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Abstracts

01 : Somatic-type malignancies in testicular mixed germ cell tumors

Ahlem Blel, Wided Ajouli, Raoudha Aloui, Lina Khalfallah, Meriem Ksentini, Imen Boubaker, Rania Mathlouthi, Soumaya Rammeh.

Department of Pathology, Charles Nicolle Hospital, Tunis, Tunisia.

Introduction: Testicular germ cell tumors (GCT) represent a heterogeneous group of neoplasms with different histopathological features, a clinical course, and a variable prognosis. Malignant transformation of germ cell tumors into somatic malignancy is uncommon. The histology of the somatic malignant elements most commonly includes carcinoma and various types of sarcomas.
Methods: We present here in a rare case of mixed germ cell tumor involving seminoma, embryonal carcinoma (EC) and teratoma with a malignant chondrosarcomatous component.
Results: A 35-year-old male presented with a right testicular mass lasting for two months and increasing rapidly in size. Testicular ultrasound showed multiple nodules whose larger was partially necrotic, measuring 27 mm. The rate of serum αFP was high. He underwent a left orchiectomy. The microscopic examination showed heterogeneous malignant tumor proliferation made of several components. The first component corresponded to a seminomatous proliferation. The second component corresponded to embryonal carcinoma. The third component corresponded to a conventional teratoma, which included cartilaginous lobules contained aspindle cells proliferation with marked cyto-nuclear atypia observed in more than one field at low magnification which performed a chondrosarcomatous area.
Discussion and conclusion: Mixed germ cell tumors contain more than one histological type of germinal tumor. The association of teratoma with somatic-type malignancy is very rare. It was seen in 3 to 6% of patients with metastatic GCT. The somatic-type malignancy may be present in the primary tumor, in the lymph node and visceral metastases or in both locations.
His identification may be difficult. Several types of somatic malignancy were reported. The most common type of somatic malignancy is sarcoma. The presence of somatic-type malignancies in primary testicular tumors may not worsen the outcome. Prognosis is highly affected in the metastatic cases.

02 : Evaluation of Trastuzumab emtansine consumption: Experience at the Salah Azaïez Institute (2021–2025)

Yosra Elfidha[1], Wiem Ben Ayed[1,2], Myriam Bizid[1], Imen Guiza[1], Marwa Bel Haj Ali[1], Imen Toukebri[1,2], Azza Ben Said[1,2], Imen Limayem[1,2]

1) Centralized Cytotoxic Preparation Unit, Institut Salah Azaïez,

2) Faculty of Pharmacy of Monastir, Monastir, Tunisia

Introduction: Trastuzumab emtansine is an antibody–drug conjugate targeting HER2-positive breast cancer. It represents a major therapeutic advance, particularly in locally advanced or metastatic disease after prior treatment failure. However, its high cost poses a significant economic challenge. This study aims to evaluate Kadcyla® consumption at the Salah Azaiez Institute over the past four years to assess its financial impact.
Methods: This is a retrospective, descriptive, single-center study conducted over a period from 2021 to 2025. All patients who received at least one course of trastuzumab emtansine Kadcyla® at the Salah Azaiez Institute were included. Patient demographics (age, sex) and treatments were collected using the Asclépios chemotherapy prescription software. Statistical analysis was performed using Excel software.
Results: A total of 75 patients with locally advanced or metastatic HER2-positive breast cancer were treated with trastuzumab emtansine. The mean age was 53 years (range: 27–73). Its use increased steadily, rising from 1 patient in 2021 to 52 in 2025, reflecting a growing use of this targeted therapy. Overall, 527 cycles were administered: 8 in 2021, 60 in 2022, 62 in 2023, 119 in 2024, and 278 in 2025. The recommended dose is 3.6 mg/kg. The mean dose was 253.1 mg per cycle, with doses ranging from 180 mg to 345 mg. The average cost per cycle was 15,383.55 TND, varying between 13,348.06 TND and 17,419.04 TND. This medicine is not authorized for marketing in Tunisia and requires prior approval from the CNAM.
Discussion and conclusion: Analysis of trastuzumab emtansine consumption shows an increase in its use in recent years, reflecting changes in therapeutic practices in the treatment of locally advanced or metastatic HER2-positive breast cancer, in line with international recommendations. However, the high cost of this therapy represents a significant economic challenge, which limits its accessibility.

03 Evaluation of atezolizumab consumption at the Salah Azaiez Institute: retrospective review over three years (2022–2025)

Yosra Elfidha[1], Wiem Ben Ayed[12], Myriam Bizid[1], Marwa Bel Haj Ali[1], Imen Guiza[1], Imen Toukebri[12], Azza Ben Said[12], Imen Limayem[12]

1)Centralized Cytotoxic Preparation Unit, Institut Salah Azaiez

2)Faculty of Pharmacy of Monastir, Monastir, Tunis

Introduction: Atezolizumab is a humanized monoclonal antibody that inhibits the immune checkpoint targeting the PD-L1 pathway. It represents a major therapeutic advance in oncology, particularly in the treatment of several solid cancers such as urothelial carcinoma, non-small cell lung cancer, and hepatocellular carcinoma.
The objective of our study is to evaluate the consumption, cost, and budgetary impact of this immunotherapy in the treatment of oncological diseases.
Methods: This was a retrospective descriptive study conducted over a three-year period, from 2022 to 2025, including all patients who received

at least one cycle of atezolizumab. Patient demographics (age, gender) and treatments were collected using the Asclépios chemotherapy prescription software. Statistical analysis of the data was performed using Excel software.
Results: A total of 18 patients were treated with atezolizumab. The population was predominantly male (83%; sex ratio = 5), with a mean age of 64 years. Seven patients were managed in the adult inpatient ward and 11 in the day hospital unit. Atezolizumab was administered as monotherapy in 50% of cases (mainly urothelial carcinoma and some NSCLC), combined with carboplatin–etoposide in 22% (small cell lung cancer), and with bevacizumab in 27% (hepatocellular carcinoma). The number of treated patients increased from 2 in 2022 to 11 in 2025. Overall, 68 cycles were delivered: 5 (2022), 15 (2023), 23 (2024), and 25 (2025). The fixed dose was 1200 mg per cycle, with an average cost of 14,414 TND. Total expenditure reached 980,152 TND, including 360,350 TND in 2025 alone.
Discussion and conclusion: The increasing use of this innovative therapy reflects its central role in the management of serious oncological diseases. However, its high cost limits its accessibility. Rigorous management is therefore essential to ensure equitable access and optimal care for all patients.

04 Pilomatrixoma Presenting as a Solitary Breast Mass in an Adult Man: A Diagnostic Challenge

Souha Jaouadi, Malek Bouhani, Mohamed Amine Bouida, Hanen Bouaziz, Tarek Ben Dhiab

Surgical Oncology Department, Salah Azaiez Institute, Tunis, Tunisia

Introduction: Pilomatrixoma is a benign adnexal tumor originating from hair follicle matrix cells, typically found in the head and neck of children. Its occurrence in the male breast is exceedingly rare and can clinically mimic malignancy. Accurate pre-operative diagnosis is essential to guide conservative management.
Methods: We are reporting a case report of a 32 male patient with a breast pilomatrixoma diagnosed in our institute
Results: A 32-year-old male presented with a painless, firm, palpable mass in his right breast, measuring 2 cm. Clinical examination revealed a well-defined, hard nodule. Initial core needle biopsy for tissue confirmation. The core needle biopsy provided histological sections showing islands of eosinophilic shadow cells surrounded by basaloid cells, along with calcification and foreign-body giant cell reaction, confirming the diagnosis of pilomatrixoma.
Based on the concordant FNA and core needle biopsy findings, the patient was counseled regarding the benign nature of the lesion and underwent conservative local excision.
Discussion and conclusion: Pilomatrixoma of the male breast is a rare entity that can be mistaken for carcinoma or other calcifying lesions on clinical examination alone. This case highlights the diagnostic value of core needle biopsy, which provided sufficient tissue to demonstrate the characteristic histological architecture. Clinicians should maintain a high index of suspicion for pilomatrixoma when evaluating firm breast nodules in adults.
Pilomatrixoma should be considered in the differential diagnosis of firm breast masses in adult males. Core needle biopsy is an effective tool for accurate pre-operative diagnosis, enabling conservative surgical management.

05 Juvenile Granulosa Cell Tumors in Children: A 19-Year Single-Center Experience

Ben Saad N., Belhssan S., Zouabi N., Ben Fredj M., Mani S., Toumi A., Ben Salah R., Messouad M., Ben Youssef S., Kechich N., Laamiri R., Ksia A., Krichen I., Mekki M., Belghith M., Sahnoun L.

Department of Pediatric Surgery of Monastir

Introduction: Juvenile granulosa cell tumors (JGCTs) are rare ovarian sex cord–stromal tumors in children. They are characterized by their hormone-secreting activity, most commonly resulting in signs of hyperestrogenism, particularly isosexual precocious puberty. The prognosis is generally favorable when diagnosed early and completely resected.
Methods: A retrospective study was conducted at the Department of Pediatric Surgery, Fattouma Bourguiba University Hospital of Monastir, between January 2006 and December 2025. Among 16 cases of malignant ovarian tumors diagnosed in patients under 18 years of age, four cases of juvenile granulosa cell tumors were identified. Analyzed data included clinical presentation, biological findings (tumor markers and hormonal profile), radiological and histopathological features, staging according to the FIGO classification, therapeutic management, and outcomes.
Results: The four patients were aged 17, 12, 2, and 1 year and 8 months. All presented with an abdominopelvic mass, and one had signs of precocious puberty. Conventional tumor markers (α-FP, β-HCG) were negative. Elevated inhibin B levels were observed in one patient. Imaging revealed a solid or mixed solid-cystic ovarian mass without locoregional or metastatic spread. All tumors were classified as FIGO stage I. Management consisted of fertility-sparing surgery. One patient received adjuvant chemotherapy. Follow-up showed no recurrence in any case.
Discussion and conclusion: Juvenile granulosa cell tumors are rare in children but should be considered in the presence of an ovarian mass associated with signs of hyperestrogenism. Serum inhibin B is a valuable diagnostic marker. The prognosis is excellent in early-stage disease following complete surgical resection, highlighting the importance of early diagnosis and appropriate multidisciplinary management.

06 Ovarian Dysgerminoma Before the Age of 16: Clinical Presentation and Therapeutic Outcomes

Ben Saad N., Belhssan S., Zouabi N., Ben Fredj M., Mani S., Toumi A., Ben Salah R., Messouad M., Ben Youssef S., Kechich N., Laamiri R., Ksia A., Krichen I., Mekki M., Belghith M., Sahnoun L.

Department of Pediatric Surgery of Monastir

Introduction: Dysgerminoma is the most common malignant germ cell tumor of the ovary in children and adolescents. The ovarian counterpart of testicular seminoma, it is characterized by high chemosensitivity and an overall favorable prognosis, even in advanced stages. However, locally advanced or recurrent forms remain a therapeutic challenge.
Methods: A retrospective study was conducted at the Department of Pediatric Surgery, Fattouma Bourguiba University Hospital of Monastir, between January 2006 and December 2024. Among 14 malignant ovarian tumors identified in patients under 16 years of age, four cases of dysgerminoma were recorded. Data collected included clinical presentation, tumor markers, imaging findings, FIGO staging, therapeutic management, and outcomes.
Results: The mean age was 11 years (range: 8–13). The main presenting symptom was an abdominopelvic mass, sometimes associated with acute pelvic pain. AFP and β-HCG were usually negative; moderate β-HCG elevation was noted in one case. Imaging revealed large solid or heterogeneous ovarian masses, occasionally with lymphadenopathy or locoregional extension. FIGO

stages ranged from I to III–IV. Management combined fertility-sparing surgery and platinum-based chemotherapy (BEP or JEB); neoadjuvant chemotherapy was used in advanced cases. Outcomes were favorable in localized disease, with one contralateral recurrence and one death in advanced-stage disease.
Discussion and conclusion: Ovarian dysgerminoma is the most common malignant germ cell tumor in children. Diagnosis relies on histology and immunohistochemistry (PLAP, CD117). Despite occasional advanced presentation, prognosis remains excellent due to high chemosensitivity and appropriate fertility-preserving management. Long-term follow-up is essential because of the risk of recurrence, particularly contralateral involvement

07 Primary Ovarian Mixed Malignant Müllerian Tumor: Clinicopathological Insights and Molecular Considerations from a 20-Year Single-Institute Experience

Krimi Ons, Kacem Selma, Sassi Imen, Bouida Amine, Bouaziz Hanen, Dhiab Tarek

Surgical Oncology Department, Salah Azaiez Institute, Tunis, Tunisia

Introduction: Ovarian carcinosarcoma, or mixed malignant Müllerian tumor, is a rare and highly aggressive subtype of ovarian cancer, accounting for only 1–4% of cases. It is characterized by poor prognosis, with a median overall survival ranging from 8 to 26 months. Due to its rarity, comprehensive clinicopathological and molecular characterization is limited.
Methods: We performed a retrospective descriptive study of patients diagnosed and treated for primary ovarian carcinosarcoma at the Salah Azaiez Institute between 2000 and 2020. Clinical presentation, imaging, surgical management, histopathology, and follow-up outcomes were analyzed.
Results: Fifteen female patients were included, with a mean age of 58.5 years (range: 42–72). Physical examination revealed a palpable mass in 38% of cases; inguinal adenopathy was observed in one patient. Tumor size ranged up to 84 mm, with bilateral involvement in four patients. Three patients had peritoneal carcinomatosis at diagnosis, two with hepatic metastases.
Twelve patients (80%) underwent primary cytoreductive surgery, while three had neoadjuvant chemotherapy followed by interval surgery. Adjuvant platinum-based chemotherapy was administered in 67% of cases. Median follow-up was 41 months: four patients experienced recurrence, seven achieved complete remission, three were lost to follow-up, and one died of pulmonary embolism.
Discussion and conclusion: Frequent molecular events include mutations in TP53, PIK3CA, and loss of p16/CDKN2A, potentially contributing to genomic instability, tumor progression, and chemoresistance. Understanding these molecular pathways may facilitate the identification of novel targeted therapies and refine prognostic stratification.
Ovarian carcinosarcomas are rare, aggressive tumors with poor survival outcomes. Optimal management relies on maximal cytoreductive surgery followed by platinum-based chemotherapy. Molecular insights into tumorigenesis may guide future targeted approaches and improve patient outcomes

08 Primary Vulvar Paget Disease: Histopathological and Immunohistochemical Features in Two Cases

Krimi Ons, Kacem Selma, Rajhi Slim, Mbarek Mehdi, Bouida Amine, Bouaziz Hanen, Dhiab Tarek

Surgical Oncology Department, Tunis, Tunisia

Introduction: Vulvar Paget disease is a rare malignant neoplasm. It predominantly affects postmenopausal women and accounts for less than 1% of vulvar malignancies. Clinically, it often presents as chronic pruritic erythematous plaques, mimicking benign dermatologic conditions, which may delay diagnosis. Histopathological confirmation is essential, not only to establish the diagnosis but also to exclude dermal invasion and associated underlying malignancies.
Case presentations:
Case 1: A 63-year-old hypertensive woman presented with persistent vulvar pruritus. Clinical examination revealed an ulcerated erythematous plaque of the left labia majora. Skin biopsy demonstrated a proliferation of large atypical epithelial cells dispersed singly and in small clusters within the epidermis. Immunohistochemical analysis showed strong positivity for CK7 and EMA, with CEA. S100 and HMB45 were negative, excluding melanoma and supporting the diagnosis of primary vulvar Paget disease.

Case 2 : A 71-year-old woman presented with perineal pain and a poorly delimited 35 mm ulcerated lesion of the right labia majora. Histological examination revealed similar features of pagetoid intraepidermal spread of large atypical glandular cells with clear cytoplasm. No invasive component was identified.
Immunohistochemistry confirmed CK7 positivity and absence of melanocytic markers. Partial vulvectomy was performed, and definitive histology confirmed non-invasive Paget disease with negative margins.
Discussion and conclusion: Immunohistochemistry is essential to confirm primary cutaneous origin. The absence of dermal invasion in both cases indicates an early stage; however, recurrence remains frequent due to multifocal microscopic extension.
Primary vulvar Paget disease is a rare intraepidermal adenocarcinoma requiring meticulous histopathological and immunohistochemical evaluation. Early diagnosis and complete surgical excision are critical, but long-term follow up is mandatory given the high risk of local recurrence.

09 Axillary Lymph Node Involvement in Breast Cancer in Young Women

Sabrine Boukhris[1], Najet Mahjoub[2], Ons Krimi[1], Houyem Mansouri[1], Nihed Riahi[1], Samia Ben Hassine[3], Salma Chaabouni[4], Leila Achouri[1]

1) Department of Surgical Oncology, Regional Hospital of Jendouba, Jendouba, Tunisia

2) Department of Medical Oncology, Regional Hospital of Jendouba, Jendouba, Tunisia

3) Department of Radiotherapy, Regional Hospital of Jendouba, Jendouba, Tunisia

4) Department of Anatomopathology, Regional Hospital of Jendouba, Jendouba, Tunisia

Introduction: Lymph node involvement remains one of the most important prognostic factors in breast cancer, significantly influencing staging, therapeutic decisions, and survival outcomes. Accurate pathological assessment of axillary status is essential for risk stratification and treatment planning. This study aimed to analyze the anatomopathological characteristics of breast cancer with a particular focus on nodal involvement.

Methods: We conducted a retrospective study including patients under 40 years old treated for non-metastatic invasive breast cancer at the regional hospital of Jedouba from 2012 to 2021. Pathological data were collected from surgical and histological reports.
Results: One hundred and thirty- four reports were analyzed. Preoperative biopsy confirmed malignancy in 56% of patients. The mean tumor size was 34 mm, with 24% exceeding 40 mm. Multifocality was observed in 34% of cases. Invasive carcinoma of no special type was predominant (88%), and SBR grade III was the most frequent (51%). An associated in situ component was identified in 66% of cases.
The mean number of lymph nodes retrieved was 14.7 (range 1–37). Nodal metastases were found in 59% of patients, with a mean of 1.94 positive nodes (range 1–23). Among node-positive patients, 19% had more than three involved nodes, and 25% exhibited extracapsular extension. A nodal ratio ≥ 30% was observed in 28% of cases and was more frequent in patients under 30 years old.
Discussion and conclusion: Young women with breast cancer in our cohort exhibited a high rate of axillary lymph node involvement, often associated with aggressive pathological features. These findings highlight the biologically unfavorable profile of breast cancer in young patients and underscore the importance of meticulous nodal assessment to guide adjuvant therapy and improve prognostic stratification.

10 Mammary-like adenocarcinoma of the vulva

Souha Jaouadi, Saida Sakhri, Hanen Bouaziz, Mohamed Amine Bouida, Ines Zemni, Tarek Ben Dhiab

Surgical Oncology Department, Salah Aziaez Institute, Tunisia

Introduction: Adenocarcinoma of the vulva is a rare entity, accounting for only 10% of vulvar cancer. It includes Bartholin gland carcinomas, sweat gland carcinomas, extramammary Paget diseases, and mammary-like adenocarcinomas. Only a few cases were reported in the scientific literature.
Methods: We present the case of a 57-year-old woman, gravida 4, para 3, who presented with a pruritic and painful lesion on her left vulva. Her medical history was notable for diffuse lichen sclerosus, a chronic inflammatory dermatosis, and she had a family history of gynecological neoplasia. Vulvar biopsy revealed poorly differentiated adenocarcinoma with trabecular-cord-like architecture. IHC showed positivity for CK7, GATA3, and estrogen receptors (ER), while CK20 and TTF1 were negative. Mammography revealed a BIRADS 4B mass, but the body scan showed no suspicious lesions.
Results: Breast tumorectomy identified an intracanalicular papilloma with atypical epithelial hyperplasia and sclerosing adenosis, ruling out breast malignancy. Surgical excision of the vulvar lesion confirmed a 10 mm poorly differentiated carcinoma with 6 mm thickness, complete margins, and no emboli. IHC was positive for CK, GATA3, and ER, and negative for CK20, Melan A, HMB45, and HER2. PET scan revealed metabolically active left deep inguinal lymphadenopathy. Inguinal lymphadenectomy yielded five lymph nodes, with one metastatic deposit and no capsular rupture.
Discussion and conclusion: The diagnosis of primary mammary-type adenocarcinoma of the vulva was established after excluding breast metastasis and other primaries. The tumor's origin is attributed to anogenital mammary-like glands, and its association with lichen sclerosus in this case may suggest a possible etiological link. Differentiating this entity from metastatic breast carcinoma relies on comprehensive IHC and negative breast imaging. Management requires a multimodal approach due to the risk of lymph node involvement.

11 AKT expression in colorectal carcinoma in a Tunisian case-series: a potential prognostic marker or an eventual therapeutic target?

Aya Khemir[1,2,3], Zaineb Abdelkafi[1,3], Hadir Hamza[4], Ibtissem Ben Mnasser[4], Rym Mecheri[1], Nadia Boujelbène[1,2], Raoudha Doghri[1,2,3], Karima Mrad[1,2,3], Lamia Charfi[1,2,3]

1) Pathology department, Salah Azaiez Institute, Tunis, Tunisia

2) Faculty of Medicine of Tunis, University of Tunis Al Manar

3)Precision Medicine and Oncology Investigation Laboratory (LR21SP01)

4) Higher Institute of Medical Technologies of Tunis, Tunis, Tunisia

Introduction: Colorectal cancer (CRC) is one of the most common malignant diseases worldwide. PI3K/AKT/mTOR pathway is one of the signaling pathways involved in its pathogenesis. It plays a key role in regulating cell growth, survival, and tumor progression. AKT, a central component of this pathway, needs particular attention.
Methods: Our study was focused on the expression of the AKT protein in CRC in a Tunisian case-series, to evaluate its potential associations with clinicopathological features (age, tumor location, size, pTNM stage, ...). The analysis was performed using immunohistochemistry with an anti-panAKT antibody.
A semi-quantitative evaluation allowed classification of cases according to the intensity of staining. Statistical analysis was conducted using GraphPad Prism software.
Results: AKT expression was studied in 33 patients. No statistically significant correlation was found between AKT expression and the studied parameters, but several noteworthy trends were observed: higher AKT expression in younger patients ($p = 0.3236$), in larger tumors ($p = 0.6341$), in tumors located at the rectosigmoid junction and left colon compared to the right colon ($p = 0.5992$), in grade 1 tumors compared to those of grade 2 ($p = 0.8334$), and in Not Otherwise Specified adenocarcinomas compared to mucinous adenocarcinomas ($p = 0.7156$).
Discussion and conclusion: These data emphasize the interest in investigating the involvement of AKT in CRC carcinogenesis in order to establish new therapeutic options for such a public health problem.

12 Clinicopathological characteristics of female breast cancer in Southern Tunisia

Mouna Zghal, Wafa Ghribi, Zineb Elleuch, Soumaya Graja, Tahya Boudawara, Meriam Triki

Department of Pathology and Research Laboratory LR18SP10, Habib Bourguiba University Hospital, University of Sfax, Sfax, Tunisia.

Introduction: Breast cancer (BC) is the most common cancer among women worldwide and in Tunisia, where it accounts for 31.4% of female cancers. This study aimed to analyze the clinicopathological features of female BC in Southern Tunisia.
Methods: This is a retrospective study that included all consecutive female BC cases who were diagnosed at our institution over a period of 6 years (2018-2023).
Results: We identified 449 patients; 82 were aged 40 years and less (18.26%) and 367 were aged over 40 years (81.74%). The median age was 52 years [18 - 92]. The median tumor size was 3.5 cm [0.2 - 28]. The most frequent histological subtype was invasive breast carcinoma of no

special type (75.3%). The main histological grade was 2 (57%). The tumor was mostly of stage p T2 in 49.9%. Nodal metastases were noted in 61.5%. Advanced stage (III/IV) was observed in 42.1%. Lymho vascular invasion was noted in 42.5%. The positive status of ER, PR and Her2 expressions was observed in 77.4%, 71.4% and 25.4% respectively. The Ki67 index was high in 55.4%. The most common molecular subtype was luminal (A,B) (77.7%), followed by triple negative (16.2%) and Her2 overexpression (6.1%).

Discussion and conclusion: Our findings highlight a relatively young age at diagnosis of BC in the Southern Tunisian population. Tumors were frequently diagnosed at intermediate to advanced pathological stages, with high rates of nodal involvement, lympho-vascular invasion, and elevated Ki-67 index, reflecting an aggressive biological profile. Despite the predominance of luminal subtypes, the notable proportion of triple-negative further emphasizes the heterogeneity of BC in our region. These results underscore the need for improved early detection strategies, and optimized therapeutic approaches tailored to the clinicopathological characteristics of this population.

13 Immature Ovarian Teratoma: A Clinicopathological Study of 11 Cases

Mouna Zghal, Zineb El Euch, Saadia Makni, Zaineb Dabbebi, Tahya Boudawara, Manel Mellouli

Department of Pathology and Research Laboratory LR18SP10, Habib Bourguiba University Hospital, University of Sfax, Sfax, Tunisia.

Introduction: Immature ovarian teratoma (IOT) is a rare malignant germ cell tumor, representing a small proportion of ovarian cancers and occurring predominantly in young women. It is characterized histologically by the presence of immature neuroectodermal tissue, which determines tumor grade and has major prognostic and therapeutic implications. Due to its low incidence and limited institutional data, we aimed to analyze the clinicopathological features of IOT.

Methods: We conducted a retrospective analysis on all cases of IOT detected in our department over 10 years (2016-2025). Tumors were classified using the WHO Norris three-tier system (Grades 1-3) based on the amount of immature neurological elements per low-power field on each slide.

Results: Eleven cases were identified. The mean age was 27.9 years (10–44). Tumors were unilateral in 10 cases (90.9%). Size ranged from 6 to 25 cm (mean: 13 cm). Macroscopically, 9 tumors were cystic (81.8%), usually with pilosebaceous material, and 2 cases were solid-cystic (18.2%). The capsule was intact in 9 cases (81.8%). A multilocular cystic component was seen in 4 cases. Necrosis was observed in 1 case. All tumors showed squamous lining and cutaneous adnexal structures. Immature neuroectodermal tissue was present in all cases: neuroepithelial tubes in 9 cases (81.8%) and rosettes in 5 cases (45.5%). Grades were 1 (8 cases, 72.7%), 3 (2 cases), and 2 (1 case). All patients had conservative surgery; 3 received adjuvant chemotherapy. No recurrence occurred during follow-up.

Discussion and conclusion: IOT remains an uncommon malignant germ cell tumor, consistent with its low frequency in our institution. The young mean age aligns with previous reports and underscores the importance of fertility-preserving management. The predominance of unilateral, large tumors agrees with literature. Histologically, immature neuroectodermal tissue confirms the diagnostic hallmark and grading basis. Grading and staging have major prognostic value and guide treatment. The predominance of grade 1 reflects the generally favorable prognosis. Conservative surgery remains the cornerstone of treatment, with adjuvant chemotherapy reserved for selected higher-grade cases.

14 Evaluation of PD-L1 as a theranostic biomarker in lung cancer

Naouress Hasni, Oussema Belkacem, Dorsaf Beltaifa, Nada Benlazrek, Sarra Mestiri, Ahlem Bdioui, Sihem Hmissa, Nabiha Missaoui

LR21ES03 Research Laboratory "Oncogenesis and Tumor Progression" Faculty of Medicine of Sousse

Introduction: Non-small cell lung cancer (NSCLC) remains one of the leading causes of cancer-related mortality worldwide. Immune checkpoint inhibitors targeting the programmed death-1/programmed death-ligand 1 (PD-1/PD-L1) pathway have substantially improved therapeutic outcomes in NSCLC.

However, responses to immunotherapy vary considerably among patients. Genetic polymorphisms in the PD-L1 gene may influence PD-L1 expression, modulate antitumor immune responses, and ultimately affect clinical outcomes and treatment efficacy.

Methods: This retrospective descriptive study evaluated PD-L1 expression and PD-L1 gene polymorphism in a cohort of 74 patients diagnosed with NSCLC between 2020 and 2025 at the Laboratory of Pathology and Cytology, Sahloul University Hospital (Sousse, Tunisia). Associations between PD-L1 gene polymorphism, tissue PD-L1 expression, and clinicopathological parameters were investigated. Genomic DNA was extracted from formalin-fixed paraffin-embedded (FFPE) tumor tissues. PD-L1 expression was assessed by immunohistochemistry using the Tumor Proportion Score (TPS), applying two positivity thresholds (TPS < 1% and TPS ≥ 1%). The PD-L1 rs822336 polymorphism was analyzed by polymerase chain reaction followed by restriction fragment length polymorphism analysis (PCR-RFLP) using the HaeIII restriction enzyme.

Results: PD-L1 expression exhibited a heterogeneous distribution: 32.43% of patients had a TPS <1%, whereas 67.5% had a TPS ≥1%, including 14.86% with a TPS ≥50%. Bivariate analysis revealed significant clinicopathological associations: PD-L1 positivity (TPS ≥1%) was strongly associated with smoking status ($p < 0.001$), histological subtype ($p = 0.040$), with squamous cell carcinomas being more frequently positive, as well as tumor size >4 cm ($p = 0.030$) and poor differentiation ($p = 0.010$). In contrast, the rs822336 PD-L1 polymorphism was not detected in the studied cohort.

Discussion and conclusion: PD-L1 expression remains a key theranostic biomarker for immunotherapy in NSCLC. The absence of the rs822336 variant in this cohort suggests a limited contribution of this polymorphism in the studied Tunisian population.

Larger multicenter studies are warranted to further investigate the potential theranostic relevance of PD-L1 genetic variants in Tunisia.

15 High-grade ovarian carcinoma with solid, endometrioid, transitional, and mucinous-like features: challenges in diagnosis and primary tumour site assignment

Ons Boudaouara, Rana Yaakoubi, Soumaya Graja, Wafa Ghribi, Tahya Sellami Boudawara

Department of pathology, Habib Bourguiba Hospital, Sfax, Tunisia

Introduction: Solid, pseudoendometrioid and transitional-like (SET) features as-well-as mucinous-differentiation are unusual morphologic-patterns of adnexal high-grade-serous-carcinoma (HGSC), occurring mainly in homologous-recombination-deficient and BRCA-mutated tumours.

This report underlines the pathologist role in recognizing these uncommon variants of HGSC and ascertaining tumour's primary site.

Methods: A 57-year-old woman presented with a left ovarian multicystic

and solid mass accompanied by ascites. After proving the presence of a HGSC within a peritoneal-biopsy, the diagnosis of a locally-advanced-ovarian-HGSC was made and a radical surgery was then performed. Gross examination of the surgical-specimen showed 2 distinct tumour masses: a dominant left-ovarian mass and a smaller lesion involving the ipsilateral fallopian tube (FT).
Results: Histologically, both tumours displayed high-grade nuclear features and a mixture of morphological patterns, including SET-pattern, mucin-producing pattern, and a minor conventional-HGSC-pattern. Immunohistochemical-analysis demonstrated diffuse WT1-staining and aberrant P53-expression, suggesting TP53-mutation. Extensive tubal sampling demonstrated serous tubal intraepithelial carcinoma (STIC) within left-FT, supporting the diagnosis of a HGSC with SET and mucinous-features, arising from left FT and extending to ipsilateral ovary.
Discussion and conclusion: HGSC with SET and mucinous-like features may closely mimic endometrioid carcinoma, particularly on limited sampling. However, the absence of a benign/borderline component and the presence of diffuse WT1 and aberrant p53 staining favour HGSC. According to ICCR criteria, adnexal HGSC is considered primary tubal in the presence of at least one criterion among the following: STIC lesions, tubal mucosal HGSC, or partial or total obliteration of one or both FT by ovarian mass. To do so, both FT should be entirely submitted for histologic assessment ensuring accurate and reproducible primary site assignment.

16 Burkitt Lymphoma of the thyroid: an extremely rare entity

Imen Noomen, Ahlem Bellalah, Seif Ben Hammouda, Samiha Mabrouk, Leila Njim, Manel Njima

Pathology Department, Fattouma Bourguiba University Hospital, Monastir, Tunisia

Introduction: Primary Thyroid lymphoma is rare accounting for less than 5% of all thyroid neoplasms. The most common sub-types of primary thyroid lymphomas are large B cell lymphoma and mucosa-associated lymphoid tissue (MALT) lymphoma. However, primary thyroid Burkitt lymphoma (BL) is very rare with only few cases reported.
Methods: We present the case of a 45-year-old female patient who presented with an anterior neck mass that had been progressing for three months. A cervical ultrasound revealed a large nodule with irregular margins, classified as EU-TIRADS 5. Given the rapid growth, anaplastic thyroid carcinoma was suspected. An intraoperative frozen section examination was performed, revealing a malignant tumor suggesting large cell lymphoma.
Results: Histologically, the thyroid parenchyma was diffusely infiltrated by a monomorphic population of medium-sized lymphoid cells with a "starry sky" pattern, characterized by numerous tangible-body macrophages admixed with neoplastic cells. The tumor cells had scant cytoplasm, round nuclei with finely clumped chromatin, and small nucleoli. A high mitotic index was observed. In immunohistochemistry, the neoplastic cells were strongly positive for CD20, as well as for CD10 and BCL6.
They were negative for CD5, CD3, and BCL2. The proliferation index was higher than 90%. These findings supported the diagnosis of Burkitt lymphoma.
Discussion and conclusion: Primary thyroid BL is an extremely rare and highly aggressive subtype of neoplasm accounting for 1% of all thyroid lymphomas and affecting adult patients with male predominance.
From a molecular perspective, BL is defined by translocations involving the MYC oncogene.Histologically, it is characterized by a monomorphic proliferation of medium-sized lymphocytes with a starry-sky pattern and an immunoprofile of CD20+, CD10+, BCL6+, c-MYC+, and BCL2-.
It is important to distinguish BL from other high grade B cell lymphoma including diffuse large B cell lymphoma and high-grade B cell lymphoma with MYC and BCL2 rearrangementswhich are BCL2 positive.
Lymphoblastic lymphoma, which typically expresses TdT, is another important differential diagnosis
In conclusion, this case emphasizes the importance of considering lymphomas when dealing with rapidly enlarging thyroid mass thyroid lesions.

17 Sclerosing well-differentiated liposarcoma with low grade leiomyosarcomatous differentiation and lack of MDM2 amplification

Ons Boudaouara, Imen Guesmi, Slim Charfi, Mouna Zghal, Tahya Sellami-Boudawara

Department of pathology, Habib Bourguiba Hospital, Sfax, Tunisia

Introduction: Leiomyosarcomatous differentiation in liposarcoma is rare. It may occur in well-differentiated liposarcoma (WDL), where adipocytic and smooth-muscle components are low grade, or in dedifferentiated liposarcoma (DL) with high-grade smooth-muscle areas. Distinguishing these entities is essential because of their different behavior. We report a sclerosing WDL with low-grade leiomyosarcomatous differentiation and discuss diagnostic pitfalls, including limitations of MDM2 testing.
Methods: We report a rare case of a 62-year-old man presenting with a 2-month history of right pelvic pain. Computed tomography showed a 10cm mass centered on the terminal ileum with retroperitoneal and spermatic cord extension.
Core biopsy evidenced a mildly atypical spindle cell tumour with smooth-muscle differentiation. Surgical resection demonstrated a poorly circumscribed heterogeneous mass.
Results: Histology revealed mildly atypical fascicular spindle cells with smooth-muscle immunophenotype, admixed with a classic sclerosing WDL. Smooth-muscle-cells appeared to arise from large vessels walls. The tumour has proved to be locally aggressive, invading the retroperitoneum and right spermatic cord with positive margins. MDM2 amplification testing performed externally was negative.
Even though, given the highly suggestive morphological features, the tumour was categorized as a sclerosing WDL with low-grade leiomyosarcomatous differentiation.
Discussion and conclusion: Leiomyosarcomatous differentiation in WDL is rare and may lead to overdiagnosis of DL, particularly on limited biopsy samples. When the smooth-muscle component retains low-grade cytologic features, it should not be misinterpreted as dedifferentiation. Recognition of the underlying WDL component is therefore essential for correct classification. Although MDM2 amplification strongly supports the diagnosis of WDL, rare tumors may lack detectable amplification. Careful morphologic assessment therefore remains crucial to avoid diagnostic pitfalls and inappropriate prognostic interpretation.

18 Cutaneous epithelioid hemangioendothelioma: a case report with literature review

Saadia Makni, Zaineb Debbabi, Manel Mellouli, Mona Zghal, Naourez Gouiaa, Tahya Boudawara, Wafa Ghribi

Department of Pathology, Habib Bourguiba University Hospital, Sfax, Tunisia

Introduction: Epithelioid hemangioendothelioma (EHE) is a rare vascular tumor of borderline malignancy, originating from endothelial cells. Its presentation in the subcutaneous tissue is exceptional and can easily be mistaken for more common conditions, particularly in patients with a history of malignancy.
Methods: We report the case of a 47-year-old male with a past medical history of diffuse large B-cell lymphoma (DLBCL) diagnosed in 2015 and treated with R-CHOP chemotherapy, completed in 2019. The patient achieved complete remission. Two years after treatment completion (2021), he developed two firm, hard subcutaneous abdominal nodules, each ~1 cm in diameter, fixed to both deep and superficial planes. A thoraco-abdomino-pelvic CT scan revealed no abnormalities. Both nodules were excised and sent for histopathological examination.
Results: Macroscopically, the specimens consisted of two skin fragments, each measuring approximately 2.3x1.8x1cm. On the cut section, each contained a whitish nodule measuring 0.7cm in greatest dimension. The histological features were similar in both fragments, showing a well-circumscribed, non-encapsulated, nodular proliferation of epithelioid cells within the dermis and hypodermis arranged in nests or strands. The tumor cells exhibited abundant eosinophilic cytoplasm, occasionally containing intracytoplasmic vacuoles with erythrocytes. The nuclei were moderately atypical with prominent nucleoli, and no mitotic figures were observed. The stroma was myxohyaline, with foci of ischemic necrosis. The overlying epidermis was unremarkable, and the surgical margins were clear. Immunohistochemical analysis was performed on one nodule. The tumor cells expressed CD31, CD34 and showed focal positivity for cytokeratin, while they were negative for HHV8.
Discussion and conclusion: EHE is a rare vascular neoplasm of endothelial origin, classified as intermediate between hemangioma and angiosarcoma in terms of metastatic potential. The main differential diagnoses include metastatic carcinoma (CD31-negative) and epithelioid angiosarcoma (characterized by high-grade nuclear pleomorphism, significant mitotic activity, and necrosis). In cutaneous EHE, it is crucial to distinguish between a primary lesion and a cutaneous metastasis from an internal tumor, underscoring the need for thorough clinical and radiological staging.
Epithelioid hemangioendothelioma, though rare, should be considered in the differential diagnosis of subcutaneous nodules. Histopathological examination with immunohistochemistry is essential for accurate diagnosis, which is critical for informed decision-making and favorable outcomes.

19 When the Gallbladder Mimics Bone: A Vesicular Osteoclastic Tumor, an Exceptional Anatomo-Pathological Case

Bouazzi Amel[1], Tlili Oumayma[1], Farhat Waad[1], Missaoui Wajdi[1], Mokrane Doriaa[1], Ben Mabrouk Mohamed[1], Dorsaf Beltaifa[2], Selma Ben Yahia[2], Oussama Belkacem[2], Syrine Moussa[2], Ahlem Bdioui[2], Sarra Mestir[2], Sihem Hmissa[2]

1) Visceral and Digestive Surgery Department, Sahloul hospital, Sousse, Tunisia

2) Pathology Department, Sahloul Hospital, Sousse, Tunisia

Introduction: Osteoclastic tumors of the gallbladder are exceptionally rare and pose a diagnostic challenge due to their often misleading clinical and radiological presentation. They can mimic suppurative or granulomatous cholecystitis or even cholangiocarcinoma.
The aim of this report is to describe a rare osteoclastic tumor of the gallbladder and to emphasize the diagnostic challenges due to its atypical clinical and radiological presentation.
Methods: The patient's medical records were retrospectively reviewed to collect relevant clinical, laboratory, radiological, and histopathological data. Surgical reports and imaging studies were examined to obtain information on tumor characteristics, operative procedures, and postoperative outcomes.
Results: The patient was a 78-year-old individual with chronic renal failure who was admitted for acute pancreatitis. A CT scan revealed a heterogeneous hypodense vesicular mass centered on a gallstone, initially suspected to represent abscessed or tumorous cholecystitis.
The patient underwent surgery via a Makuchi approach. Histopathological examination revealed that the tumor consisted of two distinct cellular populations: a mononuclear malignant epithelial component exhibiting marked nuclear atypia, high mitotic activity, and areas of necrosis, intermingled with numerous non-neoplastic osteoclastic giant cells scattered throughout the tumor stroma. Immunohistochemical analysis showed that the osteoclastic giant cells expressed CD68, supporting their histiocytic origin. The overall findings were consistent with an undifferentiated carcinoma with osteoclastic giant cells, classified as pT3 N1.
Discussion and conclusion: Osteoclastic tumors of the gallbladder are extremely rare, with only a few cases reported in the literature worldwide. They often present in one of several ways, including as a pseudotumoral mass, a sclerotic and atrophic gallbladder, or severe chronic cholecystitis. Imaging studies are generally non-specific, and definitive diagnosis is almost always established through histopathological examination.
In cases of infiltrating gallbladder masses, particularly when they mimic chronic or complicated cholecystitis, the possibility of a giant cell tumor should be considered. An extended cholecystectomy combined with thorough histopathological analysis remains the cornerstone for accurate diagnosis and effective treatment

20 From Endometriosis to Malignancy: A Rare Case of Vulvar Clear Cell Adenocarcinoma diagnosed on biopsy

Sadia Makni[1], Zineb El euch[1], Fatma Khanfir[2], Mouna Zghal[1], Manel Mellouli[1], Tahya Boudawara[1], Marwa Bouhamed[1]

1) Department of Pathology and Research Laboratory LR18SP10, Habib Bourguiba University Hospital, University of Sfax, Sfax, Tunisia.

2) Department of Obstetrics and Gynecology, Hedi Cheker University Hospital, University of Sfax, Sfax, Tunisia.

Introduction: Primary adenocarcinomas of the vulva are rare, with clear cell adenocarcinoma (CCA) representing an even rarer entity. The literature has only described a few cases of vulvar CCA arising from perineal endometriosis, with an estimated incidence of 0.3–1.0%. Immunohistochemistry (IHC) is essential to confirm the diagnosis and exclude metastatic disease. We report a case of vulvar CCA arising from perineal endometriosis with a review of the literature.
Methods: We report a 44-year-old woman who presented with a bourgeoning vulvar mass. The initial biopsy was followed by partial vulvectomy, sentinel lymph node (SLN) biopsy, and right inguinal lymph node dissection. Histological examination and IHC, including CK7, CK20, Napsin A, PAX8, SALL4, glypican 3, P504s, estrogen, and progesterone receptors, were performed on formalin-fixed paraffin-embedded sections.
Results: Grossly, the specimen showed an ulcero-bourgeoning tumor measuring 7 cm, multikystic with seromucoid content, with close deep margins. Histologically, the tumor showed glands of variable size, often

dilated and cystic with focal papillary structures, lined by cuboidal cells with clear cytoplasm, moderate nuclear atypia, and hobnail nuclei; no lymphovascular invasion was identified. A focus on endometriosis was observed adjacent to the tumor. IHC showed diffuse positivity for CK7, PAX8, and Napsin A; focal positivity for glypican 3; and negativity for CK20, SALL4, and hormone receptors. Two out of three SLNs were positive without capsular rupture; all six inguinal lymph nodes were free of any proliferation.
Discussion and conclusion: Vulvar CCA developing from endometriosis is exceptionally rare, with fewer than ten cases reported worldwide. Endometriosis in the vulva and perineum is an uncommon site outside the ovaries, frequently associated with surgical interventions such as episiotomy. Our case fulfills Sampson's three criteria: endometriosis adjacent to the tumor, no other primary site identified, and histological features compatible with endometrial origin. The müllerian IHC profile, CK7, PAX8, and Napsin A positivity, confirmed the diagnosis and excluded metastatic disease. Clinical diagnosis remains challenging because most patients present with nonspecific symptoms, making histopathological examination the essential diagnostic step. Radical surgery with clear resection margins is the cornerstone of management, and recurrence risk is closely linked to metastatic spread at diagnosis.

21 Clinicopathological Features of Gastrointestinal Adenosquamous Carcinoma: A 5-Case Series

Asma Dahmane[1], Oussama Belkacem[1], Sami Lagha[2], Nadia Makhlouf[1], Dorsaf Beltaifa[1], Selma Ben Yahia[1], Echrak Bechraoui[1], Sihem Hmissa[1]

1)Pathology Department, Sahloul University Hospital, Sousse, Tunisia

2)Department of Digestive and Visceral Surgery, Sahloul University Hospital, Sousse, Tunisia

Introduction: Digestive adenosquamous carcinoma is a rare malignant epithelial tumor characterized histologically by the coexistence of an adenocarcinoma component and a squamous cell component. This entity is typically diagnosed at an advanced stage and is associated with poor histopathological prognostic indicators.
Methods: This is a retrospective descriptive study including five cases diagnosed between 2019 and 2025. The collected data included tumor location, sex, age, tumor size, T and N stages, computed tomography (CT) findings for pancreatic cases, and the presence of high-risk histological prognostic factors.
Results: The series comprised three pancreatic tumors and two colonic tumors, involving three men and two women with a mean age of 68.6 years. The mean tumor size was 7.8 cm. Tumor staging revealed T3 disease in three cases and T4 in two cases, while lymph node involvement was present in four cases (N1) compared to one case staged as N0. Abdominal CT revealed three distinct pancreatic tumors: a 7x8.5x7 cm caudal lesion invading the splenic artery and splenomesenteric trunk, a 3 cm mass in the pancreatic head, and an 8x7 cm cystic mass. These findings illustrate the radiological heterogeneity of pancreatic forms, which can appear as solid infiltrative masses or present with a cystic component. Histologically, vascular emboli were identified in 100% of cases. Perineural invasion was observed in 80% of cases, highlighting the aggressive and invasive nature of these tumors.
Discussion and conclusion: This series emphasizes that digestive adenosquamous carcinomas are often diagnosed at an advanced stage, presenting with large tumor volumes and frequent nodal involvement. The constant presence of vascular emboli and the high proportion of perineural invasion confirm the unfavorable histopathological profile of this entity, underscoring the critical need for rigorous multidisciplinary management.

22 Confusing Cases of Lung Mass: From Suspected Malignancy to Actinomycosis

Selma Ben Yahia, Dorsaf Beltaifa, Oussama Belkacem, Asma Dahmane, Nadia Makhlouf, Syrine Moussa, Sihem Hmissa, Bechir Ben Radhia

Pathology Department, Sahloul Hospital, Sousse, Tunisia

Introduction: We analyzed two cases of pulmonary actinomycosis diagnosed at the Pathology Department of Sahloul University Hospital. Clinical, radiological, and histopathological findings were evaluated. Histopathological examination of the surgical specimens was performed to identify sulfur granules and filamentous bacteria consistent with Actinomyces. Periodic acid-schiff (PAS) staining was performed in one case. The inflammatory response, necrosis, fibrosis, surgical margins, and lymph nodes were systematically evaluated.
Methods: We analyzed two cases of pulmonary actinomycosis diagnosed at the Pathology Department of Sahloul University Hospital. Clinical, radiological, and histopathological findings were evaluated. Histopathological examination of the surgical specimens was performed to identify sulfur granules and filamentous bacteria consistent with Actinomyces. Periodic acid-schiff (PAS) staining was performed in one case. The inflammatory response, necrosis, fibrosis, surgical margins, and lymph nodes were systematically evaluated.
Results: Pulmonary actinomycosis is a rare chronic granulomatous infection caused by bacteria of the genus Actinomyces. Due to its nonspecific clinical and radiological features, it is frequently misdiagnosed as a malignancy, resulting in unnecessary surgical procedures. We report the clinical and histopathological findings of two pulmonary actinomycosis cases initially managed surgically for suspected malignancy.
Discussion and conclusion: These cases illustrate how actinomycosis can mimic malignancy on clinical examination and imaging, potentially leading to aggressive surgical management. Clinicians should consider this infection in the differential diagnosis, especially when risk factors such as diabetes are present, as in our cases.
Early recognition of this rare entity allows for appropriate antibiotic therapy and helps avoid unnecessary invasive interventions. Due to the limited diagnostic yield of culture techniques, histopathological examination combined with special stains remains the gold standard for definitive diagnosis.

23 Yolk Sac Tumors in Children: A Retrospective Study

Ben Saad N., Belhssan S., Zouabi N., Ben Fredj M., Mani S., Toumi A., Ben Salah R., Messouad M., Ben Youssef S., Kechich N., Laamiri R., Ksia A., Krichen I., Mekki M., Belghith M., Sahnoun L.

Departement of Pediatric Surgery of Monastir

Introduction: Yolk sac tumor (endodermal sinus tumor) is a rare malignant germ cell tumor of the ovary in children, characterized by rapid progression and consistently elevated alpha-fetoprotein (α-FP) levels. Despite its aggressive potential, prognosis has markedly improved due to platinum-based chemotherapy protocols.
Methods: A retrospective study was conducted at the Department of Pediatric Surgery, Fattouma Bourguiba University Hospital of Monastir, between January 2006 and December 2024. Among 14 malignant ovarian tumors diagnosed in patients under 16 years, three cases of yolk sac tumor were identified. Data collected included clinical presentation,

tumor markers, imaging, FIGO staging, therapeutic management, and outcomes.
Results: Patients were aged 12 years to 1 year 9 months. Presentation included an abdominopelvic mass with pain or vomiting. Serum α-FP was elevated in all cases, confirming its diagnostic and monitoring role. Imaging showed large solid-cystic ovarian masses; one patient had peritoneal nodules and lymphadenopathy.
Management combined fertility-sparing surgery (unilateral adnexectomy) with platinum-based adjuvant chemotherapy; neoadjuvant chemotherapy was used in one locally advanced case. Outcomes were favorable for followed patients, with α-FP normalization, though some were lost to follow-up, limiting long-term prognostic assessment.
Discussion and conclusion: Pediatric ovarian yolk sac tumors are rare but aggressive. α-FP measurement is essential for diagnosis and monitoring. Multidisciplinary management combining fertility-sparing surgery and chemotherapy achieves favorable outcomes in early-stage disease.

24 Defining the Gray Zone: Histopathological and Prognostic Challenges in Intermediate-Grade Primary Spinal Melanocytic Tumors

Imene Meddeb, Zanzouri Rym, Sghaier Sarra, Ouri Nourhène, Bouzid Nadia, Tebra Sameh

Radiation Oncology Department, Farhat Hached Hospital, Sousse, Tunisia

Introduction: Primary spinal melanocytic tumors are rare leptomeningeal neoplasms spanning a spectrum from benign melanocytoma to malignant melanoma. Intermediate-grade lesions are poorly defined and display unpredictable clinical behavior.
Methods: we retrospectively reviewed a case of intermediate-grade spinal melanocytic tumor with clinicopathological correlation.
Results: A 43-year-old man presented with progressive left lower limb heaviness. MRI showed an intradural intramedullary D11 lesion (31 × 15 × 13 mm) with T1 hyperintensity suggestive of melanin. Subtotal resection was performed due to firm spinal cord adhesion. Histology revealed a moderately cellular spindle-to-epithelioid melanocytic proliferation with moderate atypia, no necrosis, and low-to-moderate mitotic activity.
Tumor cells were positive for S100, HMB-45, and Melan-A; Ki-67 was 7%, supporting intermediate grade. Residual disease persisted postoperatively. After radiotherapy (44 Gy), six-month MRI was stable, but 12-month imaging showed progression with diffuse leptomeningeal enhancement.
Discussion and conclusion: This case underscores the biological unpredictability of intermediate-grade spinal melanocytic tumors. Despite moderate histological features and a relatively low Ki-67 index, early progression occurred. Reliable prognostic criteria remain lacking, highlighting the need for better histopathological stratification and prolonged surveillance.

25 Beyond Inflammation: Nasopharyngeal Follicular Dendritic Cell Sarcoma as a Diagnostic Pitfall Uncovered by Immunohistochemical Profiling

Rym Zanzouri, Imene Meddeb, Sarra Sghaier, Nourhène Ouri, Bouzid Nadia, Tebra Sameh

Radiation Oncology Department, Farhat Hached Hospital, Sousse, Tunisia

Introduction: Follicular dendritic cell sarcoma (FDCS) is a rare mesenchymal neoplasm exhibiting follicular dendritic cell differentiation and classified by the 2022 WHO as a stroma-derived tumor of lymphoid tissues.
Extranodal presentations are common; however, nasopharyngeal involvement is exceptionally rare and may mimic inflammatory or undifferentiated epithelial lesions, leading to diagnostic delay.
Methods: We retrospectively analyzed a case of nasopharyngeal FDCS with detailed clinicopathological and immunohistochemical correlation.
Results: A 46-year-old woman presented with cervical lymphadenopathy and nasal obstruction. Imaging revealed a lobulated nasopharyngeal mass with bilateral cervical nodes. Three biopsies showed only chronic inflammation with follicular hyperplasia. Diagnosis was established after repeat biopsy and lymph node dissection. Histology demonstrated spindle-to-ovoid cells in fascicles and whorls with moderate atypia and mitotic activity.
Tumor cells were strongly positive for CD21 and CD23, and negative for pancytokeratin and lymphoid markers. Ki-67 was ~80%. PET-CT showed intense FDG uptake without distant disease. The patient received chemotherapy and radiotherapy (60 Gy) and remains disease-free at 3 years.
Discussion and conclusion: Nasopharyngeal FDCS is a diagnostic pitfall, especially when initial biopsies are inconclusive. Immunohistochemistry is essential for accurate diagnosis. A high Ki-67 index may indicate aggressive potential, requiring close surveillance and multidisciplinary management.

26 Pediatric breast mass :about 20 cases

Salma mani, Yasmine boubaker,Alma baccouche, Afef toumi, Marwa messoud, Sami sfar, Mariem ben fradj, Sabrine ben youssef, Nedra kechiche, samia belhassen, Rachida laamiri, Imed krichen, Monji mekki, Mohsen belguith, Lasaad Sahnoun

Department of Pediatric Surgery Of Fattouma Bourguiba Hospital of Monastir

Introduction: The breast mass in children and adolescents is a rare situation. It is most often a benign pathology. In most cases, these masses are nothing more than the expression of physiological variations. The usual benignity of the lesions of the breast should not, however, make the possibility of malignant lesions misunderstood. Management involves a definite diagnostic procedure through interrogation, clinical examination, breast ultrasound and, exceptionally, histology.
Methods: This is a retrospective study of 20 cases of breast masses collected in the pediatric surgery department of Monastir over a period from 1984 to 2019.
Results: Age ranged from 1 day to 13 years, there was a female predominance (12cas), the mammary nodule was bilateral in one case. All patients had soft tissue ultrasound showing macro calcification in only one case. The causes of this breast mass have been diverse and depend on the age of the child. It was noted that breast abscess was the most common cause of this breast mass during neonatal age (38%) followed by breast angiomas (11%), during childhood it was about galactophoric ectasia (38%) and for the prepubertal period these are supernumerary breasts (13%). All patients were operated , the treatment was conservative in most cases, only one patient had a bilateral mastectomy. The evolution was favorable in all cases with a decline that varied between 25 years and 1 year.
Discussion and conclusion: The pathology of the child's breast is benign in the vast majority of cases and requires only clinical and ultrasound surveillance. At the slightest doubt, the biopsy will clarify the tumor

nature and guide the therapeutic gesture.

27 Recurrent Pelvi-Perineal Aggressive Angiomyxoma: Case Report and Surgical Management

Grari Louay, Emna Mseddi, Saida Sakhri, Souha Jaouadi, Tarek Dhieb

Service de chirurgie carcinologique, Institut Salah Azaiz, Tunis, Tunisie

Introduction: Aggressive angiomyxoma is a rare soft tissue tumor of the pelvis and perineum, primarily affecting women of reproductive age. Despite benign histology, it demonstrates locally infiltrative growth and a high risk of recurrence.
Clinical presentation is often nonspecific, leading to misdiagnosis as more common vulvo-perineal lesions such as leiomyomas or Bartholin cysts. Early recognition is essential for planning adequate surgical management.
Methods: A 40-year-old multiparous woman presented with a recurrent 10 cm right vulvar mass causing progressive pelvic heaviness, one year after an initial excision that was histologically misdiagnosed as a leiomyoma. Pelvic MRI revealed a large (109 × 86 mm; cranio-caudal 182 mm) solid-cystic mass centered on the rectovaginal septum. The lesion demonstrated a characteristic T2-hyperintense "swirl sign." It displaced the vagina, rectum, and bladder without direct visceral invasion, but infiltrated the left mesorectum, crossed the right puborectal muscle, and involved the ipsilateral ischioanal fossa.
Results: After multidisciplinary discussion, the patient underwent surgical excision via a combined approach. Complete macroscopic resection was achieved, with preservation of adjacent pelvic organs. The postoperative course was uneventful. Histopathology confirmed aggressive angiomyxoma.
Discussion and conclusion: Aggressive angiomyxoma should be considered in any recurrent vulvo-perineal mass. MRI is essential for diagnosis and preoperative planning, allowing assessment of deep pelvic extensions and surgical approach. Complete excision remains the primary treatment; however, local recurrence is common due to the tumor's infiltrative nature. Long-term follow-up with periodic imaging is mandatory to detect recurrence early and guide further management. Early recognition, accurate imaging, and individualized surgical planning are key to optimizing outcomes while minimizing morbidity.

28 Sarcomatous Transformation of a Borderline Phyllodes Tumor with Synchronous Contralateral Benign Breast Lesion

Grari Louay, Emna Mseddi, Saida Sakhri, Souha Jaouadi, Bouaziz Hanen, Tarek Dhieb

Surgical oncology department, Salah Azaiez Institute, Tunis, Tunisia

Introduction: Phyllodes tumors are uncommon fibroepithelial neoplasms, representing less than 1% of breast tumors classified as benign, borderline, or malignant.Borderline variants carry intermediate prognoses but risk local recurrence and rare sarcomatous transformation. Managing such cases is clinically challenging. We report a high-grade spindle cell sarcoma arising in a previously excised borderline phyllodes tumor, discovered alongside a contralateral benign lesion.
Methods: A 61-year-old woman had breast-conserving surgery with margin revision in 2024 for an 11 cm borderline phyllodes tumor of the left breast. During follow-up, she noted rapid enlargement at the same site. Imaging revealed a heterogeneous 15 cm mass; core biopsy confirmed high-grade spindle cell sarcomatous proliferation within a phyllodes tumor. Preoperative imaging of the right breast identified a 9 mm BI-RADS 4B lesion in the lower quadrant junction. Ultrasound-guided biopsy demonstrated a hyalinized fibroadenoma.
Results: Surgical management included left total mastectomy with immediate reconstruction using a latissimus dorsi flap, selective excision of suspicious ipsilateral axillary lymph nodes, and simultaneous removal of the right breast lesion under ultrasound guidance. Histopathology confirmed a 15 cm malignant phyllodes tumor with marked stromal overgrowth and high-grade spindle cell sarcomatous differentiation. All margins were clear. Sampled axillary lymph nodes were negative. The right breast lesion was confirmed as a hyalinized fibroadenoma without atypia. Postoperative recovery was uneventful.
Discussion and conclusion: Sarcomatous transformation of borderline phyllodes tumors is rare, featuring aggressive behavior and high recurrence risk. While nodal involvement is uncommon, hematogenous spread is more typical. Complete surgical excision with clear margins remains the treatment cornerstone. This case illustrates the unpredictable course of these tumors, highlighting the need for long-term surveillance. It also shows that synchronous management of contralateral benign lesions can be safely integrated into a single procedure. Reporting such cases aids in understanding tumor progression and supports individualized, multidisciplinary care for rare breast neoplasms.

29 Medico-economic Impact and Utilization Profile of Trastuzumab Deruxtecan (Enhertu®): Experience of the Salah Azaïez Institute (2023–2025)

Marwa Bel Haj Ali[1], Wiem Ben Ayed[1,2], Imen Guiza[1] ,Myriam Bizid[1] ,Yosra El Fidha[1], , Imen Toukebri[1,2], Azza Ben Said[1,2], Imen Limayem[1,2]

1) Centralized Cytotoxic Preparation Unit, Salah Azaïez Institute, Tunis, Tunisia.

2) Faculty of Pharmacy of Monastir, University of Monastir, Monastir, Tunisia

Introduction: Trastuzumab deruxtecan (T-DXd) is an innovative antibody-drug conjugate targeting the HER2 receptor, indicated for advanced-stage HER2-positive (HER2+) breast cancer following the failure of prior systemic therapies. While clinically transformative, the integration of such high-cost molecules into the therapeutic armamentarium imposes substantial budgetary constraints on healthcare institutions, particularly in resource-limited settings.
Methods: This retrospective, single-center, medico-economic study was conducted at the Salah Azaïez Institute (2023–2025). Data were collected by cross-referencing the Asclépios® clinical database with pharmaceutical dispensing registries. The analysis included demographic and clinicopathological characteristics (histological type, receptor status, stage), consumption metrics (treatment cycles, vials, and mean doses), and an evaluation of direct budgetary impact. The "approval lead time"—the duration between the clinical request and the granting of institutional coverage—was also assessed.
Results: Thirty-three patients (mean age: 54.78 years) were included. The mean dose was 358.9 mg/cycle. The pathological profile was dominated by HER2+/HR- invasive ductal carcinoma (53%) and Luminal B HER2+ (44%). Most patients (78%) had de novo metastatic disease. Utilization grew exponentially: 4 cycles (4 drug units) in 2023, 99 (309 units) in 2024, and 144 (532 units) in 2025. Costs rose from 60,540 TND (2023) to 8,051,820 TND (2025), with a cumulative impact of 12,789,075 TND. The mean cost per cycle was 54,319.52 TND. The mean approval delay was 52 ± 10 days, representing a significant barrier to treatment initiation.

Discussion and conclusion: Trastuzumab deruxtecan has significantly improved the prognosis for HER2+ breast cancer patients by providing potent therapeutic options and extending survival. However, its high cost presents a major economic challenge. These findings highlight the urgent need for prospective budgetary planning and the streamlining of administrative approval processes to ensure sustainable access to oncological innovations. Addressing these bottlenecks is essential to prevent delays in clinical initiation and to optimize the delivery of precision medicine in the public health sector.

30 Blastic plasmacytoid dendritic cell neoplasm: a challenging diagnosis in the era of the recently refined WHO diagnostic criteria

Ons Boudaouara[1], Ines Saguem[2], Saadia Makni[1], Mouna Zghal[1], Tahya Sellami-Boudawara[1]

1) Department of pathology, Habib Bourguiba Hospital, Sfax, Tunisia ;

2) Saguem Pathology Lab, Dar Tabib, 6000, Gabes, Tunisia

Introduction: Blastic plasmacytoid dendritic cell neoplasm (BPDCN) is a rare, aggressive hematologic malignancy derived from plasmacytoid dendritic cells. The 5th edition of the WHO Classification has refined and standardized its diagnostic criteria, particularly the required immunophenotypic profile. This report highlights the practical diagnostic challenges encountered when recommended immunohistochemical markers are not readily available.
Methods: We report on a case of a 32-year-old-man presenting with a-6-month-history of multiple bruise-like nodules and plaques of the trunk. Skin-lesion-biopsy showed a dense dermal infiltrate composed of medium-sized blast-like cells sparing the epidermis. Tumour cells co-expressed CD4 and CD56. Staining for other T-cell, B-cell and myeloid markers was negative. Given this characteristic morpho-immunophenotype, the diagnosis of a BPDCN was suspected. Nevertheless, supplementary immunohistochemical testing of CD123 and of other PDCs markers was not available in our pathology departments.
Results: Further haematological investigations demonstrated similar blast-like cells in bone-marrow aspirate and biopsy as well as in a tonsillar biopsy. Hopefully, CD123-antibody was available in the haematobiology department and was positive on bone-morrow aspirate. Thus, in view of this distinctive immunophenotype, the tumour fulfilled the WHO diagnostic criteria to be termed as a BPDCN, with tonsillar involvement. The patient underwent acute lymphoid-leukaemia/lymphoma-type chemotherapy with cutaneous relapse within 3 months.
Discussion and conclusion: According to the 5th WHO edition, BPDCN is defined by expression of CD123 and one other PDCs marker (TCF4, TCL1, CD303 or CD304) together with CD4 or CD56. Otherwise, staining with 3 PDCs markers plus negativity of expected negative markers e.g. CD3, CD34 may confirm the diagnosis. In practice, limited access to these antibodies may complicate diagnosis, particularly in resource-limited pathology settings. The CD4/CD56/CD123 immunophenotypic profile remains crucial to avoid misdiagnosing BPDCN as another haematological proliferation, mainly leukaemia cutis. In the latter, tumour cells stain with myeloid markers instead of PDCs markers.

31 Cystic Tumors of the Kidney: Challenges in Differential Diagnosis

Nour Boudriga[1], Aida Khadhar[1], Kais Chaker[2], Ines Chelly[1], Alia Zehani[1], Haifa Azouz[1].

1) Department of Pathology, La Rabta University Hospital, Tunis, TUNISIA.

2) Department of Urology, La Rabta University Hospital, Tunis, TUNISIA.

Introduction: Cystic renal tumors represent a heterogeneous spectrum of benign, indolent, and malignant entities. Their diagnosis can be challenging due to overlapping radiological and histopathological features. This study aims to highlight the main differential diagnoses of cystic renal tumors, with particular emphasis on macroscopic and microscopic features.
Methods: A retrospective study (2013–2025) in the Pathology Department of Rabta University Hospital analyzed cystic renal tumors, including clear cell cystic RCC, non-infantile cystic nephroma, multilocular cystic renal neoplasm of low malignant potential, and tubulocystic carcinoma. Clinical, radiological, and pathological data were reviewed.
Results: The study included 19 cases with male predominance (13 men, 6 women; sex ratio 2.1). Mean age was 61 years (27–75). Most lesions were classified as Bosniak III or IV. Clear cell cystic renal cell carcinoma presented as an expansile nodular tumor with multiple cystic spaces and clear cell clusters. CK7 was negative. Multilocular cystic renal neoplasm of low malignant potential showed multiloculated cysts without solid nodules and was PAX8 and CK7 positive. Cystic nephroma was entirely cystic with thin fibrous septa, WT1 positive and CK7 negative. Tubulocystic carcinoma displayed tightly packed tubules and cysts, AMACR and CK7 positive.
Discussion and conclusion: Our series highlights the key role of histopathology in diagnosing cystic renal tumors. Recent advances in molecular biology have improved understanding of their tumorigenesis. Deletion of chromosome 3p and VHL mutations are found in clear cell renal cell carcinoma and multilocular cystic renal neoplasm. Tubulocystic carcinoma often shows gains of chromosomes 7 and 17 and loss of chromosome Y, suggesting a link with papillary renal cell carcinoma. DICER1 mutations are a key event in cystic nephroma, confirming its distinct molecular pathogenesis.

32 Primary Granulocytic Sarcoma of the Bladder: A Rare and Challenging Diagnostic Case

Ahlem Bdioui, Asma Mahmoudi, Nadia Makhlouf, Dorsaf Beltaifa, Oussama Bekacem, Sihem Hmissa

Pathology Department, Sahloul Hospital of Sousse

Research laboratory oncogenesis and tumor progression (LR21ES03)

Introduction: Granulocytic Sarcoma is a seldom-seen tumor composed of immature cells of the granulocytic series. It's been reported to occur in association with known acute myelogenous leukemia and other myeloproliferative and myelodysplastic syndromes. Predominantly, it affects soft tissue, the orbit, and the skin.
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. The histological analysis of the material from the endoscopic resection concluded a myeloid sarcoma. An anterior pelvic exenteration was performed.
Results: Gross examination revealed a tumor measuring 5 × 4 cm. On sectioning, the mass infiltrated the bladder wall musculature and extended to the vaginal wall and cervix.
Microscopically, the tumor was composed of a proliferation of large, non-cohesive cells with abundant eosinophilic cytoplasm and large

nuclei displaying heterogeneous chromatin and prominent nucleoli. Mitotic figures were rare.
The neoplastic cells were embedded in a myxoid stroma containing a mature hematopoietic component. The tumor compressed the overlying urothelial epithelium, which showed no evidence of neoplastic involvement. Tumor infiltration involved the muscularis propria, extended beyond the bladder wall, and involved the vaginal wall with partial extension to the ectocervix. A large panel of immunohistochemistry was performed, excluding epithelial and mesenchymal tumors. Only CD34 and MPO were positive, confirming the diagnosis of granulocytic sarcoma.
Discussion and conclusion: Granulocytic Sarcoma of the urinary bladder presents a rare and challenging diagnostic entity. This case highlights the importance of considering granulocytic sarcoma in the differential diagnosis of bladder tumors even when hematologic manifestations of acute leukemia are absent. 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.

33 Diagnostic pitfall of metastatic lobular breast carcinoma in the urinary bladder misdiagnosed as plasmacytoid urothelial carcinoma

Ahlem Bdioui, Asma Dahmene, S. Moussa, Sarra Mestiri, Oussama Belkacem, S. Hmissa

Sahloul Hospital, Pathology Department, Sousse, Tunisia

Research Laboratory Oncogenesis and Tumoral Progression LR21ES03, Sousse Medical School, Tunisia

Introduction: Invasive lobular carcinoma accounts for 10-15% of breast cancers. It is notorious for its ability to spread systemically, including the gastrointestinal tract, gynaecological organs, peritoneum, and rarely the urological tract. It has significant morphological and immunohistochemical overlap with plasmacytoid urothelial carcinoma. The importance of accurate classification is not trivial, as the 2 diagnoses lead to different treatment plans.
Methods: A 52-year-old woman presented to the gastroenterology department with epigastric pain. CT showed parietal thickening of the left colon with infiltration of the surrounding fat and ascites, associated with dysuria and haematuria. The patient's medical history was not recorded in the data sheet. She was referred to the urology department, where a cystoscopy was performed, which revealed a parietal mass of the bladder wall. A biopsy was taken.
Results: Microscopically, the lamina propria was infiltrated by small, non-cohesive, rather monomorphic tumour cells with scarce basophilic cytoplasm and apparently atypical nuclei. The stroma was fibrous, and vascular emboli were observed. These features were not specific to urothelial carcinoma. An immunohistochemical study was therefore performed to rule out secondary cancer.
The tumour cells were CK7 and GATA3 positive, but CK20 negative. These results, together with the morphological features, were consistent with a plasmocytoid subtype of urothelial carcinoma. Multidisciplinary consultation revealed that the patient had a history of breast cancer, which was not initially indicated.
After discussion, a cadherin was performed, which was negative, correcting the diagnosis of lobular breast carcinoma metastatic to the bladder.
Discussion and conclusion: The morphological presentation as well as immunophenotypes of metastatic lobular breast cancer to the bladder share many similarities with plasmacytoid urothelial carcinoma. As they overlap considerably, communication between pathologists and clinicians is important to avoid misdiagnosis

34 Favorable-Prognosis Triple-Negative Breast Cancers

S. Kamoun, M. Bani, A. Hmidi, H. Maaroufi, A. Goucha, I. Bettaieb, Y. Houcine, M. Driss

Department of Pathology and Cytology B, Salah Azaiez Institute, Tunisia

Introduction: Triple-negative breast cancer (TNBC) is a heterogeneous entity generally associated with poor prognosis.
However, rare variants, including adenoid cystic carcinoma (ACC), metaplastic carcinoma, fibromatosis-like or adenosquamous metaplastic carcinoma, carcinoma with medullary pattern (CMP), and secretory carcinoma, are usually linked to more favorable outcomes.
This retrospective study aims to describe their morphological, immunohistochemical, and clinical outcome features.
Methods: We conducted a retrospective, descriptive, single-center study including favorable-prognosis TNBC cases collected in the Department of Pathology and Cytology B, diagnosed between July 2007 and February 2026. Diagnoses were established according to the 2019 WHO classification. The analyzed parameters included epidemiological, morphological, immunohistochemical, and outcome data.
Results: We identified 15 cases of favorable-prognosis TNBC, distributed as follows: 6 ACC, 1 fibromatosis-like metaplastic carcinoma, and 8 CMP. All patients were female. The mean age was 60 years (range : 36–91 years). Diagnosis was established on lumpectomy or mastectomy specimens. The mean tumor size was 40 mm. The most frequent histological type was CMP (n=8). Vascular emboli were observed in 2 cases corresponding to ACC. Tumor necrosis was identified in 3 cases, all corresponding to CMP. At diagnosis, lymph node metastases were observed in 3 cases, predominantly in CMP. The mean Ki-67 index was 20%.
We also found that one case of CMP associated with a poor clinical outcome (local recurrence) corresponded in fact to a high grade invasive ductal carcinoma containing a component with medullary features.
Discussion and conclusion: Our series confirms the morphological and biological heterogeneity of TNBC. Despite certain adverse histoprognostic factors (vascular emboli and lymph node involvement), the overall clinical course of the studied variants was generally favorable. These findings support the notion that histological subtype plays a key role among conventional histoprognostic parameters. Other prognostic factors alone do not always reflect the biological behavior of these subtypes, in which the tumor microenvironment, particularly tumor-infiltrating lymphocytes, may play a determining role. However, the small sample size of the study and its single-center design limit the strength of our conclusions and justify larger multicenter studies.

35 Corded-Hyalinized Endometrioid Carcinoma : Striking stroma appearance

Imen BOUBAKER, Wided AJOULI, Ahlem BLEL, Linda HADJ KACEM, Raoudha ALOUI, Lina KHALFALLAH, Rania MATHLOUTHI, Mariem GARCI, Mariem KSANTINI, Soumaya RAMMEH

Department of Pathological Anatomy and Cytology, Charles-Nicolle Hospital, Tunis, Tunisia

Introduction: Endometrioid carcinomas of the female genital tract display a spectrum of morphologic features that have long challenged pathologic diagnosis. Corded-Hyalinized Endometrioid Carcinoma (CHEC) exemplifies this with its distinctive cellular fusiform/epithelioid

stroma and biphasic appearance that often leads to misinterpretation. Accurate recognition of this distinctive stroma is essential to guide appropriate therapy and avoid overtreatment.
Methods: This case report details diagnostic criteria enabling precise classification in a postmenopausal nulligravida patient, underscoring therapeutic implications. The patient, with a history of epilepsy and asthma, presented with postmenopausal metrorrhagia. A hysteroscopy was refused so a total hysterectomy with bilateral salpingo-oophorectomy was performed. Gross examination showed a 6.5×3 cm posterior vegetative tumor filling the endometrium cavity, infiltrating full myometrial thickness to serosal contact, and extending through the cervix. Adnexa and cervix were uninvolved.
Results: Microscopy demonstrated a tubulopapillary pattern. Cells were cylindrical with vesicular pseudostratified nuclei and moderate atypia, with foci of squamous metaplasia, and no solid growth. Stroma comprised paucicellular fibrous tissue and a distinctive cellular epithelioid/vaguely fusiform pattern without atypia or mitoses—consistent with grade 1 CHEC-like morphology and excluding sarcomatous component. A single lymphatic embolus was identified. The tumor infiltrated the cervical chorion and showed millimetric metastasis in the right ovary. On immunohistochemistry, the cellular component of stroma was negative for EMA, excluding its epithelial differentiation. The diagnosis of pT3a/IIIA CHEC was retained.
Discussion and conclusion: CHEC-like tumors are distinguished from carcinosarcoma, dedifferentiated carcinoma, low-grade endometrial stromal sarcoma, and undifferentiated uterine sarcoma. Diagnostic pitfalls arise on low-power microscopy where cellular stroma mimics sarcoma, but high-power review reveals absent mitoses and bland nuclei. It is important to note that CHEC has favorable prognosis (70-88% disease-free survival in reported series) versus sarcomas. Literature documents frequent initial misdiagnoses corrected on expert review, enabling therapeutic de-escalation. Correct diagnosis has even reportedly enabled conservative treatment, though non-standard, with a subsequent spontaneous pregnancy in a young patient, underscoring the therapeutic stakes of accurate identification. Recognition of CHEC-like fusiform is pivotal in preventing misdiagnosis, fundamentally shaping therapeutic decisions and patient outcomes through accurate tumor classification.

36 Primary Cutaneous CD30-Positive Anaplastic Large Cell Lymphoma of the Medial Canthus: An unusual Presentation and Diagnostic Challenge

Selma Ben Yahia[1], Syrine Moussa[1], Hela Chaieb[2], Nouha Enafti[2], Oussama Belkacem[1], Dorsaf Beltaifa[1], Asma Dahmane[1], Nadia Makhlouf[1], Sarra Mestiri[1], Abdelfattah Slama[2], Sihem Hmissa[1]

1)Pathology Department, Sahloul University Hospital, Sousse, Tunisia

2)Oral and Maxillofacial Surgery Department, Sahloul University Hospital, Sousse, Tunisia

Introduction: Primary cutaneous anaplastic large cell lymphoma (pcALCL) is a CD30-positive T-cell lymphoproliferative disorder, characterized by skin-limited disease at presentation, without systemic involvement after appropriate staging. It most commonly affects the trunk and extremities. Periocular localization is rare, and involvement of the medial canthus has been reported in only a few cases. Clinically, these lesions may mimic benign conditions, potentially leading to diagnostic delay.
Methods: We herein report the case of a 66-year-old male patient with no significant past medical history, who presented with an ulcerated mass arising from the medial canthus of the left eye. The lesion had been evolving for 2 months. Physical examination revealed a well-circumscribed exophytic lesion with central ulceration measuring approximately 2 cm. No ophthalmological signs were noted on physical examination. The lesion has initially been managed as an Abrikossoff tumor. An excisional biopsy was performed. The specimen was submitted for histopathological evaluation. Complementary immunohistochemical studies were subsequently carried. As the lesion was initially suspected to be benign, no preoperative oncological staging was performed.
Results: Grossly, the specimen consisted of a blackish nodular lesion measuring 2x2x1cm. Histology examination revealed dense intradermal lymphomatous proliferation arranged in diffuse sheets. The neoplastic cells displayed eosinophilic cytoplasm, markedly atypical nuclei with prominent nucleoli and frequent mitosis. An inflammatory background and focal epidermotropism were noted. Immunohistochemistry revealed strong diffuse CD30 expression with paranuclear accentuation. The tumor cells were focally positive for CD3 and CD5, and negative for Pan-cytokeratin, CK20, Chromogranin, CD20 and ALK-1, supporting primary cutaneous anaplastic large T-cell lymphoma (pcALCL), involving the medial canthus. PET-CT revealed hypermetabolic cutaneous foci involving the left scrotal sac and the medial aspect of the right thigh, consistent with multifocal cutaneous involvement, while no other lesions were identified. Although imaging findings are suggestive, histopathological confirmation is required.
Discussion and conclusion: CD30-positive pcALCL of the medial canthus represents a diagnostic challenge due to its rarity and its resemblance to more common benign lesions. Distinguishing pcALCL from other lymphoproliferative conditions requires careful integration of clinical, histopathological and immunohistochemical analysis. Therefore, a multidisciplinary approach is essential to ensure optimal patient management. While pcALCL usually presents as a solitary lesion, multifocal involvement can occur in a minority of cases.

37 Submandibular angiolipoma: key histologic features for accurate diagnosis of salivary gland lipomatous tumours

Ons Boudaouara, Soumaya Graja, Marwa Bouhamed, Meriam Triki, Tahya Sellami-Boudawara

Department of Pathology, Habib Bourguiba Hospital, Sfax, Tunisia

Introduction: Lipomatous tumours are uncommon neoplasms of the salivary glands, occurring mainly in the parotid gland. Angiolipoma refers to a lipomatous tumour with a prominent vascular component and lacking normal salivary gland tissue, in contrast to sialoangiolipoma. We report a rare case of submandibular angiolipoma focusing on the pathologist's role in establishing the right diagnosis, in the setting of a fat-containing salivary gland tumour.
Methods: A 54-year-old woman presented with a painless swelling under the left chin gradually enlarging over one year. Ultrasound revealed a well-defined 21-mm hypoechoic nodule involving the left submandibular gland. The patient underwent surgical excision of the gland.
Results: Gross examination showed a well-circumscribed reddish nodule measuring 15 mm, entirely located within the submandibular gland. Frozen section suggested a benign vascular tumour. Histology revealed a well-demarcated lesion composed of thick-walled blood vessels separated by mature adipose tissue with no intralesional salivary gland elements. No cytologic atypia, mitoses, or necrosis were identified. Based on these findings, the lesion was diagnosed as a completely excised submandibular angiolipoma. The postoperative clinical course was uneventful within a 5-months follow-up.
Discussion and conclusion: Mesenchymal tumours with prominent

adipose tissue are uncommon in salivary glands and include lipomas, angiolipomas, sialolipomas, and sialoangiolipomas. Comprehensive recognition of the histologic components of each entity is warranted to establish the right diagnosis and avoid misclassification. Indeed, in the setting of a lipomatous tumour of the salivary gland, two histologic features are of crucial importance: whether the tumour includes or not a salivary gland tissue and/or a prominent vascular component. Angiolipomas lack salivary tissue and may show thick-walled vessels, distinguishing them from sialoangiolipomas.

38 Head and neck lymphomas: clinical and pathological profile

Imen Noomen[1], Ahlem Bellalah[1], Ghada Kharrat[2], Seif Ben Hammouda[1], Asma Ben Mabrouk[1], Leila Njim[1], Manel Njima[1]

1) Pathology Department, Fattouma Bourguiba University Hospital, Monastir, Tunisia

2) Department of Otorhinolaryngology, Tahar Maamouri Hospital, Nabeul, Tunisia

Introduction: Lymphoma represents the 2nd most frequent tumor in the head and neck region after squamous cell cancers. They occur mostly in the lymph nodes. They constitute a wide range of lymphoproliferative diseases, which are classified as Hodgkin's lymphomas (HL) and Non-Hodgkin's lymphomas (NHL).
Methods: A retrospective descriptive study including 51 patients who have Head and neck lymphoma diagnosed at Fattouma Bourguiba Hospital, Monastir, over the period from 2020 to 2025.
Results: The average age was 49.7 years, with a sex ratio of 1.55. Lymph node, extranodal, and mixed locations were observed in72%, 20%, and 8% of cases, respectively. The extranodal locations were the palatine tonsil (9%), parotid gland (6%), nasopharynx, tongue base, nasal cavity, maxillary sinus, thyroid gland, and submandibular gland. Lateral neck swelling was the predominant complaint. Examination revealed multiple lateral neck swellings in the majority of cases. Fine needle aspiration cytology favored lymphoma in 77.8% of cases. CT scans were performed for all patients as part of the staging assessment. Pathological study identified 47% Hodgkin lymphomas (HL) and 53% non-Hodgkin lymphomas (NHL). In HL, the classical phenotype was found in100% of cases. B-type NHL was predominant; the most commonly found subtype was diffuse large B-cell lymphoma. Other types include MALT lymphoma(4%), Mantle cell lymphoma(2%), Burkitt lymphoma(2%) , lymphocytic lymphoma(4%) and lymphoblastic lymphoma (2%).
Discussion and conclusion: Our series confirmed the heterogeneity of head and neck lymphomas. NHL, particularly diffuse large B-cell lymphoma, was the predominant type, while small cell lymphomas were less common, with MALT and mantle cell lymphoma being the most common subtypes. In classical HL, the nodular sclerosis subtype was the most frequent (75%), which was consistent with our results, followed by mixed cellularity (20%), lymphocyte-rich (5%), and lymphocyte-depleted (<1%) subtypes. The differential diagnosis of head and neck lymphomas includes reactive lymphoid hyperplasia and non-lymphomatous lesions. Small round cell tumors and poorly differentiated carcinomas may mimic lymphoid proliferation. In extranodal sites, inflammatory lesions may also represent diagnostic pitfalls.
In conclusion, lymphomas should be considered in the differential diagnosis of a patient presenting with a neck mass.

39 Breast Adenomyoepithelioma: Report of a rare tumor through a case series

Imen Noomen, Asma Ben Mabrouk, Seifeddine Ben Hammouda, Ahlem Bellallah, Leila Njim, Manel Njima

Pathology Department, Fattouma Bourguiba University Hospital, Monastir, Tunisia

Introduction: Breast adenomyoepithelioma (AME) is a rare biphasic tumor characterized by the proliferation of both epithelial and myoepithelial cells. Its diagnosis is histological and can be challenging due to its morphological diversity.
Methods: This is a retrospective study collected over a 10-year period (2016–2026), including three cases of AME diagnosed at Fattouma Bourguiba University Hospital in Monastir.
Results: The three patients were women aged 38 to 46 years, each presenting with a breast nodule (lobular, irregular, solid-cystic). The tumor was on the right side in two cases and on the left in one. Diagnosis was established on lumpectomy (one case) and on a biopsy (2 cases), then confirmed on mastectomy. Macroscopically, one tumor was whitish and multinodular, and another was beige/cystic. Tumor size ranged from 4.5 to 8cm. Histologically, two cases exhibited tubular architecture, one tubulopapillary pattern. The myoepithelial component consisted of spindle or ovoid cells, without atypia or mitosis. The stroma was highly cellular in two cases and edematous with fibrohyaline changes in the third. The epithelial component displayed marked atypia suggestive of malignant transformation in one case. One tumor showed intraductal papilloma, while another showed area of ductal carcinoma in situ with foci of microinvasion. Immunohistochemistry revealed strong P63 positivity in myoepithelial cells.
Discussion and conclusion: AME is a rare breast tumor, typically benign but with malignant potential. It most commonly affects women over 60, though our series involved younger patients. Histologically, the diagnosis relies on the identification of glandular structures lined by an inner layer of epithelial cells and an outer layer of prominent myoepithelial cells epithelial. Malignant transformation, defined by infiltrative growth, nuclear atypia, increased mitosis, may occur in either component. Three main variants exist: tubular, lobular, and spindle cell. Myoepithelial cells express P63, S100, and CK5/6; epithelial cells are positive for CK, EMA, and CK7. Focal ER/PR expression is reported. Differential diagnoses include intraductal papilloma and tubular adenoma, the latter being more circumscribed with a less prominent myoepithelial layer. Invasive carcinoma must be ruled out on biopsy.
In conclusion, AME is a rare biphasic neoplasm requiring histology and immunohistochemistry for accurate diagnosis.

40 Adenoid cystic carcinoma of the ear: A case report and review of the literature

Ikram Bahri, Sarra Yaakoub, Taghrid Tlili, Zeineb Nfikha, Atef Ben Abdelkader, Badreddine Sriha

Department of Pathology, Farhat Hached University Hospital, Sousse, Tunisia

Introduction: Adenoid cystic carcinoma (ACC) of the external auditory canal (EAC) is an extremely rare tumor. The clinical symptoms are not specific. Diagnosis is done through pathological examination. This work aims to analyze the epidemiological and pathological characteristics of this entity.
Methods: A 71-year-old female patient complained of unilateral hyperacusis, earache and chronic otitis. There was no EAC mass on physical exam. CT scan revealed a large mass that extended from the EAC to parotid gland. Biopsy confirmed malignancy, and patient underwent mastoidectomy with ear canal resection
Results: In the gross examination, the EAC was sclerous and all

structures were invaded. Histological examination showed solid, cribriform, glandular, and single-cell patterns. Perineural invasion The tumor infiltrated cartilage and bone. Surgical margins were negative. Lymph node metastasis was absent.
Discussion and conclusion: Primary cancers of EAC are rare, and most are squamous cell carcinoma (80%), with ACC accounting for 5%. They appear at any age but incidence peaks in the 6th decade of life. Clinical symptoms are not specific, and frequently, there is no visible tumor in the EAC. Therefore, early diagnosis is often missed. This entity is frequently associated with perineural and bone invasion and a high risk of intracranial invasion. Radical surgery followed by radiotherapy increases the chance of controlling the disease locally and even reduces the occurrence of distal metastasis.

41 Cutaneous Infiltration in Chronic Lymphocytic Leukemia: A Rare Presentation of Early Disease Relapse

Mouna Zghal[1], Wafa Ghribi[1], Zineb Elleuch[1], Kmar Turki[2], Slim Charfi[1], Tahya Boudawara[1], Ons Boudawara[1]

1) Department of pathology and Research Laboratory LR18SP10, Habib Bourguiba University Hospital, University of Sfax, Sfax, Tunisia.

2) Department of Dermatology, Hedi Chaker University Hospital, University of Sfax, Sfax, Tunisia.

Introduction: Cutaneous involvement in Chronic Lymphocytic Leukemia (CLL) is an uncommon manifestation resulting from infiltration of the skin by neoplastic B lymphocytes. It presents with a wide spectrum of clinical and histopathological features, sometimes posing diagnostic challenges.
We report a rare case of cutaneous relapse of LLC, occurring shortly after complete remission.
Methods: A 52-year-old woman with a history of treated CLL, in complete remission, presented five months later with papulonodular lesions on the face and arms associated with mild pruritus. A skin biopsy was performed to investigate a possible secondary cutaneous involvement of CLL and to consider the possibility of an eosinophilic dermatosis associated with hematologic malignancies.
Results: Histological examination revealed a moderately dense dermal infiltrate, diffuse or vaguely nodular, composed of small lymphocytes with round hyperchromatic nuclei. Mitotic figures were rare, and a few scattered eosinophils were observed. No epidermotropism, large atypical cells, or granulomas were identified. Immunohistochemical staining showed that the lymphoid cells expressed CD20, CD5, and CD23, while CD3 and CD4 highlighted a perinodular reactive T-cell infiltrate. These findings were consistent with cutaneous involvement by CLL.
Discussion and conclusion: We report a rare case of early cutaneous relapse of Chronic Lymphocytic Leukemia (CLL), emphasizing the importance of considering leukemic skin infiltration in patients presenting with new cutaneous lesions during follow-up. Specific cutaneous infiltrates of CLL are rare, representing 4–20% of cases. They usually occur after a mean disease duration of three years, although cutaneous involvement as the initial manifestation has also been reported. Recognition of this entity is important because the clinical presentation may mimic inflammatory dermatoses or other lymphoproliferative disorders. Histopathological examination with immunohistochemistry remains essential for establishing the diagnosis and guiding appropriate management.

42 Perineurioma: a case series of a rare entity

Imen Noomen, Samiha Mabrouk, Seifeddine Ben Hammouda, Asma Ben Mabrouk, Wafa Mokni, Rim Hadhri, Leila Njim, Manel Njima

Pathology Department, Fattouma Bourguiba University Hospital, Monastir, Tunisia

Introduction: Perineurioma is a rare benign peripheral nerve sheath tumor(PNST) divided into two major subtypes: intraneural and extra neural(soft tissue).
Methods: A retrospective study of four extra neuralperineurioma (ENP)cases diagnosed in Fattouma Bourguiba University Hospital between 2017 and 2026.
Results: The series included three women and one man with a median age of 41 years (range: 22-53).The lesionswere in the retroperitoneum, retromolar region, lower lip, and wrist subcutis.Mean tumor sizewas 3cm (range 0.5-5,5cm).Macroscopically, all were well-defined noduleswith a yellowish cut surface in two cases and a whitish cut surface in the other two. Histologically, all tumors were well circumscribed, composed of spindle cells arranged in a fascicular or storiform pattern. The cellularity was mild in two cases, low in one and variable in the fourth case. No cytological atypia was observed. Only one case revealed 1mitosis/10 HPF.
Myxoid stromal changes were noted in one case. On immunohistochemistry, all lesions expressed EMA. S100 protein was negative in two cases, positive in one, and showed focal positivity in the fourth.CD34 was positive in three cases, and focal neurofilament expression was seen in one.
Discussion and conclusion: ENP is an uncommon PNST typically presenting as a well-circumscribed subcutaneous mass not associated with a discernible nerve, affecting predominantly adult females. Histologically, it is a non-encapsulated well demarcated spindle cell tumor arranged in a fascicular, storiform or whorled pattern. Nuclei are ovoid without atypia, mitosis are rare or absent.Stroma can be collagenous, myxoid, hyalinized or densely sclerotic (sclerotic variant). EMA, Claudine 1 and GLUT1 positivity supports the diagnosis. Distinction from neurofibroma (S100+, EMA-) is essential.
Malignant mimics include dermatofibrosarcoma protuberans (subcutis honeycomb-like infiltrative pattern) and low grade fibromyxoid sarcoma (MUC4+).
The clinical course is almost always benign; rare malignant variants show hypercellularity, atypia, brisk mitosis, and necrosis.
In conclusion, diagnosis of perineurioma requires correlation of its distinguishing characteristic histopathologic features and immunohistochemical profile.

43 A Rare Presentation of Ovarian Melanoma: Histopathologic and Molecular Insights into a Tumor Arising from a Mature Teratoma with a Review of the Literature

A. Dahmane, N. Abdessayed, Z. Nfikha, S. Yacoub, S. Frini, B. Sriha

Pathology department, Farhat Hached University Hospital, Ibn Jazzar Street, 4000 Sousse, Tunisia

Introduction: Mature cystic teratomas (MCTs) are common ovarian tumors, particularly in women of reproductive age. While most MCTs are benign, malignant transformation within these lesions is rare and often difficult to detect preoperatively. Among the various types of malignant transformations that can occur, the development of melanoma within an MCT is exceptionally uncommon.
Methods: We report the case of a 59-year-old woman who presented with pelvic pain. Abdominal ultrasonography and computed tomography (CT) revealed a suspicious ovarian mass.

Results: The patient underwent radical surgery, and histopathological examination revealed diffuse melanocytic proliferation. The tumor cells were epithelioid and pleomorphic, characterized by nuclear enlargement, irregular chromatin, prominent eosinophilic nucleoli, and dusty pigmented cytoplasm, along with high mitotic activity. The tumor extensively involved the left ovary. Immunohistochemical staining was positive for melanocytic markers HMB-45 and Melan-A, and negative for Desmin and CK. Sanger sequencing did not identify the BRAF V600E mutation. Due to the lack of specific targeted therapy, the patient was recommended chemotherapy. However, the clinical course was complicated by the development of pulmonary emboli, and the patient passed away two months after surgery.
Discussion and conclusion: Primary ovarian malignant melanomas are exceedingly rare, as the ovary lacks native melanocytes. These tumors typically arise from teratoid elements within MCTs. The exact frequency and site of melanomas originating in MCTs remain unclear. Histopathological evaluation and molecular diagnostics are crucial for identifying rare tumors and guiding therapeutic strategies. This case highlights the importance of recognizing malignant transformation within MCTs, emphasizing the need for detailed investigation, including immunohistochemical and molecular analysis, to accurately diagnose such rare occurrences and determine appropriate management.

44 Gastric Adenocarcinoma: Clinical, Therapeutic, and Prognostic Comparison Between Linitis Plastica and Non-Linitis Forms

Amel Bouazzi[1], Seif Hammouda[1], Tlili Oumayma[1], Waad Farhat[1], Wajdi Missaoui[1], Mokrane Doriaa[1], Ben Mabrouk Mohamed[1], Dorsaf Beltaifa[2], Selma Ben Yahia[2], Oussama Belkacem[2], Syrine Moussa[2], Ahlem Bdioui[2], Sarra Mestiri[2], Sihem Hmissa[2]

1)Visceral and Digestive Surgery Department, Sahloul Hospital, Sousse, Tunisia

2)Pathology Department, Sahloul Hospital, Sousse, Tunisia

Introduction: Gastric cancer remains a global health priority, accounting for over 1 million cases and 768,000 deaths annually (2020 data). While most gastric adenocarcinomas exhibit molecular and histological heterogeneity, linitis plastica (LP) presents unique diagnostic and therapeutic challenges.
This study aims to determine whether LP exhibits distinct clinicopathological features and worse outcomes compared to non-LP gastric adenocarcinomas.
Methods: In this retrospective cohort study conducted between 2000 and 2022, we compared 79 cases of linitis plastica (LP) with 174 non-LP gastric adenocarcinomas treated by gastrectomy at a tertiary referral center. Tumors of the esophagogastric junction were excluded. Endoscopic, histopathological, surgical, and survival outcomes were analyzed using Kaplan-Meier survival curves and Cox proportional hazards regression.
Results: Our comparative analysis revealed significant clinicopathological and prognostic differences between LP and non-LP gastric adenocarcinomas.LP demonstrated significant demographic differences, affecting younger patients (68% under 60 years vs 53.5%, $p = 0.031$), with a marked female predominance (52.6% vs 30.8%, $p = 0.002$) and a higher association with Lynch syndrome (3.85% vs 0%, $p = 0.048$).
Histopathological assessment confirmed greater biological aggressiveness, with LP showing extensive nodal metastasis (mean 11.97 vs 5.29 positive nodes, $p < 0.001$), higher proximal margin involvement (17.9% vs 8.3%, $p = 0.044$), and significantly lower R0 resection rates (62.8% vs 77.3%, $p = 0.025$). These aggressive features translated into markedly worse oncologic outcomes: median overall survival was reduced by 50% (14 vs 26 months, $p = 0.004$), while recurrence-free survival was shorter by 11 months (11 vs 22 months, $p = 0.038$).
Discussion and conclusion: LP is a diffuse-type gastric carcinoma, predominantly composed of signet-ring cells, which are typically isolated or present in small clusters within the gastric wall. These cells are characterized by abundant intracytoplasmic mucin displacing the nucleus peripherally, giving rise to the classic "signet-ring" appearance. Unlike localized gastric tumors, LP infiltrates the submucosa and muscularis propria extensively, resulting in diffuse thickening and rigidity of the stomach wall. This pattern of dispersed cellular invasion contributes to the challenging endoscopic diagnosis and is associated with a more aggressive clinical course and poorer prognosis compared to non-diffuse gastric adenocarcinomas.

45 Calcium Pyrophosphate Dihydrate Deposition Disease of the Temporomandibular Joint: An Unusual Mass-Like Presentation

A. Dahmane, N. Abdessayed, S. Yacoub, S. Frini, Z. Nfikha, B. Sriha

Pathology department, Farhat Hached University Hospital, Ibn Jazzar Street, 4000 Sousse, Tunisia

Introduction: Calcium pyrophosphate dihydrate (CPPD) crystal deposition disease is a common joint disorder that typically affects large synovial joints. However, its involvement in the temporomandibular joint (TMJ) is exceedingly rare and can clinically mimic neoplastic processes.
Methods: We report a rare case of calcium pyrophosphate dihydrate deposition disease involving the temporomandibular joint in a 63-year-old man.
Results: We report the case of a 63-year-old male presenting with a 3 cm mass in the mandibular condyle and peri-auricular swelling. Gross examination revealed a firm, whitish lesion. Histological analysis demonstrated a lobulated chondroid architecture with mono- and binucleated chondrocyte-like cells and basophilic granular material consistent with calcium phosphate crystals.
Polarized light microscopy confirmed the presence of large, rhomboid, birefringent crystals typical of CPPD. Based on these findings, a diagnosis of pseudotumoral chondrocalcinosis (tophaceous pseudogout) was made.
Discussion and conclusion: Although CPPD typically presents as acute pseudogout, it may rarely manifest as mass-like lesions, particularly in atypical locations such as the TMJ. To date, only 42 cases of TMJ involvement have been reported. These lesions may exhibit chondroid metaplasia and mimic cartilaginous tumors, including chondrosarcoma, leading to potential misdiagnosis.
Routine histology is generally sufficient for an accurate diagnosis, and awareness of its characteristic features is crucial to avoiding unnecessary aggressive interventions. CPPD disease should be considered in the differential diagnosis of tumoral lesions involving the TMJ, particularly when histological findings suggest chondroid pathology.

46 Intracranial Solitary Fibrous Tumor Mimicking Meningioma: A Case Report

Hanen Bessrour[1], Karima Tlili[1], Ons Ben Alaya[1], Faten Gargouri[1], Ghachem Dorra[1], Lehbecha Baha[1], Fethi Falhi[2], Issam Msakni[1].

1)Pathology depatment, Military Hospital, Tunis, Tunisia.

2)Radiology depatment, Military Hospital, Tunis, Tunisia

Introduction: Solitary fibrous tumor (SFT) of the central nervous system is a rare mesenchymal neoplasm, accounting for less than 1% of primary brain tumors. Because of its nonspecific imaging features, it is frequently misdiagnosed as meningioma or schwannoma. Therefore, histopathology and immunohistochemistry remain essential for definitive diagnosis. SFT is classified into grades I, II, and III according to mitotic activity and necrosis.
Methods: A 49-year-old man presented with a 4-month history of progressive vertigo, left-sided heaviness, and paresthesia. Neurological examination revealed decreased visual acuity in the left eye, along with left hemibody hypoesthesia and paresthesia. Brain MRI demonstrated a right paramedian retrocallosal falcine extra-axial mass (41 × 38 × 34 mm) with marked hypervascularity and homogeneous contrast enhancement, initially suggestive of meningioma. Gross total resection was performed.
Results: Macroscopically, the tumor was a well-circumscribed rounded mass measuring 4 × 4 × 2 cm. Histology revealed diffuse spindle-cell proliferation with oval nuclei in a richly vascular stroma containing branching hemangiopericytoma-like vessels.
No atypia, necrosis, or brain invasion was observed; however, mitotic activity exceeded 5 mitoses per 10 high-power fields. Immunohistochemistry showed diffuse CD34 positivity and nuclear STAT6 expression, while EMA and progesterone receptor were negative. A diagnosis of WHO grade II intracranial solitary fibrous tumor was established.
Discussion and conclusion: SFT can closely resemble meningioma on clinical and radiological grounds. The presence of hemangiopericytoma-like vessels should raise suspicion for SFT, which is definitively confirmed by diffuse CD34 positivity and nuclear STAT6 expression. Gross total surgical resection is the treatment of choice, while adjuvant radiotherapy may be considered for high-grade tumors. SFT shows a high risk of local recurrence and occasional metastasis, even decades after initial diagnosis. Among histological features, only mitotic activity and the presence of necrosis consistently correlate with prognosis. Accurate diagnosis and careful long-term follow-up are therefore recommended for all intracranial SFTs.

47 Metaplastic Breast Carcinoma: Clinicopathological Features of 23 Cases from a Tertiary Referral Center in Southern Tunisia

Nermine Ellouze, Zaineb Debbabi, Mouna Zghal, Marwa Bouhamed, Tahya Boudawara, Manel Mellouli

Department of Pathology, Habib Bourguiba University Hospital, Sfax, Tunisia

Introduction: Metaplastic breast carcinoma (MBC) is a rare and heterogeneous subtype of invasive breast cancer, representing approximately 0.2–5% of all breast carcinomas. It is characterized by the coexistence of epithelial and mesenchymal differentiation.
The aim of this study was to analyze the epidemiological, clinical, histopathological, and prognostic characteristics of MBC diagnosed in a tertiary referral center in Southern Tunisia.
Methods: We conducted a retrospective descriptive study including patients diagnosed with MBC in the Department of Pathology and Cytology at Habib Bourguiba University Hospital, Sfax, Tunisia.
The study period extended over twenty-one years, from 2005 to 2025. Clinical data, imaging findings, surgical management, histopathological characteristics, and immunohistochemical profiles were collected and analyzed from pathology reports.
Results: A total of 23 patients were identified. The mean age at diagnosis was 54.8 years (33-70). Left breast involvement was observed in 73.9% of cases. Imaging most often revealed a suspicious mass classified as ACR5–6, except for one ACR4 lesion.
Tumor size ranged from 1.6 cm to 13 cm (mean 5.7 cm). Radical surgery was performed in 22 patients and breast-conserving surgery in one. Histological grading according to the Scarff–Bloom–Richardson (SBR) system showed grade grade III was observed in 22 cases and grade II in 1. Metaplastic differentiation included squamous (14), chondroid (1), fibrosarcomatous (5), and mixed forms (3).
Necrosis, vascular emboli, and perineural invasion were observed in 52.1%, 34.7%, and 12.5% of cases, respectively.
Lymph node metastases occurred in 56.5%. Immunohistochemical analysis demonstrated negativity estrogen receptor (69.5%) and progesterone receptor (60.8%). HER2 expression was negative in 60.8% of cases.
Discussion and conclusion: MBC is distinguished by its extreme histological heterogeneity, classified into several subtypes according to the WHO classification. This morphological diversity, often accompanied by a high-grade invasive ductal carcinoma, requires exhaustive tumor sampling and the use of a broad immunohistochemical panel including hormone receptors and HER2 as wells as cytokeratins, p63, mesenchymal markers to confirm the epithelial origin of the proliferation and, in particular, to rule out a malignant phyllodes tumor or a primary sarcoma.
To conclude, MBC represents an aggressive and heterogeneous group of tumors, frequently characterized by a larger tumor size, a high histological grade, a triple-negative phenotype, and a high rate of lymph node involvement. Accurate histopathological and immunohistochemical evaluation remains essential for diagnosis and prognostic assessment.

48 When Neurofibromatosis Involves the Abdomen: A Case of Jejuno-Jejunal Intussusception

Amel Bouazzi[1], Waad Farhat[1], Oumayma Tlili[1], Wajdi Missaoui [1], Doriaa Mokrane[1], Mohamed Ben Mabrouk[1], Dorsaf Beltaifa[2], Asma Dahmane[2], Oussama Belkacem[2], Syrine Moussa[2], Ahlem Bdioui[2], Sarra Mestiri[2], Sihem Hmissa[2]

1)Visceral and Digestive Surgery Department, Sahloul Hospital, Sousse, Tunisia

2) Pathology Department, Sahloul Hospital, Sousse, Tunisia

Introduction: Neurofibromatosis type 1 (NF1), also known as Von Recklinghausen disease, is a phacomatosis characterized by cutaneous neurofibromas and café-au-lait macules, often associated with multisystem involvement.
Although gastrointestinal involvement is rare, it may present as intramural nodules that can lead to acute complications, including bowel obstruction or intussusception.
Methods: The patient's medical records were reviewed to collect clinical, imaging, surgical, and histopathological data. All relevant investigations, including abdominal CT scan and operative findings, were consulted, and histopathology reports were analyzed to confirm the diagnosis and rule out malignant transformation.
Postoperative follow-up information was also retrieved from the medical records.
Results: A 54-year-old man with known NF1, presenting with multiple cutaneous neurofibromas, café-au-lait spots, and axillary and inguinal freckling, was admitted for diffuse abdominal pain of increasing severity and persistent vomiting for 48 hours. Abdominal CT scan demonstrated

a jejuno-jejunal intussusception.
Emergency laparotomy confirmed the intussusception, caused by a fibrous nodule located 50 cm from the duodenojejunal junction, along with multiple intramural nodules ranging from 0.5 to 2 cm. A 40 cm segment of the jejunum was resected.
Histopathological examination of the resected jejunal segment revealed intramural neurofibromas composed of spindle-shaped Schwann cells within a fibrocollagenous stroma. No atypia, mitoses, or necrosis were observed. Immunohistochemistry confirmed S100 positivity in Schwann cells, confirming benign NF1 involvement. Postoperative recovery was uneventful, and the patient was discharged on postoperative day 8.
Discussion and conclusion: NF1 may involve the enteric nervous system, leading to the formation of intramural neurofibromas. Gastrointestinal manifestations are often asymptomatic until mechanical complications arise. In adults—unlike in children—intestinal intussusception is rare and usually secondary to an organic lead point. In this case, the neurofibromatous nodules acted as lead points, inducing jejuno-jejunal intussusception.
Imaging, particularly CT scanning, plays a key role in the initial diagnosis by identifying the causative lesion and guiding urgent surgical management. Treatment consists of segmental small bowel resection, especially considering the risk of multifocal lesions in NF1. Histopathological examination is essential to rule out rare malignant transformation, such as malignant peripheral nerve sheath tumor (MPNST), and to confirm the benign nature of the nodules.

49 Primary Ovarian Small Cell Carcinoma, Pulmonary Type: A Rare Case Report

Hanen Bessrour, Karima Tlili, Ons Ben Alaya, Faten Gargouri, Baha Lehbecha, Dorra Ghachem, Issam Msakni.

Pathology Department, Military Hospital, Tunis, Tunisia.

Introduction: Small cell carcinoma of the ovary, pulmonary type (SCCOPT) is a very rare and highly aggressive ovarian neuroendocrine carcinoma. It mainly affects postmenopausal women and histologically mimics small cell carcinoma of the lung.
Given its rarity and morphological overlap with other small round cell tumors, SCCOPT represents a significant diagnostic challenge in pathology.
Methods: A 58-year-old postmenopausal woman presented with right pelvic pain radiating to the right lower limb. Serum CA19-9 was mildly elevated. Pelvic MRI revealed a large right latero-uterine solid mass with central necrosis measuring 143 × 80 mm, extending into the abdominopelvic cavity and infiltrating adjacent muscles.
The tumor invaded the right external iliac vein, which was thrombosed, and partially encased the external iliac artery. It was classified as O-RADS 5. The mass was considered locally advanced and classified as O-RADS 5, suggesting a malignant ovarian tumor.
Results: CT-guided biopsy showed sheets of small round-to-oval cells with scant cytoplasm, hyperchromatic nuclei, brisk mitoses, extensive necrosis, and crush artifact. Immunohistochemically, tumor cells were positive for cytokeratin, CK20, synaptophysin (focal), chromogranin, CD56, p16, and PAX8, and negative for CK7, WT1, and TTF-1. CD3 and CD20 highlighted scattered reactive lymphocytes.
The morphological and immunophenotypic profile supported the diagnosis of primary small cell carcinoma of the ovary, pulmonary type. Thoraco-abdomino-pelvic CT excluded a pulmonary primary tumor or distant metastases. The patient died a few months later from pulmonary embolism.
Discussion and conclusion: SCCOPT is a rare and aggressive ovarian neoplasm that must be distinguished from metastatic small cell carcinoma, small cell carcinoma of ovary hypercalcemic type (SCCOHT), and other ovarian small round cell tumors. Clinical and radiological correlation is essential to exclude an ovarian metastasis, and immunohistochemistry is critical for confirming neuroendocrine differentiation.
Surgical resection followed by adjuvant chemotherapy is the current standard treatment, although overall survival remains poor, and data are limited.

50 Extrauterine Endometrial Stromal Sarcoma: a case report about a challenging diagnosis and literature review

Asma Mahmoudi, Sarra Yaacoub, Yasmine Ben Romdhane, Safouene Frini, Taghrid Tlili, Zeineb Nfikha, Nihed Abdessayed, Badreddine Sriha

University Hospital Farhat Hached, Sousse, Tunisia.

Introduction: Endometrial stromal sarcoma (ESS) is a rare malignant tumor arising from the endometrial stromal cells of the uterus. It is an uncommon mesenchymal tumor that accounts for less than 1% of all primary uterine malignancies and extrauterine endometrial stromal sarcoma (EESS) is even rarer.
Methods: We report the case of a 45-year-old woman, with no prior medical history, presenting with an abdominal mass and multiple peritoneal implants. Abdominal and pelvic MRI showed uterus and adnexa of normal size.
Results: A 45-year-old woman presented with an anterior infiltrative pelvic tumor on MRI, showing solid–cystic areas and infiltration of surrounding adipose tissue. Macroscopically, the tumor was oval, encapsulated, yellowish, slightly spongy, with focal cystic, hemorrhagic, and necrotic areas. Histology revealed a monotonous mesenchymal proliferation within a loose, occasionally myxoid stroma; tumor cells were round to ovoid with indistinct borders, arranged around a rich vascular network. Necrosis involved ~10% of the lesion, with peripheral invasive nodules and a thin peritoneal surface. A large panel of immunohistochemical markers was performed and it demonstrated a diffuse positivity for CD10, estrogen and progesterone receptors. The tumor cells were negative for CD34, STAT6, AML, desmin, MyoD1, inhibin, calretinin, PS100, MDM2, pancytokeratin, EMA, and CD56.
Discussion and conclusion: ESS account for approximately 10% of all uterine sarcomas but represent only about 0.1% of all uterine malignancies. EESS are presumed to arise from pre existing endometriosis; however, histological examination does not consistently demonstrate associated endometriotic foci.
The pelvis and abdominal cavity are the most frequent sites. Diagnosis relies on histopathology, supported by immunohistochemical positivity for ER, PR, and CD10, with a broad panel to exclude other sarcomas. While the distinction between low grade and high grade ESS is generally well established in uterine tumors, it becomes more difficult in extrauterine presentations. Management of uterine ESS typically includes surgery, hormonal therapy and chemotherapy. Data on optimal treatment strategies for EESS remain limited. This case highlights the importance of meticulous histopathological evaluation and a multidisciplinary particularly when it mimics other pelvic neoplasms.

51 Breast Adenomyoepithelioma: Clinicopathological Features and Diagnostic Challenges — A 10-Year Experience from Southern Tunisia

Nermine Ellouze, Saadia Makni, Soumaya Graja, Marwa Bouhamed, Tahya Boudawara, Ons Boudawara

Department of Pathology, Habib Bourguiba University Hospital, Sfax,

Tunisia

Introduction: Breast adenomyoepithelioma (AME) is a rare benign tumor characterized by a biphasic proliferation of epithelial and myoepithelial cells. The aim of our study was to report our experience with this entity in Southern Tunisia.
Methods: This was a retrospective descriptive study including 7 cases of breast AME diagnosed in the Department of Pathology at Habib Bourguiba University Hospital of Sfax over a 10-year period between 2012 and 2025.
Results: All patients were female. The mean age at diagnosis was 38.2 years, ranging from 20 to 80 years. Five patients presented with a left breast mass, while 2 had a right breast mass. Bilateral involvement was observed in 1 patient. Mammographic examination revealed an oval hypoechoic mass with indistinct margins. Four patients underwent a core needle biopsy, whereas tumorectomy was performed in 3 cases. Histologically, the tumors showed multilobulated contours with a centrally sclerotic area. They were composed of glandular structures surrounded by a double cellular layer consisting of luminal epithelial cells lining the glandular lumen and myoepithelial cells forming the outer layer. The nuclei were slightly enlarged with low mitotic activity. Axillary lymph node examination performed in 1 case showed no evidence of metastasis.
Discussion and conclusion: Breast AME is a rare benign tumor predominantly affecting women; only two male cases have been reported. The age range is wide (16–86 years), and breast involvement is usually unilateral, with only one bilateral case previously described in the literature, in addition to our case. Histologically, AME is characterized by a biphasic proliferation of luminal epithelial and myoepithelial cells, showing papillary, lobulated, tubular, or mixed patterns.
Although most AMEs are benign, malignant transformation may occur. Diagnosis on core needle biopsy can be challenging due to tumor heterogeneity. AME shows variable biological behavior with a potential risk of local recurrence**.**

52 Pregnancy in Chronic Myeloid Leukemia: A Three-Case Series

Ben Sghaier Rihab[1], Dahleb Rihab[2], Touati Oumayma[1], Sassi Nadia[1], Zarrouk Malek[1], Kmira Zahra[1], Regaieg Haifa[1], Bouteraa Walid[1], Zaier Monia[1], Ouahchi Ines[3], Bouguizene Sassi[2], Ben Sayed Nesrine[1], Ben Youssef Yosra[1]

1) Clinical Hematology Department, Farhat Hached University Hospital , Sousse Tunisia

2)Department of Obstetrics and Gynecology, Farhat Hached University Hospital

3)Department of Medical Genetics and Molecular Biology, Farhat Hached University Hospital, Sousse, Tunisia

Introduction: The management of chronic myeloid leukemia (CML) during pregnancy remains challenging due to potential fetal risks and the need to maintain maternal disease control. We report three cases of pregnancy in women treated for CML and describe maternal and neonatal outcomes.
Methods: Clinical characteristics, therapeutic management, and molecular evolution during and after pregnancy were retrospectively analyzed.
Results: The patients were aged 41, 35, and 36 years. Prior imatinib exposure was 6 years, 5 years, and 1 month. At conception, two were in major molecular response (MMR), one was non-evaluable. In Case 1, imatinib was stopped in the first trimester, leading to MMR loss; postpartum, MMR was not regained, and therapy was switched to nilotinib. In Case 2, imatinib was continued with sustained MMR. In Case 3, continued imatinib led to failure and post-partum blast phase, requiring dasatinib, chemotherapy, and allogeneic transplantation. All delivered full-term healthy newborns; at 3–4 years, all children remain well.
Discussion and conclusion: CML management during pregnancy requires individualized decision-making and close molecular monitoring in collaboration with obstetricians.
While favorable neonatal outcomes were observed, maternal disease control may be compromised, particularly in cases with suboptimal response.

53 Idiopathic Aplastic Anemia Diagnosed During Pregnancy: Report of Two Cases

Ben Sghaier Rihab[1], Dahleb Rihab[2], Sassi Nadia[1], Touati Oumayma[1], Zarrouk Malek[1], Zaier Monia[1], Kmira Zahra[1], Regaieg Haifa[1], Ben Sayed Nesrine[1], Bouguizene Sassi[2], Bouteraa walid[1], Ben Youssef Yosra[1]

1)Clinical Hematology department, Farhat Hached University, Sousse,Tunisia

2)Department of Gynecology, Farhat Hached Hospital, Sousse, Tunisia

Introduction: Aplastic anemia associated with pregnancy is a rare and potentially life-threatening condition. Management is challenging due to cytopenias and limited therapeutic options.
Methods: We retrospectively describe two cases of idiopathic aplastic anemia diagnosed during pregnancy, including clinical presentation, laboratory workup, management, and maternal–fetal outcomes.
Results: A 27-year-old woman at 31 weeks' gestation presented with severe anemia and febrile dyspnea. CBC showed aregenerative normocytic anemia (Hb 3 g/dL), leukopenia (2×10^3/mm³), and thrombocytopenia (30×10^3/mm³). Bone marrow biopsy confirmed aplastic anemia. She received supportive transfusions until cesarean delivery; persistent cytopenias prompted HLA typing and successful allogeneic HSCT. A 32-year-old woman at 33 weeks presented with pancytopenia (Hb 5 g/dL, WBC 3×10^3/mm³, platelets 35×10^3/mm³). Marrow was hypocellular; viral and immunologic workup were negative. Both cases were managed with transfusions until cesarean, with follow-up showing progressive recovery.
Discussion and conclusion: Management of aplastic anemia associated with pregnancy remains challenging for both obstetricians and hematologists. Maternal and fetal morbidity and mortality remain high.

54 Retrospective Analysis of Nivolumab Use in a Cytotoxic Drug Preparation Unit (2020–2025): Insights from the Salah Azaiez Institute

Myriam Bizid[1], Wiem Ben Ayed[1,2], Yosra El Fidha[1], Imen Guiza[1], Marwa Bel Haj Ali[1], Imen Toukebri[1,2], Azza Ben Said[1,2], Imen Limayem[1,2]

1) Unité de préparation centralisée des cytotoxiques, Institut Salah Azaiez,

2) Faculté de pharmacie de Monastir, Monastir, Tunis

Introduction: Nivolumab is an anti–PD-1 monoclonal antibody widely used in oncology as monotherapy or combination therapy, including in breast, ovarian, and gynecological cancers. Its expanding use and high cost present organizational, economic, and pharmaceutical challenges for cytotoxic drug preparation units, requiring optimized management and coordination between clinicians and pharmacists.

Methods: A retrospective descriptive study included all nivolumab preparations in the Cytotoxic Drug Preparation Unit of the Salah Azaiez Institute from January 2020 to December 2025. Data were collected from Asclepios® and STKMED® software and analyzed using Microsoft Excel®.
Results: Between 2020 and 2025, 57 patients received nivolumab, totaling 479 cycles administered in the day hospital. The population included 49% women and 51% men (M/F ratio 1.04). Annual activity increased from 7 cycles in 2020 to 201 in 2025. Monotherapy predominated (82%), while 13% of cycles involved combination therapy, mainly with ipilimumab. Fixed doses of 240 mg (68%) and 480 mg (16%) were most frequent. Overall, 128 vials (100 mg) and 59 vials (40 mg) were used. Estimated cost per cycle was 24,648 TND (240 mg) and 49,297 TND (480 mg).
Discussion and conclusion: Nivolumab use increased substantially, reflecting its growing role in oncology, including breast and gynecological cancers.
Fixed-dose regimens improved preparation standardization and workflow efficiency, while individualized doses required flexible coordination.
Given its high cost, nivolumab represents a significant financial burden, highlighting the pivotal role of hospital pharmacists in optimizing vial management, reducing wastage, and ensuring cost-effective, safe immunotherapy delivery.

55 Sequential Surgical Strategy for a Giant "Hourglass" Retroperitoneal Ganglioneuroma: A Case Report

Louay Grari, Emna Mseddi, Saida Sakhri, Souha Jaouadi, Tarek Dhieb

Surgical oncology, Salah Azaiz Institute, Tunis, Tunisia

Introduction: Ganglioneuroma is a rare, benign neurogenic tumor. When located in the retroperitoneum, it can occasionally extend through the neural foramina into the spinal canal, creating an "hourglass" (dumbbell) configuration. This anatomical complexity presents a major surgical challenge, requiring careful coordination between visceral and neurosurgical teams.
Methods: We report the case of a 17-year-old female presenting with right lumbar pain and left lower limb edema. Advanced imaging (MRI and CT) identified a giant right retroperitoneal mass measuring 94x52x164 mm. The tumor demonstrated significant intraspinal extension from D11 to L2, displacing the spinal cord and maintaining close contact with the inferior vena cava and aorta. Biopsy confirmed a benign ganglioneuroma.
Results: Following multidisciplinary consultation, a two-stage sequential surgical strategy was adopted. The first stage, performed in January 2026, involved a midline laparotomy to resect the abdominal portion. The mass was found to be densely adherent to the psoas muscle and great vessels, requiring meticulous fragmented excision. A second, planned stage will involve a neurosurgical approach to resect the residual intraspinal component. Final histopathology identified an intermixed-type ganglioneuroblastoma with infiltration into striated muscle and fibro-adipose tissue. Resection was confirmed as incomplete due to the tumor's infiltrative nature and the residual intraspinal component.
Discussion and conclusion: The transition from a preoperative diagnosis of ganglioneuroma to a final pathology of intermixed-type ganglioneuroblastoma (GNB) highlights the inherent limitations of needle biopsies in high-volume tumors. Because GNB is characterized by scattered nests of immature neuroblasts within a dominant mature stroma, spatial heterogeneity often leads to sampling errors. Clinicians must maintain a high index of suspicion for a "histological upgrade" when dealing with giant retroperitoneal masses.

56 Incidental discovery Wolffian tumor of the broad ligament: A case report.

Moez Hamdani[1], Sarra Laarayedh[1], Rihab Laarayedh[2], Rayen Cherif[3], Samir Aloulou[3]

1) Department of Pathology, Sadok Mkaddem Regional Hospital, Djerba.

2) Department of Gynecology and Obstetrics, Sadok Mkaddem Regional Hospital, Djerba.

3) Department of Medical Oncology, University Hospital of Gabes

Introduction: Wolffian tumor, also known as “Female Adnexal Tumor of probable Wolffian Origin (FATWO), is a rare gynecologic neoplasmas arising from Wolffian duct remants. It is often discovered incidentally due to nonspecific or absent clinical symptoms. The diagnosis relies on histopathological and immunohistochemical analysis, as imaging findings are usually nonspecific. We report a case of an incidental Wolffian tumor discovered during cesarean section.
Methods: We report the case of a 41-year-old multiparous woman (G7P6) who was admitted for gynecological care for a cesarean section due to a pathological fetal heart rate. During surgery, an incidental small mass was discovered in the right broad ligament, and it was completely excised. The specimen was sent for histopathological and immunohistochemical examination.
Results: Gross examination showed a well-circumscribed nodular mass measuring 2×1.3×0.5cm, beige in color and surrounded by a congestive capsule. Histological examination revealed a well-defined tumor composed of medium-sized cells with sparse cytoplasm and slight nuclear atypia, arranged in diffuse sheets with tubular structures and cavities of varying size, lined with one or two layers of non-atypical cuboid cells containing eosinophilic acellular material. No mitotic figures or signs of malignancy were observed. Immunohistochemical analysis demonstrated vimentin-positive tumor cells and focal positivity for CD10, pancytokeratin, and calretinin, confirming the diagnosis of Wolffian tumor.
Discussion and conclusion: Wolffian tumors (FATWO) are rare entities, most often discovered incidentally and characterized by nonspecific clinical features. Diagnosis relies essentially on histological features supported by immunohistochemistry. Although this tumor generally exhibit benign behavior, isolated cases with malignant potential have been reported. Complete surgical excision is recommended and the prognosis is excellent in absence of signs of malignancy. This case emphasizes the importance of recognizing Wolffian tumor in the differential diagnosis of broad ligament masses and highlights the key role of pathological examination in guiding appropriate management.

57 Sarcomatous Transformation in Neurofibromatosis Type 1: A Case Report of Multifocal Malignant Peripheral Nerve Sheath Tumor (MPNST)

Louay Grari, Emna Mseddi, Saida Sakhri, Souha Jaouadi, Tarek Dhieb

Surgical oncology, Salah Azaiez Institute, Tunis, Tunisia

Introduction: Malignant Peripheral Nerve Sheath Tumors (MPNST) are rare, high-grade soft tissue sarcomas that frequently arise from pre-existing plexiform neurofibromas in patients with Neurofibromatosis Type 1 (NF1). Due to their aggressive biological behavior and poor response to conventional chemotherapy, MPNSTs represent a significant

diagnostic and therapeutic challenge, often carrying a poor prognosis.
Methods: We report the case of a 62-year-old male with a known history of NF1 who presented with a rapidly enlarging, painful mass in the right lumbar region, measuring 12 cm in its greatest dimension. Radiological evaluation via MRI and thoraco-abdomino-pelvic CT scan revealed a large retroperitoneal extension associated with multiple peritoneal nodules, raising suspicion of metastatic or multifocal disease.
Results: Histopathological examination of the biopsy and subsequent surgical specimen confirmed a high-grade spindle cell sarcoma. Immunohistochemical analysis showed a high mitotic index and features consistent with an MPNST. The patient underwent surgical resection of the intra-abdominal masses before being referred to the Salah Azaïez Institute for specialized oncological management of the primary lumbar lesion.
Discussion and conclusion: This case highlights the critical importance of lifelong clinical and radiological surveillance in NF1 patients. Since the primary treatment remains wide surgical resection with negative margins, early detection of sarcomatous transformation is the most significant factor in improving survival. A multidisciplinary approach in specialized centers is essential for managing the complexities of multifocal MPNST.

58 From Recurrent Mastitis to Bilateral Mastectomy: A Rare Evolution of Extensive Breast Necrosis

Krimi Ons, Kacem Selma, Rajhi Slim, Fertani Yasmine, Gallas Amira, Bouhani Malek, Bouaziz Hanen, Dhieb T

Surgical Oncology Department, Salah Azaiez Institute , Tunis, Tunisia

Introduction: Mastitis is a common inflammatory condition of the breast. The most implicated pathogens are Staphylococcus aureus and streptococcal species.
In rare and severe situations, uncontrolled infection may progress to Necrotizing fasciitis of the breast requiring urgent and aggressive surgical intervention. Such evolution remains exceptional but carries significant morbidity and potential mortality if not promptly recognized.
Methods: We report the case of a 37-year-old woman with a medical history of endophthalmitis requiring ocular enucleation and recurrent dental abscesses, without identifiable pathogen or documented immunodeficiency. She presented with recurrent bilateral mastitis unresponsive to multiple courses of large-spectrum antibiotics and repeated surgical drainages.
Results: Bilateral breast biopsies revealed abscessed mastitis no evidence of malignancy. Given the severity and refractoriness of the condition, a multidisciplinary team recommended radical surgical management. The patient underwent bilateral mastectomy to control the infection and prevent further systemic complications. Immediate breast reconstruction was performed using bilateral latissimus dorsi flaps. Postoperative recovery was uneventful under appropriate antibiotic coverage.
At follow-up, the patient demonstrated satisfactory wound healing and expressed satisfaction with the aesthetic outcome, highlighting the importance of integrating reconstructive strategies even in the setting of severe infection.
Discussion and conclusion: Bilateral mastectomy remains an exceptional but life-saving option in cases of recurrent, treatment-resistant infection or suspected necrotizing soft tissue involvement. Early multidisciplinary assessment, timely surgical intervention, and consideration of immediate reconstruction are crucial in optimizing both clinical and psychological outcomes.
This case underscores the need for vigilance in atypical or recurrent mastitis and illustrates that aggressive management may be warranted when conventional therapies fail.

59 Management of Recurrent Malignant Perivascular Epithelioid Cell Tumor: A Case Report

Krimi Ons, Kacem Selma, Rajhi Slim, Khessairi Nayssem, Ghalleb Montassar, Bouaziz Hanen, Dhiab Tarek

Surgical Oncology department, Salah Azaiez Institute, Tunis, Tunisia

Introduction: PEComa is a rare and heterogeneous group of mesenchymal neoplasms characterized by a distinctive perivascular epithelioid cell proliferation. The precise cell of origin remains unknown. Prognosis is variable and unpredictable. Surgical resection is the mainstay of treatment, as conventional chemotherapy has shown limited efficacy.
Recent advances have suggested a role for mTOR inhibitors in advanced disease.
Methods: We report the case of a 67-year-old woman with no past medical history treated at our institute for an abdominal PEComa.
Results: Abdominal CT scan revealed two hypervascular masses likely ovarian in origin. Surgical exploration identified an epiploic mass and a right ovarian mass adherent to the rectum. She underwent a Hudson procedure and complete excision of the epiploic mass. Histopathology confirmed a malignant PEComa with TFE3 translocation, consistent with aggressive behavior.
One year later, recurrence was noted as an abdomino-pelvic mass, necessitating ileo-caecal resection, with histopathology confirming malignant PEComa recurrence. The patient remained under close follow up. Currently, she presents with a second recurrence adherent to mesenteric vessels. Given the locally advanced and unresectable nature of the disease, she was referred for targeted therapy with mTOR inhibitors.
Discussion and conclusion: PEComas frequently demonstrate activation of the mTOR signaling pathway, especially in tumors harboring TFE3 translocations. This molecular insight has led to the use of mTOR inhibitors in advanced or metastatic PEComas, providing objective responses in some cases.
This case highlights the importance of multidisciplinary management, early recognition of recurrence, and integration of molecularly guided therapies in optimizing patient outcomes for this rare mesenchymal malignancy.

60 Occult Breast Cancer Presenting as Axillary Lymphadenopathy: A Case Series Emphasizing Immunohistochemical Diagnosis

Sabrine Boukhris[1], Najet Mahjoub[2], Ons Krimi[1], Nihed Riahi[1], Samia Ben Hassine[3], Salma Chaabouni[4], Leila Achouri[1]

1) Department of surgical oncology, regional hospital of Jendouba, Jendouba, Tunisia

2) Department of medical oncology, regional hospital of Jendouba, Jendouba, Tunisia

3) Department of radiotherapy, regional hospital of Jendouba, Jendouba, Tunisia

4) Department of anatomopathology, regional hospital of Jendouba, Jendouba, Tunisia

Introduction: Occult breast cancer (OBC) is a rare malignancy characterized by axillary lymph node metastasis without a detectable primary tumor in the breast. Immunohistochemistry (IHC) is critical in confirming breast origin and guiding treatment, especially when imaging fails to identify a lesion. The aim of this study was to describe clinical presentation, diagnostic approach including IHC, therapeutic management, and outcomes of patients presenting with axillary OBC.
Methods: We retrospectively reviewed all cases of OBC presenting with isolated axillary lymphadenopathy between 2021 and 2025. All patients underwent mammography, ultrasound, and breast MRI. Biopsy was performed, and IHC markers including estrogen receptor (ER), progesterone receptor (PR), HER2, were analyzed to confirm breast origin and subtype.
Results: Four patients presented with isolated axillary lymphadenopathy. The median age was 59 years. Mammography, breast ultrasound, and breast MRI were performed in each patient and failed to identify a primary breast tumor.
An excisional biopsy of the axillary lymph node was performed and revealed invasive ductal carcinoma in all cases. Immunohistochemical analysis confirmed breast origin: all tumors were ER and PR positive, and one case demonstrated HER2 overexpression.
Therapeutic management included lumpectomy in two patients and axillary lymph node dissection in all four patients. All patients received systemic chemotherapy, adjuvant radiotherapy, and hormone therapy.At a median follow-up of 34 months, complete clinical remission was achieved in all patients.
Discussion and conclusion: IHC is indispensable in diagnosing OBC, confirming breast origin, and guiding systemic therapy. Combined multimodal treatment,including axillary dissection, chemotherapy, radiotherapy, and hormone therapy, can lead to favorable outcomes. Clinicians should consider OBC in patients with unexplained axillary metastases and utilize IHC for accurate diagnosis and tailored management.

61 Optimizing Conservative Surgery in breast cancer: The Critical Role of Intraoperative Examination Post-Neoadjuvant Therapy

Yoldez Houcine[1], Nihed Riahi[2], Fatma Saadallah[3], Salma Kamoun[1], Lamia Naija[3], Ilhem Bettaeib[1], Sabrine Boukhris[2], Maha Driss[1]

1) Pathology, Salah Azeiz Institute, Tunis, Tunisia,

2) Oncologic surgery, regional hospital of Jendouba, Jendouba, Tunisia,

3) Oncologic surgery, Salah Azeiz institute, Tunis, Tunisia

Introduction: Conservative surgery after neoadjuvant chemotherapy (NAC) is widely used in breast cancer management. Frozen section examination (FSE) is an intraoperative histopathological technique enabling real-time evaluation of surgical margins and residual tumor. In the post-NAC setting, it may optimize surgical decisions and reduce re-excision. However, its diagnostic accuracy remains debated due to sampling errors, artifacts, and chemotherapy-induced changes.
Methods: A retrospective study was conducted on 30 patients who underwent conservative surgery after receiving neoadjuvant chemotherapy in the Salah Azeiz Institute over a one-year period.
Results: Our population had a mean age of 50 years (31–68). Frozen section examination (FSE) identified tumor remnants as non-specific type infiltrative carcinoma (NST) in 14 cases; NST with micropapillary component, mucinous carcinoma, and infiltrative lobular carcinoma in one case each. Extemporaneous examination (EE) showed no remnant in 9 cases and doubtful infiltrative remnant in 4. Margins were clear in 23 lumpectomies, tumoral in 4, <1 mm in 2, and carcinoma in situ in 1; 5 patients had complementary mastectomy. Definitive histological examination (DHE) confirmed infiltrative remnants in 18 cases (one bifocal) and absence in 12. Margins were clear in 26 cases, tumoral in 3, and carcinoma in situ in 1. For tumor remnant: Se 100%, Sp 75%, PPV 0.85, NPV 1.
Discussion and conclusion: Our study highlights the critical role of FSE in evaluating tumor remnants and surgical margins in post-chemotherapy conservative surgery. Our results suggest that FSE is a valuable intraoperative tool for assessing tumor remnants and margin status, potentially reducing the need for re-excision and optimizing surgical management. However, given that DHE remains the gold standard for definitive assessment, further studies with larger cohorts are warranted to refine the role of FSE in post-chemotherapy lumpectomies and enhance its diagnostic accuracy.

62 Primary Cutaneous Carcinoma Mimicking Invasive Breast Carcinoma: Report of Two Cases

Sabrine Boukhris[1], Nihed Riahi[1], Ons Krimi[1], Racha Ben Romdhane[1], Samia Ben Hassine[3], Salma Chaabouni[4], Najet Mahjoub[2], Leila Achouri[1]

1) Department of surgical oncology, regional hospital of Jendouba, Jendouba, Tunisia

2) Department of radiotherapy, regional hospital of Jendouba, Jendouba, Tunisia

3) Department of medical oncology, regional hospital of Jendouba, Jendouba, Tunisia

4) Department of anatomopathology, regional hospital of Jendouba, Jendouba, Tunisia

Introduction: Primary cutaneous carcinoma of the areola region is a rare entity that may clinically and radiologically mimic invasive breast carcinoma. Accurate diagnosis is essential, as management and prognosis differ significantly between primary skin malignancies and primary breast cancer. We report two cases illustrating this challenge.
Methods: We included two cases of Primary cutaneous carcinoma of the areola region treated at the department of surgical oncology at the regional hospital of Jendouba, from 2022 to 2025.
Results: A 72-year-old man presented with a progressively enlarging ulcerative lesion of the right breast with areolar retraction. Clinical and imaging findings suggested locally advanced invasive breast carcinoma; however, biopsy confirmed primary cutaneous basal cell carcinoma. He underwent complete surgical excision without adjuvant therapy.
A 64-year-old woman with no significant medical history, presented with a hyperpigmented irregular lesion of the areolar region, clinically mimicking Paget's disease of the breast. Mammography (ACR 2) showed no underlying malignancy. Biopsy revealed squamous cell carcinoma in situ. Wide excision with negative margins was performed, confirming initial diagnosis. Further treatment was not required.
Discussion and conclusion: Primary cutaneous carcinomas involving the breast area may closely mimic invasive breast carcinoma on clinical and radiological assessment.
Histopathological and immunohistochemical evaluation are crucial for accurate diagnosis and appropriate management. Awareness of this rare differential diagnosis can prevent overtreatment and guide optimal therapeutic strategies.

63 Ectopic breast tissue arising in the inguinal region: An uncommon finding

Selma Ben Yahia[1], Oussama Belkacem[1], Jawher Ziedi[2], Echrak Bechraoui[1], Syrine Moussa[1], Nadia Makhlouf[1], Asma Dahmane[1], Mariem Chaieb[2], Sihem Hmissa[1]

1)Pathology Department, Sahloul University Hospital, Sousse, Tunisia

2)Plastic Surgery Department, Sahloul University Hospital, Sousse, Tunisia

Introduction: Ectopic breast tissue typically results from incomplete regression of the mammary ridges during embryonic development. It can occur anywhere along the embryonic milk line from the axilla to the vulva. Although rare, inguinal ectopic breast tissue is an important differential diagnosis that should be considered or ruled out, given its potential to develop the same benign and malignant transformations as orthotopic breast tissue.
Methods: A 31-year-old woman, with no significant past medical history, was referred to the Department of Plastic Surgery at Sahloul Hospital for the assessment of a slowly growing mass located in the right inguinal region. The patient reported that the lesion had been present for approximately three years, with rapid enlargement over the past 6 months. There were no other complaints on anamnesis.
Physical examination revealed a 5cm, well-circumscribed, mobile, and non-tender mass on the inner thigh with normal overlying skin and no regional lymphadenopathy. MRI showed a 5.5cm subcutaneous solid-cystic mass located on the medial aspect of the root of the right thigh, containing internal endocystic vegetations. Clinical and radiological findings were suggestive of subcutaneous liposarcoma. The patient underwent complete surgical excision of the mass under local anesthesia.
Results: Complete excision resolved the inguinal mass; The specimen was addressed to the Pathology Department for histopathological examination. Grossly, it measured 7x5x3.5cm and weighed 50grams. The lesion was covered by an overlying layer of macroscopically normal skin measuring 6x3cm. On the cut section, the specimen contains a cyst structure measuring 6x3 cm with whitish intracystic vegetations with a leaf-like appearance. Microscopically, the mass consists of acini and mammary ducts surrounded by fibrotic changes. The specimen shows no atypia or malignancy. On immunohistochemical study, the epithelial cells expressed GATA3 and progesterone receptors. The final diagnosis, based on histology and immunohistochemistry, revealed morphological features and immunohistochemical profile consistent with ectopic mammary tissue with fibrocystic changes (fibrocystic disease).
Discussion and conclusion: Inguinal ectopic breast tissue poses a diagnostic challenge due to its rarity and non-specific presentation, often mimicking common vulvar lesions. While most cases are benign, there are documented cases of malignant transformation, including invasive ductal carcinoma, therefore histological confirmation and complete surgical excision are recommended.

64 Leukocytoclastic Vasculitis: A Small-Vessel Neutrophilic Inflammation with a Broad Etiologic Spectrum

Yasmine Barbirou[1], Aida Khadhar[1], Tayssir Ben Achour[2], Fatma Said[2], Haifa Azouz[1], Alia Zehani[1], Ines Chelly[1]

1) Department of Pathology, La Rabta University Hospital, Tunis, TUNISIA.

2) Department of Internal Medicine, La Rabta University Hospital, Tunis, TUNISIA.

Introduction: Leukocytoclastic vasculitis (LCV) refers to a histopathological description of a common form of small-vessel vasculitis, characterized by a neutrophilic infiltrate, fibrinoid necrosis and nuclear debris (leukocytoclasia).
The main clinical manifestation of LCV is palpable purpura. Further investigations are usually required to determine whether the disease is skin-limited, or represents part of a systemic disorder. Our study aims to identify the main etiologies of LCV.
Methods: We report a retrospective study of 15 cases of LCV diagnosed on skin biopsy specimens in our pathology department between 2022 and 2025.
Results: Among 15 cases, 60% were females and 40% males (sex ratio: 0,67), aged between 31 and 82 years (mean age: 54 years).
67% of patients presented with typical palpable purpura.
Skin biopsy confirmed LCV in all cases, showing vascular neutrophilic infiltration with leukocytoclasia, fibrinoid necrosis and surrounding extravasated red blood cells.
A specific etiology was identified in all cases: IgA vasculitis (n=4), seronegative ANCA-associated vasculitis (n=2), cryoglobulinemia (n=1), granulomatosis with polyangiitis associated with mixed cryoglobulinemia (n=1), polyarteritis nodosa (n=1), erythema nodosum (n=1), Behçet's disease (n=1), systemic lupus erythematosus (n=1), post-streptococcal syndrome (n=1), necrotizing dermohypodermitis (n=1) and drug eruption (n=1).
Discussion and conclusion: LCV is a histopathological pattern rather than a distinct disease entity. In more than half of cases, an underlying cause is identified, most commonly infections or drugs. Systemic associations include IgA vasculitis, ANCA-associated vasculitis, connective tissue diseases, and Cryoglobulinemic vasculitis. Malignancy may also occur as a paraneoplastic condition, while the remaining cases are classified as idiopathic.
Patients presenting with palpable purpura require comprehensive clinical, laboratory, and radiological evaluation, together with skin biopsy, to determine the underlying etiology, as management and prognosis vary substantially.

65 Unusual Malignant Tumor of the Auditory Region

Nour BOUDRIGA[1], Aida KHADHAR[1], Rihab LAHMAR[2], Imen HELAL[3], Haifa AZZOUZ[1], Alia ZEHANI[1], Ines CHELLY[1].

1) Department of Pathology and Cytology, La Rabta Hospital, Tunis, Tunisia.

2) Department of Otorhinolaryngology , La Rabta Hospital, Tunis, Tunisia.

3) Department of Pathology and Cytology, Habib Thameur Hospital, Tunis, Tunisia

Introduction: Merkel cell carcinoma is a rare, highly aggressive primary cutaneous neuroendocrine tumor.It predominantly arises on chronically sun-exposed skin and mainly affects elderly or immunocompromised individuals. Atypical sites, including the external auditory canal, remain exceptional and may delay diagnosis. Owing to its rapid progression, high risk of regional and distant metastasis, , early diagnosis is essential to optimize treatment outcomes and improve prognosis.
Methods: A 76-year-old male presented with severe vertigo. Otoscopic examination revealed a polypoid lesion obstructing the right external auditory canal. High-resolution computed tomography of the right temporal bone demonstrated complete canal stenosis due to a mass lesion, associated with extensive osseous destruction of the mastoid process.
A biopsy was performed and two tissue fragments measuring 2 mm each

were obtained.
Results: Histological analysis demonstrated a dermal tumor proliferation composed of round to oval cells arranged in nests and clusters. The cells exhibited scant eosinophilic cytoplasm and irregular nuclei with finely granular chromatin and inconspicuous nucleoli. Immunohistochemical staining was positive for chromogranin and synaptophysin, supporting the diagnosis of a neuroendocrine carcinoma.
Tumor cells showed cytoplasmic CK20 expression with a perinuclear dot-like staining pattern. Further imaging and staging workup were conducted to assess the extent of the disease and to plan appropriate management.
Discussion and conclusion: Merkel cell carcinoma of the external auditory canal is exceptional and may delay diagnosis because of non-specific symptoms, often mimicking necrotizing otitis externa. In elderly patients, a rapidly progressive or treatment-resistant polypoid lesion requires biopsy.
Tumorigenesis involves Merkel cell polyomavirus or UV-induced mutations. Diagnosis relies on immunohistochemistry showing CK20 perinuclear dot staining with neuroendocrine markers. Treatment is wide excision plus radiotherapy. Anti-PD-1/PD-L1 is reserved for advanced disease. Early diagnosis improves prognosis.

66 Incidental uro-genital lymphocytic lymphoma and prostate adenocarcinoma found in patient surgically treated for bladder urothelial carcinoma

Ahlem Bdioui, Wafa Mokni, Dorsaf Beltaifa, Salma Ben Yahia, Oussama Belkacem, Sihem Hmissa

Pathology department, Sahloul Hospital Sousse, Tunisia

Research laboratory oncogenesis and tumor progression (LR21ES03), faculty of Medicine Sousse, Tunisia

Introduction: Synchronous prostate adenocarcinoma in patients with muscle-invasive bladder cancer undergoing radical cystectomy is not uncommon. However, its occurrence with uro-genital lymphoma is exceptional. Malignant lymphoma of the bladder is exceedingly rare, accounting for approximately 0.2% of primary neoplastic lesions. Non-specific presentation and rarity of this disease pose a diagnostic challenge for both the clinician and the histopathologist.
Methods: A 65-year-old man with no past medical history, in particular no familial or personal history of lymphoma or haematolymphoid disorder, presented to the urology department with a history of gross haematuria and dysuria for 2 months. Initial laboratory results showed an abnormally high PSA level. Cystoscopy revealed a large multifocal bladder mass, which was biopsied and microscopically diagnosed as muscle-invasive papillary bladder carcinoma.
Results: The patient underwent radical cytoprostatectomy with bilateral lymph node dissection. After microscopic examination and immunohistochemical stydy, the patient was found to have high-grade muscle-invasive papillary urothelial carcinoma without lymph node metastasis, classified as pT2 N0 Mx, associated on one side to transparietal infiltration of the bladder wall by lymphocytic lymphoma, extending into the perivesical fat; seminal vesicles; prostate tissue and ureters and of 22 lymph nodes infiltration and on the other side to a millimetric foci of well-differentiated acinar adenocarcinoma of the prostate with Gleason score of 6 (3+3) with healthy surgical margins and without perineural invasion, classified as pT2 N0.
Discussion and conclusion: We describe an extremely infrequent instance of concurrent bladder tumors. Although the incidence of bladder lymphoma is low, in cases of diffuse and multifocal lymphocytes infiltration, the diagnosis of uro-genital lymphoma should be considered.

67 A Rare Association of Ileal Neuroendocrine Tumor and Ulcerative Colitis: A Case Report

Echrak Bechraoui, Oussama Belkacem, Salma Ben Yahya, Dorsaf Beltaifa, Asma Dahmane, Nadia Makhlouf, Sihem Hmissa

Pathology Department, Sahloul Hospital of Sousse, Tunisia

Introduction: Patients with Ulcerative Colitis (UC) have a high risk of developing gastrointestinal malignancies, primarily adenocarcinoma. Neuroendocrine Tumor (NET) complicating ulcerative colitis (UC) is exceptionally rare, representing less than 1 % of colorectal neoplasms. According to the literature, a few cases of colorectal neuroendocrine tumors associated with ulcerative colitis (UC) have been reported.
Methods: A 53-year-old man with a 5 year history of ulcerative colitis presented with a recent onset of bloody diarrhea. His UC was being managed with mesalamine, 5- aminosalicylate therapy, with good adherence to treatment. Physical examination was normal aside from traces of blood on digital rectal examination. The patient was admitted to the gastroenterology department, where a laboratory and endoscopic workup was performed. Biology showed an elevation of CRP at 36 mg/L. Endoscopy revealed a polypoid lesion situated in the terminal ileum, arising from an area of ulcerated mucosa and erythematous ulcerative colitis. Multiple biopsies were taken from the ileum and colon.
Results: The specimens were addressed to the Pathology Department for histopathological examination. Grossly, 14 fragments measured between 0.2 and 0.3 cm. Microscopically, the ileal specimens showed an infiltrative, ulcerated proliferation composed of monomorphic cells with characteristic “salt and pepper” chromatin. Mitotic figures were rare. On immunohistochemical study, cells intensely expressed synaptophysin and chromogranine A, with a Ki-67 proliferation index of 4%. The microscopic examination of the colonic specimen showed moderate architectural distortion of the crypts, along with a diffuse mixed inflammatory infiltrate in the lamina propria. There were foci of active inflammation, including cryptitis and crypt
abscesses. The final diagnosis based on histology and immunohistochemistry was a Grade 2
well-differentiated neuroendocrine tumor, concomitant with active ulcerative colitis.
Discussion and conclusion: Literature suggests that the development of these rare tumors might occur because of long-standing chronic inflammation, which directly drives dysplasia involving multipotential or neuroendocrine cells. Consequently, this case highlights the need for clinicians to remain vigilant and consider neuroendocrine neoplasms when evaluating polypoid lesions during UC flare-ups.

68 Rare Case of Breast Lymphoma: Look Beyond Carcinoma

Ons Ben Alaya, Karima Tlili, Hanen Bessrour, Faten Gargouri, Baha Lahbacha, Dorra Ghachem, Fethi Falhi, Issam Msakni

1) Pathology department, Military Hospital, Tunis

2) Radiology department, Military Hospital, Tunis

Introduction: Breast lymphoma is a rare malignant condition. The reported incidence of primary breast lymphoma ranges from 0.04% to 0.5% of all malignant breast tumors. It accounts for approximately 1.7% of extra nodal non-Hodgkin lymphomas. The clinical presentation and radiological features of breast lymphoma and breast carcinoma are

similar. The definitive diagnosis is histological. Despite these clinical and radiographic similarities, the treatment differs radically.
Methods: We report the case of a 74-year-old woman with no significant gynecological history who underwent a breast biopsy following the radiological discovery of a mass in the upper outer quadrant of the left breast during breast cancer screening. Ultrasound revealed a peri-areolar mass in the left upper outer quadrant classified as ACR5, with irregular contours and shape, hypoechoic and heterogeneous, containing anechoic necrotic areas with posterior acoustic attenuation, measuring 40 × 29 mm. A breast biopsy was performed and submitted for histopathological examination.
Results: Histological examination showed a dense, basophilic, crushed, and necrotic cellular proliferation. The tumor was composed predominantly of large lymphocytes, scant cytoplasm and an irregularly shaped nucleus. Additional immunohistochemical studies demonstrated the absence of pan-cytokeratin expression in the tumor cells with diffuse CD20 positivity. CD3 highlighted a few reactive T lymphocytes, and CD138 stained scattered plasma cells.
Overall, the findings were consistent with diffuse large B-cell lymphoma (DLBCL).
Discussion and conclusion: Despite its rarity, breast lymphoma should be considered in the differential diagnosis of a breast mass. Fine needle aspiration, along with ancillary studies, is useful for the initial diagnosis of breast lymphoma because it can facilitate appropriate triage of patients for further management. The prognosis of breast non-Hodgkin lymphoma is closely related to the clinical stage and histological grade. The surgical excision is not indicated, and the treatment is based on chemotherapy with or without radiotherapy.

69 Rare cervical lymphoma: A case report

Ons Ben Alaya, Karima Tlili, Hanen Bessrour, Faten Gargouri, Baha Lahbacha, Dorra Ghachem, Fethi Falhi, Issam Msakni.

1) Pathology department, Military Hospital, Tunis

2) Radiology department, Military Hospital, Tunis

Introduction: Primary cervical lymphomas are uncommon and account for approximately 0.5-1% of all extra nodal non-Hodgkin lymphomas. The most commonly reported presenting symptom is abnormal vaginal bleeding. Because of its rarity and non-specific presentation, this condition may be mistaken for other malignant tumors, particularly squamous cell carcinoma, or even for inflammatory processes. Currently, no standardized therapeutic strategy has been established.
Methods: We report a case of a 70-year-old woman, G5P5, with no significant family or gynecological history, who has been post-menopausal since the age of 50. She consulted for her routine gynecological examination without any specific symptoms. Clinical examination revealed a barrel-shaped cervix with cervical induration extending to the parametrium. Pelvic CT scan demonstrated a cervical mass measuring 39x36mm. A cervical biopsy was performed.
Results:
Histological analysis showed a cervical epithelium that was ulcerated on the surface. It was occupied by a cellular proliferation composed of polymorphous inflammatory elements associated with a few large lymphoid-like structures. Immunohistochemical study revealed the following results:
- Positivity for CD20, CD30, Bcl2 and Mum1.
- Negativity for CD3, CD5, CD15 and pan-cytokeratin.
- The proliferation index was estimated at 60%.

Overall, these findings were consistent with a diffuse large B-cell lymphoma.
Discussion and conclusion: Primary cervical lymphoma is an exceptionally rare malignant tumor that often presents with non-specific features mimicking other cervical tumors. Diffuse large B-cell lymphoma is the most common subtype and typically affects peri or post-menopausal women. Diagnosis relies on histopathology supported by immunochemistry. Despite the absence of standardized treatment guidelines, combination chemotherapy, with or without radiotherapy, has been associated with favorable outcomes and high rates of remission.

70 A rare entity in an unusual site: A case of sacrococcygeal ependymoblastoma with systematic review of literature

Aya Khemir[1,2,3], Imen Abbes[1], Raoudha Doghri[1,2,3], Nada Mansouri[4], Nadia Boujelbene[1,2], Ines Nasri[1], Karima Mrad[1,2,3], Lamia Charfi[1,2,3]

1) Pathology department, Salah Azaiez Institute, Tunis, Tunisia

2) Faculty of Medicine of tunis, University of Tunis Al Manar

3) Precision Medicine and Oncology Investigation Laboratory (LR21SP01)

4) Pathologist, Private practitioner, Tunis, Tunisia

Introduction: Ependymoblastomas are high grade embryonal tumors. The sacrococcygeal localization is extremely rare. Only few cases have been reported in literature until this date.
Methods: We report a case of a 20-month-old girl diagnosed with a sacrococcygeal ependymoblastoma that was first thought to be a teratoma. The tumor was surgically removed and then the patient had chemotherapy.
Results: A 20-month-old girl presented with a 10cm in diameter tumor mass in the sacrococcygeal region. Sacrococcygeal CT-scan was in favor of a teratoma.
Surgical resection was performed. Macroscopic examination of the resected tumor mass found a firm mass in consistency. Grossly, the resected tumor was fleshy and firm on cut surface. Microscopic examination showed a malignant tumor proliferation arranged in tubulo-papillary structures and sheets of poorly differentiated cells and multistratified rosettes without a limiting basement membrane. The immunohistochemical study showed diffuse positivity of tumor cells to anti-GFAP and anti-CD99 antibodies.
The ki67 proliferation index was high. INI1 expression was maintained. The diagnosis of congenital sacrococcygeal ependymoblastoma, Not Otherwise Specified was made.
Discussion and conclusion: Sacrococcygeal ependymoblastomas are extremely rare. The diagnosis of such tumors is definitely challenging for pathologists especially in case of an unusual clinico-radiological presentation.

71 Synchronous Bilateral Breast Cancer: Histologic and molecular Features and outcome from a 15 Year Study

Asma Mahmoudi[1], Sarra Yaacoub[1], Nesrine Gaha[2], Yasmine Ben Romdhanen[1] Ichrak Hadhri[1], Safouene Frini[1], Badra Bannour[2]

1)Pathology Department, University Hospital Farhat Hached, Sousse, Tunisia.

2)Obstetrics & Gynecology Department, University Hospital Farhat Hached, Sousse, Tunisia.

Introduction: Bilateral breast cancer accounts for 2–11% of all breast cancers and may occur as synchronous or metachronous tumors.

Synchronous bilateral breast cancer (SBBC) is uncommon, with an incidence of 0.2–3%, but its detection has increased with advances in breast imaging. However, it remains poorly studied. This study aims to investigate the epidemiological, histopathological, and molecular characteristics of SBBC and to identify factors associated with patient survival.
Methods: A retrospective analytical study conducted in the Department of Pathology and Gynecology and Obstetrics at Farhat Hached Hospital in Sousse, on a series of 45 patients diagnosed with SBBC over a 15-year period, from 2010 to 2024.
Results: The frequency of SBBC was 0.85%, with a mean age at diagnosis of 51.3 ± 13.3 years. Only 26.8% of patients presented with palpable bilateral nodules at diagnosis. The most common histological type was invasive ductal carcinoma, followed by invasive lobular carcinoma. Immunohistochemical analysis revealed strong hormone receptor expression in 90.2% of cases. The predominant molecular subtype was luminal B bilaterally. Bilateral mastectomy was performed in 56.1% of patients. Complete remission was achieved in 54.3%, while rate mortality counted for 31.4%. Tumors diagnosed simultaneously or measuring less than 5 cm were associated with improved overall and disease-free survival. Histological concordance correlated with improved survival, whereas molecular concordance showed higher recurrence-free survival but unexpectedly lower overall survival.
Discussion and conclusion: In SBBC, invasive ductal carcinoma is the most frequent subtype, while invasive lobular carcinoma, though less common, may have a relatively higher incidence in SBBC compared to unilateral disease. Rare subtypes such as mucinous and medullary carcinomas have also been reported. Molecular profiling of SBBC generally shows predominance of luminal subtypes; in our series, luminal B was the most frequent, although other studies have reported luminal A as the predominant subtype. Hormone receptor positivity is typically high in SBBC and shows strong concordance between paired tumors, emphasizing the relevance of hormone-based therapies. HER2 overexpression, though less common, is associated with more aggressive disease and poorer outcomes. Unlike our study, discordance in molecular profiles between bilateral tumors has been linked in the literature to poorer overall and disease-specific survival, likely reflecting divergent oncogenic pathways.

72 Phyllodes Tumors of the Breast: Concordance of Core Needle Biopsy and Surgical Specimen Grading

Nermine Ellouze, Zaineb Debbabi, Mariem Triki, Mouna Zghal, Tahya Boudawara, Soumaya Graja

Department of Pathology, Habib Bourguiba University Hospital, Sfax, Tunisia

Introduction: Phyllodes tumors (PTs) are rare fibroepithelial breast tumors characterized by epidemiological and histopathological heterogeneity, mainly related to their histological grade (benign, borderline, or malignant). The aim of our study was to analyze the epidemiological characteristics of PTs and to evaluate the concordance of histological grading between core needle biopsies and surgical specimens.
Methods: This was a retrospective, descriptive, and analytical study conducted in the Pathology Department of Habib Bourguiba University Hospital of Sfax over a 10-year period (2012–2021).
Results: Our study included 80 patients who underwent surgery for breast PTs. These were distributed into 56 benign PTs, 14 borderline PTs, and 10 malignant PTs. Core needle biopsy was performed in 40 cases. Three cases were initially diagnosed as fibroadenoma (7.5%). The remaining 37 cases were classified as 31 benign PTs (77.5%), 2 borderline PTs (5%), and 4 malignant PTs (10%).
Twenty-eight biopsies showed a grading concordant with that of the surgical excision specimen (75.7%). In all discordant cases, the biopsy underestimated the tumor grade. The concordance rate was 77.4% for benign PTs and 100% for malignant PTs, whereas no concordance was observed for borderline PTs. The Kappa coefficient was 0.431.
Discussion and conclusion: PTs are rare, representing 0.3–1% of primary breast tumors and 2.5% of fibroepithelial lesions. The mean age at diagnosis is 40–50 years, with malignant PTs occurring later. Histologically, PTs show biphasic proliferation of epithelial and stromal components; the epithelial part is benign, while the stromal component determines the grade. Core needle biopsy often underestimates grade due to intrinsic tumor heterogeneity. Concordance with surgical specimens ranges from 58% to 82%, making diagnosis and grading challenging.

73 Methylation of the miR-34 Family in Non-Small Cell Lung Cancer: Clinicopathological Correlations in a Tunisian Cohort

Fida Mtimet[1], Naoures Hasni[1], Oussema Belkacem[1,2], Dorsaf Beltaifa[1,2], Sihhem Hmissa[1,2], Missaoui Nabiha[1]

1) LR21ES03 Research Laboratory "Oncogenesis and Tumor Progression", Faculty of Medicine of Sousse, University of Sousse, Tunisia

2) Pathology Department, Sahloul University Hospital, Sousse, Tunisia

Introduction: Lung cancer is the major cause of cancer-related mortality worldwide, primarily due to late-stage diagnosis and early metastatic dissemination. Besides genetic changes, epigenetic mechanisms like DNA methylation are key in carcinogenesis. The tumor-suppressor miR-34 family (miR-34a, miR-34b/c), regulated by p53, is often silenced by promoter methylation in NSCLC. However, data regarding their epigenetic regulation in North African populations remains limited.
Methods: This retrospective study investigated the methylation status of miR-34a and miR-34b/c and its association with clinicopathological characteristics in NSCLC. A total of 71 NSCLC cases diagnosed between 2020 and 2024 at the Laboratory of Anatomy and Pathological Cytology, CHU Sahloul (Sousse, Tunisia), were included. Genomic DNA was extracted from formalin-fixed paraffin-embedded tumor tissues, followed by sodium bisulfite modification. Methylation-specific polymerase chain reaction (MSP) was performed to determine the methylation status of the target miRNAs.
Results: Among the 68 evaluable samples, methylation of at least one member of the miR-34 family was detected in a substantial proportion of tumors. miR-34a methylation was observed in 60.9% of cases, while miR-34b/c methylation was detected in 47.5%. Concurrent methylation of both loci was identified in 38.23% of tumors. A statistically significant association was found between miR-34a methylation and histological subtype ($p = 0.041$).
Discussion and conclusion: These findings highlight the involvement of miR-34 family methylation in the epigenetic landscape of NSCLC. The frequent methylation of these tumor-suppressive miRNAs suggests their potential utility as epigenetic biomarkers for tumor characterization and may contribute to improved diagnostic and prognostic strategies in NSCLC.

74 Metaplastic breast carcinoma: clinico-pathological features and outcomes.

A. Dahmane, N. Abdessayed, S. Yacoub, A. El Amri, B. Sriha

Pathology department, Farhat Hached University Hospital, Ibn Jazzar Street, 4000 Sousse, Tunisia

Introduction: Metaplastic breast carcinoma (MpBC) is a rare, heterogeneous, and aggressive subtype of breast cancer associated with diagnostic and therapeutic challenges.
Methods: We conducted a retrospective descriptive study in the pathology department of Farhat Hached University Hospital, Sousse, Tunisia, over 15 years (2008–2023).
Results: 34 patients were included, with a mean age of 51.26 years. MpBC commonly presented as large, high-grade, advanced-stage tumors. Lymph node involvement was observed in 42.3% of cases. Squamous cell carcinoma was the predominant histological subtype (52.9%), and most tumors were grade III (83.9%). More than half showed a triple-negative phenotype. Chemotherapy had limited efficacy, whereas radiotherapy was associated with reduced progression and better survival. Five-year overall and disease-free survival were about 70%. Lung metastases were the most frequent distant recurrences. Poor prognostic factors included nodal metastasis, high Ki-67, and perineural invasion.
Discussion and conclusion: MpBC represents less than 5% of all breast cancers and is characterized by marked histological heterogeneity and aggressive behavior. It is frequently triple-negative and shares molecular features with BRCA1-associated breast cancers. Pathogenic germline variants have been identified in a subset of patients, most often involving BRCA1. Despite variable nodal involvement reported in the literature, MpBC generally shows poor response to conventional chemotherapy. Its prognosis depends on several adverse factors, particularly nodal metastasis, high Ki-67 index, and perineural invasion.

75 A paradox of benignity: A rare case of Peritoneal Strumosis arising from a Benign Struma Ovarii

Lina Khalfallah , Wided Ajouli, Mariem Ksantini, Raoudha Aloui, Linda BelHadj Kacem, Abir Chaouchi, Rania Mathlouthi, Imen Boubaker, Ahlem Blel, Soumaya Rammeh

Pathology Department, Charles Nicolle Hospital, Tunis, Tunisia

Introduction: Struma ovarii is a mature monodermal teratoma composed of > 50% thyroid tissue. While usually benign and confined to the ovary, rare cases exhibit extraovarian spread.
Peritoneal strumosis (or strumatosis) defines the dissemination of histologically benign thyroid tissue throughout the peritoneal cavity, posing a diagnostic and nosological "enigma" due to metastatic-like behavior.
Methods: We present this case to describe the clinicopathological characteristics of benign struma ovarii associated with peritoneal thyroid implants and highlight the blurred frontiers between benignity and malignant potential.
A 54-year-old nulliparous female, with a history of left ovarian cystectomy and appendectomy, presented with chronic pelvic pain and abnormal uterine bleeding. Pelvic MRI showed a right ovarian mass (ORADS3), a parietal mass near a prior laparoscopy scar suggestive of an endometriotic implant, and multiple intraperitoneal nodules interpreted as superficial endometriotic implants. The patient underwent a right adnexectomy and a peritoneal biopsy.
Results: Grossly, the right ovary contained a 5 x 4cm multilocular cystic mass with fine walls, containing a brown, glistening substance. A frozen section examination suggested a struma ovarii. Definitive histological examination showed that the cystic mass was composed of thyroid follicles filled with colloid and lined by regular thyrocytes, devoid of signs of malignancy consistent with benign struma ovarii. Peritoneal biopsies revealed thyroid parenchyma composed of macrofollicles lined by bland thyrocytes, supporting the diagnosis of peritoneal strumosis.
Discussion and conclusion: This case illustrates rare peritoneal dissemination of an innocuous-appearing thyroid tissue. Peritoneal strumosis challenges classification, underscoring the discordance between a bland histological appearance and potentially aggressive biological behavior. This overlap raises an important differential diagnostic consideration between peritoneal strumosis and well-differentiated follicular carcinoma arising in struma ovarii with peritoneal spread. To address this ambiguity, some authors have proposed the term highly differentiated follicular carcinoma of ovarian origin (HDFCO) for extraovarian dissemination of thyroid tissue resembling normal thyroid parenchyma.
Peritoneal dissemination of thyroid tissue associated with struma ovarii is rare and paradoxical. Careful histopathological evaluation with clinicopathological correlation is essential to avoid misclassification and ensure appropriate management.

76 Ovarian Mixed Sex Cord–Stromal Tumor with Fibrothecomatous Component: A Rare Entity with Unpredictable Behavior

Mathlouthi Rania, Ajouli Wided, Belhadj Kacem Linda, Blel Ahlem, Ksantini Mariem, Boubaker Imene, Khalfallah Lina, Olfa Slimeni(OB/GYN), Aloui Raoudha, Rammeh Rommani Soumaya

Department of Pathology, Charles Nicolle Hospital, Tunis, Tunisia

Introduction: Sex cord–stromal tumors represent approximately 5–8% of all ovarian tumors. Fibrothecomatous tumors are among the most common benign ovarian stromal tumors. However, its coexistence with a mixed sex cord tumor component is exceptional and may pose diagnostic challenges. Accurate recognition of these entities relies primarily on careful histopathological examination, as the identification of each component may have important diagnostic and prognostic implications.
Methods: We report a rare ovarian mixed sex cord–stromal tumor with fibrothecomatous component, highlighting its pathological features, diagnostic challenges, and clinical implications. A 56-year-old woman presented with chronic pelvic pain. MRI showed a right ovarian solid–cystic lesion (O-RADS 4) and a left ovarian mass (O-RADS 3). Surgical excision with intraoperative frozen section examination was performed.
Results: Grossly: Left adnexa showed a unilocular cyst with clear fluid and thin wall; right adnexa, a solid whitish mass with focal yellowish areas, without necrosis. Frozen section examination suggested a benign ovarian cyst (left) and fibrothecoma with suspected sex cord component (right). Histologically: Left ovary had fibrous cyst wall lined by cuboidal-columnar endocervical-type mucinous epithelium without atypia. Right tumor showed diffuse proliferation with tubular/cord-like patterns; polygonal cells with round nuclei, mild-moderate atypia, and 12 mitoses/10 HPF. Focal retiform/tubular Sertoli differentiation, Leydig cell groups, and fibrothecomatous component were noted.
Final diagnosis was: Left: Endocervical-type mucinous cystadenoma of the ovary. Right: Mixed ovarian tumor of fibrothecal type with a poorly differentiated component consistent with a sex cord tumor.
Discussion and conclusion: Mixed sex cord–stromal tumors are rare ovarian neoplasms recognized in the WHO Classification of Female Genital Tumours. Their biological behavior is mainly determined by the most aggressive component. In our case, the right ovarian tumor. The relatively high mitotic activity and moderate nuclear atypia suggest an intermediate malignant potential, highlighting the need for careful clinical follow-up. Such synchronous associations between epithelial and

sex cord–stromal tumors remain exceptional. This case emphasizes the importance of gross examination, extensive sampling and careful histopathological evaluation in bilateral ovarian tumors to accurately identify all tumor components and exclude major differential diagnoses such as adult granulosa cell tumor, clear cell carcinoma, or metastatic carcinoma.

77 Adult-Onset Vaginal Embryonal Rhabdomyosarcoma: A Rare Case Report

Yasmine Ben Romdhane, Sarra yacoub, Asma Mahmoudi, ichrak hadhri, safouene frini, zeineb nfikha, badreddine sriha

Pathology department, Farhat Hached hospital

Introduction: Embryonal rhabdomyosarcoma is a malignant mesenchymal tumor showing skeletal muscle differentiation and is predominantly a pediatric malignancy. Involvement of the vagina is typically observed in infants and young children, while occurrence in adults is exceptionally rare. Because of its rarity in this age group, diagnosis may be delayed or unexpected. The aim of this report is to describe a rare case of vaginal embryonal rhabdomyosarcoma in an adult woman.
Methods: We report the case of a 31-year-old woman who presented with menorrhagia associated with serosanguineous vaginal discharge. Clinical examination revealed a vaginal lesion, and a biopsy was performed and submitted to the pathology department for histopathological evaluation. The specimen was processed using routine histological techniques. Immunohistochemical analysis was subsequently performed to further characterize the tumor
Results: Histological examination revealed a mesenchymal proliferation with a polypoid architecture, largely ulcerated. The tumor showed alternating hypercellular and hypocellular areas composed of small round to stellate cells with scant cytoplasm and uniform hyperchromatic nuclei embedded in a loose myxoid stroma. A component of rhabdomyoblastic cells was also identified, characterized by round to globoid cells with abundant eosinophilic granular cytoplasm and eccentrically located hyperchromatic nuclei. Immunohistochemical analysis demonstrated diffuse cytoplasmic positivity for desmin and strong nuclear expression of MyoD1, supporting skeletal muscle differentiation. CD10 expression was also observed in tumor cells. These morphological and immunohistochemical findings were consistent with embryonal rhabdomyosarcoma.
Discussion and conclusion: Vaginal embryonal rhabdomyosarcoma in adults is exceedingly rare, and its nonspecific presentation can lead to diagnostic delays. In this case, immunohistochemistry was critical for confirming skeletal muscle differentiation, with desmin and MyoD1 positivity supporting the diagnosis, while CD10 expression highlighted the mesenchymal nature of the tumor. Key differential diagnoses include Müllerian adenosarcoma, which displays a biphasic architecture including endometrial stromal sarcoma, which may express CD10 but lacks rhabdomyoblastic differentiation; other small round cell tumors such as Ewing sarcoma or lymphoma can be excluded based on morphology and immunoprofile. Early recognition is essential, as management typically requires a multimodal approach combining surgery and chemotherapy. This case underscores the importance of integrating histopathology with immunohistochemistry to accurately identify this rare entity and guide appropriate treatment.

78 HIV related Non Hodgkin Lymphomas in Tunisia: Clinicopathological Spectrum and LongTerm Outcomes Over 28 Years

Yasmine Ben Romdhane, Sarra yacoub, manel Ben slama, Souha ghachem*, asma mahmoudi , ichrak hadhri, Wissem Hachfi, badreddine Sriha*

Pathology department

** infectious disease department Farhat hached university hospital*

Introduction: AIDS is associated with an increased risk of several malignancies known as AIDS-defining cancers, among which Non Hodgkin Lymphoma represents one of the most frequent and aggressive forms. Despite the widespread use of Antiretroviral Therapy, lymphoma remains a major cause of morbidity and mortality among HIV-infected patients. We aim to describe the biological clinical, histologic and characteristics of HIV patients diagnosed with HIV-associated NHL.
Methods: We conducted a retrospective study including patients diagnosed with Human Immunodeficiency Virus Infection and NHL at Farhat Hatched University Hospital between 1996 and 2024. Epidemiological data, biological parameters, clinical and pathologic characteristics and outcome were assessed.
Results: 9 male patients were included,with a median age of 37 years.Median CD4 count at diagnosis was 96 cells/mm³ and the median viral load was 391,000 copies/mL.In 3 cases lymphoma presentation revealed previously unrecognized HIV infection,the remaining patients developed NHL during followup,after a median of 34 months.Nodal involvement was found in 4 cases,and extranodal disease in 5 patients,predominantly gastrointestinal followed by cutaneous and head and neck sites .Histologically, our cohort comprised 5 cases of mature Bcell lymphomas classified as diffuse large Bcell lymphoma,1post–germinal center activated Bcell lymphoma of Burkittlike type,2 plasmablastic lymphomas, and 1 mature Tcell neoplasm consistent with anaplastic large cell lymphoma. Epstein–Barr Virus infection was detected in one plasmablastic lymphoma and one DLBCL case,the oneyear survival rate was 33.3%.Overall, eight patients died.
Discussion and conclusion: Patients with HIV Infection remain at high risk of developing aggressive lymphoid malignancies such as Non-Hodgkin Lymphoma. In our cohort, the young age of patients, severe immunosuppression, advanced disease stage, and frequent extranodal involvement are consistent with the typical presentation of HIV-associated lymphomas reported in the literature. The predominance of DLBCL and the high mortality rate highlight the aggressive nature of these malignancies.

79 Response to neoadjuvant chemotherapy in her2-low breast cancer

Hijen Maaroufi[1], Yoldez Houcine[1], Salma Kamoun[1], Fatma Saadallah[2], Maha Driss[1]

(1) Pathology Department B , Salah Azeiz Institute

(2) Surgical Oncology Department, Salah Azeiz Institute

Introduction: Human epidermal growth factor receptor 2 (HER2)-low breast cancer has recently emerged as a distinct biological entity with the development of antibody–drug conjugates. Defined as immunohistochemistry (IHC) 1+ or 2+ with negative in situ hybridization, HER2-low tumors represent a heterogeneous group that includes both hormone receptor–positive (luminal) and triple-negative breast cancers. Data on their clinicopathological characteristics and response to neoadjuvant chemotherapy (NAC) remain limited in many populations. This study aimed to describe the clinicopathological features of HER2-low breast cancer and evaluate response to NAC

according to hormone receptor status.

Methods: We conducted a retrospective descriptive study including patients diagnosed with HER2-low breast cancer (IHC 1+ or 2+ with negative chromogenic in situ hybridization [CISH]) who received NAC at the Salah Azaiez Institute between [2020–.2022]. Tumors were classified as luminal HER2-low or triple-negative HER2-low according to hormone receptor status. Clinical, histopathological, and treatment data were collected, including pathological response after NAC. The primary outcome was pathological complete response (pCR), defined as the absence of invasive tumor in the breast and axillary lymph nodes.
Results: A total of 92 patients with HER2-low breast cancer were included. The median age at diagnosis was 49 years (range 32–78). Clinically, 46% presented with stage II disease and 38% with stage III disease. Bilateral and multifocal tumors were observed in 9% and 33% of patients, respectively, with a mean tumor size of 41 mm (range 1–170). Luminal HER2-low tumors accounted for 83% of cases, while 17% were triple-negative HER2-low. HER2 IHC score was 1+ in the majority of cases (79%). The mean Ki-67 proliferation index was 42% (range 8–90%), and the predominant histological grade was grade 2 (54%). Lymph node involvement occurred in 56% of patients, and visceral metastases were present in 23%. All patients received standard NAC. The overall pCR rate was 23%, with luminal HER2-low tumors achieving a pCR rate of 20% and triple-negative HER2-low tumors 37% ($p = 0.1$).
Discussion and conclusion: HER2-low breast cancer represents a heterogeneous group encompassing both luminal and triple-negative subtypes with distinct clinicopathological features. In line with previous studies, HR-positive tumors predominated among HER2-low cases. Our cohort also exhibited larger tumor size and frequent lymph node involvement. Response to NAC varied according to hormone receptor status, with higher pCR rates observed in triple-negative HER2-low tumors. Notably, patients in our study were younger at diagnosis compared to prior reports. These findings contribute to the growing evidence on HER2-low breast cancer and may help inform treatment strategies in the era of emerging HER2-targeted therapies.

80 Pleomorphic Lobular Carcinoma of the Breast: A Retrospective Clinicopathological Study of 14 Cases

Yoldez Houcine[1], Ons Krimi[2], Salma Kamoun[1], Nihed Riahi[2], Maha Driss[1]

1) Pathology Department B , Salah Azeiz Institute

2) Surgical Oncology Department, Salah Azeiz Institute

Introduction: Pleomorphic lobular carcinoma represents less than 1% of all breast carcinomas, characterized by marked nuclear pleomorphism and an aggressive behaviour compared with classic lobular carcinoma. PLC frequently exhibits higher histologic grade, larger tumor size, and increased metastatic potential. Available data remain limited and its prognostic significance continues to be debated. The aim of this study was to analyse the clinicopathological and immunohistochemical characteristics of PLC diagnosed in our institute.
Methods: We conducted a retrospective descriptive study including patients treated for pleomorphic lobular carcinoma of the breast at Salah Azaiez institute over five years between 2019 and 2023.
Results: Fourteen female patients were included, with a mean age of 63.5 years (range: 47–74). A family history of breast cancer was reported in 42.8% of cases. The mean clinical tumor size was 41 mm (range: 15–90 mm), and ipsilateral axillary lymphadenopathy was present in 85% of patients (11 cases). Tumors were clinically staged as T1 and T2 in 57.1% (8) of cases, while locally advanced tumors (T3–T4) accounted for 42.8%. Three T4 tumours received neoadjuvant chemotherapy with minimal response. Surgery was mainly modified radical mastectomy (57.1%), while conservative surgery was carried out in 21.1% (4) of cases. Two patients were not operated on because of metastatic disease at diagnosis.
Histopathological examination revealed a mean tumor size of 43.4 mm. Multifocal tumors were identified in 33.33% of cases (4 patients) and were associated with lobular carcinoma in situ in 83.3%(10 patients). Loss of E-cadherin expression was found in all tumors. Lymphovascular invasion was identified in 57.1% of cases (8). Axillary lymph node metastases were present in 58.3% (7) of operated patients, including massive nodal involvement in two cases and extracapsular extension in three cases. Immunohistochemically, most tumors showed a Luminal B phenotype (78.6%), with one Luminal A tumor and two triple-negative cases. No HER2 overexpression was observed. Adjuvant chemotherapy and radiotherapy were administered in 83.3% of patients(10 cases) . The mean overall survival was 16.9 months.
Discussion and conclusion: These findings support the concept that pleomorphic lobular carcinoma may behave more aggressively than classic invasive lobular carcinoma and highlight the importance of its accurate pathological identification. Larger studies are needed to better define its biological behavior and therapeutic implications.

81 Clinicopathologic predictors of non-sentinel lymph node metastasis in breast cancer patients with positive sentinel lymph nodes

Salma Kamoun, Hijen Maaroufi, Amira Hmidi, Mariem Bani, Sarra Mhali, Ilhem Bettaieb, Aida Goucha, Yoldez Houcine, Maha Driss

Department of Pathology B, Salah Azaiez Institute, Tunis, Tunisia

Introduction: Axillary management in breast cancer has evolved considerably with the introduction of the sentinel lymph node biopsy technique. Several studies have shown that nearly half of patients with positive sentinel lymph nodes have no additional metastases in the remaining axillary nodes. Identifying predictors of residual nodal disease is therefore essential to avoid unnecessary axillary lymph node dissection. This study aimed to evaluate clinicopathologic factors predictive of non-sentinel lymph node metastasis in breast cancer patients with positive sentinel lymph nodes.
Methods: We conducted a retrospective study of patients who underwent surgery for breast cancer with sentinel lymph node biopsy between January 2024 and February 2026. Patients with at least one positive sentinel lymph node who underwent completion axillary lymph node dissection were included. Clinical data, tumor characteristics, and nodal parameters were evaluated.
Results: Data from 54 patients were analyzed. The mean age was 54 years (range 34–78). Multifocal disease was observed in 8 patients (15%), and the median tumor size was 22 mm (range 1–60 mm). The most common histological subtype was carcinoma of no special type (80%), followed by lobular carcinoma (11%) and mixed subtypes (6%). Luminal B was the predominant molecular subtype (82%). The most frequent SBR grade was grade II (50%), and lymphovascular invasion was present in 80% of cases.
Discussion and conclusion: In this cohort of breast cancer patients with positive sentinel lymph nodes, no clinicopathologic factor was significantly associated with non-sentinel lymph node metastasis, although lymphovascular invasion and the ratio of involved sentinel lymph nodes showed a trend toward significance. The identification of reliable predictive factors for residual nodal disease could support therapeutic de-escalation in axillary management, thereby reducing surgical morbidity while maintaining oncologic safety. Further studies

with larger cohorts are warranted to validate these findings.

82 Clinicopathological characteristics of p16-positive and p16-negative oropharyngeal squamous cell carcinoma

Hijen Maaroufi, Amira Hmidi, Yoldez Houcine, Mariem Bani, Aida Goucha, Ilhem Bettaieb, Salma Kamoun, Maha Driss

Department of Pathology B, Salah Azaiez Institute, Tunis, Tunisia

Introduction: Human papillomavirus (HPV)-associated oropharyngeal squamous cell carcinoma (OPSCC) has emerged as a distinct clinical and biological entity with specific epidemiological and prognostic features. Overexpression of p16 detected by immunohistochemistry is widely used as a surrogate marker for HPV-related disease. The prevalence and clinicopathological characteristics of HPV-associated OPSCC vary across geographic regions. This study aimed to describe the clinicopathological characteristics of OPSCC and to explore potential differences between p16-positive and p16-negative tumors in our population.
Methods: We conducted a retrospective study including patients diagnosed with OPSCC at the Salah Azaiez Institute, a referral oncology center in Tunisia, between January 2020 and February 2026. Clinical, epidemiological, and pathological data were collected from medical records. Tumors were classified according to p16 expression assessed by immunohistochemistry. The analyzed variables included demographic characteristics, tobacco and alcohol consumption, tumor location, histological differentiation, TNM stage, and the presence of nodal or distant metastasis at diagnosis. Associations between clinicopathological variables and p16 status were evaluated.
Results: Thirty-four patients were included, predominantly men (82%), with a mean age of 57 years (range 42–69). Tobacco use was reported in 59% of patients, while 44% consumed alcohol; all alcohol users were also smokers. The tonsillar fossa was the most frequent tumor site (62%), followed by the base of the tongue (22%), posterior oropharyngeal wall (13%), and soft palate (3%). Histologically, 55% of tumors were well differentiated, 37% moderately differentiated, and 9% poorly differentiated. Most patients (89%) presented with advanced-stage disease, and 22 were considered inoperable at diagnosis. p16 positivity was observed in 11 patients (32%). No significant associations were found between p16 status and gender, age, tumor location, or TNM stage. Smoking was less frequent among p16-positive patients, although this difference did not reach statistical significance ($p = 0.5$).
Lymph node metastasis was more frequent in the p16-positive group (45.5% vs. 34.8%), without statistical significance ($p = 0.2$). Two patients presented with visceral metastases at diagnosis, both of whom were p16-negative.
Discussion and conclusion: In this cohort, approximately one-third of OPSCC cases were p16-positive. Although smoking appeared less frequent and nodal involvement more common among patients with p16-positive tumors, no statistically significant clinicopathological differences were identified between the two groups. These findings appear consistent with observations reported in similar populations but differ from those described in Western countries, where HPV-associated OPSCC is more prevalent.
Larger studies are warranted to better characterize the epidemiology and clinicopathological features of HPV-associated OPSCC in our population.

83 Placenta site trophoblastic tumor revealed by abnormal uterine bleeding: a case report.

Moez Hamdani[1], Sarra Laarayedh[1], Sihem Bouzidi[2], Rayen Cherif[3], Samir Aloulou[3]

1) Department of Pathology, Sadok Mkaddem Regional Hospital, Djerba.

2) Department of Gynecology and Obstetrics, Sadok Mkaddem Regional Hospital, Djerba.

3) Department of Medical Oncology, University Hospital of Gabes

Introduction: Placental site trophoblastic tumor (PSTT) is a rare gestational trophoblastic neoplasm (GTN) that arises from the placental site trophoblasts. PSTT accounts for only 1% to 2% of all GTN cases. It manifests with various clinical presentations, including abnormal uterine bleeding, pelvic pain.
It is characterized by variable malignant potential, often making diagnosis difficult, which relies primarily on histological and immunohistochemical analysis.
Methods: We report the case of a 38-year-old premenopausal women presented with persistent abnormal uterine bleeding unresponsive to medical therapy. Pelvic ultrasound demonstrated a 3 cm hyperechoic isthmic lesion infiltrating the myometrium. Hysteroscopy showed friable non-vascularized whitish mass and endometrial biopsy curettage revealed extensive necrosis with decidualization lesions and some atypical cells. Pelvic MRI suggested a necrobiotic fibroid with an intracavitary component.
Total hysterectomy with bilateral salpingectomy and left oophorectomy were subsequently performed.
Results: Gross examination showed a 3 cm cervico-isthmic polypoid lesion with a yellowish focus infiltrating the myometrium. Histological analysis revealed sheets and nests of large polygonal trophoblastic cells with abundant eosinophilic cytoplasm and marked nuclear atypia, associated with fibrono-hemorrhagic necrosis. No mitotic figures, chorionic villi, or vascular invasion were identified. Immunohistochemistry analysis demonstrated positivity for CD10 and pancytokeratin, negativity for smooth muscle cells actin and approximately 15 % of Ki-67 proliferation index.
These findings supported the diagnosis of placental site trophoblastic tumor with focal myometrial invasion and no histological signs of malignancy.
Discussion and conclusion: Placental site trophoblastic tumor is a rare lesion that may mimic benign uterine tumors, leading to diagnostic difficulty. In this case, clinical and imaging findings suggested a fibroid. Histology and immunohistochemistry were essential for diagnosis that revealed trophoblastic cells positive for pancytokeratin and CD10, with negative smooth muscle cells actin. Surgery remains the mainstay of treatment, as PSTT responds poorly to chemotherapy.
PSTT should be considered in women with abnormal uterine bleeding. Accurate pathological diagnosis is crucial to ensure appropriate surgical management and long-term follow-up.

84 Technetium Sentinel Lymph Node Mapping in Early-Stage Endometrial Cancer: Single-Center Feasibility and Accuracy

Mayssa Rebei, Ahmed Araoud, Ele Chiboub

Department of Family Medicine Faculty of Medicine of Monastir Tunisia,

Department of Gynecology and Obstetrics Habib Bougatfa University Hospital Tunisia

Introduction: Sentinel lymph node (SLN) mapping can reduce morbidity from systematic lymphadenectomy in early-stage endometrial cancer. In settings where indocyanine green is not routinely available, technetium-based mapping remains an alternative. We evaluated the

feasibility and mapping performance of cervical technetium SLN mapping in a tertiary gynecology department.
Methods: We retrospectively reviewed 31 patients with presumed early-stage endometrial cancer who underwent hysterectomy-based staging with an attempt at SLN mapping using cervical injection of radioactive technetium. Outcomes included SLN identification rate, bilateral mapping rate, number of SLNs removed, nodal metastasis, and correlation with completion pelvic/para-aortic lymphadenectomy when performed.
Results: Median age was 62 years (range 40–78). Minimally invasive surgery was performed in 19/31 (61.5%). SLNs were identified in 11/31 patients (35.5%), with bilateral mapping in 2/31 (6.5%). The median number of SLNs removed was 2 (range 0–16). Lymph node metastases were found in 2/31 patients (6.5%). After SLN biopsy, completion pelvic lymphadenectomy was performed in 8 patients and completion para-aortic lymphadenectomy in 2. Sensitivity and negative predictive value were both 100% for detection of pelvic (and para-aortic when assessed) metastases.
Discussion and conclusion: Technetium SLN mapping was feasible and showed excellent diagnostic performance in this cohort, but detection particularly bilateral mapping was low. Technique optimization and larger prospective studies are needed, and comparisons with indocyanine green based approaches may help improve mapping success.

85 Breast Cancer Under 40 in Bizerte: Clinicopathologic Spectrum and Treatment Patterns (2022–2025)

Mayssa Rebei[1], Ahmed Aroud[1], Ele Chiboub[2]

1)Department of Family Medicine, Faculty of Medicine of Monastir, Tunisia

2)Department of Gynecology and Obstetrics, Habib Bougatfa University Hospital , Bizerte, Tunisia

Introduction: Breast cancer is the most common malignancy in women, yet a substantial proportion of cases in Tunisia occur before age 40, suggesting distinctive clinicopathologic features. We aimed to describe the epidemiological profile, tumor characteristics, and initial management of breast cancer in women under 40 years treated in the Bizerte region.
Methods: Retrospective case series using hospital records at Bougatfa University Hospital (Bizerte). Women <40 years diagnosed between January 2022 and September 2025 were included. Data collected covered clinical stage, nodal/metastatic status, histology, HR/HER2 status and molecular subtype, plus treatments (neoadjuvant therapy and surgical approach).
Results: Thirty-two patients were identified (mean age 35.8 years, range 22–39); 21.9% reported a family history. Tumor stages were T1 37.5%, T2 34.4%, and inflammatory forms (T4d) 9.4%. Nodal involvement was present in 53.1% and distant metastases in 6.3%. Histology showed 53.1% invasive carcinoma of no special type, 40.6% invasive ductal carcinoma, and 6.3% mixed ductal–lobular carcinoma. HR positivity was 53.1%. Molecular subtypes were luminal B 34.4%, triple-negative 25%, luminal A 21.9%, and HER2-positive 18.8%. About half received neoadjuvant therapy. Surgery was performed in 87.5%: 39.3% breast-conserving surgery with sentinel node biopsy, 39.3% mastectomy with axillary dissection, and 21.4% breast-conserving surgery with axillary dissection.
Discussion and conclusion: Breast cancer in young women in Bizerte was frequently node-positive and included a sizable proportion of aggressive subtypes (triple-negative/HER2+). These findings support earlier detection and awareness strategies, timely access to genetic counseling, and multidisciplinary management tailored to young patients.

86 Confusing Cases of Lung Mass: From Suspected Malignancy to Actinomycosis

Selma Ben Yahia, Dorsaf Beltaifa, Oussama Belkacem, Asma Dahmane, Nadia Makhlouf, Syrine Moussa, Sihem Hmissa

Pathology Department, Sahloul Hospital, Sousse, Tunisia

Introduction: Pulmonary actinomycosis is a rare chronic granulomatous infection caused by bacteria of the genus Actinomyces. Due to its nonspecific clinical and radiological features, it is frequently misdiagnosed as a malignancy, resulting in unnecessary surgical procedures. We report the clinical and histopathological findings of two pulmonary actinomycosis cases initially managed surgically for suspected malignancy.
Methods: We analyzed two cases of pulmonary actinomycosis diagnosed at the Pathology Department of Sahloul University Hospital. Clinical, radiological, and histopathological findings were evaluated. Histopathological examination of the surgical specimens was performed to identify sulfur granules and filamentous bacteria consistent with Actinomyces. Periodic acid-schiff (PAS) staining was performed in one case. The inflammatory response, necrosis, fibrosis, surgical margins, and lymph nodes were systematically evaluated.
Results: The patients were 58 and 42 years old, both male, with a history of diabetes, and presented with chest pain. Chest CT scan revealed a suspected mass in the left upper pulmonary lobe in both cases. Pathological findings were comparable in the two patients.
On gross examination, the masses were solid-cystic and filled with purulent material. The largest dimension measured 9.5 cm in the first case and 5.5 cm in the second case. Histopathological analysis demonstrated suppurative and necrotizing bronchopneumonia with dense inflammatory infiltrates composed of neutrophils, lymphocytes, and plasma cells.
Basophilic filamentous bacterial colonies forming actinomycotic grains were observed and were highlighted in one case by PAS staining. No histological evidence of malignancy was identified, and the regional lymph nodes were reactive. Surgical margins were free of disease.
Discussion and conclusion: These cases illustrate how actinomycosis can mimic malignancy on clinical examination and imaging, potentially leading to aggressive surgical management. Clinicians should consider this infection in the differential diagnosis, especially when risk factors such as diabetes are present, as in our cases.
Early recognition of this rare entity allows for appropriate antibiotic therapy and helps avoid unnecessary invasive interventions. Due to the limited diagnostic yield of culture techniques, histopathological examination combined with special stains remains the gold standard for definitive diagnosis.

87 Pleural Thickening and Lung Mass Suggesting Mesothelioma Revealing WHO Type B1 Thymoma on Core Biopsy

Mayssa Rebei, Ahmed Araoud, Seifeddine Ben Hammouda, Samiha Mabrouk, Asma Ben Mabrouk, Ahlem Bellalah, Leila Njim, Manel Njima

1) Department of Family Medicine, Faculty of Medicine of Monastir, Tunisia,

2) Department of Pathology, Fattouma Bourguiba University Hospital, Monastir, Tunisia

Introduction: Diffuse nodular pleural thickening with mediastinal

extension strongly suggests primary pleural malignancy such as mesothelioma. However, lymphocyte-rich tumors with limited biopsy material can be misleading. We report a thoracic case in which imaging suggested mesothelioma but histology and immunophenotype supported thymoma.
Methods: A 79-year-old woman presented with 1 month of cervical polyadenopathy, progressive dyspnea, pleuritic chest pain, persistent cough, fatigue, and weight loss. CT showed multiple polylobulated pleural thickenings, a right intraparenchymal polylobulated mass with irregular margins, and mediastinal extension. A CT-guided biopsy of the pulmonary mass was performed.
Results: Histology demonstrated a lobulated proliferation separated by thick hyalinized fibrous bands, with thin-walled vessels and predominant small monomorphic lymphoid cells admixed with scattered epithelial-appearing polygonal cells. Immunohistochemistry showed lymphoid cells diffusely positive for CD3, CD5 and TdT, negative for B-cell markers, and epithelial cells positive for cytokeratin AE1/AE3.
The integrated morphology and immunophenotype were compatible with WHO type B1 thymoma (within biopsy limits). The disease was considered locally advanced (M1a) and managed by MDT with induction platinum-based chemotherapy aiming for eventual R0 resection, with contrast-enhanced CT used for staging/response in the absence of PET/CT.
Discussion and conclusion: This case highlights a key radiology–pathology pitfall: pleural-based disease mimicking mesothelioma may represent thymoma. Recognition of a cytokeratin-positive epithelial component within a TdT-positive immature T-cell–rich background is critical on core biopsy to avoid misclassification and guide appropriate MDT management.

88 Life-Threatening Left Main Bronchus Obstruction from Endobronchial Metastasis of Rectal Adenocarcinoma Confirmed by IHC

Mayssa Rebei, Ahmed Araoud, Seifeddine Ben Hammouda, Samiha Mabrouk, Asma Ben Mabrouk, Ahlem Bellalah, Leila Njim, Manel Njima

1) Department of Family Medicine, Faculty of Medicine of Monastir, Tunisia,

2) Department of Pathology, Fattouma Bourguiba University Hospital, Monastir, Tunisia

Introduction: Endobronchial metastases from colorectal cancer are uncommon and may mimic primary lung cancer. They can present with acute symptoms due to central airway obstruction, requiring urgent intervention and confirmatory histopathology with immunohistochemistry.
Methods: A 47-year-old woman previously treated for mid-rectal adenocarcinoma (2019) developed five pulmonary metastases managed with metastasectomy (2021). She presented with acute dyspnoea and chest pain. Flexible bronchoscopy revealed a haemorrhagic endobronchial mass completely obstructing the left main bronchus; multiple biopsies were taken.
Results: Histology showed an invasive gland-forming carcinomatous proliferation with focal necrosis; tumor cells were columnar with mild atypia and pseudostratified nuclei. Immunohistochemistry demonstrated diffuse nuclear CDX2 positivity and diffuse CK20 positivity, with absence of TTF-1 expression (and no CK7), supporting colorectal origin rather than primary lung adenocarcinoma. Urgent therapeutic bronchoscopy under general anaesthesia was performed to recanalize the left main bronchus and restore airway patency. Following stabilization, MDT review initiated standard metastatic colorectal work-up (including MMR/MSI and RAS/BRAF profiling) and first-line systemic therapy with an oxaliplatin–fluoropyrimidine doublet plus an anti-VEGF agent.
Discussion and conclusion: In patients with a history of colorectal cancer, new-onset respiratory symptoms and endobronchial lesions should raise suspicion for metastatic disease even years after initial treatment. Bronchoscopic biopsy with an appropriate IHC panel (CDX2/CK20 positive, TTF-1 negative) is essential to establish origin and guide therapy. Early airway intervention can be life-saving in cases of complete main bronchus obstruction.

89 Primary leiomyoma of the pancreas: a case report and review of the literature

Yasmine Chaabane[1], Mohamed Hajri[2], Nadhem Khelifi [2], Manel Ben Khalifa[1], Ahlem Lahmar[1], Hafedh Mestiri [2], Douha Bacha [1], Sana Ben Slama[1]

1) Department of Pathology, Mongi Slim Hospital, Tunis, Tunisia,

2) Department of Surgery, Mongi Slim Hospital, Tunis, Tunisia

Introduction: Leiomyoma is a benign mesenchymal neoplasm that typically arises in the uterus, other soft tissues and occasionally in the gastrointestinal tract. Primary pancreatic leiomyoma is extremely rare. This often complicates the preoperative diagnosis and frequently leads to major resections such as pancreaticoduodenectomy.
Methods: A 50-year-old female patient with no significant past medical history (especially no history of resection of uterine fibroid), was investigated for a mass of the head of the pancreas discovered in the context of isolated jaundice. Contrast enhanced computed tomography and endoscopic ultrasound revealed a hyper vascular tumor with a clear margin.The tumor was homogenous and showed no hemorrhagic or necrotic findings.
The patient underwent surgery and a pancreaticoduodenectomy was performed. She had an uneventful postoperative course and was discharged 10 days later.
Results: The macroscopic examination of the surgical specimen found a white well-circumscribed, encapsulated, fasciculated, focally cystic tumor located in the pancreatic head, measuring 6×5 cm. On histological examination, the tumor was surrounded by a thick continous capsule and composed of uniform spindle cells with abundant eosinophilic cytoplasm, without nuclear pleomorphism, mitotic activity or necrosis. The stroma was well vascularized.
All resection margins were free and there was no lymph node involvement. Immunohistochemistry showed strongly positive expression of anti-smooth muscle actin, DOG1 was negative. The diagnostic of a leiomyoma was confirmed.
Discussion and conclusion: Fewer than 20 cases of primitive pancreatic leiomyoma have been reliably documented in the worldwide literature. Although it is very rare, pancreas must be considered as a metastatic site of a benign leiomyoma even many years after uterine fibroid surgery. Leiomyoma of the pancreas occurs more common in middle-aged and elderly patient (female and male). Laparoscopic enucleation of the tumor is an option. The overall prognosis is favorable but only one case of malignant transformation was described.
Pancreatic leiomyoma lack distinctive clinical features or characteristic imaging findings making preoperative diagnosis difficult.

90 Adaptation strategies in women who have undergone mastectomy

Foued Trabelsi, Naouel ElFekih

Under the direction of environmental health, Sousse

Introduction: Breast cancer represents a major public health concern. Its management often involves mastectomy, a surgical procedure that can profoundly alter body image and compromise perceptions of female bodily integrity, leading to physical, social, and emotional disturbances. The objective of this study is to identify the coping strategies adopted by women who have undergone mastectomy, based on Callista Roy's Adaptation Model
Methods: This quantitative descriptive study was conducted during the second quarter of the 2020–2021 academic year, specifically in April and May 2021. Data collection took place in the gynecology–obstetrics outpatient department at Farhat Hached University Hospital and in the cancer surgery outpatient department at the Salah Azaïz Institute. We collected the opinions of 60 participants through an anonymous, self-administered questionnaire. Ethical considerations were respected.
Results: According to our findings, 56.7% of patients had very troublesome sequelae.61.7% of patients often suffer from pain, and 38.3% of patients stated that the intensity of the pain was moderate. The majority of our patients (80%) cried after the caregiver removed the dressing for the first time. and 71.7% of patients had experienced a change in body image following a mastectomy.
Discussion and conclusion: The findings of this study highlight the need to strengthen emotional support for women who have undergone mastectomy. They also emphasize the importance of integrating foundational training on psychosocial adaptation into nursing education programs.
Furthermore, the application of Callista Roy's Adaptation Model in clinical settings is recommended to guide holistic, patient-centered care and promote effective coping and adjustment.

91 Clinicopathological characteristics of female breast cancer in Southern Tunisia

Mouna Zghal, Wafa Ghribi, Zineb Elleuch, Soumaya Graja, Tahya Boudawara, Meriam Triki

Department of pathology and Research Laboratory LR18SP10, Habib Bourguiba University Hospital, University of Sfax, Sfax, Tunisia.

Introduction: Breast cancer (BC) is the most common cancer among women worldwide and in Tunisia, where it accounts for 31.4% of female cancers. This study aimed to analyze the clinicopathological features of female BC in Southern Tunisia.
Methods: This is a retrospective study that included all consecutive female BC cases who were diagnosed at our institution over a period of 6 years (2018-2023).
Results: We identified 449 patients; 82 were aged 40 years and less (18.26%) and 367 were aged over 40 years (81.74%). The median age was 52 years [18 - 92]. The median tumor size was 3.5 cm [0.2 - 28]. The most frequent histological subtype was invasive breast carcinoma of no special type (75.3%). The main histological grade was 2 (57%). The tumor was mostly of stage p T2 in 49.9%. Nodal metastases were noted in 61.5%. Advanced stage (III/IV) was observed in 42.1%. Lymho vascular invasion was noted in 42.5%. The positive status of ER, PR and Her2 expressions was observed in 77.4%, 71.4% and 25.4% respectively. The Ki67 index was high in 55.4%. The most common molecular subtype was luminal (A,B) (77.7%), followed by triple negative (16.2%) and Her2 overexpression (6.1%).
Discussion and conclusion: Our findings highlight a relatively young age at diagnosis of BC in the Southern Tunisian population. Tumors were frequently diagnosed at intermediate to advanced pathological stages, with high rates of nodal involvement, lympho-vascular invasion, and elevated Ki-67 index, reflecting an aggressive biological profile. Despite the predominance of luminal subtypes, the notable proportion of triple-negative further emphasizes the heterogeneity of BC in our region. These results underscore the need for improved early detection strategies, and optimized therapeutic approaches tailored to the clinicopathological characteristics of this population.

92 Immature Ovarian Teratoma: A Clinicopathological Study of 11 Cases

Mouna Zghal, Zineb El euch, Saadia Makni, Zaineb Dabbebi, Tahya Boudawara, Manel Mellouli

Department of pathology and Research Laboratory LR18SP10, Habib Bourguiba University Hospital, University of Sfax, Sfax, Tunisia.

Introduction: Immature ovarian teratoma (IOT) is a rare malignant germ cell tumor, representing a small proportion of ovarian cancers and occurring predominantly in young women. It is characterized histologically by the presence of immature neuroectodermal tissue, which determines tumor grade and has major prognostic and therapeutic implications. Due to its low incidence and limited institutional data, we aimed to analyze the clinicopathological features of IOT.
Methods: We conducted a retrospective analysis on all cases of IOT detected in our department over 10 years (2016-2025). Tumors were classified using the WHO Norris three-tier system (Grades 1-3) based on the amount of immature neurological elements per low-power field on each slide.
Results: Eleven cases were identified. The mean age was 27.9 years (10–44). Tumors were unilateral in 10 cases (90.9%). Size ranged from 6 to 25 cm (mean: 13 cm). Macroscopically, 9 tumors were cystic (81.8%), usually with pilosebaceous material, and 2 cases were solid-cystic (18.2%). The capsule was intact in 9 cases (81.8%). A multilocular cystic component was seen in 4 cases. Necrosis was observed in 1 case. All tumors showed squamous lining and cutaneous adnexal structures. Immature neuroectodermal tissue was present in all cases: neuroepithelial tubes in 9 cases (81.8%) and rosettes in 5 cases (45.5%). Grades were 1 (8 cases, 72.7%), 3 (2 cases), and 2 (1 case). All patients had conservative surgery; 3 received adjuvant chemotherapy. No recurrence occurred during follow-up.
Discussion and conclusion: IOT remains an uncommon malignant germ cell tumor, consistent with its low frequency in our institution. The young mean age aligns with previous reports and underscores the importance of fertility-preserving management. The predominance of unilateral, large tumors agrees with literature. Histologically, immature neuroectodermal tissue confirms the diagnostic hallmark and grading basis.
Grading and staging have major prognostic value and guide treatment. The predominance of grade 1 reflects the generally favorable prognosis. Conservative surgery remains the cornerstone of treatment, with adjuvant chemotherapy reserved for selected higher-grade cases.

93 Clinicopathological characteristics of endometrial carcinosarcoma: a single-center institutional study

Nermine Ellouze, Zaineb Debbabi, Mouna Zghal, S.Charfi, T. Boudawara, Meriam Triki

Department of Pathology, Habib Bourguiba University Hospital, Sfax, Tunisia

Introduction: Endometrial carcinosarcoma, or uterine carcinosarcoma (UCS), is a rare, highly aggressive tumor representing 2–5% of uterine cancers. Previously termed a mixed Müllerian tumor, it is now considered a metaplastic carcinoma derived from a monoclonal epithelial

neoplasm undergoing epithelial–mesenchymal transition. Most cases belong to the TP53-mutated subgroup.
This study analyzes its clinicopathological and prognostic features.
Methods: We conducted a retrospective descriptive study of 7 cases of endometrial carcinosarcoma diagnosed in our pathology department over a 16-year period (2010–2025). Clinical data, gross findings, and histopathological features were analyzed.
Results: The mean age was 68.5 years (65–82). Metrorrhagia was the main symptom. Diagnosis was made on hysterectomy specimens (5 cases) or endometrial curettage biopsies (2 cases). Tumors were large polypoid whitish masses with necrosis and hemorrhage (4/7), mean size 7.75 cm (5–10.5 cm). All showed biphasic carcinomatous and sarcomatous components. The epithelial component was grade 2 (4 cases) or grade 3 (3 cases) endometrioid carcinoma. The sarcomatous component showed highly atypical spindle cells with high mitotic activity. Sarcomatous predominance and heterologous elements were each seen in 3 cases (43%). Cervical stromal invasion and lymphovascular invasion were present in 3 and 4 cases.
Discussion and conclusion: Our findings align with published data describing UCS as a tumor of elderly women presenting with metrorrhagia and large polypoid masses.
Poor prognostic factors—tumor size >4 cm, lymphovascular invasion, sarcomatous predominance, and heterologous differentiation—were frequent. Molecular data support UCS as a high-grade carcinoma with metaplastic features, mainly driven by TP53 alterations. Rare POLE-mutated or MMR-deficient cases may have therapeutic implications. Accurate histopathological and molecular evaluation is essential for risk stratification and management.

94 Choroid plexus carcinoma with low mitotic activity: diagnostic challenges and WHO criteria

Ons Boudaouara[1], Soumaya Graja[1], Saadia Makni[1], Mehdi Borni[2], Tahya Sellami-Boudawara[1]

1) Department of pathology, Habib Bourguiba Hospital, Sfax, Tunisia

2) Department of neurosurgery, Habib Bourguiba Hospital, Sfax, Tunisia

Introduction: According to the WHO, choroid plexus carcinomas (CPC) are malignant WHO grade-3 tumours arising from the choroid plexus, occurring predominantly in children. Distinguishing CPC from other choroid plexus tumours may be challenging, particularly when the tumour does not meet all histologic features suggesting malignancy. We report a CPC with unusually low mitotic activity to highlight defining diagnostic criteria and potential pitfalls.
Methods: We report the case of a 14-year-old girl presenting with persistent headaches and vomiting. Brain MRI revealed a 6cm heterogeneous intraventricular mass with marked vascularity. Imaging initially suggested choroid plexus papilloma in spite of the presence of atypical features that might suggest malignancy. Intraoperatively the tumour was fragile, highly vascular and focally infiltrative. Gross total resection was achieved.
Results: Histology showed crowded papillae and sheets of tumour cells with increased cellular density, necrosis and moderate nuclear pleomorphism. Careful examination demonstrated multifocal brain invasion. Tumours cells demonstrated immunohistochemical choroid plexus differentiation with heterogeneous positivity for S100 and CK7. Mitoses were rare (<1/mm² after meticulous assessment on a 2.3 mm² area) and Ki-67 index was very low (<1%). Despite the unusually low mitotic activity, the tumour fulfilled four WHO histologic criteria suggesting malignancy together with brain invasion. Based on these findings, the final diagnosis of CPC was retained.
Discussion and conclusion: CPC are rare malignant choroid plexus tumours that usually occur in young children and rarely in adolescents. Diagnosis relies on WHO criteria requiring at least four among the following five histological features: increased cellular density, nuclear pleomorphism, blurring of the papillary pattern with poorly structured sheets of tumour cells, necrosis and increased mitotic activity (>2.5mitoses/mm2). Hence, the lack of one criterion (like mitoses in our case) does not exclude CPC when other malignant features are present. Brain invasion and TP53 mutation, although not definitional of malignancy, strongly support the diagnosis of CPC.

95 Solitary Fibrous Tumor of the Buccal Mucosa: An Extremely Rare Case

Yasmine Barbirou[1], Aida Khadhar[1], Rihab Lahmar[2], Haifa Azouz[1], Alia Zehani[1], Ines Chelly[1]

1) Department of Pathology, La Rabta University Hospital, Tunis, TUNISIA.

2) Otorhinolaryngology department, La Rabta University Hospital, Tunis, TUNISIA.

Introduction: Solitary fibrous tumor (SFT) is a rare fibroblastic mesenchymal neoplasm of intermediate biological potential, characterized by the NAB2–STAT6 gene fusion and typically showing indolent behavior. SFTs most commonly arise in the pleura and abdomen, while involvement of the buccal mucosa is extremely rare, with only a few cases reported in the literature.
We report the case of a 52-year-old patient diagnosed with a low-grade solitary fibrous tumor of the inner cheek.
Methods: A 52-year-old male patient with no medical history presented with a slowly enlarging swelling of the left inner cheek, without other symptoms. Cervicofacial Magnetic resonance imaging revealed a left buccal mass in the subaponeurotic space, in contact with the maxillary bone without lysis. Surgical excision was performed and the specimen was sent to our pathology department.
Results: Gross examination showed five tissue fragments measuring between 0.6 and 3.5 cm, homogeneously white and lobulated on cut section. Microscopically, the tumor consisted of spindle to oval cells arranged haphazardly around branched and dilated vessels with a characteristic “stag-horn” pattern. Tumor cells showed eosinophilic cytoplasm, round to oval nuclei, mild atypia, and low mitotic activity. The stroma was collagenous with focal hyalinization, without necrosis. Immunohistochemistry revealed strong and diffuse STAT6 expression. Tumor cells were also positive for CD34 and Bcl2, and negative for CK, EMA, and S100. Ki-67 proliferation index was low (<5%). These findings supported the diagnosis of a low-grade solitary fibrous tumor of the inner cheek.
Discussion and conclusion: SFT of the cheek is an extremely rare benign soft-tissue neoplasm, usually occurring in adults aged between 50 and 70 years. It typically presents as a painless, mobile submucosal or subcutaneous nodule measuring 2–8.5 cm. Immunohistochemistry is essential for diagnosis, showing positivity for STAT6, CD34, and vimentin. Surgical excision is the treatment of choice and prognosis is generally favorable. However, high-grade forms can occur. Grading is based on mitotic index, cytonuclear atypia and the presence or absence of tumor necrosis. Therefore, long-term follow-up is recommended to detect recurrence or metastasis.

96 Metastatic Gastric Linitis Plastica: A Diagnostic Pitfall of Lobular Breast Carcinoma

Sana Hidouri, Seifeddine Ben Hammouda, Asma Ben Mabrouk, Samiha Mabrouk, Sirine Ben Tekaya, Leila Njim, Manel Njima

Department of Pathology, Fattouma Bourguiba University Hospital, Monastir, Tunisia

Introduction: Invasive lobular carcinoma (ILC) represents 10–15% of breast cancers and shows a distinct metastatic pattern with a tendency for unusual sites, particularly the peritoneum and gastrointestinal tract. Gastric linitis plastica is a diffuse infiltrative gastric lesion that may rarely result from metastatic breast carcinoma. We report a case of invasive lobular breast carcinoma revealed by gastric involvement mimicking linitis plastica with peritoneal carcinomatosis.
Methods: A 53-year-old woman with no significant past medical history presented with dysphagia associated with weight loss and asthenia. Upper gastrointestinal endoscopy revealed a diffuse infiltrative thickening of the gastric wall with a rigid, nondistensible appearance suggestive of gastric linitis plastica. Gastric biopsies demonstrated an invasive proliferation of poorly cohesive tumor cells suggesting a poorly cohesive gastric carcinoma. Several months later, the patient developed progressive abdominal pain and digestive discomfort. Abdominal CT scan revealed multiple peritoneal nodules suggestive of peritoneal carcinomatosis. A peritoneal biopsy was therefore performed.
Results: Histological examination showed fibroadipose tissue infiltrated by a carcinomatous proliferation composed of small, monomorphic, poorly cohesive cuboidal cells arranged singly or in linear cords forming a characteristic “Indian file” pattern. The tumor cells displayed scant eosinophilic cytoplasm and relatively bland nuclei, occasionally eccentric, resembling signet-ring cells. The stroma was moderately fibrous. Immunohistochemical analysis revealed strong and diffuse expression of cytokeratin, CK7, GATA3, estrogen receptor (ER) (80%), and progesterone receptor (PR) (85%). Tumor cells were negative for CK20, E-cadherin, and HER2. These findings supported the diagnosis of peritoneal metastasis from a carcinoma compatible with breast origin, particularly ILC. A review of the initial gastric biopsies with additional immunohistochemical staining confirmed the mammary origin and the metastatic nature of the gastric lesion.
Discussion and conclusion: Gastrointestinal metastases from breast cancer are rare and occur more frequently in invasive lobular carcinoma than in ductal carcinoma. Their clinical presentation often mimics primary gastric carcinoma, making diagnosis challenging since clinical and endoscopic findings are usually nonspecific. Immunohistochemistry plays a crucial role in differentiating metastatic breast carcinoma from primary gastric cancer, particularly through the expression of hormonal receptors and GATA3, along with CK20 negativity and loss of E-cadherin expression, which are characteristic features of lobular carcinoma. Accurate diagnosis is essential because therapeutic strategies differ significantly. While primary gastric carcinoma is mainly treated surgically, metastatic breast carcinoma is managed with systemic therapy including chemotherapy and hormone therapy.

97 Breast Desmoid Fibromatosis: Clinicopathological Features and Diagnostic Challenges Over a 10-Year Period

Sana Hidouri, Samiha Mabrouk, Seifeddine Ben Hammouda, Sirine Ben Tekaya, Imen Noomen, Leila Njim, Manel Njima

Department of Pathology, Fattouma Bourguiba University Hospital, Monastir, Tunisia

Introduction: Breast desmoid fibromatosis (BDF) is a rare benign mesenchymal tumor arising from musculoaponeurotic structures. Despite its benign nature and absence of metastatic potential, it is locally aggressive and may clinically and radiologically mimic breast carcinoma.
Methods: We conducted a retrospective descriptive study including seven cases of BDF diagnosed at the Department of Pathology of Fattouma Bourguiba University Hospital, Monastir, over a ten-year period (2016–2026).
Results: All patients were women. The mean age was 45 years. The specimens consisted of two core needle biopsies and five surgical excisions. The mean tumor size in surgical specimens was 4.58 cm (range: 2–6.5 cm). Grossly, the tumors presented as firm, poorly circumscribed, whitish nodules.
Histologically, the lesions were composed of spindle cells arranged in long sweeping fascicles with moderate cellularity. The tumor cells displayed myofibroblastic features, with eosinophilic cytoplasm and elongated to oval nuclei containing small nucleoli. No significant nuclear atypia or mitotic activity was observed. The stroma was collagenous, occasionally focally myxoid, and contained scattered blood vessels.
Immunohistochemical study was performed in four cases. Tumor cells showed diffuse and strong nuclear expression of beta-catenin, focal positivity for smooth muscle actin (SMA), and were negative for cytokeratins.

Discussion and conclusion: BDF is a rare entity, representing less than 0.2% of breast neoplasms. It may occur sporadically or in association with familial adenomatous polyposis (Gardner syndrome), highlighting the importance of clinical correlation in selected cases. The main differential diagnoses include metaplastic carcinoma particularly fibromatosis-like, phyllodes tumor (borderline or malignant), fibrosarcoma, myoepithelial carcinoma, and fibrous scar. Immunohistochemistry is essential, demonstrating nuclear beta-catenin expression and absence of epithelial markers such as cytokeratins. Treatment relies on complete surgical excision with clear margins. Although the tumor has no metastatic potential, local recurrence occurs in 18–29% of cases.
BDF is a benign but locally aggressive tumor that can closely mimic malignancy. Accurate histopathological and immunohistochemical evaluation is essential to avoid misdiagnosis and overtreatment