT. A p value <0.05 was considered significant for all statistical tests.
Results: Patients had a median age of 47 years (28-75 years), 56% of them were clinically diagnosed stage III. The median follow up was 30.5 months. Twelve patients (14.3%) were able to undergo BCT after NCT. The most likely subtype to convert to BCT was ER+/ Her2+ (27.8%).
Patients with the ER-/Her2+ subtype (70%) were most likely to have recurrence, while those with the ER+/Her2+ subtype were least likely to have recurrence (5.6%) (P= 0.002). The comparison between conversion to BCT and radical mastectomy (RM) is as follows: patients who received BCT accuses least relapses than those who underwent RM (8.3% vs 36.1%, p= 0.05), with best 5-year DFS (91.7% vs 63.9%) and a trend of increased 5-year OS (83.3% vs 70.8%) without significance.
Conclusion: Patients treated by NCT, who were identified for treatment at subtype ER+/ Her2+ were the most likely to become eligible for BCT and the least likely to have recurrence. Conversion of patients from mastectomy to breast conserving treatment is an important outcome.

Keywords: Breast, Cancer, Subtypes

[P-08]

Breast Cancer In Young Women, Neoadjuvant Chemotherapy And Survival Benefit

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Background: The aim of this study is to assess the impact of neoadjuvant chemotherapy (NCT) on survival patients of less than 39 years of age.
Methods: A retrospective analysis was made on survival data of 115 patients with operable breast cancer, admitted from January 2012 to December 2017 in the Hospital University Cancer Centre of Sidi-Bel-Abbes (west of Algeria), for NCT cures followed by surgery and adjuvant treatments. Patients were stratified into three age groups (group 1, <=39 years; group 2, 40-50 years; group 3, >=51 years). Chi-square test was performed for all association analyses.The overall survival (OS) and the disease free survival (DFS) were calculated using the Kaplan-Meier method. The 5-year survival was analyzed according to age at diagnosis. A P value of <0,05 was considered significant.
Results: The median follow up was 32 months. The 5-year DFS rates were 44% in the youngest patients, compared with 67% and 80% in groups 2 and 3, respectively (p=0.013), with a median 5-year DFS of 48 months (95% CI [7.739-88.261]). Group 1 patients also had a worse 5-year OS, compared with the older patient's age (50% versus 76% and 74%; p=0.088) (Figures). Patients aged <=39 years were significantly most likely to have recurrence (57%) and death (50%, p=0,028), while those older patient's age were least likely to have recurrence (27%) and death (23%) (p=0.038). the patients of group1 were least likely to have breast conserving treatment (BCT, 7%) then those older patient's age (16%), without significance. (p=0.36).
Conclusion: The patients in the youngest age group remained at a high risk for recurrence and for death. In this cohort, patients who were identified for treatment at age <=39years were the least likely to become eligible for BCT and the most likely to have a twice worse OS and DFS.

Keywords: Breast-cancer, young-age, survival

[P-09]

Therapeutic Approaches Of Chemotherapy In Women With Breast Cancer In North-Western Algeria

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Background: Neo-adjuvant chemotherapy (NCT) and adjuvant chemotherapy (ACT) are used in the treatment of breast cancer. NCT offers a well-established strategy for advanced cases, while equaling adjuvant chemotherapy in terms of survival. The aim of this study was to compare clinico-pathological factors of breast cancer in women treated by different approaches of chemotherapy.
Methods: A retrospective analysis was made on 253 women with operable breast cancer, admitted from January 2021 to December 2023 in the mother-child specialised hospital establishment of Sidi-Bel-Abbes (west of Algeria), for NCT cures followed by surgery and ACT. Patients were stratified into tow treatment approches groups (group NCT = 73 patients and group ACT = 180 patients). We compared the two groups of patients: according to the clinical-pathological factors.
Results: Our results show that the mean age at diagnosis is 51±1,27 years in the ACT adjuvant chemotherapy population and 49±1,42 years in the NCT neoadjuvant chemotherapy patients, with extremes ranging from 18 to 88 years. The clinical tumour size for the ACT group is T1 and T2 with clinical stage II, in contrast to patients who have received neo-adjuvant chemotherapy, who are T3 and T4 with a locally advanced stage (stage III).
Conclusion: The clinical aspects compared between the two groups of patients (ACT versus NCT) showed a trend in the choice of therapeutic approach. Clinical size T3 and T4 as well as clinical stage III tended to be associated with neoadjuvant treatment, compared with adjuvant treatment.

Keywords: Cancer, Breast, Chemotherapy

[P-10]

Breast Carcinoma Metastasis on Thyroid Fine Needle Aspiration Biopsy: A rare case report

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Introduction: Axillary lymph node, bone, lung and liver metastases can be frequently detected in patients with breast carcinoma. However, the thyroid gland is a very rare localization for breast carcinoma metastasis. The incidence of breast carcinoma metastasis in thyroid fine needle aspiration biopsy (FNAB) is less than 0.2%.
Case: Our case is a 42-year-old female patient diagnosed with invasive ductal carcinoma 7 years ago (ER+, PR-, Cerb B2: Score 2/ FISH-, KI-67: 25%). Right mastectomy and axillary dissection were performed. In the clinical follow-up, breast carcinoma metastasis was detected in the lung, pleura and fourth rib 20 months ago. The patient, who received chemotherapy and is still being followed-up, showed F-18 FDG (SUV MAX: 4.89) uptake in the right lobe of the thyroid gland 6 months ago in the control PET-CT. A two-cm diameter irregularly bordered nodule was observed in the thyroid USG and thyroid fine needle aspiration biopsy (FNAB) was performed from the nodule. The material was examined using liquid-based cytology and cytoblock methods. Microscopic examination revealed atypical epithelioid cells with large hyperchromatic nuclei and eosinophilic cytoplasm, which were in the form of gland-like cell groups. GATA3 and ER immunohistochemical markers were positive; TTF1, PAX8, Thyroglobulin, and Calcitonin were negative. Based on the findings, a diagnosis of invasive ductal carcinoma metastasis of breast origin was made in the thyroid fine needle aspiration biopsy. After chemotherapy treatment, the lesion was observed to have completely disappeared in the PET-CT taken 3 months later. The patient's clinical oncological follow-up is ongoing.
Conclusion: The thyroid gland is a rare localization where metastases from other organs are seen. It should be noted that in thyroid fine needle aspiration biopsies (FNAB), not only thyroid gland malignancies but also, rarely, metastases can be seen.

Keywords: Breast carcinoma metastasis, FNAB, The thyroid gland

[P-11]

Epidemiological and morphological profile of cutaneous metastases: Experience of the pathology department at the Mohamed VI University Hospital Marrakech

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Cutaneous Metastases are secondary localizations of malignant tumors and can sometimes reveal the primary tumor This retrospective study examines histologically diagnosed cutaneous metastases at the pathology department of Mohamed VI University Hospital in Marrakech from January 2014 to December 2023, spanning 10 years.
During the study period, 195 cases of cutaneous metastases were recorded. The mean age of patients was 45.1 years, ranging from 21 to 90 years. Macroscopically, metastases were nodular in 83 cases (42.56%). The most common locations were the thorax (80 cases, 41.02%), abdomen (62 cases, 31.7%), head and neck (27 cases, 13.84%), limbs (23 cases, 11.79%), and pubic region (3 cases, 1.53%). Histologically, adenocarcinoma was the predominant type (117 cases, 60%), followed by Paget's disease (11%), and neuroendocrine carcinoma (6%). The primary cancers were mainly breast, digestive, pulmonary, and gynecological in origin.
Cutaneous metastases represent the spread of a distant malignant tumor to the skin. They can be the first sign of cancer or the first indication of metastatic recurrence in previously treated cancer patients. The frequency of cutaneous metastases is low, with breast, colon, lung, and gynecological cancers being the most common sources, consistent with our findings. The exact mechanism of cutaneous metastasis is not well understood. Several theories have been proposed, suggesting that distant metastases spread hematogenously, while local metastases propagate via dermal lymphatic routes or through iatrogenic manipulation, leading to the implantation of tumor cells.
Cutaneous metastases can be the first sign of a primary tumor or metastatic recurrence of a known cancer. Given the poor prognosis, cutaneous metastases should always be considered in patients with a history of cancer who present with suspicious skin lesions.

Keywords: Dermatopathology, cutaneous, metastases

[P-12]

Idiopathic calcinosis cutis: a case report

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Backgroud: Idiopathic calcinosis cutis is a rare condition caused by the formation and accumulation of phosphocalcium deposits in the skin. It may be idiopathic or occur following a pathological, traumatic, inflammatory, degenerative or neoplastic process.
Methods: Observation of a case of idiopathic calcinosis cutis diagnosed on July 2024 within the department of pathology of the Mohammed VI university hospital center of Marrakech.
Results: We report the case of a 60-year-old patient, with no pathological history, who consulted for whitish papules located in the left iliac and scrotal region, evolving for 10 years. Clinical examination revealed millimetric papules, firm to palpation, chalky and ulcerated in some places. Complete phosphocalcic profil was normal. The patient underwent surgical biopsy and excision. Pathological examination revealed calcific, anhistatic, basophilic deposits of variable size in the dermis, surrounded by a granulomatous foreign-body reaction. The diagnosis of idiopathic calcinosis cutis was retained.
Conclusion: Idiopathic calcinosis cutis is a rare, benign dermatosis with no identifiable cause. It is due to the deposition of calcium phosphate crystals in the skin. Histological examination allows us to make this diagnosis, thereby avoiding invasive additional examinations or unnecessary treatments. ,

Keywords: Calcinosis cutis, idiopathic, pathology

[P-13]

Pseudoendocrine Sarcoma: A Case Report of a Newly Described Soft Tissue Tumor

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Background: Pseudoendocrine sarcoma (PES) is a recently reported tumor that usually arises in paravertebral deep soft tissues and shares histological similarities with well-differentiated neuroendocrine tumors, but it lacks epithelial and neuroendocrine marker expression. Most of the reported PES exhibited aberrant nuclear β-catenin expression with confirmed mutations in the *CTNNB1* gene. We here describe the clinicopathological, immune histochemical, and molecular findings of one case.
Case Presentation: A 70-year-old man presented with left posterior neck mass that was discovered on surveillance imaging for a previously diagnosed colorectal carcinoma. Imaging revealed an enhanced left paraspinal soft tissue mass measuring 5x6.2x7 cm. The mass is separate from the adjacent bone and nerve roots. Histologically, a relatively circumscribed neoplasm with lobular invasion into the adjacent tissue. The tumor is made up of epithelioid cells with uniform, central round nuclei with speckled chromatin and pale cytoplasm with focal clear cell change. The cells are arranged in sheet-like, trabecular, organoid, and/or nested patterns. Occasional pseudo-glycular architecture, eosinophilic hyaline globules and psammomatous calcifications are noted. Immune histochemical staining showed negative expression of Pan-cytokeratin, CK7, CK8/18, CK20, EMA, p63, synaptophysin, chromogranin A, GFAP, and SOX10 with weak S100 positivity. Strong nuclear β-catenin expression was observed throughout the tumor. The Ki-67 labeling index was 10–15% in areas with increased mitotic activity. DNA-based targeted next-generation sequencing (NGS) confirmed the presence of a *CTNNB1* (p.S37F) mutation.
Conclusion: The prominent epithelioid morphology and predilection for deep soft tissues in the paravertebral region of PES may raise the possibility of other tumor types such as paraganglioma, ependymoma, glomus tumor and some round cell sarcomas such as Ewing sarcoma and so it may represent a diagnostic pitfall. Accurate diagnosis is challenging on morphology alone, and it mandates immune histochemical and molecular evaluation. This is very important because of the varied biological behaviors and clinical outcomes.

Keywords: Pseudoendocrine sarcoma, neuroendocrine, Beta catenin

[P-14]

Medullary Thyroid Carcinoma Presenting With Metastases: 3 Case Reports

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Introduction: Medullary Thyroid Carcinoma (MTC) is rare primary neuroendocrine malignancy of the thyroid gland that develops from parafollicular C cells. MTC often metastasizes to liver, lung, mediastinum and bone. We would like to present 3 cases presented with metastasis.
Case: The first case was a 41 year old woman operated for colon carcinoma who was found to have multiple lesions in the liver on routine examinations. Liver biopsy demonstrated tubule structures with pink, acellular substance in their lumens. Immunhistochemical (IHC) CK7, PR were positive; CK20, CDX2, AmyloidA were negative. After 1 month, a bone lesion was detected and a biopsy specimen showed monotonous cell groups with narrow cytoplasm, hyperchromatic, plasmacytoid nucleus in a single microscopic focus. IHC panCK, CK7, CD56, Synaptophysin, Chromogranin, Calcitonin, TTF1, M-CEA, PR were positive and the case was reported as MTC metastasis. Then thyroid was operated and MTC was diagnosed. Second case was a 37 year old male patient come to the hospital with renal colic pain. Preopreative scans revealed miliary lesions in the lung. Lung wedge resection sections showed a tumoral lesion with multiple focus, accumulation of pink-amorphous material and eosinophilic cytoplasm, round, hyperchromatic nucleus. IHC CD56, Chromogranin, Synaptophysin, Calcitonin (focal), M-CEA were positive. Histochemical K.Red positive.The case was reported as MTC metastasis. Third case was 47 year old man who had a history of oligodendroglioma, epilepsy and frequent nervous breakdown attacks was found to have lymphadenopathy in the cervical region during oncologic follow-up. Tumoral cell groups and amyloid deposition were observed in the lymph node biopsy. This case was also reported as MTC metastasis.
Conclusion: MTC is a rare thyroid carcinoma with a poor prognosis. Patients may apply to the clinic with signs of metastasis. In metastatic cases of unknown primary, MTC should be considered in the presence of amyloid deposition and neuroendocrine morphology.

Keywords: Neuroendocrine morphology, Medullary thyroid carcinoma, Metastasis

[P-15]

Incidental hobnail subtype papillary carcinoma of thyroid in thyroglossal duct cyst

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Introduction: The thyroglossal duct cyst (TGDC) is the most common neck developmental anomaly, found in 7% of the population. During embryonic development, thyroid gland connected to foramen cecum and hyoid bone by thyroglossal duct(TGD), gradually disappears by the 10th week. If involution fails, TGD remnants may persist as cystic or ductal formation. Ectopic thyroid tissue is found in the TGCD wall in 65% of cases. Malignant neoplasms arising from TGDCs are rare, accounting for 1-3% of all TGDCs. Hobnail-Papillary Thyoid Carcinoma(HPTC) a rare,agressive subtype, has not been reported in the TGDC.
Case: A 31-year-old male was admitted with anterior neck swelling that had been present for 5 years. Ultrasound revealed a cystic lesion localized in the midline of the neck. There was no solid or cystic lesion in the thyroid gland. The cyst was excised with a preliminary diagnosis of TGDC. Macroscopic examination revealed a cyst measuring 4 cm in diameter with a solid area measuring 1.5x1 cm. Histopathologically majority of the cyst was denuded of epithelium and had fibrotic wall. In samples taken from solid areas, a tumor forming papillary structures with fibrovascular cores was observed. The tumor consisted of cells with large, elongated nuclei and clear chromatin, containing nuclear grooves and pseudoinclusions. Approximately 70% of the tumor consisted of cells having enlarged nuclei that bulge from the apical surface. Immunohistochemically tumor cells showed TTF-1, Thyroglobulin, HBME-1positive staining. With these features, the case was reported as papillary thyroid carcinoma of the hobnail subtype (HPTC) in TGDC. It was decided to perform thyroidectomy and neck dissection.
Discussion: HPTC presents extrathyroidal extension or lymph nodal metastasis majority of the cases. Thyroglossal duct cysts should be carefully examined because of the possibility of neoplastic development. Morphological features associated with aggressive behavior should be well distinguished because of different therapeutic approach.

Keywords: papillary thyroid carcinoma, hobnail subtype, thyroglossal duct cyst

[P-16]

inaugural metastases in Algeria

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Background: Metastases represent the most important challenge in cancer care, with an incidence and clinical presentation depending in each studied population. Elderly feminine population are particularly vulnerable, but their epidemiologic and anatomopathological profiles remains to be explored.
Objective: This study aims to precise epidemiologic and anatomopathological characteristics of metastases in elderly women, in order to understand better this disease and to guide management strategies.
Methodology: A retrospective analysis of epidemiological and anatomopathological data has been carried out on a cohort of elderly women (65 years old and more) over a period of 5 years, demographic characteristics metastases sites and primary histology has been studied.
Results: 314 patients have been included in this study, 65٪ of the studied population are women of whom a quarter (25٪) are over 65 years old, the samples received are almost biopsies (86٪), the most common metastatic site is the peritoneum (represents 22٪ of cases), adenocarcinoma is the most prevalent histology with a significant prevalence of 44٪. the origine of inaugural metastases has been found in 73٪ of cases which breast cancer is the most common, unknown primary site represents 23٪ in this series and it requires clinical paraclinical investigations or even molecular analysis.
Discussion: This result demonstrates the importance of close monitoring for metastases in elderly women, and highlighting the value of regular screening for the most common metastatic sites. Optimizing and individualizing treatment with taking in consideration the primary histology and prognostic factors can leads to the improvement of clinical benefits with potential impact on patients quality of life and survival improvement. Conclusion: This study provides a detailed epidemiological and anatomopathological characteristics of metastases in elderly women, this result highlights the importance of close monitoring of this high-risk population and suggests new paths to enhance clinical care in particular identifying predictive prognostic factors.

Keywords: Metastases, inaugural, Cup

[P-17]

Neoadjuvant treatment for gastric adenocarcinoma: predictive factors of histological response

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Background: The prognosis of locally advanced gastric adenocarcinoma (GA) is significantly improved with perioperative chemotherapy (CT). However, more than a third of treated patients experience a recurrence of the disease. The histological response to neoadjuvant treatment is a crucial factor, correlated with overall and recurrence-free survival rates. This study aimed to identify the predictive factors of the histological response to neoadjuvant treatment in GA.
Methods: Our study was descriptive and retrospective, involving patients with GA who underwent surgery after neoadjuvant treatment between January 2008 and January 2020. To assess the histological response to neoadjuvant treatment in gastric resection specimens, Mandard's tumor regression grade (TRG) was used. This 5-grade system considers the proportion of residual viable tumor cells and the extent of fibrosis and has been condensed into two groups: Group response (TRG1 to 3) and no response (TRG4 and 5).
Results: In our study, we examined 40 patients with an average age of 61.95 years (+/- 9.81). The numbers in the 2 groups were comparable: the no response group 52% and the response group 48%.
In univariate analysis, these factors were predictive of the histological response: tumor differentiation (p=0.002), parietal invasion (p<10-3), lymph node invasion (p<10-3), pTNM stage (p<10-3), presence of vascular emboli (p=0.001), perineural invasion (p=0.001), and tumor size (p=0.003). In the multivariate analysis, parietal invasion (p=0.022) and lymph node invasion (p=0.001) were identified as independent predictive factors of histological response.
Conclusions: Based on these results, we can adapt the treatment of patients with locally advanced GA by considering neoadjuvant CT and specific protocols. This will enable quick surgical intervention for poor responders and help in avoiding the toxicity of CT. To aid in this adaptation, we propose predilection scores for the response to neoadjuvant treatment, which comprise the different factors found in this study and their respective weightings.

Keywords: Gastric cancer, Chemotherapy, Prognosis

[P-18]

Colorectal cancers linked to probable Lynch syndrome: A study of 339 cases

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Background: Lynch syndrome (LS) represents approximately 1 to 5% of colorectal cancers (CRC).It is caused by a germline mutation affecting at least one gene in the MMR (mismatch repair) family. This mutation is responsible for microsatellite instability (MSI) which, it is observed in 90–95% of CRC linked to LS. The objective of our study is to identify a population of CRC with MSI phenotype and to detect probable LS by immunohistochemistry using the four MMR proteins such as (hMLH1, hPMS2 hMSH2, hMSH6).
Methods: The work presented is a retrospective and prospective mono-centric study of 339 cases of colorectal cancers collected in our Anatomy-Pathology department at the Abdelkader Hassani University Hospital of Sidi Bel Abbes, during six years (2010-2016).
Results: Microsatellite instability (MSI) is noted in 10.98% (n=9). Probable LS is detected in 2%. The mean age of the patients with MSI phenotype, linked to probable LS was 50 years. Correlations of MSI status were significant for site, tumor differentiation grade, PN lymph node status and stage with p value respectively (0.001), (0.031), (0.046), (0.039).
The MSI status/correlations were not significant for the following parameters: sex, parietal infiltration (pT) and metastasis. We note that loss of expression of MSH2 is the most frequent with 55.55% (n=5) followed by MLH1 33.33% (n=3) and MSH6 11.11% (n=1).
Conclusion: Microsatellite instability is observed in 10.98% of cases. MSI CRC have a predilection for the right colon. Immunohistochemistry is a simple, inexpensive technique that is quickly applied in everyday practice. It identifies the genes of the MMR system involved which will be useful for targeting the search for germline mutations and subsequently directing patients for an oncogenetic evaluation.

Keywords: MSI, LS, Immunohistochemistry

[P-19]

Challenging diagnosis of abdominal actinomycosis: a case report of a 59-year-old male with acute appendicitis-like presentation

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A 59-year-old male presented to our clinic with a two-day history of abdominal pain and vomiting. Physical examination led to a preliminary diagnosis of acute appendicitis, and the patient underwent a laparotomy. During exploration, a fibrous band was observed between the appendix mesentery and the small intestine, which was considered a congenital band. An appendectomy and excision of the fibrous formation were performed.
Histopathological examination revealed reactive lymphoid hyperplasia in the appendix with no other pathologic findings. However, the excised fibrous tissue, initially suspected to be a congenital band, contained rosette-like clusters of basophilic filamentous bacteria surrounded by abscessing acute inflammatory cells. These bacterial clusters were confirmed by Gram and GMS stains. The patient was subsequently diagnosed with abdominal actinomycosis.
As demonstrated in this case, abdominal actinomycosis is a rare and challenging diagnosis, often clinically unsuspected, making it difficult to diagnose.

Keywords: Abdominal actinomycosis, acute appendicitis, congenital band

[P-20]

Gallbladder Actinomycosis Presenting as Gallstones: A Case Report

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Introduction: Actinomyces is a gram-positive, anaerobic, filamentous bacterium that is a normal flora member of the cervicofacial region, gastrointestinal system, and urogenital system. These microorganisms have low pathogenicity, and actinomycosis typically occurs when the mucosal barrier is disrupted for any reason. Gallbladder actinomycosis is extremely rare, with only 22 cases reported in the English literature to date.
Case Report: A 57-year-old female patient presented to the emergency department due to the exacerbation of abdominal pain, which had been ongoing for two years. An abdominal ultrasound (USG) revealed multiple millimeter-sized echogenic calculi in the gallbladder. A contrast-enhanced upper abdominal CT scan showed a hyperdense appearance in the gallbladder, potentially indicative of a stone. Laparoscopic cholecystectomy was performed with a preoperative diagnosis of cholelithiasis; macroscopically, the gallbladder appeared normal, and no stones were observed. Microscopic examination revealed numerous basophilic bacterial clusters with a filamentous structure belonging to Actinomyces in the lumen.
Discussion: Actinomycosis is a chronic suppurative and granulomatous disease most commonly seen in the head and neck, chest, and abdominal regions. It typically spreads within tissues, leading to abscess formation, which eventually results in the formation of draining sinuses. Gallbladder actinomycosis is a very rare condition. Preoperative diagnosis is challenging due to the absence of specific clinical and radiological findings. Radiologically, it can be confused with carcinoma in chronic cases as it causes wall thickening. Diagnosis is usually made through histological examination after cholecystectomy. Long-term antibiotic therapy is recommended in treatment, particularly to prevent recurrence.
Conclusion: In conclusion, gallbladder actinomycosis is an exceptionally rare and incidental condition that is often unpredictable before the microbiological, cytological, or histological examination of the affected organ. With this case report, we aim to raise awareness among surgeons and pathologists regarding the potential and unforeseen occurrence of actinomycosis in the gallbladder.

Keywords: Gallbladder, actinomycosis, carcinoma

[P-21]

Clear cell hepatocellular carcinoma: a clinicopathological study

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Background: The clear cell subtype of hepatocellular carcinoma (HCC) is uncommon, accounting for only 3 to 7% of cases. According to literature series, its prognosis is considered favorable. This type is characterized by a mixture of clear and/or acidophilic ground glass hepatocytes with excessive amounts of glycogen and/or fat. Our series aimed to study the clinicopathological characteristics of this rare entity by analyzing patients treated at our center.
Methods: We included patients with clear cell HCC diagnosed in our center over a 5-year period (2017-2021). The diagnosis was confirmed histologically by biopsies or surgical specimens.
Results: A total of six patients were analyzed, including 4 men and 2 women, with an average age of 56 years., HCC was developed from cirrhosis, with viral origin in 4 cases, metabolic in 1 case, and autoimmune in 1 case. Abdominal pain led to the discovery in 5 cases, while it was accidental in one case. The average tumor size was 4.5 cm (ranging from 2 to 6.5 cm). Surgical treatment was performed in 4 cases, whereas chemoembolization was done in the other 2 cases. On the surgical specimens, the proportion of clear cells ranged from 25 to 70%. All tumors were well differentiated. Vascular invasion was noted in 1 case. After a 36-month follow-up, recurrence was noted in one case, while no cases of metastasis were observed.
Conclusion: These results suggest a low aggressiveness of this subtype, such as histologic differentiation and monitoring data. The clear cell variant of HCC requires additional studies with a larger sample size to fully characterize. This is especially important to address challenges such as determining the minimum percentage of tumor cells required to display clear cell change in order to qualify as this subtype. Correlating histologic features with imaging and molecular features is also crucial.

Keywords: Hepatocellular carcinoma, clear cell, prognosis

[P-22]

Osseous metaplasia in colonic adenocarcinoma Case report

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Background: Osseous metaplasia (OM) has been described in both benign and malignant tumors of the gastrointestinal tract (GIT). Indeed, OM in the gastrointestinal tract was first comprehensively described by Dukes in 1939. It is an extremely rare phenomenon, and only 20 cases have been reported in the literature. OM has a non-specific clinical presentation and unknown pathogenesis. Here, we report a case of colonic adenocarcinoma with OM.
Methods: A 55-year-old female with a month's history of paroxysmal dull abdominal pain. Physical examination revealed a hard and poorly mobile mass in the right lower quadrant. A CT scan showed a budding parietal thickening of the right colon. Colonoscopy revealed a mass causing lumenal stenosis. Biopsies of the colon revealed adenocarcinoma. A right colon resection was performed.
Results: The resected right colon specimen contained a protuberant tumor measuring 8 × 7 × 6 cm. Histologically, the tumor showed a malignant epithelial tumor forming a predominantly serrated growth pattern with less than 50% mucinous area. The malignant cells had invaded the muscularis propria. Benign bone tissue was observed in the stroma. Laminated bone trabeculae were scattered in the stroma, but neither necrosis nor hematopoietic fatty marrow was observed. A diagnosis of serrated adenocarcinoma with OM was made.
Discussion: OM in the GIT is rare. It is generally a radiological or histological curiosity and of no prognostic significance. However, its presence in colorectal adenocarcinoma metastatic to soft tissue can mimic a primary ossifying soft tissue neoplasm. Also, the presence of ossification within adenocarcinoma of the rectum may falsely imply sacral invasion, so it has some clinical relevance.
Conclusion: OM in colorectal adenocarcinoma is morphologically peculiar and should be recognized, even though it does not seem to be of prognostic impact.

Keywords: Osseous metaplasia, gastrointestinal tract, ossification

[P-23]

Cutaneus squamous cell carcinoma with unique gastric metastasis; a discussion of diagnostic difficulties and pitfalls

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Introduction: Squamous cell carcinoma SCC) of stomach either primary or metastatic is a rare entity. It can be very difficult to distinguish between the two. We may also encounter with different morphological characteristics in different locations.
Case: A 73-year-old man presented with abdominal pain. Clinic evaluation of the patient revealed that an antropyloric tumor with infiltration of duodenum and head of pancreas on CT scan. There wasn't any other organ/site involvement. Because of tumour localization she underwent Whipple resection. Macroscopically a fungating mass had 10 cm in size, located in antropylorus and extended to duodenum. The tumour attached to peripancreatic tissues but not infiltrated pancreas parenchyma. Microscopically the tumor architecturally, arranged in sheets, nests, cords and rarely forming pseudoglandular structures. The tumor cells had large nuclei, prominent nucleoli, and abundant eosinophilic cytoplasm. We noticed that there were intercellular connections in some areas suggestive of desmosomes. We didn't see any keratinization. Lymphovascular invasion and serozal involvement were present. In contrary there was no lymph node metastasis. Collecting all this features; differential diagnosis included solid varyant of tubulary adenocarcinoma, melanoma, poorly differentiated neuroendocrine carcinoma, hepatoid adenocarcinoma and poorly differentiated SCC.
Immunohistochemically tumour cells showed PanCK, p63, p40 positivity; S100,Chromogranin A, Synaptophysin, HepPar-1, Arginase-1, SALL4, and Melan-A negativitiy. We reported our case as SCC. During histopathological examination it wasn't reported to us that the patient priorly had diagnosis of SCC. We found that the patient had history of moderately differentiated SCC of lower lip five years ago. We accepted our case as metastasis of SCC.
Discussion: Before the diagnosis of primary gastric SCC the possibility of metastasis should definetely be excluded. Especially, poorly differantiated SCC may simulate many tumours. It should be kept in mind that we can encounter variable morphological apperance. Reaching correct diagnosis requires clinical history and detailed histopathological examination supported by appropriate immunohistochemical staining.

Keywords: squamous cell carcinoma, metastasis, gastric squamous cell carcinoma

[P-24]

A gastric localization of a melanoma: Case report

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Background: Melanoma is a malignant melanocytic tumor that develop from melanocytes of the skin and mucosal membranes. Melanomas of the digestive tract are essentially metastasis from a distant primary cutaneous, ocular or anal melanoma. Treatment remains essentially relied on chemotherapy and/or surgery.
Objectifs: Digestive metastases of melanomas are rare. The stomach remains an unusual site. Our case is that of a 60-year-old patient with a gastric metastasis of a primary melanoma of the hard palate, which was diagnosed on biopsies.
Methods: A 60-year-old patient with a history of melanoma of the hard palate in whom it was discovered in a context of iron deficiency anemia and epigastralgia, a round and flat dark pigmented fundal gastric mass. Biopsies were taken. RESULTS: Macroscopic examination: A fragment that measured 5mm.Microscopic examination: Shows a gastric mucosa that is the site of a proliferation of a melanocytic nature, arranged in wide areas of large atypical round to ovoid melanocytes, with abundant cytoplasm loaded with melanin pigment, their nuclei are irregular, bulky and vesicular, with a prominent nucleolus.
The diagnosis of a gastric localization of a melanoma is established.
Discussion: The clinical symptoms of these metastases are unordinary. On esophago-gastro-duodenal fibroscopy, the presence of dark pigmented lesions gives us keys to suggest the diagnosis. Histological analysis confirms this latter.
Conclusion: Melanoma has a very high metastatic potential. Gastric metastasis is exceptional. This rare observation represents 2.6% of gastrointestinal tract metastases. The clinical symptoms are often non-specific and responsible for a diagnostic delay. The prognosis is bad, hence the importance of detecting and treating melanomas at an early stage.

Keywords: melanoma, gastrointestinal tract metastases, chemotherapy

[P-25]

Solitary fibrous tumor of the pancreas: a case report

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Background: Solitary fibrous tumors are rare mesenchymal tumors developed from fibroblasts in the body's soft tissues. Pancreatic localization is exceptional.
Methods: Observation of a case of a solitary fibrous tumor of the pancreas diagnosed in the month of August 2024 within the department of pathology of the Mohammed VI university of Marrakech.
Results: We report the case of a 58-year-old female patient, followed in endocrinology for a mesenchymal tumor dependent on the duodeno-pancreatic region, revealed by atypical epigastralgia and episodes of hypoglycemia. The evolution was marked by a rapid increase in tumour volume. The patient underwent emergency cephalic duodenopancreatectomy.
Anatomopathological study of the surgical specimen revealed a well encapsulated solid cystic mass. Histologically, it was an undifferentiated malignant tumor proliferation with high cell density. An immunohistochemical study using a panel of antibodies showed moderate, diffuse positivity of tumor cells to vimentin, CD34 and focal STAT 6. Tumor cells were negative for cytokeratin and PS100. The diagnosis of solitary fibrous tumor was thus retained.
Conclusion: Solitary fibrous tumors are mesenchymal tumors of difficult diagnosis. Their clinical manifestation depends essentially on their topography. They are tumors of variable malignancy potential, rarely described in the pancreas.

Keywords: Solitary Fibrous Tumor, Pancreas, Pathology

[P-26]

Pseudocarcinomatous hyperplasia of the fallopian Tube,histologically mimicking tubal adenocarcinoma: a Pathological diagnostic challenge two cases report

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Background: Pseudocarcinomatous hyperplasia (PCH) of the fallopian tube is a rare, benign disease characterized by florid epithelial hyperplasia. This entity has not been discussed extensively in the literature but it can pose a considerable problem in differential diagnosis especially with tubal adenocarcinoma.
Methods: Case 1: A 36-years-old woman presented with persistent lower abdominal pain.
The paraclinical examination showed well defined bilateral adnexal cysts with irregular thickened walls, laparotomy was performed under a putative preoperative diagnosis of tubal cancer.
Case 2: A 39-years-old woman presented with left hydrosalpinx found during explorations of the infertility assessment. A salpingectomy was performed.
Results: Gross examination
Case 1: both fallopian tubes were markedly dilated with thickened tubal walls.
Case2: slightly dilated left salpingectomy.
Microscopic examination: Microscopic findings revealed papillary growth and fusion of plicae. The tubal epithelium showed nuclear crowding and epithelial stratification within an inflammatory background; however, cytologic atypia was minimal and mitoses were rare.
Discussion: PCH of fallopian tubes is a rare, reactive response to an underlying inflammatory or neoplastic process, and can mimic adenocarcinoma clinically and pathologically. Differential features that aid the discrimination of benign PCH of the fallopian tube and tubal cancer should be considered to ensure accurate diagnosis and proper management. The typically young age of the patient, the presence of chronic inflammation, the absence of a macroscopically detected tumour or solid proliferation, the mildness of nuclear atypia and the absence of mitotic figures favours the diagnosis of tubal epithelial hyperplasia.
Conclusion: PCH of the fallopian tube is a benign, reactive response to an underlying inflammatory process. A meticulous morphological assessment is required to avoid an erroneous diagnosis of tubal cancer and subsequent overtreatment of this benign disease.

Keywords: Pseudocarcinomatous hyperplasia, tubal adenocarcinoma, morphological assessment

[P-27]

Elastofibroma: A study of 7 cases

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Introduction: Elastofibromas are rare benign lesions, primarily localized in the shoulder region and paravertebral areas. They are characterized by atypical proliferation of elastic fibers and dense fibrosis. Although their prevalence is low, elastofibromas are significant in pathology due to their distinctive histological features. This study, based on seven clinical cases at the CHU of Tangier, aims to deepen the understanding of the pathological mechanisms and clinical challenges associated with these lesions, highlighting epidemiological aspects.
Material and Method: his study focused on seven clinical cases of elastofibromas, with histopathological analysis performed on tissue samples from each case. The main objective was to identify recurring histological characteristics and explore any clinical patterns associated with the development of these lesions. In addition, demographic and epidemiological data were gathered to examine the distribution of elastofibromas according to age, gender, and the anatomical locations of the lesions.
Observations and Results: Histopathological examination of the seven cases reveals a striking uniformity in histological characteristics, with dense bundles of collagen fibers alternating with thick elastic fibers, without malignancy. The collected epidemiological data show that elastofibromas primarily affect middle-aged to older adults, with a slightly higher incidence in women (ratio 2:1). The age of patients in our study ranges from 33 to 69 years. The lesions are often located in specific areas such as subscapular (60% of cases) and dorsal (40% of cases), with some bilateral cases. This histological consistency confirms the benign nature of elastofibromas, while clinical diversity highlights the complexity of their manifestation.
Discussion and Conclusion: Elastofibromas are distinguished by a specific histological presentation: dense bundles of collagen fibers alternating with thick elastic fibers. Often discovered during imaging examinations, mainly subscapular, their diagnosis has improved thanks to orcein and Verhoeff stains, which allow better visualization of elastic fibers, as well as high-resolution MRIs and CT scans detailing the size and location of the lesions. Genetic abnormalities, such as those in the fibrillin-1 gene, offer new insights into the pathological mechanisms. In conclusion, although benign, precise identification of elastofibromas is essential to avoid unnecessary treatments. Advances in histology, imaging, and genomics greatly facilitate diagnosis and clinical management.

Keywords: Elastofibromas, Histological characteristics, Imaging examinations

[P-28]

Parotid gland tumors: a retrospective study of 188 patients

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Background: Tumors of the parotid gland are by far the most common of all salivary gland tumors. They correspond to all the benign or malignant, primary or secondary proliferations that develop in the constituent elements of the parotid gland. Parotid salivary tissue is capable of producing a wide variety of tumours with highly variable evolutionary behaviour, dominated by pleomorphic adenomas.
Methods: The aim of this work is to present our experience with 188 cases of parotid gland tumors collected in the department of pathology of the Mohammed VI University Hospital Center of Marrakech, between January 2013 and December 2023.
Results: The cases included 115 women and 73 men. The average age was 45 years for benign tumors while it was 47 years for malignant tumors. Swelling of the parotid region was a constant revealing sign in all patients. Malignancy is clinically evoked by pain, facial paralysis, fixation to the superficial or deep plane and the presence of adenopathy. Benign parotid tumors represent the most frequent entity (79%) and pleomorphic adenoma remains the predominant histological type (62.5%). Malignant tumors are rare (21%), dominated mainly by ductal carcinomas (12%). Surgical treatment is the option of choice, often associated with lymph node dissection and radiotherapy for malignant tumors. Facial paralysis is the most frequent complication of parotid surgery.
Conclusion: Tumors of the parotid gland poses many diagnostic and therapeutic problems. Pathological studies remain the fundamental examination for determining the nature of the tumor, dictating the subsequent therapeutic attitude and assessing the prognosis.

Keywords: Parotid, Tumor, pleomorphic adenoma

[P-29]

The impact of rational test order algorithm in the diagnosis of bone marrow failure (bmf) in terms of delay in diagnoses, effective workforce, and financial perspective

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Bone marrow failure (BMF) can occur due to benign and neoplastic conditions including myelodysplastic syndrome (MDS). MDS diagnosis, risk stratification and treatment requires a multidisciplinary algorithmic approach and several additional tests including next generation sequencing (NGS) methods. The objective of this study is to reveal the critical role of bone marrow morphology in differential diagnosis of BMF and demonstrate the rational test orders maintaining effective laboratory workforce, waste of financial resources and delay in diagnosis. Hospital records of 96 patients retrieved whose bone marrow biopsy and aspirates were examined in one year with a preliminary diagnosis of MDS. Complete blood count (CBC), reticulocyte, nutritional parameters (folic acid, B12) as well as, flow cytometry (FC), cytogenetic, FISH and NGS panels requested for preliminary diagnosis were recorded. Final diagnoses for each case with the follow up evaluations were recorded.
Thirty-seven of 96 (38,5%) cases were diagnosed as MDS by morphology and confirmed with FC, cytogenetic or FISH. In 55 cases (57,3%), the final diagnosis was non MDS BMF, such as reactive hyperplasia (%45,8, n=44), multiple myeloma (5%, n=3), lymphoproliferative disease (13%, n=7), aplastic anemia (2%, n=1). In 4 (4,2%), cases morphology was not supportive for MDS and diagnosis was made by FC and molecular results. B12 values were tested in 74%(n=41) and folic acid levels were tested in 70%(n=55) of the non MDS cases.
The rate of requesting FC and genetic tests required for the diagnosis of MDS by clinicians in non-MDS patients is very high. Only 4% do not have initial morphology support. If a rational algorithmic test order is not preferred, starting with morphology in BMF patients, it may lead unnecessary molecular test application which will occupy laboratory workforce, bring waste of resources, and may cause delays in diagnosis.

Keywords: MDS, Molecular, tests

[P-30]

Two cases of blastic plasmacytoid dendritic cell neoplasm

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Background & Objectives: Blastic plasmacytoid dendritic cell neoplasm (BPDCN) is a rare and aggressive hematological malignancy, derived from plasmacytoid dendritic cell precursors. It frequently presents with cutaneous involvement, but extracutaneous including bonemarrow infiltration and leukemic dissemination are common. BPDCN poses diagnostic difficulties due to overlapping with other hematological malignancies.
Methods: We present 2 male cases of BPDCN presenting with skin masses.
Results: The first case was an83-year-old patient, who presented with widespread painless erythematous -purplish tumoral masses across the body. The second case was a 55-year-old patient with numerous purple nodular masses on the trunk, the largest measuring 5-6cm in diameter, along with axillary lymphadenopathy.
Histopathological examination revealed a malignant tumor with diffuse infiltration in the dermis, in both cases. Tumor was extending into fatty tissue in Case 2.The epidermis was spared.
The tumor cells exhibited medium size, scant cytoplasm, monomorphic blastoid appearance and irregular nuclei.
Immunohistochemical staining showed positivity forCD123, CD4, CD33, CD14, E-cadherin, and TCL1, while B and T lymphoid markers, myeloperoxidase, CD34, CD117, CD19, perforin, lysozyme and EBER were negative.
Patchy positivity for TDT was observed in Case 2 and CD56 was positive in Case 1. Ki67proliferationindex was 60%and70%, respectively.
Conclusion: BPDCN should be differentiated mainly from acute myeloid leukemia/myeloid sarcoma, mature plasmacytoid dendritic cell proliferation with myeloid neoplasm, lymphoblastic leukemia / lymphoma NK cell leukemia / lymphoma. Expression of plasmacytoid dendritic cell markers (TCF4,TCL,CD3030,CD304 in addition to CD123andCD4and/orCD56) and absence of lymphoid (CD19,CD3,CD20) and myeloid lineage (MPO, lysozyme) markers, as well as CD34 negativity and high Ki-67 proliferation index is helpful in differential diagnosis. It should be kept in mind that Tdt may be positive, variably. Recognition and differential diagnosis of these tumors, for which the median survival is approximately 1 year, is important to elucidate the pathogenesis of the disease and develop appropriate treatment regimens.

Keywords: Plasmacytoid dendritic cell, hematological malignancy, cutaneous mass

[P-31]

Castleman's disease: A histopathological experience from two tertiary hospitals, Western, Saudi Arabia, with emphasis on associated malignancy

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Background: Castleman's disease (CD) is a rare benign disorder. Little is known about the pattern of CD in Saudi Arabia. This study aimed to document the pathological features and subtypes of CD at two tertiary hospitals in the western region of the Kingdom of Saudi Arabia and to emphasize the association with solid malignancy.
Methods: All CDs diagnosed between January 2002 to July 2022 were retrieved. Histopathological and immunohistochemical slides were reviewed. Follow-up data were collected.
Results: There were 45 cases of CD in the records of the two hospitals. The age of the patients ranged between 2 and 85 years (median, 39 years; mean, 40 years). Twenty-eight (62.2%) were males, and 17 (37.8%) were females. There were 33 (73.3%) cases of unicentric CD and 12 (26.7%) of multicentric CD. For UCD, the site of the mass was as follows; neck (16, 48.5%), mediastinal (5, 15.2%), axillary (5, 15.2%), abdomen (5, 15.2%), inguinal (1, 3%), and pelvic mass (1, 3%). The pathological types include 28 hyaline vascular (62.2%), 12 plasma cells (26.7%), and five mixed (11.1%). HHV-8 immunohistochemistry stain was positive in 6.3%. Four (8.9%) cases were associated with carcinoma, including three squamous cell carcinomas (two oral and one vulval) and one breast invasive ductal carcinoma. In all these four cases, the clinical and radiological impression of the enlarged lymph nodes was suspicious for metastasis and gave an initial false impression of advanced tumor stages.
Conclusion: The CD data from two centers were reported. The most frequent site in CD patients was the neck, followed by the mediastinum and axillary. HIV-associated MCDs are less frequently seen in our community compared to literature from western countries. We noted an association between CD and epithelial malignancies with subsequent misdiagnosis as cancer metastasis.

Keywords: Castleman's disease, Saudi Arabia, histopathology

[P-32]

Primary Lymphoma Involving the Breast: Histopathological Experience from Two Tertiary Hospitals, Western Region, Saudi Arabia

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Background: Primary breast lymphoma, a rare condition, constitutes less than 1% of non-Hodgkin lymphomas and only 0.04-1% of malignant breast tumors. Unlike breast cancer and specific types of lymphoproliferative disorders that primarily impact the lymph nodes or other regions, primary breast lymphoma shows distinct prevalence.
Methods: we targeted cases of non-breast implant lymphomas that were diagnosed as primary breast lymphomas between 2002 and 2019. Pathology and immunohistochemistry slides were retrieved and reviewed, additional immunohistochemical markers were done on selected cases.
Result: herein we present a study of 10 patients. On average, individuals received their diagnosis at the age of 38.4 years, with the youngest diagnosis occurring at 23 years and the oldest at 62 years. Primary breast lymphomas were present in nine female patients and one male patient in our study. Out of the total cases, 50% were diagnosed with DLBCL, three of them showing an immunophenotype indicating germinal center B-cell origin. Classical Hodgkin Lymphoma (CHL) accounted for 30%, while 10% were Mucosa-Associated Lymphoid Tissue Lymphoma (MALT) and 10% were high-grade B-cell lymphoma with Burkitt-like morphology. Confirmation of the diagnosis was based on the morphological, immunoexpression and clinical features.
Conclusion: while this study confirms the relatively high occurrence of DLBCL in the breast, it also reveals the wide range of lymphomas that can occur in this location. The diverse subtypes emphasize the importance of conducting additional studies to properly categorize lymphoma types, as these investigations are integral in achieving an accurate diagnosis and ensuring appropriate treatment.

Keywords: Breast, Lymphoma, Immunohistochemistry

[P-33]

Extrameduallary hematopoesis of the endometrium in a successfully treated case with acute myeloid leukemia

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Background & objectives: Extra-medullary hematopoiesis (EMH) represents an abnormal development of hematopoietic tissue outside the bone marrow. Endometrial EMH is a rare finding that might be associated with hematological disorders. This diagnosis requires a thorough examination to exclude the possible association of such a serious disease.
Methods: We present a 51-year-old lady complaining of postmenopausal bleeding. The patient was diagnosed, six years ago, with acute myeloid leukemia. She was successfully treated and, currently in remission for the last four years.
Results: The endometrial specimen showed features of chronic, non-specific endometritis, with the presence of mixed-pattern glands that were inactive, looking to others with secretory changes. The stroma had focal areas of inflammatory cells, comprising plasma cells. In some places, megakaryocytes and nucleated RBCs were also noted, featuring extra-medullary hematopoiesis (EMH). This diagnosis might require a thorough examination of the patients to exclude the possible association of such a serious disease. However, other options prefer to ignore further diagnostic workups.
Conclusion: Careful examination of endometrial curettings or pipelle samplings performed for abnormal uterine bleeding is always warranted to exclude endometrial malignancies or prenoplastic conditions. Moreover, the pathologist should exclude abnormalities in any associated nonendometrial tissues. The most common situation is to exclude cervical pathologies. Herein, we would like to enhance the attention of our pathology colleagues to examine the benign endometrial specimen in balance with all the clinical settings of the patients.

Keywords: Extrameduallary hematopoesis, endometrium, acute myeloid leukemia

[P-34]

Unexpected Expression of T-cell Markers on High-Grade B-Cell Lymphoma with MYC and BCL-6 Rearrangement

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B-cell lymphomas may display abnormal expression of T-cell markers. Apart from CD5 being the most common expressed marker, other T-cell expressed markers may include CD2, CD4, CD7, and/or CD8. It is exceedingly rare for multiple T-cell antigens, including CD3 which is commonly accepted as a specific marker for T-cells, to be expressed simultaneously. Detecting such instances reveals that relying solely on CD3 antibodies in the paraffin section can result in an inaccurate evaluation of cell lineage in certain B-cell lymphoma cases. In situations like these, it is essential to employ immunohistochemistry (IHC) that involves the use of cell lineage-specific markers or molecular analysis aimed at antigen receptor gene rearrangements, as they are crucial for correctly identifying the cell lineage. The challenge is to determine if it is a B-cell lymphoma with abnormal expression of T-cell markers, or a T-cell lymphoma with abnormal expression of B-cell markers. We report an exceptionally rare occurrence of high-grade B-cell lymphoma (HGBL) with MYC and BCL6 rearrangement, that abnormally expresses CD5, CD3, and CD43 along with B-cell lineage markers, exhibiting clonal rearrangement of immunoglobulin genes but not the T-cell receptor gamma (TRG) gene. The new 2022 World Health Organization (WHO) and International Consensus Classification (ICC) recommendations have provided a distinction between MYC-BCL6 rearranged cases and MYC-BCL2 lymphomas, as they are biologically distinct entities. As far as we know, this is the first reported case of HGBL with MYC-BCL6 rearrangement that exhibits strong co-expression of CD5, CD3 and CD43.

Keywords: High-grade B-cell lymphoma, MYC-BCL6 rearrangement, T-cell markers

[P-35]

Insights into an uncommon molecularly brain tumor type with recurrent NTRK gene fusions showing rapid leptomeningeal dissemination: glioneuronal tumor with ATRX alteration, kinase fusion and anaplastic features (GTAKA)

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Background: In 2023, twenty cases of a new molecularly distinct category of glioneuronal (GN) brain tumors have been identified by Bogumil et al. designated as GN tumors with ATRX alteration, kinase fusion, and anaplastic features (GTAKA), mostly seen in childhood and young adulthood and characterized by an aggressive clinical course compared to other GN tumors.
Methods: A 6-year-old female, presented with frequent headaches, underwent craniotomy for a large cerebral hemispheric tumor. She was referred to KHCC for management with a pathological diagnosis of primary neoplastic process representing glial neoplasm or mixed neuronal tumor.
Results: Post op MRI, performed 5 weeks after surgery, showed subtotal resection of large left parieto-occipital tumor and widespread leptomeningeal metastases. The overall radiologic appearances suggested high-grade glioma.
The histopathological exam re-evaluated, evoked central nervous system (CNS) neuroblastoma. Tumor cells showed clear cytoplasm hyperchromatic, sometimes pleomorphic nuclei and rich hyalinized capillaries network. They were diffusely positive for NF-κB, L1CAM, focally positive for Olig2, GFAP and NeuN and negative for CD34 and TTF1. P53 showed wildtype pattern and Ki67 proliferation index was 25%. Based on this diagnosis, the patient received 6 cycles of VEC (vincristine, etoposide, cyclophosphamide) chemotherapy then craniospinal irradiation (36Gy) with boost to the brain. DNA-methylation testing confirmed the GTAKA diagnosis (calibrated-score: 0.999). Further immunostain and molecular testing revealed respectively ATRX loss and NTRK2-fusion with CDKN2A/B homozygous deletion. The patient could not get NTRK-inhibitor and experienced further disease progression, prompting to switch treatment to Whole-brain radiotherapy for palliative intent.
Conclusions: This case illustrates the challenge of accurate diagnosis and highlights the molecular ancillary tests significance in correctly classifying and efficiently managing these CNS GN tumors. Clinical experience with these lesions is very limited. Furthermore, the enormous prospects for patient care are enhanced by the high frequency of targetable fusion events that might represent a therapeutic approach.

Keywords: Glioneuronal tumor, ATRX loss, NTRK fusion

[P-36]

Grade 3 Solitary fibrous tumor of central nervous system: case report

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Background: Grade 3 Solitary fibrous tumor (SFT) is malignant tumor developed from Zimmermann pericytes, contractile cells surrounding capillaries. Individualized in 1942 by Stout and Murray as anaplastic hemangiopéricytoma. Primary SFT of the central nervous system (CNS) is rare tumor and represents 2 - 4% of meningeal tumors. The diagnosis is suggested by histological examination and confirmed by immunohistochemistry.
Methods: We report a case of SFT of CNS occurring in a 62-year-old patient who presented with a highly vascularized parieto-occipital lesion exerting a mass effect on the lateral ventricles. We specify the contribution of immunohistochemistry in diagnosis of this tumour.
Results: A brain CT scan and MRI demonstrated an extra-axial lesion homogeneously and intensely enhancing 68/47/78 mm in the left posterior parieto-occipital area with a central necrosis and perilesional edema. The lesion showed radiological imaging features suggestive of a meningioma. Total resection was performed.
Microscopic examination revealed perivascular proliferation of high cellularity composed of oval to slightly spindle cells with small cytoplasm and a large nuclear cytoplasmic ratio, in a densly hyalinised background and interrupted by numerous slit-like vascular spaces lined by flattened endothelial cells, so called " staghorn" sinusoids. Mitotic figures were 7/10 HPF with necrosis. The histological approach requires the use of immunohistochemistry (STAT6, CD34, Vimentin, CD31, EMA, SMA, PS100, CD99, and KI67).
Conclusion: We have reported a case of malignant Solitary fibrous tumor (SFT) and a review of literature. Grade 3 SFT is a clinicopathologic entity exhibiting high rates of recurrences and late intra and extracranial metastasis, for this reason a long-term clinical and radiographic follow-up is mandatory.

Keywords: s: SFT, Grade 3, immunohistochemistry

[P-37]

Pediatric astroblastoma with MN1 altered: a case report and review of the literature

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Astroblastoma is a rare, primary central nervous system tumor accounting for less than 1% of all brain tumors. It predominantly affects children and young adults, with a slight predilection for females. Astroblastoma are typically located supratentorially, with a significant proportion arising from the cerebral hemispheres. They are characterized histologically by perivascular pseudo-rosette formation, where tumor cells arranged them self radially around small blood vessel. Due to their rarity and histological resemblance to other CNS tumors, the diagnosis requires comprehensive histopathological evaluation, supported by immunohistochemistry and molecular testing. Here we present a case of 2 years old child, presented with 2 weeks history of right eye squint. Radiology reveals a large solid-cystic parieto-occipital mass. Histological examination reveals a highly cellular neoplasm comprised of compact sheets of oval cells with areas of perivascular pseudorosettes. The cells shows dot like positivity to EMA, positive for S100, GFAP and CD56. They are negative for INI, L1CAM, IDH, neuroendocrine markers, Pan CK, BRAF V600, LIN28A and P53. Molecular testing reveals MN1 altered mutation which confirms the diagnosis of Astroblastoma with MN1 altered.

Keywords: Astroblastoma, Brain tumors, MN1 altered

[P-38]

Recurrent malignant teratoid ocular medulloepithelioma presenting as a conjunctival mass after cosmetic evisceration of a misdiagnosed hidden ocular tumor: A case report

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Background: Ocular medulloepithelioma (OM) is a rare embryonal tumour arising from non-pigmented ciliary body epithelium. Although morphologically similar to central nervous system medulloepithelioma (embryonal tumor with multilayered rosettes) but biologically differs as it encompasses a spectrum of benign, malignant, nonteratoid and teratoid tumours. It is the second most common pediatric intraocular tumour after Retinoblastoma, typically presenting between 2-10 years. Clinically, many patients present by glaucoma and cataract with a hidden tumor leading to misdiagnosis.
Case summary: A female patient reported a history of left macrophthalmia and squint at two years of age. She had glaucoma management and cataract extraction. At the age of 8, ocular ultrasound revealed lost anterior chamber and vitreous exudates with no appreciated mass, thus underwent cosmetic evisceration with orbital implant. The patient was lost for follow-up receiving no further treatment. At the age of 10 years, she presented with a rapidly progressive conjunctival mass. Histopathological examination of both ocular content (previously misdiagnosed as retinoblastoma) and the conjunctival mass revealed an embryonal tumor composed mostly of multilayered neuroepithelial tubules with limiting membrane displaying papillary and net-like architecture with significant atypia, mitosis, apoptosis and foci of tumor necrosis. The stroma showed well evident myxoid and hyalinized material. Areas of rhabdomyoblastic and retinoblastomatous differentiation were noted. Lymphovascular emboli and invasion of the inner cornea appreciated.
Immunohistochemical positivity for LIN28A along with rhabdomyoblastic desmin/myogenin staining further confirms the diagnosis of malignant teratoid OM.
Conclusion: The relatively hidden site and slow growth of OM are responsible for frequent atypical presentation and delayed diagnosis. A high index of suspicion is required. Intraocular malignant OM has low metastatic rate that increases with extraocular extension. Malignant teratoid tumours can present with purely sarcomatous secondaries, thus timely diagnosis and histopathologic differentiation from retinoblastoma is of paramount importance.

Keywords: medulloepithelioma, conjunctiva, teratoid

[P-39]

Chordoid Glioma; A very rare glial tumor with chordoma-like morphology

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Introduction: Cordoid Glioma, a slow-growing, well-circumscribed, glial tumor in the third ventricle in adults, is quite rare, with less than 50 case reports in the literature. Histologically, it is a glial tumor consisting of epithelioid cells forming cords and clusters within a mucinous matrix with a morphology very similar to chordoma. It was deemed worthy of presentation due to its rarity and its potential to be confused with other chordoid tumors in differential diagnosis.
Case: A 44-year-old male patient who applied to our hospital's neurosurgery clinic due to headache, nausea and vomiting was taken to surgery after a mass lesion filling the third ventricle and causing compression findings in the surrounding structures was detected on MR radiographs. The submitted specimen is macroscopically 2 cc gray colored, some gelatinous in appearance, fragmented tissues. Microscopic examination showed a tumoral lesion consisting of cells with a large cytoplasm, uniform appearance, slightly enlarged nuclei, separated from each other by fibrous bands in places, in fibromyxoid stroma, in the form of cords and clusters. Mitosis and necrosis were not observed, and in immunohistochemical examination, the cells forming the lesion were observed to be diffusely positive with GFAP and Vimentin, and positive with varying rates of Pancytokeratin, EMA, S100 and TTF-1. Ki67 index was 2%. The case was evaluated as compatible with Chordoid Glioma in this state.
Conclusion: This tumor, which can be confused with neoplasms such as chordoma, chordoid meningioma, epithelioid hemangioendothelioma in differential diagnosis, is important to consider in differential diagnosis, although it constitutes less than 0.1% of all brain tumors

Keywords: Chordoid Glioma, Chordoma, Glial Tumor

[P-40]

Impact of the time of archival tumor tissue on PD-L1 expression in non-small cells lung cancer

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Background: Programmed death ligand-1 (PD-L1) expression predicts immunotherapy utility in Non-Small Cells Lung Cancer (NSCLC). The age of samples may affect PD-L1 expression, particularly if archived tissue is used.
This study aimed to evaluate the impact of the time of archival tumor tissue on PD-L1 expression
Methods: This observational study included 332 consecutive patients with NSCLC who were tested for PD-L1 using the clone 22C3 and stratified in tumor proportion score (TPS). PD-L1 TPS scores were reported according to the most frequently clinically employed cut-off points: samples with <1% TPS were counted as PD-L1 negative, samples with >=1% TPS were classified as PD-L1 positive.
Results: The prevalence of PD-L1 expression was 46.7% (TPS >=1%). TPS was between 1% and 49% in 25.9% of cases and it was >=50% in 20.8% of cases. The median age samples was 2.13 months with a variability of 17 days to 41.7 months. the time elapsed from diagnosis to the immunochemistry analysis was associated with an increased fading of PD-L1 expression: positive PD-L1 staining was higher in time of archival tumor tissue < 6 months (75,5% vs. 25,5%, p = 0.003). There was no significant difference between the time to perform PD-L1 immunohistochemistry and the intensity of staining in positive cases (p=0.09). When the timeframe was <= 6 months, TPS was between 1% and 49% in 70.9% of cases, and it was >= 50% in 81.2% of cases.
Discussion: Several factors are known to affect the immunoreactivity of formalin-fixed, paraffin-embedded (FFPE) tissues. Specifically, the antigenicity of the PD-L1 protein can degrade over time within a tissue block. Therefore, storage conditions such as light, temperature, and humidity can play a role in the loss of PD-L1 expression. Several studies have demonstrated similar findings, showing that the age of the specimen influences PD-L1 staining in immunohistochemistry, with a decrease in expression observed in samples older than 3 years, 1 year, 6 months, or even 3 months.
Conclusion: Our results suggest that specimens older than 6 months may lead to an underestimation of PD-L1 status and should be carefully assessed.

Keywords: PD-L1, immunohistochemistry, archival sample

[P-41]

Primary gastric alveolar rhabdomyosarcoma: a rare case initially misdiagnosed as neuroendocrine carcinoma

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This case report describes a rare instance of primary gastric alveolar rhabdomyosarcoma (ARMS) in a 72-year-old male, initially misdiagnosed as neuroendocrine carcinoma due to similar immunohistochemical profiles. Typically arising in younger individuals and in the extremities, gastric ARMS is exceptionally uncommon, with this case being one of the very few documented. Diagnosis was complicated by the biopsy's small size and the presence of crushing artifacts, which obscured cell morphology and mimicked other poorly differentiated tumors. The correct diagnosis was established after comprehensive resection, immunohistochemical reevaluation, and histochemical staining, highlighting the necessity of a broad diagnostic panel and traditional staining techniques in ambiguous cases.

Keywords: Gastric Tumors, Alveolar Rhabdomyosarcoma, Diagnostic Pitfalls

[P-42]

Sacrococcygeal teratoma in a newborn: A case Report

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Introduction: Sacrococcygeal teratoma is a rare embryonic tumor characterized by various differentiated tissues, presenting unique diagnostic and treatment challenges. This poster examines the histological features of immature teratoma, illustrated by a clinical case from the Department of Anatomy and Cytological Pathology at CHU Tangier.
Observation and Results: A 3-day-old female newborn was admitted with a massive 30 cm sacrococcygeal mass, with a liquid consistency. The resection specimen measured 20 x 11 x 7 cm and weighed 1678 g. It was a well-defined, heterogeneous, gelatinous, cystic, and hemorrhagic tumor, with about 5% necrosis. Histologically, the tumor showed a complex multi-tissular proliferation, including cystic formations lined with squamous and cuboidal cells, sebaceous gland hyperplasia, Malpighian skin epithelium, respiratory mucosa elements, and endocervical and gastric glandular cells. It also contained cartilaginous and bony parenchyma. Immature neuroepithelium was marked by tubulous structures, rosettes, and pseudo-rosettes with high mitotic activity, evident in more than three low-power fields.
The child had no neurological deficits before the surgical procedure. Five days after the surgery, she developed a surgical site infection, accompanied by rectal fistulization and a respiratory infection, leading to hemodynamic instability and then death.
Discussion and Conclusion: Immature sacrococcygeal teratoma in the newborn is a complex germ cell tumor characterized by undifferentiated embryonic tissues, including primitive neuroectodermal structures, disorganized muscle and bone precursors, and immature digestive or respiratory glands. Diagnosis depends on identifying these undifferentiated cells and using immunohistochemical markers such as SALL4, CD30, and PLAP.
Due to its proximity to vital structures, surgery is delicate and requires careful management of complications. Genetic studies, including mutations in genes like CTNNB1, suggest potential for targeted therapies. Accurate diagnosis and a multidisciplinary approach integrating pathology, surgery, and genomics are crucial for optimizing clinical outcomes. Although rare, immature sacrococcygeal teratoma presents significant challenges in pediatrics, with advances in histology and genomics offering promising prospects for more targeted and effective treatments.

Keywords: Sacrococcygeal teratoma, Immature teratoma, Histological features

[P-43]

A new, cost-effective and eco-friendly technology for processing tissue material in pathology

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Introduction: Pathological examination is one of the longest in the list of medical diagnostic examinations. A large part of this time is spent on the preparation of the slide.

The goal of our project is to develop a new, cost-effective and eco-friendly technology for processing tissue material by integrating an ultrasound device into the processing protocol.
Material-Methods: 28 experimental protocols were developed to create a new tissue processing protocol. In the experiments were used autopsy tissue samples with a standard set of organs (brain, heart, lung, liver, kidney, spleen). The processing was carried out manually under conditions of ultrasonic treatment (UST) of the tissue samples. Slides were stained with standard hematoxylin-eosin technology.

Results: New tissue processing protocol: 1) buffered formalin-60 min, 2) alcohol 70%-60 min, 3) alcohol 96%-30 min with sonification (UST), 4) alcohol 96%-30 min with sonification (UST), 5) alcohol 96% -30 min with sonification(UST), 6) alcohol 100%-30 min with sonification(UST), 7) paraffin-90 min with interval sonification 60 min (20 min(UST)/10 min).
Conclusions: The new tissue material processing protocol is significantly different from the standard one, namely:
- The duration of the new protocol is 5.5 hours;
- The number of reagents in the processing battery is 7;
- Xylene was removed from the processing process;
- Removing xylene resulted in a 3-fold reduction of paraffin.

Due to the removal of xylene from the processing process, paraffin is no longer polluted and is consumed almost completely without loss, which is no less important, because although paraffin itself is not an aggressive and harmful compound, it is not subject to recycling, so reducing its consumption will significantly reduce the pressure of harmful effects on the environment.

Project was supported by scientific grant STEM-22-2527 Shota Rustaveli National Science Foundation of Georgia.

Keywords: processing protocol, ultrasonic treatment, Xylene removing

[P-44]

Burned-out testis tumor in a 4-year-old child

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Background & Objectives: A burned-out testicular tumor or a regressed germ cell tumor(GCT) is a rare disease, defined as spontaneous complete or partial regression of a testicular GCT without any treatment, leaving a scar in the parenchyma with or without vestiges of GCT.
Methods: A 4-year-old boy admitted for investigation of pseudo-precocious puberty. He presented pubic hair, advanced bone age, and enlarged penis and right testicle. Tumor markers and testosterone levels were normal. Scrotal ultrasound showed multiple calcifications without any lesions suspicious of malignancy. During hospitalization, he experienced spontaneous torsion-detorsion of the right testicle. MRI confirmed testicular necrosis, leading to right radical orchidectomy.
Results: Macroscopic examination revealed a whitish nodule of 2.5 cm with a brownish center. Microscopic examination showed extensive fibrous scarring, multiple calcifications, lymphoplasmacytic infiltrates, neutrophils, macrophages, siderophages and testicular atrophy. No tumor proliferation was observed. The diagnosis of a burned-out testicular GCT was retained.
Conclusion: In conclusion, this case highlights the rare occurrence of a burned-out testicular tumor in a 4-year-old child. The mechanism behind this phenomenon remains unclear. Potential explanations include an immune response or ischemia resulting from the neoplasm outgrowing its blood supply due to its elevated metabolic rate. Timely recognition and appropriate management are essential to prevent potential complications and treatment-related toxicity and to ensure optimal patient outcomes.

Keywords: Burned-out tumor, testicle, 4-year-old

[P-45]

Granulocytic sarcoma of the urinary bladder: Case report

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Background & Objectives: Granulocytic Sarcoma is a seldom-seen tumor composed of immature cells of the granulocytic series. It's been reported to occur in association with myeloproliferative and myelodysplastic syndromes. Its location in the urinary bladder is exceptional and poses a diagnostic problem.
Methods: We present a case of granulocytic sarcoma of the urinary bladder without hematologic manifestations of acute leukemia in a female patient aged 76.
She presented with urologic symptoms, prompting the performance of a bladder ultrasound revealing a tumor measuring 5cm.
Results: The macroscopic examination revealed a tumor measuring 5x4cm. Histologically, the tumor consists of a proliferation of large, non-cohesive cells with eosinophilic cytoplasm and large nuclei, exhibiting heterogeneous chromatin and prominent nucleoli. Mitotic figures are infrequent. The tumor cells reside within a myxoid background, including a mature hematopoietic population. It infiltrates the parietal muscle, extends beyond the bladder wall, and involves the vaginal wall and partially the ectocervix. An immunohistochemical analysis was performed and ruled out the diagnosis of sarcomas and carcinomas. The initial panel included the antibody CD34 and the second panel included MPO and they both turned out positive. The diagnosis was established after collegial decision and expert contribution.
Conclusion: This case highlights the importance of considering the diagnosis of granulocytic sarcoma even in exceptionally reported localizations, especially in the presence of a tumor with non-cohesive cells. The comprehensive histological and imaging findings underscore the aggressive nature of this malignancy, necessitating prompt and tailored therapeutic interventions. Awareness of this entity will allow earlier diagnosis and appropriate treatment.

Keywords: Ganulocytic, Sarcoma, Urinary bladder

[P-46]

Sertoli cell tumor of the testis with macroscopic and histological malignancy features: A case report

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Background & Objectives: Sertoli cell tumors (SCT) of the testis are rare, constituting less than 1% of all testicular tumors. The majority of SCT are benign, but as many as 10% can be malignant and associated with a poor prognosis.
Methods: We report a case of a malignant SCT in a 59-year-old man. The patient, with no prior medical history, presented with a right testicular mass. Scrotal ultrasound revealed an 8*4 cm tumor. Blood levels of alpha-fetoprotein (AFP), testosterone, and beta-human chorionic gonadotropin were normal. Subsequently, a right radical orchidectomy was performed.
Results: Macroscopic examination revealed a yllowish solid mass measuring 7 cm in its largest axis. Histological examination showed a largely necrotic tumor, with trabecular and tubulopapillary architecture. Cytonuclear atypia ranged from moderate to marked. The mitotic index was 5 mitoses/10 high-power fields (HPF). Several images of vascular invasion and a pericapsular extension were found. Immunohistochemically, tumor cells were positive for calretinin, CD99, and cytokeratin, and negative for inhibin and AFP. The diagnosis of malignant SCT was made.
Conclusion: Approximately, 10% of adult SCT are malignant. Malignant SCT show local invasion and involvement of lymph and blood vessels with early regional lymph node metastasis. Survival in the patients rarely exceeds 2 years. Although the large size, poor tumor demarcation, invasion of adjacent structures, blood vessel and lymphatic invasion, and increased mitotic activity are all suggestive of malignant potential, the designation of malignancy can be made with certainty only in the presence of metastasis.

Keywords: Malignant, Sertoli cell tumor, Testicle

[P-47]

Multiple intrarenal complication in autosomal dominant polycystic kidney

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Background: Autosomal dominant polycystic kidney disease (ADPKD) is the most common, inherited systemic disease caused by mutations in the PKD1/PKD2 gene. It leads to cyst formation primarily in the kidneys but also in multiple organs with other extrarenal manifestations. ADPKD is mostly clinically silent. Kidney stones, hemorrhagic cysts, infected cysts, end stage renal failure (ESRF) and Dialysis related amyloidosis are well-known complication seen in ADPKD. The aim of this study was to report a case of ADPKD with multiple intrarenal complications including Hemorrhagic cyst, Nephrolithiasis, ESRF and Dialysis Related Focal Nodular Amyloidosis.
Case: 49 year old male diagnosed with ADPKD at 33years of age, subsequently developed renal failure and underwent dialysis after 5years. Now presented with complain of hematuria and flank pain. Radiology showed large multicystic left kidney with haemorrhagic cyst in the lower pole adherent to tail of pancreas. The patient underwent left open nephrectomy. Grossly, the cut surface of kidney was multicystic. At lower pole, a large haemorrhagic cyst, measuring 10.5 x 10 x 9 cm was identified. Microscopically, large cyst filled with blood and cholesterol cleft with no definitive lining was seen. Few foci of amorphous acellular material were identified that showed spherical concentric lamination mimicking corpora amylacea which gave apple birefringence under polarized light on Congo-red special stain. Background renal parenchyma exhibited cystic spaces lined by flattened to cuboidal epithelium with atrophic tubules exhibiting thyroidization and few tubular lumen showed crystals, dystrophic calcification, fibrosis, and mild non-specific inflammation. The case was diagnosed as Hemorrhagic cyst in the background of ADPKD with End stage renal disease, Nephrolithiasis and Dialysis Related Focal Nodular Amyloidosis.
Conclusion: Dialysis-related amyloidosis is a serious complication characterized by the deposition of amyloid fibrils in soft tissues, osteoarticular system and visceral organs. Extensive sampling and careful examination can lower the associated systemic manifestation.

Keywords: ADPKD, Focal Nodular Amyloidosis, Hemorrhagic cyst

[P-48]

Expression of PD-L1 in ovarian surface epithelial tumors with clinico-pathological correlation

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Background: Primary carcinoma of the ovary (OCs) are responsible for a significant number of deaths related to cancer, and have the highest rate of death related to cancers of the female reproductive organs. Programmed cell death 1 (PD1) protein, acts as an immune checkpoint, and has an important role in the down-regulation of the immune system by preventing the activation of T-cells, which will weaken the autoimmunity and increases self-tolerance. This study aimed at the evaluation of the immunohistochemical (IHC) expression of PD-L1 in various primary surface ovarian epithelial tumours and to test its correlation with different clinicopathological parameters together with the expression of a panel of P53, ER and PR.
Methods: A set of 102 cases of primary ovarian surface epithelial neoplasms (benign, borderline and malignant) were collected to construct Tissue Microarray (TMA) using 3 tissue cores from each case. IHC for PD-L1, p53, PR and ER was performed. The expression of PD-L1 was evaluated in relation to some clinicopathological parameters and to the expression patterns of other markers.
Results: Expression of PD-L1 was detected in about 51% (n = 36) of malignant tumours. The malignant group significantly showed PD-L1 positivity compared to borderline and benign groups. The malignant tumours significantly showed PD-L1 and total p53 positivity in comparison to borderline group. Also, malignant tumours significantly showed higher combined positivity of PD-L1 and either PR or ER compared to borderline and benign lesions. No significant correlation was appreciated between PD-L1 expression and with any of the studied clinicopathological parameters.
Conclusions: This study showed a significant PD-L1 expression in malignant primary surface epithelial tumours. Construction of a panel of IHC markers, including PD-L1, could have a potential value to define patients those would benefit from the addition of immunotherapy to the treatment plan.

Keywords: PD-L1, Ovarian Carcinoma, immune histochemistry

[P-49]

When the unexpected happens: A case of intravascular lobular capillary hemangioma misdiagnosed as a testicular tumor

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A 68-year-old male presented to our clinic with a palpable mass in the left scrotum. MRI revealed a hypervascular mass with asymmetric extension from the head of the left epididymis towards the testis, initially assessed as a testicular tumor. The patient's serum markers, including beta-hCG, alpha-fetoprotein, and lactate dehydrogenase, were within normal limits. A left radical orchiectomy was performed.
The testis appeared normal on macroscopic examination. However, a well-circumscribed, bright red, lobulated lesion, measuring 1.7 cm in diameter, was observed in the paratesticular area, specifically attached to the epididymal head without connection to the testis.
Microscopic evaluation revealed no pathological findings in the testis. The lesion in the epididymal head showed an intravascular, well-defined capillary vascular proliferation within an edematous to fibromyxoid stroma. There was no evidence of atypia or mitosis. Immunohistochemical staining demonstrated that the vascular structures were positive for CD31 and ERG.
Paratesticular tumors, excluding metastases, are most commonly lipomas, adenomatoid tumors, or angiofibromas. In this case, an intravascular lobular capillary hemangioma was identified, which had been clinically misinterpreted as a testicular tumor.
This case emphasizes the importance of including intravascular lobular capillary hemangioma in the differential diagnosis when evaluating testicular masses.

Keywords: Intravascular lobular capillary hemangioma, Paratesticular tumor, Testicular neoplasm mimicker

[P-50]

Ovarian cellular fibroma with peritoneal deposits: An uncommon Jordanian case report

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Background: Ovarian fibromas represent approximately 4% of all ovarian neoplasms. Cellular fibromas (CF) are defined by bland nuclear features and 1-to-3 mitotic figures/10 high-power-fields (HPF). Diagnosis challenges of this entity are represented by a correct subclassification within the group of fibromatous tumors, especially in the presence of extra-ovarian deposits and its differentiation from other ovarian tumors.
Methods: A 38-year-old female, with history of gastric sleeve surgery, was referred to KHCC for the management of a large left ovarian mass without definite direct invasion to other organs.
Results: The patient underwent left ovarian mass resection, omental biopsy and peritoneal washing. Gross features showed a 19x 16x 10.4 cm yellow solid-cystic mass having a smooth surface. Pathological exam revealed spindle-shaped cells with areas showing increased cellularity without necrosis. Mitotic count was up to 2/10 HPF. Pelvic and bladder peritoneum were invaded by the same neoplastic proliferation. The tumor cells were positive for SF-1 and focally positive for inhibin and SMA and negative for calretinin, CD10, h-caldesmon, pan-cytokeratin, SS-18 and SATB2. Peritoneal metastases were positive to SF-1. Reticulin special stain highlights pericellular staining pattern. Ki-67 proliferative index was 4%. The histopathology ruled out other differential diagnosis and concluded to a cellular fibroma with pelvic and bladder peritoneal deposits.
Conclusions: Extra-ovarian deposits in CF were rarely reported in literature. Six percent of CF were associated with ovarian surface adhesions or rupture and 11% showed extraovarian involvement at the time of presentation most likely due to detached tumor fragments that have implanted on peritoneal surfaces. The majority of CF described previously behave in a benign fashion, with a low rate of local recurrence recommending a sharp dissection and a long-term clinical follow-up. CF should be differentiated from other spindly cells ovarian tumors especially fibrosarcoma that exhibits moderate to severe atypia and usually high mitotic rate.

Keywords: cellular fibroma, extra-ovarian deposits, fibrosarcoma

[P-51]

Mucosal Melanoma of The Urethra- Case Report and Literature Review

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Introduction: Melanomas are malignant tumors that develop from melanocyte pigment cells. They are mostly of cutaneous origin; however, they can also arise in various extracutaneous sites where pigment cells are present. Primary mucosal melanomas are rare but aggressive tumors because the immune checkpoint inhibitors approved in recent years, like anti-CTLA-4 and PD-1, have a low response rate to mucosal melanoma. Malignant melanomas of the genitourinary tract make up a quarter of mucosal melanomas. It accounts for 0.2% of all melanoma and about 4% of urethral cancer.
Case Report: A 67-year-old woman was referred to the urology department with external urethral bleeding and a mass 45 mm in diameter visible through the vulva. She had no history of a prior cutaneous melanoma. The mass was excised and delivered for a pathology examination.
Results: On a macroscopic exam, the mass was referred to pathology and was divided into three fragments, two of which had pigment spots.
Histology findings revealed a urethral wall invaded by a malignant proliferation that infiltrates the serosa and ulcerates the urothelial lining. This proliferation comprises round and spindle cells with abundant and pigmented cytoplasm. Their nuclei show marked pleomorphism and Prominent eosinophilic nucleoli.
Discussion: Malignant urethral melanoma is three times as common in females, with a median age of 64. Histogenesis of melanomas arising in mucous membranes still remains in dispute and several theories have been proposed. The most significant prognostic factors for local control and overall survival are anatomic localization and tumor extension.
Conclusion: Malignant urethral melanoma is three times as common in females, with a median age of 64. The histogenesis of melanomas arising in mucous membranes remains in dispute. Several theories have been proposed.

Keywords: Urethral melanoma, chemotherapy, the immune checkpoint inhibitors

[P-52]

Sarcomatoid bladder carcinoma: report of two cases

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Introduction: Sarcomatoid bladder carcinoma, accounting for less than 1% of bladder cancers, is known for its aggressive behavior and poor prognosis. Typically diagnosed in older patients, with a median age of 60-70 years, and is more common in men. Its invasive nature makes diagnosis and treatment challenging. This work aims to underscore the clinical and histopathological characteristics of sarcomatoid bladder carcinoma by presenting and analyzing two cases from Mohammed VI University Hospital of Tangier.
Observations and Results: Case 1: A 78-year-old woman with high-grade urothelial carcinoma and a sarcomatoid component underwent total cystoprostatectomy and lymphadenectomy. Histological analysis revealed diffuse sarcomatoid proliferation with severe pleomorphism, myxoid stroma, and necrosis. The tumor invaded the bladder wall, perivesical fat, and adjacent structures, with peri-neural encasement and vascular emboli. One of five left lymph nodes was involved.
Case 2: A 59-year-old man with pT1 sarcomatoid bladder carcinoma underwent transurethral resection, cystoprostatectomy, and lymphadenectomy. Histology showed sarcomatoid carcinoma with marked pleomorphism and squamous differentiation. The tumor infiltrated 90% of the bladder wall, with a 5 mm margin and peri-neural encasement but no vascular emboli. Lymph nodes exhibited reactive changes on the right and hyperplasia with histiocytosis on the left.
Discussion and Conclusion: Sarcomatoid bladder carcinoma is a rare and aggressive bladder cancer subtype, characterized by its diffuse architecture, pleomorphic spindle cells, and often myxoid or fibrous stroma with necrosis. Recent advancements in genomic sequencing have identified crucial mutations in genes such as TP53, FGFR3, and PIK3CA, which are associated with rapid tumor progression and poor responses to conventional therapies. These developments enable more personalized treatment approaches. Enhanced diagnostic techniques, including advanced immunohistochemistry and flow cytometry, improve differentiation from other urothelial cancers and provide deeper insights into tumor characteristics. The development of targeted therapies, such as FGFR3 inhibitors, and emerging immunotherapies offer promising new treatment options.

Keywords: Aggressive, Diagnostic challenges, Genomic sequencing

[P-53]

Tumor-to-tumor metastasis: An extremely rare case presentation with a prostate carcinoma metastasis into a clear cell renal cell carcinoma

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Introduction: Tumor-to-tumor metastasis(TTM) is a rare condition, in which a tumor metastasizes into another tumor most frequently by hematogenous spread. Herein, we report a case of prostate carcinoma metastasis into clear cell renal cell carcinoma (ccRCC), which was detected incidentally. To our knowledge, this is the fifth case of TTM of prostate carcinoma into another tumor.
Case presentation: A 70-year-old male patient, who had been diagnosed with prostate adenocarcinoma in the prostate needle biopsy four months ago, applied to medical oncology department with a complaint of severe bone pain. Pre-treatment imaging revealed metastatic bone lesions and a renal mass measuring 57x50x66 mm in the mid-lower pole of the right kidney. Macroscopic examination of radical nephrectomy specimen revealed a tumor in mid-lower pole, measuring 45x40x35 mm, with a capsule, and cut-surface showing hemorrhagic cystic areas and yellow-creamy solid regions. Microscopic examination of renal mass revealed high grade ccRCC and completely different solid tumor areas were detected multifocally within ccRCC, characterized by tumor cells with less cytoplasm, dark round nuclei, and high mitotic activity, Immunohistochemistry showed Pax8 and carbonic anhydrase IX expression in the areas of ccRCC, whereas these noticably different solid areas were Pax8 negative and PSAP, PSA positive, indicating its prostatic origin. Consequently, the final diagnosis was TTM of prostate adenocarcinoma into ccRCC.
Discussion: TTM is an exceptionally rare entity that poses challenges in correct diagnosis and patient management. There has been only four cases of prostate carcinoma TTM into another tumor in the English literature. During the histopathological evaluation of a tumor with completely different morphologic areas inside it, should raise suspicion of such a very rare occasion, tumor-to-tumor metastasis, and lead to immunohistochemical examination to confirm this posibility. Given its rarity, there is not a well-documented management protocole for these patients too.

Keywords: Tumor-to-tumor metastasis, prostat adenocarcinoma, renal cell carcinoma

[P-54]

Renal Tumours Histopathologically Detected at Adult Autopsy; How Lethal Are They?

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Objective: The morphology, structure and underlying pathology of renal lesions detected at autopsy are highly variable. A detailed autopsy examination can shed light on acute or chronic renal pathologies and whether these pathologies caused the death of the person. Lesions detected at autopsy include acute tubular necrosis, chronic renal disease, glomerular disease, renal tumours, renal cysts, infections, metastatic tumours, vascular lesions and congenital anomalies. Renal cancers are still a fatal type of cancer and 80% of them are adenocarcinomas arising from the parenchyma. The aim of this study was to reveal the incidence and types of renal tumours in adult autopsies performed in our institution and to discuss how many of these tumours cause death.
Materials-Methods: In a 13-year period, autopsy reports of adult patients over 18 years of age who were autopsied in our institution were retrospectively analysed. Renal lesions, age, gender, comorbidities, causes of death and the relationship between the detected renal lesions were evaluated. Regression analyses were used during this evaluation. Ethical approval for the study was obtained from the scientific committee of our institution.
Results: During a 10-year period, 12,670 adult autopsies were performed and renal tumours were detected in 66 cases. 79% of the cases were male and 21% were female. Primary renal tumours were present in 92% of cases and metastatic renal tumours were detected in 8%. The mean age for primary renal tumours was 60.4 years. The most common renal tumours were medullary fibroma (20); tubulopapillary adenoma (16); papillary renal cell carcinoma (9); clear cell renal cell carcinoma (8) and 2 clear cell papillary renal cell tumours. In only one case, death was due to diffuse metastatic clear cell renal cell carcinoma. In the other cases, the causes of death were atherosclerotic heart disease, trauma, pneumonia, other malignancies or intoxication.

Keywords: Renal Tumours, Adult Autopsy, Histopathology

[P-55]

From trauma to tumor: Mural Nodules of Anaplastic carcinoma of the ovary uncovered after a road traffic accident

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Background: Ovarian mucinous tumors may be associated with various types of mural nodules, which can be classified as benign or malignant, including leiomyoma, sarcoma, carcinosarcoma and anaplastic carcinoma. The histogenesis of which remains unclear. Anaplastic carcinoma nodules have been rarely reported.
Case: In this study, we report a 46-year-old female who presented as a case of road traffic accident (RTA) were she was found to have an incidental 21 cm cystic ovarian mass with the impression of benign mucinous cystadenoma. CA125 tumor marker was within normal limit (125 unit/ml). She underwent laparoscopic resection complicated by surgical spill and peritoneal seeding. Histologic examination revealed a rare ovarian tumor of anaplastic carcinoma mural nodules in a background of mucinous borderline tumor. Post operative imaging showed widespread disease with abdominal wall surgical sites, peritoneal and omental deposits as well as bone metastasis and left lower lobe pulmonary nodule. She was started on Paclitaxel and carboplatin chemotherapy combination. However, her disease progressed, and she developed chest infection and sepsis. The patient is planned for a second line chemotherapy regimen after clearing the infection.
Conclusion: Herin, we present a case of rare aggressive ovarian tumor discovered incidentally after RTA. Mural nodules of anaplastic carcinoma may remain undetected for an extended period before being unveiled. It can have radiologic impression of a benign cyst and CA 125 tumor marker level can be withing normal range. Thus, histologic examination is the definitive diagnostic modality and although the clinical impression can point to a benign nature, careful management is necessary to prevent further disease progression.

Keywords: Ovary, Mural nodules, Anaplastic carcinoma

[P-56]

Primary Ewing Sarcoma in the Tail of the Pancreas: An Unusual Site of Presentation

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Background: Extraosseous Ewing's sarcoma (ES/PNET) is a rare and aggressive tumor, with pancreatic involvement being extremely uncommon. Recognizing pancreatic ES/PNET is critical due to its similar morphology to other tumors, making diagnosis challenging when the tumor's origin is unclear. Methods: We present a case of a 36-year-old female with abdominal pain, found to have a moderately hypermetabolic, centrally necrotic pancreatic tail mass, confirmed as malignancy via biopsy.
Results: Microscopic examination revealed sheets of small round cells with enlarged round to oval nuclei, fine stippled chromatin, and moderately clear to amphophilic cytoplasm. Necrosis, focal peritheliomatous proliferation of tumor cells around blood vessels, increased mitosis, prominent apoptosis, and nuclear molding were observed. The cells were positive for CD99, CD34, NKX2.2, and CK AE1/AE3, with patchy CD10 positivity. Beta-catenin showed membrane staining. The cells were negative for Synaptophysin, Chromogranin, ER, E-cadherin, TFE3, PR, DOG1, SMA, Melan A, Pax8, Inhibin, Desmin, CD117, SALL4, and HMB-45. Genetic and molecular studies detected the EWSR1(7) - FLI1(5) fusion, indicating EWSR1 rearrangement. The sample was positive for SS18 rearrangement but negative for EWSR1 rearrangement. The case was reviewed by a multidisciplinary team (MDT), which recommended neoadjuvant chemotherapy followed by surgery. Further evaluation revealed a large tumor in the posterior stomach wall invading the pancreas, leading to partial gastrectomy, resection of the pancreatic body and tail, and splenectomy.
Conclusion: Extraosseous Ewing's sarcoma in the pancreas is extremely rare, typically arising in bones or soft tissues. In this case, a 36-year-old female with abdominal pain had a necrotic pancreatic tail mass. Diagnosis and primary site were confirmed using immunohistochemistry, cytogenetics, molecular studies, and PET CT. This case highlights the importance of considering ES in atypical locations, emphasizing the need for a broad diagnostic panel.

Keywords: Ewing, Sarcoma, Pancreas

[P-57]

Unveiling Extra-skeletal Mesenchymal Chondrosarcoma: Insights into Soft Tissue Tumors

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Background: Chondrosarcoma (CS) is a primary bone cancer, with mesenchymal chondrosarcoma (MCS) being a rare and aggressive subtype that accounts for less than 3% of all CS cases. MCS typically affects young adults and is rarely found outside bones. This case involves a 43-year-old male who presented with a large intra-abdominal mass and liver metastases after a history of an extraskeletal mesenchymal tumor. Extraskeletal MCS is particularly rare, making diagnosis and treatment challenging, with limited literature available regarding its clinical course and prognosis.
Methods: The patient presented with severe abdominal symptoms, prompting imaging studies that revealed a large malignant intra-abdominal mass and liver metastases. A biopsy was performed, followed by surgical resection and palliative treatment. Microscopically, the tumor displayed biphasic characteristics with a mixture of well-differentiated hyaline cartilage and undifferentiated cells. Immunohistochemistry was conducted, showing positivity for CD99, NKX2.2, and focal S100, while NKX3.1 was negative, and INI-1 expression was preserved. These findings confirmed the diagnosis of high-grade extraskeletal mesenchymal chondrosarcoma.
Results: Despite surgical intervention and palliative therapy, the tumor exhibited rapid progression. Histopathological analysis revealed a malignant neoplasm with solid sheets of undifferentiated small blue cells and islands of mature hyaline cartilage, with frequent mitoses. The patient experienced worsening symptoms and complications, including acute kidney injury and gastrointestinal bleeding, leading to his death. The aggressive behavior of this tumor subtype, combined with its extraskeletal location, contributed to the poor outcome.
Conclusion: This case highlights the aggressive nature and poor prognosis of extraskeletal mesenchymal chondrosarcoma, a rare malignancy. Diagnosis relied heavily on histopathological analysis due to the nonspecific radiological features. The patient's rapid clinical decline underscores the need for advanced treatment strategies and further research into targeted therapies for this challenging and often fatal tumor type.

Keywords: Extra-skeletal, Chondrosarcoma, Mesenchymal

[P-58]

Decade-Long Nasal Obstruction Reveals Biphenotypic Sinonasal Sarcoma

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Background: A 68-year-old male presented with a 10 year history of right nasal obstruction, accompanied by frequent nasal secretions, post-nasal drip, decreased sense of smell, snoring, and mouth breathing. There was no history of nasal trauma, epistaxis, headache, or prior nasal surgeries.
Method: Initial MRI revealed an enhanced mass in the right nasal cavity, suspected to be an antrochoanal polyp. Further imaging showed a heterogenous polypoidal mass extending into the ethmoidal air cells and sphenoid sinus, with associated bony erosion of the right anterior sphenoidal sinus wall. The patient underwent functional endoscopic sinus surgery (FESS) with excision of the right nasal mass, septoplasty, and submucosal diathermy of the inferior turbinates. The mass was located medial to the middle turbinate, originating from the cribriform plate, with anterior feeding vessels.
Results: Histopathological examination identified the lesion as a biphenotypic sinonasal sarcoma, a rare low-grade malignancy with potential for local aggressiveness. The tumor consisted of compact fascicles of spindle cells with mild nuclear pleomorphism and rare mitotic figures, showing diffuse strong S100 and SMA positivity. Focal myogenic differentiation was observed, with positive staining for Desmin, Myo-D1, and Myogenin. Follow-up imaging was recommended to monitor for residual disease or recurrence.
Conclusion: This case highlights the diagnostic challenge of biphenotypic sinonasal sarcoma, a rare and locally aggressive tumor. The patient's prolonged history of nasal obstruction underscores the importance of thorough evaluation in chronic cases. Continued monitoring through follow-up imaging is crucial to assess for recurrence or residual disease.

Keywords: Biphenotypic, Sinonasal, Sarcoma

[P-59]

Unmask the unexpected: Treponema Pallidum and Herpes Simplex Virus can present with pseudomalignant lesions on mucosal surfaces - A two case report

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Background: Infections, including Syphilis (Treponema pallidum (TP)) and Herpes Simplex Virus (HSV), can present clinically as mucosal lesions with worrying clinical features. Diagnosis can be challenging, clinically and histologically, as they can mimic malignant squamoproliferative lesions. Accurate diagnosis is crucial in management, emphasizing the critical role of histopathology. This case report describes the clinical presentation and diagnostic workup of two cases involving the lips caused by TP and HSV and highlights the hallmark microscopic features in both entities.
Methods: We have encountered two cases; the first case involved a 36-year-old male with a painless, whitish mucosal lesion on the lip. The second case involved a 65-year-old male with a proliferative lesion on the lip suspecting squamous cell carcinoma. One patient underwent serological testing for Syphilis, and both lesions were biopsied.
Results: The first patient tested positive for Treponema pallidum via rapid plasma reagin (RPR) and enzyme immunoassay (EIA), confirming the diagnosis of primary syphilis. Histopathology revealed plasma cell- and neutrophil-rich lesion consistent with Syphilis and confirmed by Warthin Starry stain. The second patient biopsy showed ulcerated squamoproliferative lesion with a few multinucleated giant cells displaying intranuclear inclusions, confirmed by HSV immunostain.
Even though this type of presentation is infrequently encountered by pathologists, we aim to emphasize the need to consider TP and HSV infections in the differential diagnosis of mucosal lesions. Precise diagnosis requires a thorough evaluation using a combination of serological, molecular, and histopathological techniques to ensure optimal management and treatment.
Conclusion: Syphilis (Treponema pallidum) and HSV can present as mucosal lesions with clinical features that overlap with those of malignant conditions, making accurate diagnosis challenging. Considering these infections in the differential diagnosis is important to avoid misdiagnosis and unnecessary clinical measures. Early recognition and a comprehensive diagnostic approach are essential for effective management and improved patient outcomes.

Keywords: Mucosal lesions, Syphilis, HSV

[P-60]

Primary Pulmonary Hepatoid Adenocarcinoma: First Case Report in Bahrain

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Introduction: Hepatoid adenocarcinoma can occur in many organs, most frequently the stomach, but rarely affecting the lungs. Establishing the diagnosis relies mainly on the detection of hepatoid differentiation, and on clinicopathological and immunohistochemical testing to exclude metastatic hepatocellular carcinoma to the lung.
Methods: Herein we present the case of a 76-year-old male patient who is a chronic heavy smoker. He presented with cough, generalized body weakness, loss of appetite, nausea and weight loss of more than 10 kg over 2 months. Imaging studies showed an infiltrative heterogeneous mass centered at the right hilar region measuring 5.7 x 4.0 x 3.0 cm, encasing the right pulmonary artery and middle and lower bronchi. There were also multiple enlarged mediastinal and right hilar lymph nodes as well as multiple lytic bone lesions and liver and bilateral adrenal nodules. Trans-bronchial biopsy was done and show multiple fragments of bronchial mucosa infiltrated by nests and cords of large discohesive epithelioid malignant cells. The cells have moderate to abundant pale granular cytoplasm, highly pleomorphic nuclei and prominent cherry red nucleoli. Focal areas of necrosis and vague acinar formation are also noted. Immunohistochemical stains reveal that malignant cells are diffusely positive for CK7 and interestingly show granular cytoplasmic staining for TTF1 and HepPar1. Molecular testing show that the tumor is negative for rearrangement of ALK1 and ROS1 genes and EGFR mutations.
Results: In view of the diffuse positivity of CK7 and the clinical and radiological impression of primary lung carcinoma, a diagnosis of hepatoid carcinoma of the lung was favored.
Conclusion: Pulmonary hepatoid adenocarcinoma is an extremely rare and aggressive type of lung adenocarcinoma that generally share morphological and immunohistochemical similarities with hepatocellular carcinoma and can be misdiagnosed by both pathologists and clinicians. Accurate and timely diagnosis is essential for proper management of this tumor.

Keywords: Hepatoid, carcinoma, lung

[P-61]

Rare Case of Iatrogenic Kaposi Sarcoma of the Gingiva and Tonsils

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Kaposi sarcoma is an intermediate grade, locally aggressive vascular neoplastic proliferation that usually presents with cutaneous lesions, but it can also involve soft tissue, lymph nodes, mucosal surfaces and visceral organs. It is usually associated with HHV8 infection. It is sub-typed depending on the etiology into Sporadic, Endemic, Iatrogenic and Epidemic. Here we present a rare case of an iatrogenic Kaposi sarcoma in the oral cavity and tonsils. The case is for a 37-year-old male patient who is a recipient of a kidney transplant and is on Tacrolimus immunosuppressive treatment. He presented with generalized gingival swelling around all the maxillary and mandibular teeth. Biopsy of the gingiva shows oral mucosa with mild epithelial hyperplasia and underlying vascular proliferation showing occasional slit-like and sinusoidal spaces lined by plump endothelial cells with fascicles of spindle cells in between with mild nuclear atypia and occasional mitoses. Extravasated red blood cells are also noted. The spindle cells are positive for CD31 and HHV8, supporting the diagnosis of Kaposi sarcoma. One month later, the patient presented with bilateral tonsillar enlargement of which the excisional biopsy shows foci of spindle cell proliferation with slit-like vascular spaces replacing most of the tonsillar reactive lymphoid tissue suggestive of involvement by Kaposi sarcoma. The patient had no cutaneous lesions and no GI tract involvement at the time of presentation or on follow-up. Herein, we present an interesting rare case of iatrogenic or post-transplant Kaposi Sarcoma that involves the oral mucosa and both tonsils. The diagnosis of Kaposi sarcoma should always be in the differentials of spindle cell lesions arising in the setting of immunosuppression.

Keywords: Kaposi sarcoma, tonsil, immunosuppression

[P-62]

Prevalence and predictors of seizure in patients with meningioma

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Background: Meningioma is the most common primary central nervous system tumours. The clinical presentation of meningioma are variables according to the site of the meningioma. Seizure is reported in around 30% of patients with meningioma. The aim of this study is to assess the prevalence of seizure as a presentation pf meningioma in patients from Saudi Arabia.
Methods: We retrospectively reviewed patients with meningioma from King Abdulla Medical City from 2017 to 2022. Data collected included patients age, gender, location of meningioma, presentation, pathological grade and the presence of oedema.
Results: A total of 88 patients with meningioma were included with a mean age of 51.2 ± 12.4 years old. the most reported diagnoses were WHO grade 1. Meningothelial meningioma (31.8%), WHO grade 1. Transitional meningioma (30.7%), WHO grade 2. Atypical meningioma (18.2%), and WHO grade 1. Angiomatous meningioma (4.5%). The least reported types were fibrous meningioma WHO grade 1. A total of 27 (30.7%) cases with meningioma had seizures while most of them (69.3%; 61) had no seizures. None of the patient's bio-clinical factors showed a significant relation with having seizures. Seizures were insignificantly higher among older patients, male patients and patients who had edema (P>0.05 for all).
Conclusion: The prevalence of seizure in association with meningioma is 30.7%. No significant association of seizure development to the patient's bio-clinical factors.

Keywords: Meningioma, Seizure, Tumours

[P-63]

Sclerosing papillary epithelial hyperplasia (SPH) without myoepithelial cell base: a rare and a tricky lesion

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Introduction: Sclerosing papillary epithelial hyperplasia (SPH) without myoepithelial cell base is a rare and singular variant of papilloma. This rare entity mimics an infiltrating carcinoma of non-specific type (ICNST).
The aim of this study is to recall its histological features and to discuss its main differential diagnoses.
Method: We report the case of a 76-year-old patient who underwent a lumpectomy for a breast nodule.
Results: Macroscopic examination revealed a focally spiculated, yellowish, soft nodular lesion measuring 0.9 cm. Histological exam revealed an epithelial lesion with a striking fibrohyaline stroma compressing the epithelial structures. The latter were composed of irregular tubes, spans and solid masses, deformed by fibrosis. The epithelial cells were cubic, monotonous. Nuclear atypia was mild with a solely slight increase in nuclear size. IHC study showed diffuse cell expression for pancytokeratin and PS100, with negativity for myoepithelial markers (CD10 and P63). There was moderate nuclear staining with RO, with no Ki67 nor Her2 neu (score 0+) expression.
Discussion: HSP is an uncommun and little-known benign lesion, highlighted by Gomez RG et al through series of 8 cases presented during the 2013 USCAP. This lesion is puzzling because it mimics solid papillary carcinoma or ICNST due to the retracting sclerosis and lack of myoepithelial cells. HSP is a small lesion that doesn't exceed 1.1 cm. It is papillary lesion within a marked fibro-hyaline stromal reaction. Fibrosis can become so severe that it obliterates the papillary configuration. The cells show mild cytonuclear atypia without mitosis. On IHC no myoepithelial cells are identifiable and there is no expression of hormonal receptors. A focal positivity of Ck5/6 and diffuse expression of PS100 is observed. In our case, the small tumor size, the very significant fibrosis, the expression of PS100 and the negativity of Ki67 guided our diagnosis.

Keywords: Breast pathology, Rare benign neoplasm, Papilloma

[P-64]

Intracholecystic papillary neoplasm with mixed neuroendocrine-non-neuroendocrine neoplasms: A Rare Case Report

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Background: Intracholecystic papillary neoplasm (ICPN) of the gallbladder is a rare premalignant lesion characterized by a papillary growth, with infrequent association with invasive adenocarcinoma. We report a rare case of ICPN associated with mixed neuroendocrine-non-neuroendocrine neoplasms (MiNENs) to highlight its clinicopathological features.
Methods: A 74-year-old woman presented with severe flank abdominal pain. Abdominal computed tomography revealed a distended gallbladder with the presence of lymphadenopathy near the hepatic artery. The patient underwent radical cholecystectomy with hepatic lymph node dissection.
Results: Macroscopically, the gallbladder was occupied by two polyploid lesions with a fleshy, heterogeneous cut surface, areas of focal necrosis, mucinous regions, and multiple embedded brownstones The gallbladder wall was diffusely thickened, with granular lesions in the surrounding mucosa Histologically, the two polyps were predominantly composed (70%) of a large cell neuroendocrine carcinoma (LCNEC) component. This component formed by diffuse sheets and papillary structures lined with large, monomorphic, occasionally anaplastic cells, with granular chromatin. it is extensively necrotic, infiltrating up to the muscular layer. A second component representing about 30% of the tumor, formed of tubes, cribriform or solid structures lined by biliary-type epithelium. This component infiltrates various layers of the gallbladder wall up to the subserosa, with evidence of vascular and perineural invasion. The adjacent mucosa exhibited a tubulo-papillary architecture, corresponding to a ICPN showing both low- and high-grade dysplasia. Immunohistochemically, the LCNEC component was positive for synaptophysin and pancytokeratin but negative for CK7, CD56, and chromogranin with Ki-67 proliferation index of about 100%. The diagnosis of ICPN with associated invasive large cells neuroendocrine and non-neuroendocrine adenocarcinoma was retained.
Conclusions: This case contributes to the scarce literature, representing one of only seven reported instances of ICPN associated with MiNENs.

Keywords: Gallbladder, intracholecystic papillary neoplams, Minen

[P-65]

Cystic Granulosa Cell Tumors of the Ovary: a tricky lesion

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Introduction: Adult granulosa cell tumor (AGCT) is the most common sex cord–stromal tumor. Occasionally, it may be strikingly cystic posing a challenge in diagnosis.
Materials-Methods: Herein, we report a case of a 56-year-old female patient who underwent a left oophorectomy for a multilocular cystic formation of 8.6cm in the left ovary.
Result: The surgical specimen showed an 11cm intact, cystic mass with a smooth surface. It appeared multilocular, containing yellow liquid and lined by fine endophytic vegetations. The cystic wall showed focal thickening. Microscopically, the cyst was lined with layers of tumor cells, forming numerous macrofollicles, Call-Exner bodies, cords and nests that invaginated into cystic wall. Tumor cells were monomorphs with scant cytoplasm and hyperchromatic nuclei, with a hint of nuclear grooves. Immunohistochemical analysis revealed diffuse positive staining of the tumor cells for Inhibin and heterogeneous staining for Calretinin. The diagnostic of cystic AGCT was retained.
Conclusion: For pathologist, AGCT are associated with many diagnostic problems because of their broad morphological spectrum. Cystic AGCT specifically poses a significant diagnostic challenge because of its overlapping gross features, as well as the frequent denudation or flattening of the lining epithelium that may impart a nondiagnostic appearance in many areas. The most challenging aspect in the differential diagnosis of a cystic GCT is distinguishing it from benign follicle cysts, which may exhibit gross and histological characteristics overlapping with those of GCTs. Additionally, serous cystadenomas and carcinomas, endometrioid cystic tumors, and the commonest monodermal teratoma, struma ovarii, may also present as potential differential diagnoses.
Despite extensive denudation, good sampling will almost invariably disclose diagnostic features of GCT, which can be confirmed in particularly difficult cases by mmunohistochemical or molecular finding.

Keywords: Ovaries tumors, Granulosa Adult type, Ovaries cyst

[P-66]

Ocular location of IgG 4 (OIgG4) disease: a case report and review of the literature

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Background and Objective: IgG4 related diseases (IgG4-RD) is a newly known systemic disorder. It can present as an orbital lesion. Clinical presentation is non-specific. Pathological examination with immunochemistry is essential for diagnosis. This work aims to report a case of (OIgG4) and analyze its epidemiological and pathological characteristics.
Methods: We report a case of a 35-year-old women presented with exophtalmy. An ultrasound examination showed an 1cm intra-orbital tissular mass She underwent a biopsy with a pathological examination.
Results: Histological examination showed fibroadipose tissue with dense lymphoplasmacytic infiltrate, and mild oblierative phlebitis. There were no storiform fibrosis. The immunohistochemical study revealed positivity for CD 138 mostly of IgG type with IgG4 count exceeding >50 cells and IgG4+ plasma cell/ IgG plasma cell rate of 50%. IgG4 serum concentration was elevated. There was no other suspected location.
Conclusions: IgG4-related disease is a recently recognized fibroinflammatory disorder that may affect 1 or more organs. It is characterized by lympho-plasmacytic infiltrate with large numbers of IgG4 positive plasma cells, storiform fibrosis, obliterative phlebitis, and eosinophil infiltration as well as peripheral eosinophilia, and in some cases, elevated serum levels of IgG4. IgG/IgG4 is a more specific feature given the fact that same organ such lacrymal glands counts normally more IgG4 positive plasmocytes. Pathologic features of IgG4-RD vary from an organ to another, so that storiform fibrosis and obliterative phlebitis are rare in lachrymal glands. Thus, integrating clinical, imaging, biological and histopathological data, with reference to recently defined diagnostic criteria is mandatory.

Keywords: Ophtalmology, IgG4, occular lesion

[P-67]

A confusing round blue cell tumor of nasal cavity

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Background: Extra-nodal lymphoma of B-terminal cell differentiation are rare and challenging entity. Herin we report a peculiar and misleading case of plasmablastic lymphoma (PL).
Methods: Herein we present the case of a 36-year-old patient, HIV positive, who developed a fast-growing nasal cavity mass. An excisional biopsy was performed.
Results and Conclusion: Microscopic examination showed a highly proliferative tumor made of large round blue cells. The tumor cells were of medium size with scanty eosinophilic cytoplasm with indistinct boundaries and an eccentric round nucleus with a prominent eosinophilic nucleolus. The mitoses were numerous. Neoplastic cells were negative for CD138 (with positive internal control), CD20, pan T cells markers, CD56, PS100, ALK, and TDT. They were positive for MUM1, EMA, CD99 and EBER by situ hybridization, with kappa immunoglobulin light chain restriction. Tumour cells focally expressed CD45. PL is an aggressive, extra-nodal B lymphoma, predominantly affecting HIV-positive patients. It is a challenging diagnosis because it is a rare lymphoid tumour expressing none of B cells, T cells and lymphoid cells antigens. Our case is even more challenging because of lack of CD138 antigen. Loss of CD138 expression can be observed in 10% of cases. The use of several plasma cell markers (CD38, Mum1, Lambda, etc.) and the search for EBV by EBER probe is redeeming in those cases. CD99 stain can also be a very misleading feature that has been reported as a normal stain in activated B cells

Keywords: HIV positive patients, Extra-nodal lymphoma, Plasmablastic lymphoma

[P-68]

Kimura disease of the stomach, a rare localisation: a case report

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Background: Kimura's disease (KD) is a chronic benign inflammatory condition of unknown etiology. The primary affected regions are the head and neck. It is often misdiagnosed due to its resemblance to other benign or malignant diseases, especially in uncommon sites. This study aims to present a rare case of KD diagnosed in the stomach.
Methods: We report a case of KD localized in the stomach, which was diagnosed in our pathology department at Sahloul hospital in Sousse.
A 75-year-old female presented with intestinal bleeding. An endoscopy revealed an erythematous and hemorrhagic mucosa in the antral and fundic regions of the stomach. A 4 cm antral polyp was identified and resected.
Results: The initial biopsy specimen examination concluded to a high grade dysplastic polyp. Partial gastrectomy was performed. Histologically, the polyp was bordered by a focally ulcerated epithelium, without dysplasia. The axis was edematous, containing clusters of lymphoid cells dispersed among moderate inflammatory infiltrate rich in eosinophils. Characteristic multinucleated cells with crown- arranged nuclei were present. The lesion is well vascularized. Immunohistochemistry for CD117, Dog-1, S100 protein, SMA and ALK was performed to exclude other diagnoses, particularly a GIST tumour and an inflammotory fibroid polyp. The study was negative. We concluded to KD after multidisciplinary consultation meeting and expert opinion.
Conclusion: This is the first case of a gastric KD reported in literature so far. Misdiagnosis can lead to unnecessary aggressive treatments, making it essential to distinguish KD from other diseases. While KD has a favorable prognosis with no potential for malignancy, its high recurrence rate necessitates careful monitoring of affected patients.

Keywords: Kimura's disease, stomach, ALHE

[P-69]

A Clinical Audit of Breast Fine Needle Aspiration Cytology Reporting

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Introduction: Fine- Needle Aspiration Cytopathology (FNAC) of the breast remained an inexpensive, non-invasive, fast method of breast cancer diagnosis. writing cytopathology reports in Iraq, however, is not following one of the standard reporting systems creating sometimes inappropriate interpretation by physicians, surgeons, and oncologists and difficulties in statistical analyses and cancer registries.
Aims: Introducing a standard reporting system for reporting breast cancer cytology and recording the cancer predictive value in the center of breast cancer detection/ Oncology Teaching Hospital/ Baghdad Medical City.
Methods: Yokohama System for Reporting Breast FNAC was selected and introduced to the pathologist working in the center, several lectures and multidisciplinary workshops were conducted to explain the system and its significance and the working algorithm for each category. A total of 1075 reports were issued using this system during the period between 1/1/2019-31/12/2019. Results were correlated with histopathology reports where available.
Results: Preliminary results showed that 28% of the ports were unsatisfactory for diagnosis C1, 10% were benign lesions C2, 31% were atypical probably benign C3, 5% were suspicious for malignancy, C4 and 25% were malignant C5. Further analyses and cancer predictive value will be presented in the conference.
Conclusion: Standard reporting of breast cytology can improve patient management and pathologist performance. The follow-up algorithm required further augmentation.

Keywords: Breast, FNA, Yokohama System

[P-70]

An Update on Touch Imprint Cytology (TIC) with Comparative Literature Review: Is TIC Alive in the ROSE and Telecytology Era?

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Background: The diagnostic precision, advantages, and drawbacks of touch imprint cytology (TIC) are thoroughly reviewed. The examination includes a variety of organs; including the head&neck, lung&pleural tissue, mediastinal lymph-nodes, breast &sentinel lymph-nodes, parathyroid-thyroid, GIS, urinary tractus, gynecological, peritoneal tissues, bone and soft tissue tumors/tumor-like lesions, CNS tumors and pituitaryNET surgical margins. For time-honoured intraoperative evaluations, TIC has shown to be a quick, accurate, and affordable method; particularly when it comes to identifying macrometastasis in sentinel&mediastinal lymph node biopsies for breast, lung cancers and melanomas.
Methods: The diagnostic usability, advantages and drawbacks of TIC are thoroughly reviewed by nearly 100 large series in English literature including the authors themselves and summarized in Tables. TIC is not without limits, such as a reduced sensitivity in identifying micrometastases and difficulties distinguishing between benign and malignant cells in the absence of architectural context. The procedure is less accessible in some contexts because it also requires skilled workers. Using TIC in conjunction with rapid on-site evaluation n (ROSE) seems to improve diagnostic accuracy in lung& mediastinal biopsies and head & neck cancers.
Results: The reported TIC sensitivity in different trials varied from 72.8% to 97%, however the specificity was consistently quite good, sometimes 100%. The emerging role of telecytology & TeleROSE, particularly in remote or resource-limited settings, presents a promising extension of TIC's utility. The application of telecytology in head&neck FNA procedures, achieved high sensitivity(97%) and specificity(95%) while optimizing resource use through remote real-time evaluation.
Conclusion: TIC remains an essential tool in diagnostic cytopathology, particularly for its speed and cost-effectiveness. The incorporation of current approaches like ROSE and Telecytology further enhances its clinical utility, expanding access to quality diagnostics even in settings with limited pathology resources. These combined models of traditional intraoperative frozen section/TIC evaluations and current approaches have the potential to reduce diagnostic delays, improve patient outcomes, and enhance the efficiency of healthcare systems.

Keywords: Cytology, Touch imprint cytology, diagnostics