International Academy of Pathology Malaysian Division (IAPMD) 10th Annual Scientific Meeting 2025, Breast & Gynaecology Pathology: Empowering Women's Health, From Cells to Cure, held on 1st – 2nd October 2025 at SunMed Convention Centre, Sunway Medical Centre, Selangor, Malaysia. Abstracts of plenary, talk, symposium and paper (oral and poster) presented are as follows:

ABSTRACT

IAP001 Diagnostic utility of PAX8 and PAX2 immunohistochemistry markers in primary and metastatic ovarian epithelial neoplasm

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Introduction: Ovarian cancer is one of the most lethal forms of cancer in females and currently lacks useful markers and efficient screening methods due to the complexity of variable subtypes. We evaluated the expression of PAX8 and PAX2 in primary and metastatic ovarian epithelial neoplasms. *Material and methods:* A total of 51 formalin-fixed paraffin-embedded cases diagnosed as ovarian epithelial neoplasms were selected for this study. The tumour cells were stained with PAX8 and PAX2 immunohistochemical antibodies and the expressions were evaluated. *Results*: There were 38 cases of serous carcinoma, two cases of serous borderline tumour, 10 cases of primary ovarian mucinous neoplasm (9 mucinous borderline tumour and 1 mucinous carcinoma), and a case of endometrioid carcinomas. Out of 51 cases, 13 were metastatic ovarian carcinoma. PAX8 was expressed in all (38/38) serous carcinoma cases (100%) whereas PAX2 was expressed in 36 cases (95%). Both PAX8 and PAX2 were negative in the two cases of serous borderline tumour (0%). All the cases of mucinous neoplasms including borderline and mucinous carcinomas were negative for PAX8 (0%), however, a single case of mucinous carcinoma was positive for PAX2 (100%). Endometrioid carcinoma (0/1) expressed neither PAX8 nor PAX2. All the 13 metastatic cases were serous carcinomas which showed PAX8 immunepositivity in 12 cases. Six cases of metastatic disease were immunepositive for PAX2. *Discussion and conclusion:* Our study revealed that both PAX8 and PAX2 are sensitive markers for the detection of ovarian serous neoplasms. Thus, PAX2 and PAX8 are useful biomarkers in the diagnosis of ovarian epithelial neoplasm.

IAP002 Strumal carcinoid and struma ovarii: Two cases of ovarian monodermal teratomas

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Introduction: Struma ovarii is a rare ovarian teratoma comprising of thyroid tissue. Most of the tumours are benign and about 5% are malignant. In certain cases, thyroid tissue within the ovary is admixed with carcinoid, a condition referred to as strumal carcinoid. Strumal carcinoid is a rare tumour accounting for less than 0.1% of ovarian malignancies. It presents in fifth and sixth decades of life and has vague non-specific symptoms. *Case reports:* Case 1: A 39-year-old patient presented with abdominal distention for one month and a pelvic ultrasonography revealed a left solid-cystic adnexal mass. Microscopic examination of the ovarian cyst revealed multiple variably sized colloid-filled thyroid follicles with bland-looking follicular cells within normal ovarian tissue. Case 2: A 52-year-old post-menopausal woman complained of abdomen distention and weight loss for one month. Pelvic sonography revealed a well-defined right ovarian solid mass measuring 10×6×5.5cm. She underwent total abdominal hysterectomy and bilateral salpingo-oophorectomy with lymph node dissection. Microscopically, the right ovarian mass displayed tumour cells forming tubules, glands, and trabeculae juxtaposed with thyroid follicles. The cells were uniform with eosinophilic cytoplasm and centrally located nuclei with salt-and-pepper chromatin. Immunohistochemistry shows the tumour cells were positive for synaptophysin and chromogranin A. A diagnosis of strumal carcinoid was made. *Discussion:* Ovarian strumal tumours should be considered in middle-aged women with a pelvic mass. Diagnosis is established through histopathology and immunohistochemistry study. Surgery is the mainstay of treatment, adjunct with chemotherapy or radiation for advanced cases. Although recurrence and metastasis are rare but, long term follow-up is recommended for monitoring of such cases.

IAP003 Carcinoma ex sinonasal papilloma: An insight of the exceptional neoplasm.

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Introduction: Carcinoma ex sinonasal papilloma is an uncommon neoplasm arising typically from the inverted subtype of sinonasal papilloma and is most commonly associated with squamous cell carcinoma transformation. This case report highlights the potential

role of driver mutations in the malignant transformation of a pre-existing sinonasal papilloma, possibly driven by an underlying viral infection. *Case report:* This case involves a 52-year-old male with a left-sided nasal polyp. Histopathological analysis of the initial polypectomy specimen confirmed a diagnosis of carcinoma ex sinonasal papilloma. A redo procedure was performed later for margin clearance. Patient currently free of disease on 1 year follow up. *Results:* Inverted subtypes papilloma is a digitiform proliferation of squamous epithelium into the underlying stroma. Unlike other subtypes, this mucosal lesion inverts, rather than everts, into the underlying connective tissue stroma. Malignant transformation of the inverted subtype results in carcinoma ex sinonasal papilloma. *Discussion:* Its unique morphology, locally aggressive behaviours and established link with human papilloma virus (HPV) characterize it as an exceptional neoplasm. Owing to its high propensity for recurrence, achieving clear surgical margins through complete excision is crucial for minimising the risk of recurrent disease. Otherwise, further study on etiologic factors is necessary for clinical guidance and therapeutic targets.

IAP004 Mixed Invasive Carcinoma of No Special Type and Invasive Lobular Carcinoma of the Breast with Hormonal Receptor Discordance

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Introduction: Mixed invasive carcinoma of no special type and invasive lobular carcinoma, also known as invasive ductulolobular carcinoma (IDLC), is a rare histological subtype of breast carcinoma, accounting for approximately 5% of all invasive breast carcinomas. IDLC is characterized histologically by a mixed ductal and lobular invasive components. This poses diagnostic challenges, particularly in small biopsies or cases with subtle lobular features. *Case report:* A 55-year-old woman who was initially diagnosed in 2018 with invasive lobular carcinoma in the right breast, for which no surgical intervention was performed. In 2020, she presented with a contralateral left breast lump, ulcerative right breast lump and axillary lymphadenopathy. Radiological investigations revealed metastatic spread to the adrenal glands and bones. Histological examination revealed two distinct malignant components. One component consisted of malignant epithelial cells in sheets and small clusters, typical of an invasive ductal carcinoma. The second component displayed a subtle, single-cell infiltrative pattern, confirmed as invasive lobular carcinoma with loss of E-cadherin immune-expression. Both components were oestrogen receptor positive. The lobular component showed 80% positivity for progesterone receptor (PR), while the ductal components was PR negative. The patient was started on palliative hormonal therapy. *Discussion:* The infiltrative nature of the lobular component can be subtle, potentially leading to misdiagnosis, especially in limited biopsies. This case underscores the importance of meticulous histopathological evaluation and the role of immunohistochemistry, E-cadherin in arriving to accurate diagnosis. Hormonal receptor discordance may have prognostic and therapeutic implications.

IAP005 Squamous Cell Carcinoma of the uterus and cervix, arising from the HSIL of the cervix: A case report

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Introduction: Superficial spreading of high-grade squamous intraepithelial lesion (HSIL) and squamous cell carcinoma (SCC) from the cervix to the endometrium is a rare occurrence. *Case report*: A 70-year-old postmenopausal woman (Para 7) underwent routine Pap smear revealing HSIL. The conization biopsy and endometrial sampling confirmed HSIL involving endometrial tissue. She subsequently underwent a hysterectomy with bilateral salpingo-oophorectomy. *Result*: No gross tumour was observed in the cervix or uterus. Microscopically, the cervix showed extensive HSIL with glandular involvement and a focus of microinvasion. These high-grade dysplastic epithelium interestingly spread superficially and contiguously upwards, involving and replacing the entire endometrial lining. At areas, the dysplastic squamous epithelium breached the basement membrane and invaded the endometrial stroma and superficial myometrium in clusters and small nests. Immunohistochemistry revealed positivity for p40 and block positivity for p16 in both the cervix and endometrium. Carcinoembryonic antigen (CEA) was positive in the endometrium while p53 showed a wild-type pattern. ER and PR were negative. Final histological examination confirmed the diagnosis of HPV-associated non keratinising squamous cell carcinoma of cervix and uterus. *Discussion*: There are only a few cases reported of superficial extension of HSIL/SCC from the cervix to the endometrium in the literature. Reporting is essential for better understanding this phenomenon and enabling future meta-analyses.

IAP006 Malignant proliferating trichilemmal tumour of the lower extremity: a case report of an unusual location of a rare cutaneous adnexal tumour

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Introduction: Proliferating trichilemmal tumour (PTT) is a rare neoplasm derived from the outer root sheath of hair follicle, affecting women over the age of 40, with 90% of cases occurring on the scalp. Malignant PPT is a rare finding exhibiting infiltrative growth pattern, cellular atypia and high mitotic activity. Here, we present a case of malignant PTT at the lower extremity. *Case report*: A

55-year-old male presented with a right big toe swelling for one year which showed recent rapid enlargement. There is no history of trauma and chronic irritation. Ray amputation of the right big toe was performed. *Results*: Histopathological examination shows a tumour composed of small, basaloid cells displaying peripheral palisading. The inner layers show differentiation towards trichilemmal type and lacking significant atypia. Abrupt keratinization is noted. In other areas, the cells show moderate to marked nuclear atypia with increase mitotic activity. *Discussion*: Marked nuclear atypia, increased mitotic figures, and necrosis are features of malignant PTT, which can frequently be mistaken for squamous cell carcinoma (SCC). Characteristics that support the diagnosis of proliferating trichilemmal tumour include trichilemmal keratinization, cyst formation, calcification, and the absence of a premalignant epidermal lesion. Immunohistochemistry has limited utility in differentiating malignant PTT and squamous cell carcinoma. *Conclusion*: Malignant PTT is a rare adnexal tumour that poses a clinicopathological challenge, especially when it presents with atypical morphology at unusual sites. High index of suspicion, supported by accurate histopathological interpretation are needed to facilitate early diagnosis and immediate intervention.

IAP007 **Invasive Breast Carcinoma of No Special Type (NST) with Osteoclast-like Stromal Giant Cells Pattern; A rare variant.**

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Introduction: Invasive breast carcinoma (IBC) osteoclast-like stromal giant cells (OSGCs) is a rare histological variant of breast carcinoma, accounting for a small fraction of all invasive breast carcinomas. Although OSGCs are most commonly observed in invasive breast carcinomas of no special type (IBC-NST), they may also be found in other subtypes of breast cancer such as tubular carcinoma, metaplastic carcinoma, ductal carcinoma in situ (DCIS) and cribriform carcinoma. Its clinical significance remains unclear due to limited case reports and studies. *Case report*: We report the case of an asymptomatic 47-year-old female whose screening mammogram showed an area of density with a spiculated lesion causing architectural distortion at the right upper quadrant measuring 3.2×2.8×2.5 cm, BIRADS 5 lesion. *Results*: Ultrasound-guided biopsy confirmed invasive carcinoma, Modified Bloom and Richardson at least grade 1. She underwent wide local excision with hook wire localisation and sentinel lymph node excision. Histopathological examination of the surgical specimen revealed IBC-NST with OSGC pattern and low-grade carcinoma in situ. Hormonal status for oncoprotein showed oestrogen and progesterone receptors positive (3+, 100% of malignant cells) and HER2 negative. P63 immunohistochemical stain for myoepithelial marker was negative for the malignant cells. The patient underwent radiotherapy after the surgical resection. *Discussion*: Recognising OSGCs within the tumour microenvironment is important to avoid diagnostic confusion with other giant cell-rich neoplasms or reactive conditions. Accurate histopathological evaluation, supplemented by immunohistochemistry, is essential for appropriate diagnosis.

IAP008 **Paraganglioma Masquerading as a Huge Ovarian Tumour: Histological Approach and Review of Literature.**

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Introduction: Paragangliomas are rare neuroendocrine tumours originating from extra-adrenal chromaffin cells, with exceedingly uncommon presentations in the female reproductive tract. *Case report*: A 40-year-old woman presented with a progressive abdominal distension over six months. Radiological imaging revealed a large intra-abdominal cystic mass initially suspected to arise from the left ovary. The patient underwent total abdominal hysterectomy with bilateral salpingo-oophorectomy. *Results*: The tumour was a massive uniloculated cystic mass measuring 350mm in largest diameter, containing haemorrhagic material with lining of yellowish friable nodules. Microscopy showed tumour cell arranged in trabecular and nested architecture, composed of epithelioid cells with eosinophilic cytoplasm and low mitotic activity. No ovarian parenchyma was demonstrable. Immunohistochemistry stains were positive for neuroendocrine markers and S100, and were negative for epithelial, sex cord-stromal, melanocytic, and thyroid markers, supporting the diagnosis of an extra-adrenal paraganglioma. The separated left ovary was unremarkable. *Discussion*: This case highlights the diagnostic challenge posed by paragangliomas at atypical sites, often mimicking more common ovarian or mesenteric neoplasms. Accurate diagnosis hinges on histopathology and a broad immunohistochemical panel. Given the potential for hereditary syndromes and recurrence, genetic counselling and long-term follow-up are essential. *Conclusion*: This report adds to the limited literature on paragangliomas in the female genital tract and underscores the importance of considering them in the differential diagnoses of large cystic pelvic masses.

IAP009 **Synchronous Papillary Carcinoma of the Thyroid with Bilateral Highly Differentiated Follicular Carcinoma of Ovarian Origin and Multisite Metastases.**

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Introduction: Highly differentiated follicular carcinoma of the ovary (HDFCO) is a rare malignant neoplasm that arises from struma ovarii, characterized by the presence of benign-appearing thyroid follicles outside the ovary. *Case report*: We report the case of a 50-year-old woman who underwent total abdominal hysterectomy, bilateral salpingo-oophorectomy, and omentectomy for bilateral ovarian masses. *Results*: Extensive histological sampling and immunohistochemical staining led to a diagnosis of HDFCO, with tumour deposits involving the omentum, uterine serosa, and right fallopian tube. Subsequent contrast-enhanced CT thorax, abdomen, and pelvis (CTTAP), followed by ultrasound of the neck, revealed an incidental right thyroid nodule. Total thyroidectomy was performed, and histopathology confirmed papillary thyroid carcinoma (pT1). Discussion: The diagnosis of HDFCO was established based on strict histopathological criteria as outlined by Roth and Karseladze (2008). This case is notable for the coexistence of two distinct thyroid-related malignancies: primary papillary thyroid carcinoma and bilateral HDFCO with extraovarian spread. This rare scenario presents a significant diagnostic challenge, particularly in distinguishing HDFCO from metastatic thyroid carcinoma involving the ovary. Due to the extreme rarity of HDFCO, there is no standardized treatment protocol; however, management typically involves complete surgical resection and consideration of adjuvant radioactive iodine therapy. *Discussion*: HDFCO with concurrent primary papillary thyroid carcinoma is exceptionally rare. Accurate diagnosis requires thorough sampling and awareness of histological criteria. Personalized treatment strategies are essential for optimal patient outcomes.

IAP010 Galore of giant cell-rich tumours: Spot the difference!

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Introduction: Giant cell-rich tumours are a broad group of tumours that can be benign or malignant. They share histological features and display wide heterogeneity in clinical features and treatment. A precise interpretation is crucial in distinguishing a range of Giant cell-rich tumours. *Materials and Methods*: This study explores the morphology, molecular characteristics, and clinicopathological correlation between five major entities: Brown tumour (BT), Giant cell tumour of bone (GCTB), Tenosynovial giant cell tumour (TSGCT), Chondroblastoma (CB) and Telangiectatic osteosarcoma (TOS). *Results*: Brown Tumour is a benign lesion with osteoclast-like giant cells and is associated with hyperparathyroidism. GCTB is a benign, locally aggressive tumour composed of giant cells and mononuclear stromal cells and related to H3F3A mutations. TSGCT is a neoplasm within the joints, characterized by a mixture of synoviocyte-like mononuclear cells. Chondroblastoma exhibits chondroblasts with chicken-wire calcification and is linked to H3F3B K36M mutations. TOS, a high-grade malignant tumour that creates blood-filled spaces with malignant cells. *Discussion and Conclusion*: Giant cell-rich tumours involve collaborative diagnostic approach with clinical, radiology, histology immunohistochemistry, and molecular testing.

IAP011 Nasopharyngeal Papillary Adenocarcinoma: Uncommon Tumour Mimicking Benign Nasopharyngeal Papillary Neoplasm.

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Introduction: Nasopharyngeal papillary adenocarcinoma (NPAC) is a rare low-grade carcinoma, accounting <1 % of nasopharyngeal malignancies. The tumour arises in nasopharynx with predominant feature of papillary architecture that mimics benign papillary neoplasm of nasopharynx. Therefore, due to it's rarity, we present a case of NPAC. *Case presentation:* A 45-year-old man, presented with left nasal epistaxis for 1 week. Rigid nasoendoscopy revealed a mass located at the roof of nasopharynx. Tumour excision was performed and a brownish, pedunculated polypoidal tissue measuring 10 × 3 × 4 mm was received. *Result:* Microscopically, it shows an exophytic polypoid tumour exhibits papillary architecture with arborization and hyalinized fibrovascular cores; lined by columnar cells with oval nuclei, inconspicuous nucleoli and eosinophilic cytoplasm. No direct connection with surface epithelium. Mitosis is absent. Vascular, lymphatic, and neural invasion are not identified. No area of necrosis. The tumour cells are diffusely positive for EMA and TTF1 stains, while they are negative for Thyroglobulin and PAX8 stains. Ki67 proliferative index is low (<2%). *Discussion:* NPAC is a rare neoplasm, which has low-grade behaviour and excellent prognosis by complete surgical excision in most of the cases. However, distinguishing it from other benign mimickers of nasopharyngeal papillary neoplasms are very crucial in recognising this uncommon entity.

IAP012 Ovarian Tumour: Concordance of Frozen and Paraffin Sections Diagnosis.

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Introduction: While managing patients, particularly those in the reproductive age group, frozen sections of ovarian tumours greatly aid in the process of making intraoperative decisions in order to preserve the patient's fertility. Hence, we evaluated the concordance diagnosis of frozen sections and paraffin sections of ovarian tumour, diagnosed in Penang General Hospital. *Material and Methods:* A retrospective study was carried out at Penang General Hospital over 4 years from 2020 to 2023. Clinical details,

report of both frozen and paraffin sections were reviewed and analysed. *Results:* Ovarian tumour cases which were frequently requested for frozen section diagnosis in our centre are among reproductive age women (11-34 years old) with radiologically large, complex tumour and elevated CA-125 (>35 U/mL). Among the total of 23 samples, 19, three and one are diagnosed as benign, borderline, and malignant tumours, respectively, based on frozen sections. Paraffin sections, on the other hand, showed that 21 of the ovarian tumours were benign, and one was each of the borderline and malignant types. The predominant histological type is epithelial tumour (52.1%), followed by germ cell tumour (30.4%) and sex-cord stromal tumour (4.3%). The functional cysts (13.0%) are also identified. *Discussion and conclusion:* Our study discovered concordant diagnoses between frozen and paraffin sections (91.7%), which contributes to local data. Further large-scale research is required to achieve high-impact results that will support the management of intraoperative ovarian cancer.

IAP013 Gastroblastoma: An Extremely Rare Biphasic Tumour.

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Introduction: Gastroblastoma is an extremely rare malignant gastric neoplasm with biphasic histomorphology. Only 28 cases have been reported in the literature. We report the first case of gastroblastoma in Malaysia. *Case report:* A 27-year-old male presented with 3-week abdominal distension and rectal bleeding. Computed tomography showed a large intraperitoneal multiloculated cystic mass with compression effect. Exploratory laparotomy revealed an exophytic multiloculated cystic gastric tumour measuring 235x225x110mm at the greater curvature. Some locules were ruptured during manipulation, releasing brownish fluid. Multiple regional lymph nodes were palpable. Stomach wedge resection was performed. *Results:* Histological evaluation revealed a biphasic gastric tumour, featuring predominantly bland monotonous spindled cells in a nodular plexiform pattern and a less prominent epithelioid component in glandular and cribriform islands with an adenoid cystic appearance. Mitotic figures were infrequent. Tumour cells were diffusely positive for CD10 and CD56. No lymph node metastasis was seen in all ten isolated lymph nodes. *Discussion:* Current knowledge regarding gastroblastoma derives primarily from isolated case reports due to its extremely low incidence. It typically demonstrates indolent biological behaviour with a favourable clinical outcome. Definitive diagnosis ideally incorporates demonstration of molecular alterations, often MALAT1-GLI1 fusion gene, however, recognition of the distinctive biphasic histomorphology supplemented by supportive immunohistochemical profiles is crucial in resource-constrained settings.

IAP015 Microscopic Colitis as A Hidden Cause of Chronic Diarrhoea

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Introduction: Colitis is described as an inflammation disease of the colon. Microscopic colitis is one of causes of chronic inflammatory condition of the bowel and is female predominance. Microscopic colitis is associated with chronic watery diarrhoea, normal colonoscopy and characteristic histological features. We describe the histomorphology features of a case of microscopic colitis. *Case report:* A 70-year-old man presented with chronic watery diarrhoea for 2 months associated with weight loss. He has taken antibiotics prior colonoscopy. However, the colonoscopy findings were unremarkable and colonic biopsy was taken. Microscopically, there is presence of subepithelial thickened collagen band with entrapped inflammatory cells. Subepithelial collagen band is highlighted by trichrome stain. Background distorted crypts with mildly increase in lymphoplasmacytic infiltrates at the lamina propria are observed. There is no evidence of dysplasia or malignancy. *Discussion:* Microscopic colitis can be categorized into collagenous colitis and lymphocytic colitis. Some reported cases revealed microscopic colitis poses spontaneous remission and appears to have no increased risk of colorectal carcinoma. The understanding the nature of microscopic colitis may avoid unnecessary anxiety among clinician and patients.

IAP016 The Wolf in Double Clothing: A Malignant PEComa Masquerading in the Pouch of Douglas Shadows.

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Introduction: Malignant perivascular epithelioid cell tumour (PEComa) of Pouch of Douglas orchestrates very rare soft tissue neoplasms exhibiting dual differentiation of melanocytic and myoid patterns. This case highlighted the importance of thorough histomorphologic description with Modified Folpe Classification, along with immunohistochemical detective work to solve the riddle of this wolf amidst the tumour 'sheep'. *Case presentation:* A 46-year-old woman complained of right lumbar pain, radiating to the suprapubic area for 4 months and progressively worsening. A CT thorax, abdomen, and pelvis (CT-TAP) scan revealed a large multiloculated solid cystic mass arising from the pelvis, measuring 166 × 242 × 297 mm (APxWxCC). This patient went for TAHBSO, tumour debulking and bilateral internal artery ligation. *Discussion:* Diagnosis of malignant PEComa of the Pouch of Douglas remains challenging, as the tumour exhibits diverse histological patterns. The tumour shows admixture of malignant epithelioid and spindle cell type. Immunohistochemical stains show coexpression of HMB-45, TFE3, smooth muscle actin (SMA), Desmin, and Caldesmon, establishing PEComa and based on the Modified Folpe Classification, this patient fulfilled five out of six

criteria: the tumour size is more than 5 cm, infiltrative growth, high nuclear grade and cellularity, mitotic rate >1/10HPF, necrosis and vascular invasion, which confirms the malignant PEComa. *Conclusion:* Malignant PEComa is an unique tumour that needs coordination of morphologic, immunophenotypic, and molecular data into a single, unifying diagnosis. This case report aims to compile the existing evidence on malignant PEComa, particularly in Malaysia, and to outline additional research to refine treatment plans for these patients.

IAP017 A Clear Deceptive Face of Urothelial Carcinoma

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Introduction: Clear cell urothelial carcinoma (CCUC) of the bladder is an exceptionally rare urothelial variant, often misdiagnosed due to histologic overlap with metastatic Müllerian tumours. We present a case of bladder tumour that poses a significant diagnostic challenge to determine whether it represents recurrence or a primary malignancy, requiring integrated histological, immunohistochemical, clinical, and radiological correlation. *Case Presentation:* A 64-year-old woman with ovarian clear cell carcinoma (CCC) treated a decade ago presented with haematuria. Cystoscopy revealed a bladder mass infiltrating the superior wall. Contrast-enhanced CT demonstrated similar findings, with possible involvement of the right rectus abdominis but no pelvic recurrence or surgical bed involvement were detected. Histopathology showed an invasive carcinoma with extensive clear cell morphology in solid and papillary formations, alongside focal conventional urothelial carcinoma and urothelial dysplasia. PAS-positive glycogen-rich cytoplasm was confirmed. The tumour was CK7+, GATA3+, p63+, and negative for Napsin A and WT1, supporting a urothelial origin. *Discussion & Conclusion:* Differentiating recurrence from a metachronous carcinoma is deceptively complex. CCC exhibits tubulocystic and hobnail patterns, which is absent in this tumour. CCUC, defined by ≥30% clear cells, often invades muscle and has high mortality. Histological and immunohistochemical findings, alongside clinical-radiological assessment, favoured CCUC over Müllerian metastasis. This case highlights the importance of comprehensive tumour evaluation to ensure accurate diagnosis and optimal therapeutic guidance.

IAP018 MEN 1 Syndrome Presenting as Cutaneous Nodules: The Role of Histopathology in Clinical Diagnosis.

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Introduction: Multiple endocrine neoplasia type 1 (MEN 1) is a rare syndrome characterized by tumours development in multiple endocrine organs. Cutaneous manifestations like collagenomas may serve as early diagnostic clues but are frequently mistaken for other syndromes, particularly neurofibromatosis. *Case Presentation*: A 48-year-old man was investigated for multiple skin nodules on the abdomen and neck, initially raising suspicion for neurofibromatosis. There was no similar history in the family. He later developed hypertension and hypercalcemia. Chest X-ray revealed a widened mediastinum and computed tomography showed an anterior mediastinal and pancreatic mass, and a superior mediastinal lesion suggestive of a parathyroid adenoma. *Results:* A skin biopsy from an abdominal lesion—where the thick dermis posed interpretative challenges—revealed cutaneous collagenoma. Histopathological examination (HPE) of the mass confirmed neuroendocrine tumour (NET G2) in the mediastinum and pancreatic mass. The parathyroid lesion was reported as an adenoma. A diagnosis of MEN 1 was established based on the combination of clinical, radiologic, and pathological findings. Genetic testing was not performed due to financial constraints. *Discussion:* This case highlights the crucial role of HPE in diagnosing MEN 1, particularly in distinguishing collagenomas from neurofibromas, which may appear similar clinically. While collagenomas are recognised cutaneous markers of MEN 1, biopsy from thick skin areas like the abdomen may obscure key histological features. In this case, HPE was instrumental in confirming the diagnosis of collagenoma and the associated endocrine tumours, supporting a diagnosis of MEN 1 especially in resource limited setting where genetic testing is not widely feasible.

IAP019 IgG4-Related Disease Masquerades as a Brain Tumour

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Introduction: IgG4-related disease (IgG4-RD) is an immune-mediated systemic fibro-inflammatory condition that may mimic a variety of inflammatory and neoplastic conditions. Its incidence in the brain is rare and deceptively mimics a brain neoplasm. *Case report:* We present a case of a 43-year-old Malay female with a history of recurrent orbital tuberculosis since 2008. Serial MRI of the brain and orbit showed a gradually enlarging right anterior cranial fossa extra-axial lesion with stable intracranial nodular pachymeningeal enhancement. The enlarging lesion raised the concern of a neoplastic process; hence, surgical intervention was adopted. Intraoperatively, abundant inflamed tissue was seen at the inferior part of the frontal lobe, which was sent for histopathological examination. *Results:* Microscopically, the tissue showed dense fibrous tissue in a storiform pattern associated with lymphoplasmacytic infiltration enriched with IgG4-positive plasma cells (more than 10 per HPF). IgG4/IgG ratio was over

0.4. Occasional obliterative phlebitis was seen. The case was concluded as IgG4-RD. *Discussion:* IgG4-RD is a master of disguise. This case highlights the importance of considering IgG4-RD in the differential diagnosis of extra-axial or intracranial lesions with pachymeningeal enhancement. Accurate diagnosis is essential, as management differs significantly from that of other brain tumours, with corticosteroid therapy being the mainstay of treatment. Early recognition and intervention are critical in alleviating symptoms, preventing irreversible fibrotic damage, and reducing the risk of secondary amyloidosis.

IAP020 Laryngeal Spindle Cell Squamous Cell Carcinoma, A Diagnostically Challenging Tumour

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Introduction: Spindle cell squamous cell carcinoma (SCSCC) of the larynx is a rare and aggressive variant. Histologically, it is characterised by the presence of spindle shapes or pleomorphic epithelioid cell and typically associated with intraepithelial dysplasia and/or conventional SCC. *Case report:* A 73-year-old male presented with hoarseness of voice. CT neck and thorax showed a locally advanced laryngeal carcinoma. He underwent total laryngectomy, bilateral selective neck dissection and total thyroidectomy. Gross examination revealed a transglottic fungating tumour, measuring 80 × 30 × 25 mm. The tumour is extending beyond the thyroid cartilage into part of the anterior soft tissue and flap muscle, as well as the posterior pharyngeal wall. Microscopically, the majority of the tumour (approximately 95%) was composed of malignant spindle cells exhibiting marked nuclear atypia. A minor component (about 5%) showed features of conventional squamous cell carcinoma. Immunohistochemically, the spindle cell component was positive for vimentin and showed focal positivity for p63 and cytokeratin AE1/AE3. Diagnosis of squamous cell carcinoma, spindle cell type (95%) mixed with conventional type, with TNM staging of pT4a, pN0 was given. *Discussion:* It is crucial to distinguish this tumour from primary mucosal sarcomas and reactive spindle cell lesions. The diagnosis depends on the detection of a typical squamous cell carcinoma component and the immunopositivity of epithelial markers. In this case, even though the epithelial markers are only focally positive, the presence of a conventional squamous component supports the diagnosis. Careful correlation of histomorphology with immunohistochemical findings is essential to avoid misdiagnosis and to ensure appropriate clinical management.

IAP021 Concurrent Intraductal Papillary Mucinous Neoplasm and Serous Cystadenoma of Pancreas

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Introduction: Pancreatic cystic neoplasms encompass a heterogeneous group of lesions with varying biological behaviour and malignant potential. Among these, serous cystadenoma (SCA) is a benign, typically asymptomatic cystic lesion, whereas intraductal papillary mucinous neoplasm (IPMN) is recognised for its potential to undergo malignant transformation. The synchronous occurrence of both lesions within the same pancreas is exceedingly rare and presents significant diagnostic, prognostic, and therapeutic challenges. *Case Presentation:* A 76-year-old female presented with vague epigastric fullness and right-sided abdominal discomfort. Radiological evaluation revealed two distinct cystic lesions within the pancreas: a hypodense, septated cystic lesion at the pancreatic body, and a well-defined cystic lesion at the pancreatic tail demonstrating direct communication with the main pancreatic duct, radiologically suggestive of an IPMN. The patient subsequently underwent a distal pancreatectomy. Histopathological examination confirmed the diagnosis of a serous cystadenoma at the pancreatic body and a low-grade IPMN at the pancreatic tail, without evidence of high-grade dysplasia or invasive carcinoma. *Conclusion:* The concurrent occurrence of IPMN and serous cystadenoma is uncommon, with only a limited number of cases reported in the literature. This case highlights the importance of comprehensive preoperative evaluation and meticulous histopathological examination in patients with multiple pancreatic cystic lesions. Recognition of this dual pathology is crucial as management strategies differ due to the malignant potential associated with IPMN.

IAP022 Double Trouble: Primary Bilateral Ovarian Neuroendocrine Tumours in a Patient with Prior Renal Cell Carcinoma

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Introduction: Primary ovarian neuroendocrine tumours (NETs) are rare; bilateral involvement is exceptional. This poses a diagnostic challenge in distinguishing primary from metastatic disease, particularly in patients with a prior malignancy. We report a unique case of primary bilateral ovarian NET in a patient with previous clear cell renal cell carcinoma (ccRCC). Case Presentation: A 45-year-old woman with a history of left nephrectomy for ccRCC in 2018 currently presented with enlarging bilateral ovarian masses on surveillance imaging. Computed tomography showed multiloculated cystic masses without evidence of ccRCC recurrence. She underwent total abdominal hysterectomy with bilateral salpingo-oophorectomy. Results: Gross examination of both ovaries showed solid-cystic, tan-yellow tumours (Right: 10 cm; Left: 12 cm). Microscopically, both tumours showed uniform cells in tubular and trabecular patterns with round nuclei, "salt-and-pepper" chromatin, and eosinophilic cytoplasm. Mitoses were low (1/10 HPF) with no tumour necrosis. Immunohistochemistry showed positivity for neuroendocrine markers (CKAE1/AE3,

synaptophysin, and chromogranin A). Ki-67 proliferative index was 5%. Tumour cells were negative for renal, sex cord-stromal, germ cell, gastrointestinal, and hormonal markers; supporting a diagnosis of NET grade 2. Discussion: This case highlights an exceptionally rare presentation of primary bilateral ovarian NETs, with added complexity from a prior malignancy. It underscores the importance of integrating histopathology, immunohistochemistry, and clinical history to distinguish rare primary tumours from metastases. Accurate diagnosis is critical for optimal patient management and prognosis.

IAP023 Ameloblastic Carcinoma: Diagnostic Challenges in Two Cases

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Introduction: Ameloblastic carcinoma (AC) is a rare tumour of the jaw. While its aetiology is unknown, some ACs are thought to arise from longstanding untreated ameloblastoma (AM). Since ameloblastoma also resembles AC, salient morphological features are key in differentiating both tumours as they both require different intervention. We present two cases of ACs reported on tissue biopsy and fine needle aspiration cytology (FNAC) samples. Case report: Case 1: A 53-year-old man presented with 3-year history of increasing left jaw swelling. CT scan revealed a large heterogenous mandible mass associated with necrotic centre, bone destruction and adjacent structures' infiltration associated with lung nodules and enlarged mediastinal lymph nodes. Ultrasound guided biopsy was performed. Case 2: A 51-year-old Malay man presented with increasing bilateral jaw swellings for 5 years. FNAC was performed. Results: Case 1: Histopathology examination showed mainly AM features with sheets and cords of epithelial cells displaying peripheral basaloid palisading and reverse nuclear polarity. Deeper sections demonstrated moderate nuclear pleomorphism, abnormal mitoses and free-lying necrotic material. Case 2: FNAC revealed clusters of disorganised basaloid cells in palisades associated with pleomorphic hyperchromatic nuclei and prominent nucleoli. Discussion: These cases represent a rare jaw tumour and the challenges it poses when interpreting limited diagnostic material. It also illustrates the importance of multidisciplinary team discussions as well as additional tests in arriving to the best possible diagnosis.

IAP024 A Rare Case of Malignant Phyllodes Tumour with Myxoid Liposarcomatous Differentiation

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Introduction: Malignant phyllodes tumour (PT) is a rare fibroepithelial breast neoplasm, accounting for less than 1% of all breast tumours. Malignant transformation is defined by stromal overgrowth, marked nuclear pleomorphism, increased mitotic activity (≥10/10 HPFs), diffuse stromal cellularity, and infiltrative margins. The presence of malignant heterologous elements alone confirms malignancy. *Case report:* We report a malignant PT with myxoid liposarcomatous differentiation in a 70-year-old woman who presented with a rapidly enlarging, intermittently painful left breast mass over one year. CT scan revealed a large, lobulated, heterogeneously enhancing mass occupying the entire breast (10.5 × 12.5 × 12.6 cm). Core biopsy suggested a fibroepithelial lesion, favouring PT. A mastectomy was subsequently performed. Grossly, the tumour was firm, multilobulated, with a gelatinous cut surface. Histology confirmed a biphasic PT with extensive myxoid liposarcomatous differentiation, featuring spindle cells in a myxoid matrix with curvilinear vasculature and lipoblasts, including signet-ring forms. Mild to moderate nuclear pleomorphism and increased mitotic figures (14/10HPF), infiltrative edges and nodular "skipped" growth patterns were observed. The spindle cells are positive for vimentin, focal S100, SMA, CD34, and p16. CK AE1/AE3 and p63 were negative. *Discussion:* The diagnosis of malignant phyllodes tumour with prominent heterologous components can be challenging, often raising concern for primary breast sarcoma or metaplastic carcinoma. In this case, the presence of infiltrative borders, classical phyllodes architecture in areas, and heterologous myxoid liposarcomatous differentiation supports the diagnosis of malignant phyllodes tumour. Immunohistochemistry, along with careful histological assessment, is essential to differentiate this entity from other mimics.

IAP025 Adenoid Cystic Carcinoma in the External Auditory Canal: Rare Otologic Malignancy

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Introduction: Malignant tumours of the external auditory canal (EAC) are rare, with squamous cell carcinoma being the most common. Adenoid cystic carcinoma (ACC) in the EAC is exceptionally uncommon, primarily occurring in salivary glands of the head and neck. *Case report:* A 70-year-old Chinese gentleman presented with a one-year history of left otalgia, which is throbbing in nature and accompanied by minimal ear discharge. Clinical examination shows that the tympanic membrane is not seen and a smooth swelling involving the anterior, posterior, and floor of the EAC. CT and MRI findings identified a soft tissue lesion causing bony erosion and narrowing of the EAC lumen. A left temporal bone and tumour resection was performed. Grossly, the tumour appeared as an infiltrative, solid, greyish lesion. Histopathological analysis confirmed ACC with bone involvement and positive resection margins. *Discussion:* Primary tumours of the EAC account for less than 0.2% of head and neck cancers, with ACC being an exceedingly rare diagnosis. ACC follows a slow growing but relentless malignant course. Its precise origin in the EAC remains uncertain, possibly from ceruminous gland derivation, ectopic salivary tissue or extension from the parotid gland. Although this theory remains unproven. ACC has a challenging prognosis, with high rates of locoregional recurrence and most developed distant metastases commonly in the lungs. Surgical resection remains the primary treatment modality. While post-resection imaging in this

case showed no residual tumour, close long-term monitoring is essential for optimal patient management and early intervention. This case highlights the rarity and aggressive nature of adenoid cystic carcinoma in the external auditory canal, underscoring the need for long-term surveillance.

IAP026 Not Your Typical Fibroid: A Rare Case of Uterine Inflammatory Myofibroblastic Tumour

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Introduction: Inflammatory myofibroblastic tumours (IMTs) are rare mesenchymal neoplasm of fibroblastic/myofibroblastic origin, classified as neoplasm of uncertain malignant potential. They can involve various anatomical sites, including the female genital tract, though uterine IMTs are particularly uncommon and often mimic benign leiomyomas both clinically and radiologically. Histological resemblance to other more common uterine tumours further complicate diagnosis. *Case report:* A 35-year-old woman, para 3, presented with menorrhagia and anaemia for four months. Ultrasound revealed a 37 mm intramural uterine mass, clinically diagnosed as a leiomyoma. Myomectomy was performed and tissue was submitted for histopathology. Grossly, the tumour appeared light yellow, slightly bulging with a firm cut surface. *Results:* Microscopy showed mild to moderately atypical, spindle tumour cells with irregular infiltrative border involving the myometrium. Tumour cells were arranged in fascicles with occasional storiform areas and little accompanying inflammatory infiltrates. Scattered gang
lion-like cells were noted. The stroma was fibrocollagenous to myxoid with delicate vasculature. No necrosis, appreciable mitoses, marked atypia, or vascular invasion was seen. Immunohistochemistry revealed diffuse smooth muscle actin positivity, strong cytoplasmic ALK expression in 50–60% of tumour cells, focal CD10 and ER positivity. Cyclin D1 was negative. *Discussion:* Uterine IMTs are rare but important tumour entity due to the potential for tumour recurrence and extrauterine spread. ALK gene rearrangements are common, which can aid diagnosis. Recognising this tumour is essential, particularly in cases with aggressive features, as targeted therapy with a tyrosine kinase inhibitor may offer therapeutic benefit.

IAP027 Pioneering DLBCL Diagnostics: Computational Design of DNA-Aptamers for High-Specificity Detection of BCL-2 Translocated Oncoprotein

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Introduction: The aggressive diffuse large B-cell lymphoma (DLBCL) is identified by BCL-2 oncogene translocations. Fluorescence in situ Hybridization (FISH) is currently the gold standard for diagnosis, its application is limited by high cost, laborious procedures, and inconsistent specificity and sensitivity. An expeditious, affordable, and highly accurate protein-level diagnostic solution is therefore needed. This study developed DNA aptamer-based assays that target the BCL-2 oncoprotein in DLBCL. We compared its diagnostic specificity and sensitivity to FISH for gene translocation detection by integrating biocomputational design with Aptahistochemical (AHC) validation. *Materials and methods:* A Comprehensive bioinformatics evaluation was conducted to describe the binding mechanisms of DNA-Aptamers targeting the BCL-2 translocated oncoprotein after they were computationally developed in silico. Using AHC assays on 20 DLBCL-positive tissue samples, the specificity and sensitivity of these DNA-Aptamers were confirmed. The outcomes were compared to oncogene translocations found by FISH. *Results:* With binding energies ranging from -18.3 to -17.8 kcal/mol, three DNA-Aptamers with 35–50 nucleotides showed excellent stability and a substantial affinity for BCL-2 oncoprotein. The unique binding of these DNA-Aptamers to cytoplasmic-localised BCL-2 in DLBCL tissue samples was validated by AHC analysis. Comparative analysis revealed that DNA-Aptamer-based assays achieved specificity and sensitivity comparable to the current gold standard for detecting translocated oncoproteins, which the protein-level detection results agreed with those obtained by FISH. *Conclusion:* These results show that DNA-Aptamer-based assays have considerable potential as substitutes for protein-focused diagnostic instruments, providing a promising path to revolutionise DLBCL diagnosis.

IAP028 Papillary Renal Neoplasm with Reverse Polarity: A Distinct Entity with Indolent Behaviour

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Introduction: Papillary renal neoplasm with reverse polarity (PRNRP) is a newly proposed entity characterised by distinct histology and frequent KRAS mutations. Initially classified under papillary renal cell carcinoma (PRCC), it has since been recognised as a separate entity due to its unique morphological features and more favourable prognosis. *Case Report:* A 78-year-old Chinese woman with a history of right breast carcinoma post-mastectomy and a liver cyst was incidentally found to have a hyperdense lesion in the upper pole of the right kidney during a CT liver multiphase. The lesion measured 1.6 × 1.3 × 1.1 cm with significant post-contrast enhancement. She subsequently underwent a right partial nephrectomy. *Results:* The tumour was well-circumscribed with partly cystic areas and surrounded by a fibrous pseudocapsule. It was composed of neoplastic cells arranged in thinly branching papillae and lined by oncocytic granular cells. These cells exhibited medium-sized, rounded nuclei with mild pleomorphism, apically located

nuclei, and occasional prominent nucleoli. The cytoplasm was abundant, eosinophilic, and granular. Immunohistochemistry showed diffuse positivity for GATA3 and negativity for vimentin. EMA demonstrated apical membranous staining. *Discussion:* PRNRP is a newly recognised low-grade renal tumour with indolent biological behaviour. Its morphological, immunophenotypic, and molecular features differ from classical PRCC types 1 and 2. PRNRP should be classified as a distinct subset of renal neoplasms and may be recognised as a separate entity with benign behaviour if further evidence supports this in the future.

IAP029 Papillary Renal Neoplasm with Reverse Polarity: A Distinct Entity with Indolent Behaviour

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Introduction: Epithelioid angiomyolipoma (EAML) is a rare variant of the perivascular epithelioid cell tumour (PEComa) family. Its variable histological composition can closely mimic malignant renal neoplasms radiologically, particularly renal cell carcinoma (RCC), making accurate diagnosis challenging. *Case report:* A 39-year-old woman presented with a one-year history of left iliac fossa discomfort, unintentional weight loss, and intermittent haematuria. Notably, her father had a history of RCC. Contrast-enhanced computed tomography revealed a Bosniak III cystic lesion in the left kidney, raising suspicion for RCC. A partial nephrectomy was performed. Results: Grossly the lesion was well-circumscribed, whitish and nodular measuring 15 × 7 × 17 mm. Histologically, the tumour displayed epithelioid and spindle cell components. Epithelioid cells were arranged in nests and trabeculae with eosinophilic to clear cytoplasm and pleomorphic nuclei. Spindle cells formed fascicles with mild atypia. Focal lipomatous areas and multinucleated giant cells were seen. No mitosis or necrosis was identified. Immunohistochemically, the tumour cells were diffusely positive for vimentin, strongly positive for SMA in spindle areas, and showed intense Melan-A staining in epithelioid areas. HMB-45 showed focal positivity. INI-1 was retained. The tumour was negative for CKAE1/AE3, EMA, and CD10. The Ki-67 index was low (~1%). *Discussion:* Despite imaging features suggestive of RCC, histological and immunohistochemical findings confirmed EAML. This case highlights the importance of considering EAML in the differential diagnosis of renal masses, particularly when radiological findings are ambiguous. Awareness of this rare entity can prevent misdiagnosis and guide appropriate clinical management.

IAP030 An unfamiliar case of hepatic MiNEN; featuring combined HCC-NEC in a cirrhotic liver.

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Introduction: Mixed HCC-NEC is a rare entity accounting for only 0.4% of primary hepatic tumours. We reported a case of hepatic MiNEN, arising from background of cirrhotic liver, secondary to chronic Hepatitis C infection. *Case report:* A 55-year-old gentleman, with underlying history of drug abuser and chronic Hepatitis C, presented with worsening right hypochondriac pain for 1 week. CECT liver 4 phase reveals feature of liver cirrhosis with ruptured segment VII/VIII hepatoma and hemoperitoneum. Patient underwent right hemihepatectomy. *Results:* Histopathological examination reveals two distinct intermingling tumours; with dominant one being neuroendocrine carcinoma, featuring cells having typical high nuclear to cytoplasmic ratio with 'salt and pepper' nuclei. These cells are positive for CD56 and Synaptophysin, while being negative for HepPar1, AFP, CK7, CK20, TTF1 and CDX2 immunostains. The other tumour is composed of moderately differentiated hepatocellular carcinoma showing positivity towards HepPar1 and Arginase, while being negative for Synaptophysin, Chromogranin A and CD56 immunostains. Background liver display cirrhotic changes featuring complete nodular formation of varying sizes, bounded by thick fibrosis. Variable lymphocytic portal inflammation is also seen. *Discussion:* Due to the rarity and complexity, hepatic MiNEN could be challenging to diagnose and treat. Metastasis must be rigorously excluded before committing to hepatic primary. Hepatic MiNEN is highly aggressive and rapidly lethal. The patient unfortunately succumbed to the disease.

IAP031 Metastatic Ovarian Mesonephric-like Adenocarcinoma Mimicking Endometrioid Carcinoma: A Case Report.

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Introduction: Mesonephric-like adenocarcinoma (MLA) is a rare but distinct subtype of ovarian adenocarcinoma exhibiting mesonephric differentiation. It likely originates from Müllerian-derived tissues and often mimics more common ovarian carcinomas, posing diagnostic challenges. *Case report:* A 67-year-old woman presented with a one-year history of progressive abdominal distension and pain. Imaging revealed a large ovarian mass, pelvic lymphadenopathy, and hepatic lesions suspicious of metastases. She underwent total abdominal hysterectomy with bilateral salpingo-oophorectomy, omentectomy, and liver biopsy. *Results:* Macroscopically, the right ovary harboured a solid-cystic mass measuring 155 × 145 × 155 mm, adherent to the posterior uterus and extending into the left adnexal region. The solid component had a lobulated, haemorrhagic, and spongy cut surface. Histologically, the tumour exhibited confluent villoglandular and branching papillary architecture, with some dilated glands containing eosinophilic secretions. The malignant cells displayed low-grade nuclear features resembling endometrioid carcinoma with brisk mitotic activity. Foci of endometriosis were identified. Immunohistochemically, the tumour cells were

positive for GATA3 and CD10 (luminal staining), with wild-type p53 expression and focal, mosaic p16 staining. The cells were negative for TTF-1, WT1, ER, PR, and calretinin. These findings are consistent with MLA. The liver biopsy confirmed metastatic involvement. *Discussion:* MLA can mimic endometrioid carcinoma morphologically, making accurate diagnosis reliant on careful histopathological and immunohistochemical assessment. Although rare, MLA is associated with aggressive clinical behaviour and metastatic potential, with limited literature suggesting an unfavourable prognosis. KRAS molecular alteration associated with this disease offers a potential avenue for targeted therapy. At present, our patient remains stable and is tolerating chemotherapy well.

IAP032 Ulcerative Colitis-Associated Oral Squamous Cell Carcinoma: A Case Report Highlighting the Systemic Oncogenic Potential of Inflammatory Bowel Disease

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Introduction: Inflammatory bowel disease (IBD) induces a chronic systemic inflammatory state that increases extraintestinal cancer risk, yet its association with oral squamous cell carcinoma (OSCC) remains under-recognised. Specific cancer risks vary: Crohn's disease predisposes to small-bowel adenocarcinoma, whereas ulcerative colitis (UC) is associated with hepatobiliary and, increasingly, oral cavity malignancies. *Case report:* We report a case of a 49-year-old female with 22-year history of UC, which has been well-controlled for over a decade with 6-mercaptopurine and mesalazine. She was diagnosed with pT1N0M0 tongue squamous cell carcinoma despite having no conventional risk factors, such as tobacco or alcohol exposure. The initial presentation involved a progressive 1.5 cm ulcerative tongue lesion with a characteristic erythematous base requiring excisional biopsy. *Results:* Histopathological examination revealed infiltrating malignant squamous cells that invaded the subepithelial stroma and skeletal muscle in cords and nests, with keratin pearl formation consistent with well-differentiated squamous cell carcinoma. Subsequent wide local excision with selective neck dissection achieved complete resection with clear margins, and she remained disease-free at a 17-month follow-up. *Discussion:* Recent Mendelian randomisation studies suggest ulcerative colitis causally increases oral cavity cancer risk. The pathogenesis is likely multifactorial, with chronic inflammation, oral–gut microbiome dysbiosis, and long-term immunosuppression contributing to carcinogenesis. IBD surveillance effectively reduces colorectal cancer but may overlook extraintestinal malignancies. OSCC development in a patient lacking conventional risk factors highlights a critical gap in IBD management. This case emphasises the necessity for comprehensive surveillance, urging clinicians to recognise systemic malignancy risks beyond the colorectum in IBD patients, particularly those on prolonged immunomodulatory treatment.

IAP033 Beyond the Usual Suspects: Histological Diagnosis of Uterine Lipoma

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Introduction: Lipomatous tumours of the uterus are rare, with uterine lipomas being extremely uncommon. Their origin remains uncertain, and due to their clinical and radiological resemblance to leiomyomas, they can be misdiagnosed. Definitive diagnosis requires histopathological examination. *Case report:* A 61-year-old postmenopausal woman with type 2 diabetes, hypertension, and dyslipidemia presented with two weeks of postmenopausal bleeding, nocturia, occasional urge incontinence, and difficulty initiating urination. No constitutional symptoms were noted. On examination, an abdominal mass corresponding to a 14-week gestational size was palpable. Pelvic ultrasound revealed an 11 × 7.8 cm anterior uterine mass. CT imaging showed a well-defined fat-density intramural lesion in the uterine fundus, measuring 9 × 8.4 × 8.8 cm, suggestive of a lipoleiomyoma. She underwent total abdominal hysterectomy with bilateral salpingo-oophorectomy. *Results:* Grossly, a circumscribed yellowish mass measuring 97 × 105 × 70 mm filled the endometrial cavity, with a nodular, glistening cut surface. Microscopically, the lesion was composed of mature adipocytes arranged in sheets and lobules, separated by thin fibrovascular septae with scattered blood vessels. No smooth muscle component was identified. These findings confirmed a diagnosis of uterine lipoma. The patient has been under follow-up with no evidence of recurrence. *Discussion:* This case emphasises the diagnostic value of histopathology in identifying rare uterine lipomas and differentiating them from other lipomatous or malignant tumours. Although imaging may suggest a fat-containing lesion, definitive diagnosis is histological. Awareness and reporting of this entity are essential to improve diagnostic accuracy and management strategies.

IAP034 Bilateral Renal Anastomosing Haemangioma in a Transplant Candidate: A Benign Mimicker of Malignancy

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Introduction: Anastomosing haemangioma (AH) is a rare, benign vascular tumour most often seen in the genitourinary tract. It is a variant of capillary haemangioma with anastomosing, sinusoid-like vascular channels, often mimicking angiosarcoma and renal cell carcinoma both radiologically and histologically. Few cases have been reported, making AH an important diagnostic challenge. **Case Report:** A 38-year-old woman with underlying lupus nephritis and end stage renal disease (ESRD) was planned for a living-donor kidney transplantation from her mother. Computed tomography showed incidental findings of bilateral complex renal cysts (Bosniak IV), suspicious of malignancy. She underwent bilateral radical nephrectomies with intraoperative findings revealing multiple renal cysts and atrophic kidneys. **Results:** Microscopy of right kidney revealed an uncapsulated, partly circumscribed

lesion composed of irregular, anastomosing, sinusoidal capillary-sized spaces lined by bland endothelial cells, with occasional hobnailing. Foci of extramedullary haematopoiesis were present. Similar multifocal lesions were identified in the contralateral kidney. Background renal parenchyma showed benign cysts and features of ESRD. Immunohistochemical analysis demonstrated CD31 and CD34 positivity with low Ki67 proliferative index, highlighting the intraluminal hematopoietic cells. The differential diagnoses included angiomyolipoma, well-differentiated angiosarcoma and renal cell carcinoma. **Discussion:** AH closely mimics renal cell carcinoma and angiosarcoma on imaging. Histological examination supported by immunohistochemistry is essential for accurate diagnosis to avoid unnecessary delays in kidney transplantation. The differential diagnoses included angiomyolipoma, well-differentiated angiosarcoma and renal cell carcinoma. The characteristic sinusoidal pattern with lack of significant nuclear atypia, endothelial multilayering and atypical epithelial cells supported a diagnosis of AH.

IAP035 Caught Between Shadows and Stains: Diagnosing Hyalinizing Trabecular Tumour in A Resource-Limited Setting.

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Introduction: Hyalinizing trabecular tumour (HTT) is a rare thyroid neoplasm that morphologically resembles papillary thyroid carcinoma (PTC). Accurate diagnosis requires recognising its distinct morphologic features, especially when ancillary studies are limited. *Case report:* A 34-year-old woman presented with a progressively enlarging left thyroid swelling for one year. Ultrasound categorized as TIRADS 5. Fine needle aspiration was not performed due to strong suspicion of malignancy, and the patient underwent left hemithyroidectomy. *Results:* Gross examination revealed a well-circumscribed, firm tan left thyroid nodule. Histology showed trabecular and nested growth, tumour cells with grooved nuclei, occasional inclusions and intra-trabecular diastase-resistant PAS-positive hyaline material. No mitoses, necrosis or capsular/vascular invasion were noted. Immunohistochemistry (IHC) showed positivity towards TTF-1 and PAX8. Ki-67 was inconclusive. A diagnosis of HTT was made. *Discussion:* This case emphasises the importance of thorough histopathologic evaluation in resource-limited settings. HTT shows distinctive trabecular architecture and diastase-resistant PAS-positive hyaline stroma. When available, cytoplasmic Ki-67 and negative Galectin-3, HBME-1 or CK19 can aid diagnosis. Ki-67 was inconclusive, likely due to fixation issues or different monoclonal antibody usage. PAX8-GLIS3 fusion offers molecular confirmation. Accurate diagnosis depends on morphology, IHC and multidisciplinary collaboration.

IAP036 Clonally Unrelated Recurrence of Diffuse Large B-cell Lymphoma: A Phenotypic Switch from Germinal Centre B-cell to Activated B-cell Subtype

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Introduction: Diffuse large B-cell lymphoma (DLBCL) is a heterogeneous entity with distinct molecular subtypes, most notably germinal centre B-cell (GCB) subtype and activated B-cell (ABC) subtype. Clonally unrelated recurrence of DLBCL is rare. However, distinguishing between a clonally related recurrent lymphoma and a second *de novo* lymphoma is extremely crucial as it potentially impacts the therapeutic decision. *Case report:* We present a 77-year-old female, initially presented with right-sided sore throat and odynophagia for a month. Histopathological evaluation of the right tonsil revealed DLBCL, GCB subtype. She then underwent chemotherapy. Two years later, surveillance Positron Emission Tomography-Computed Tomography (PET-CT) showed increased metabolic activity over the left tonsil. The left tonsillectomy was done. *Results:* Histopathological examination of left tonsil showed infiltration of large malignant lymphoid cells with moderately pleomorphic nuclei, vesicular chromatin and prominent nucleoli. Immunohistochemical studies revealed expression of CD20 and MUM1 on malignant cells, but negative for germinal centre markers (CD10 and BCL-6), which confirmed the diagnosis of DLBCL, ABC subtype. Comparatively, right tonsil immunohistochemical studies two years ago demonstrated diffuse positivity of CD20, CD10, BCL-6 and MUM-1, a phenotypically distinct subtype of GCB. *Discussion:* This case highlights the awareness of clonally unrelated second *de novo* lymphoma as a differential diagnosis of relapsed DLBCL despite clonally-related relapse is more commonly seen. Because the management of these two phenotypically and clonally distinct lymphoma is different, hence a thorough pathological evaluation including immunohistochemical studies is required as it carries clinical importance.

IAP037 A Deceptive Gluteal Tumour Mimicking Primary Soft-Tissue Neoplasm Unveils EBV-Positive Nasopharyngeal Carcinoma

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Introduction: Skeletal-muscle metastasis from nasopharyngeal carcinoma (NPC) is exceedingly uncommon and may masquerade as a primary soft-tissue tumour, delaying correct diagnosis and therapy. *Case report:* A 49-year-old man developed a progressively enlarging, painless left gluteal mass, associated with symptomatic anaemia, epistaxis, and bilateral cervical lymphadenopathy. Contrast-enhanced CT showed lobulated, heterogeneously enhancing masses involving bilateral gluteal regions; the dominant left

lesion measured 12.8 cm and eroded the sacrum, while a smaller right-sided lesion measured 6.6 cm. Multiple hepatic, nodal, and paraspinal deposits were also present. Clinically and radiologically, the gluteal mass was considered a probable primary soft-tissue sarcoma. *Results:* Trucut biopsy revealed a high-grade, poorly differentiated carcinoma with squamous differentiation. Tumour cells were diffusely positive for p40, BerEP4, and GATA3, but negative for CK7/CK20. MDM2 showed focal strong positivity, suggesting possible dedifferentiated liposarcoma, albeit unusual. Given the absence of a clear visceral source, endoscopic nasopharyngoscopy was performed initially with unremarkable findings. However, a targeted repeat examination identified a small submucosal lesion. Histology demonstrated non-keratinising NPC, identical to the metastatic lesion. Epstein–Barr virus (EBV) RNA in-situ hybridisation on the gluteal tumour was positive, confirming metastatic NPC. *Discussion:* A bulky, destructive intramuscular mass accompanied by widespread metastases naturally invokes suspicion of primary sarcoma. In endemic regions, EBV testing and nasopharyngeal evaluation should be considered for soft-tissue lesions with convincing epithelial lineage. Multimodal imaging, comprehensive immunohistochemistry, and early EBV studies are essential to avoid misclassification and expedite definitive chemoradiotherapy.

IAP038 A Deceptive Gluteal Tumour Mimicking Primary Soft-Tissue Neoplasm Unveils EBV-Positive Nasopharyngeal Carcinoma

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Introduction: Epithelioid sarcoma is a rare malignant mesenchymal neoplasm of uncertain differentiation that exhibits partial or complete epithelioid cytomorphology and immunophenotype. It represents less than 1% of all adult soft tissue sarcomas. *Case report:* A 41-year-old woman presented with a 5-month history of a painful right labial swelling, initially treated as a labial abscess with multiple courses of antibiotics, without improvement. Examination revealed a firm, tender, non-fluctuant 2 × 1 cm mass. An incisional biopsy was performed. *Results:* Microscopically, the lesion exhibited ulcerated epidermis with dermal infiltration by malignant cells arranged in diffuse and nodular patterns with central necrosis and infiltrative borders. The malignant cells were pleomorphic, epithelioid to plump spindle-shaped, with vesicular nuclei, prominent nucleoli, and eosinophilic cytoplasm. Mitoses were brisk with aberrant forms. Immunohistochemically, the cells stained positive for CKAE1/AE3, EMA, SMA, and CD34, while negative for p40, p63, S100, and CD31. Notably, there was loss of nuclear INI-1 expression, supporting the diagnosis of epithelioid sarcoma. *Discussion:* Loss of INI-1 (SMARCB1) is a characteristic feature of epithelioid sarcoma, resulting from biallelic deletion of the SMARCB1 tumour suppressor gene on chromosome 22q11.23. Due to its rarity, epithelioid sarcoma is often misdiagnosed as benign lesions such as Bartholin cysts or infectious granuloma, or as malignancies like squamous cell carcinoma. Three months post-biopsy, the patient has not returned for follow-up or pursued the recommended radiological staging and surgical treatment. This case highlights the importance of integrating histopathological examination with immunohistochemistry for accurate diagnosis of epithelioid sarcoma.

IAP039 Shape-Shifting Spinal Ependymoma: Late Recurrence of Myxopapillary Ependymoma Eight Years after "Conventional" Lumbar Ependymoma Resection

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Introduction: Myxopapillary ependymoma (MPE) is a WHO Grade 2 glioma that chiefly involves the conus–cauda–filum axis. Although regarded as indolent, it relapses in 20–30 % of patients at 10 years and can mimic conventional spinal ependymoma. We report a young adult whose 2015 lumbar tumour was signed out as a conventional spinal ependymoma, but 2023 recurrence shows myxopapillary morphology. Accurate histo-molecular classification is therefore vital for risk stratification and tailored surveillance. *Case Report:* A 27-year-old woman underwent gross-total resection and adjuvant radiotherapy for an L2–L3 spinal ependymoma in 2015. After eight symptom-free years, she developed increasing sacral fullness and radicular pain. MRI disclosed a 10 × 12 cm lobulated, contrast-enhancing mass extending L4–S2 with bone erosion, and a separate smaller intradural nodule at L2. *Results*: Histology demonstrated classical radial arrangements of uniform glial cells around hyalinised fibrovascular cores embedded in Alcian-positive myxoid stroma, confirming myxopapillary architecture. Tumour cells diffusely expressed GFAP and vimentin, with patchy S100 and focal EMA. FISH showed no MYCN amplification; excluding MYCN-amplified aggressive spinal ependymoma subtype. Multidisciplinary review concluded the recurrence is MPE, WHO Grade 2. *Discussion*: This case underscores two lessons. First, lumbar MPE may initially masquerade as conventional ependymoma - expert review and, where available, methylation profiling of primary tissue can prevent misclassification. Second, even histologically low-grade MPE warrants lifelong surveillance, because late recurrences may arise. Acquisition of adverse molecular events - such as MYCN amplification, TERT-p or CDKN2A/B deletion - portends aggressive behaviour and may prompt adjuvant therapy.

IAP040 Reclassification of Endocervical Adenocarcinoma Using International Endocervical Adenocarcinoma Criteria and Classification (IECC): A Multicentre Malaysian Study

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Introduction: Endocervical adenocarcinoma (ECA) comprises a growing proportion of cervical cancers, with HPV-associated (HPVA) and non-HPV-associated (NHPVA) subtypes showing distinct clinicopathological features and prognoses. The 2018 International Endocervical Adenocarcinoma Criteria and Classification (IECC) aims to improve diagnostic accuracy by incorporating etiological and morphological criteria. This study evaluates the prevalence and characteristics of HPVA and NHPVA ECAs in Malaysia using the IECC, comparing it with the WHO 2014 classification. *Materials and Methods:* A retrospective, cross-sectional review of 102 primary ECA resection specimens from 15 Ministry of Health tertiary hospitals in Malaysia (2015–2021) was conducted. Cases were classified using IECC criteria supported by p16 immunohistochemistry. Demographic, histological, and clinical data were analysed. Interobserver agreement was assessed by kappa statistics for both WHO and IECC classifications. *Results:* HPVA-ECA represented 80.4% of cases, with usual type being most common, while NHPVA-ECA comprised 19.6%, mainly gastric type. HPVA-ECA occurred at a younger mean age and was more frequently diagnosed at FIGO Stage I (88.0%) compared to NHPVA-ECA (55% diagnosed at Stage II or higher, $p = 0.011$). Tumours in NHPVA-ECA were larger but not statistically significant. IECC showed better interobserver agreement ($\kappa = 0.54$) than WHO 2014 ($\kappa = 0.36$). p16 immunopositivity correlated strongly with HPVA-ECA. *Conclusion:* The IECC classification improves diagnostic reproducibility and aligns with clinical behaviour. The high prevalence of HPVA-ECA and strong correlation with p16 supports its routine use. These findings advocate for IECC adoption in Malaysia and indicate the need for larger studies with outcome data to guide subtype-specific management.

IAP041 CDK4 Immunohistochemistry in Liposarcoma: A Practical Alternative to FISH for Diagnosis

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Introduction: Cyclin-dependent kinase 4 (CDK4) gene amplification is one of the key driving events in atypical lipomatous tumours (ALT)/well-differentiated liposarcomas (WDLPS) and dedifferentiated liposarcoma (DDLPS). This study aimed to assess the utility of CDK4 immunohistochemistry (IHC) as a surrogate for fluorescence in situ hybridisation (FISH) in diagnosing liposarcoma and to explore its association with clinicopathological features. *Materials and Methods:* A total of 87 cases previously analysed by FISH were included, comprising 25 liposarcomas and 62 lipomatous tumours measuring ≥ 10 cm. CDK4 IHC was performed on formalin-fixed paraffin-embedded tissue sections and scored using a four-tier system based on nuclear staining intensity and percentage of immunoreactive cells. Chi-squared test was used to evaluate the sensitivity and specificity of CDK4 IHC compared to FISH amplification status and to assess associations with clinicopathological characteristics. A p-value of <0.05 was considered statistically significant. *Results:* Liposarcomas accounted for 28.7% of the cases, with ALT/WDLPS being the most common subtype (12.6 %). CDK4 IHC showed a significant association with CDK4 amplification by FISH ($p < 0.001$), achieving 82% sensitivity, 96% specificity, 75% positive predictive value, and 97% negative predictive value. The association between CDK4 IHC and clinicopathological characteristics were variable. *Discussion and Conclusion:* CDK4 IHC is a reliable and cost-effective adjunct to FISH in the diagnosis of ALT/WDLPS and DDLPS. Its significant association with FISH suggests that CDK4 IHC could aid in liposarcoma evaluation, particularly in resource-limited settings. However, further large-scale studies are warranted to determine its full clinical potential.

IAP042 Challenges in Pre-Operative Diagnosis of Inguinal Angiomyofibroblastoma: Learning from A Rare Case.

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Introduction: Angiomyofibroblastoma (AMFB) is a rare benign mesenchymal tumour, typically found in the vulvovaginal region of middle-aged women. Its presentation in the inguinal region is uncommon and may clinically resemble more common entities, such as hernias or lipomas. Preoperative diagnosis is often difficult due to nonspecific clinical features, radiologic appearances, and limited diagnostic yield from biopsy samples. We report a rare case of AMFB in the inguinal region with inconclusive biopsy results prior to excision. *Case report*: A 43-year-old female presented with a right inguinal swelling for two years, which had rapidly increased in size over the last six months. On examination, the swelling measured 8×15 cm, extending from the right inguinal region to the perineum. MRI of the pelvis revealed a large, heterogeneous subcutaneous soft tissue mass with lobulated margins extending toward the mons pubis and labia majora. Two separate biopsy procedures yielded inconclusive results. Subsequently, the patient underwent surgical resection of the mass. *Results*: Grossly, the resected mass was multilobulated, measuring 210 × 190 × 95 mm, with a solid, greyish cut surface. Microscopically, the tumour exhibited alternating hypercellular and hypocellular areas composed of spindle-shaped stromal cells, numerous thin-walled capillaries, and foci of adipose tissue. Immunohistochemical

staining showed positivity for oestrogen and progesterone receptors and negativity for S100 and CD34, supporting the diagnosis of angiomyofibroblastoma. *Discussion*: This case underscores the limitations of core needle biopsy in diagnosing heterogeneous mesenchymal tumours such as AMFB. Inconclusive biopsy findings necessitate a high index of suspicion and often warrant surgical excision for accurate diagnosis and appropriate treatment.

IAP043 Prevalence of HPV 16/18 Positivity and Cytological Findings in the Post-Vaccination Era: A Retrospective Study at SASMEC@IIUM

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Introduction: Malaysia's national HPV vaccination program was introduced over a decade ago to reduce cervical cancer rates. As vaccinated cohorts enter screening age, evaluating the local prevalence of HPV 16/18 is essential to assess vaccine impact and guide screening practices. Cytology remains central to cervical screening, but may not detect all high-risk infections. This study aims to determine the prevalence of HPV 16/18 among HPV-positive women at SASMEC@IIUM and examine their correlation with cytological findings. *Materials and Methods:* A retrospective cross-sectional review of medical records was conducted for 304 HPV-positive women screened between 2019 and 2024. Data extracted included age, HPV genotype, and Pap smear results. Cases positive for HPV 16 and/or 18 were categorised using the Bethesda System. *Results:* The median age was 35 years (range: 19-64). HPV 16 and/or 18 were detected in 51 cases (16.8%): 17 (5.6%) with HPV 16 alone, 19 (6.3%) with HPV 18 alone, and 15 (4.9%) with both. Among these, 26 (51%) had negative cytology, while 17 (33.3%) showed epithelial abnormalities, indicating genotype–cytology discordance. *Discussion and Conclusion:* HPV 16/18 remains detectable in the post-vaccination era, with over half of positive cases showing negative cytology. These findings support the incorporation of HPV genotyping into routine screening and highlight the need for continued local monitoring.

IAP044 Innovative Techniques in Renal Biopsy Diagnostics: Clinicopathological Insights and Aptamer-Based Advancements

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Introduction: Renal biopsies are essential for diagnosing kidney diseases, but immunofluorescence on frozen tissue (Immunofluorescence-Frozen, IF-F) has limitations. This study assesses clinicopathological features, compares immunofluorescence on paraffin-embedded tissue (IF-P) and IF-F and evaluates deoxyribonucleic acid (DNA) aptamers as novel bioreceptors for detecting Immunoglobulin G (IgG) and Complement 3 (C3) in renal biopsies. *Methods*: Data from 242 renal biopsies (2016–2023) at Hospital Pakar Universiti Sains Malaysia were analysed. Paraffin blocks were treated with pronase for Immunofluorescent-Paraffin (IF-P) staining. The performance of IF-P specificity, sensitivity, and predictive values was compared to IF-F. DNA aptamers targeting IgG and C3 were designed using in-silico models and tested on IF-P tissues. *Results*: Renal biopsies rose from 22 in 2016 to 48 in 2022, with a slight drop in 2023. The mean age was 21.2 years, female-to-male ratio (1.3:1), with 53.3% under 18. Most patients were Malay (95.5%), and nephrotic syndrome was the main indication (47.9%). Mean serum creatinine and 24-hour urine protein were 115.22 µmol/L and 4.32 g, respectively. Common diagnoses included Lupus Nephritis (31.0%), Focal Segmental Glomerulosclerosis (FSGS) (21.9%), and Minimal Change Disease (15.7%). IF-P showed high specificity (IgG 98.2%, C3 98.3%) and sensitivity (IgG 90.8%, C3 84.2%), comparable to IF-F. Nine single strand deoxyribonucleic acid (ssDNA) aptamers showed strong stability and affinity to IgG and C3c, with IgG-47H and C3c35C showing the highest specificity in aptahistochemistry. *Conclusion*: This study shows promising potential of DNA-Aptamers as novel diagnostic tool and pronase-treated IF-P as effective alternatives to IF-F, offering improved diagnostic accuracy and outcomes.

IAP045 BCL2-Negative Follicular Lymphoma: A Diagnostic Pitfall

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Introduction: Follicular lymphoma (FL) is characterised by t(14;18)(q32;q21) chromosomal translocation which typically resulted in BCL2 protein expression in the neoplastic cells. BCL2-negative FL is uncommon and can pose a diagnostic challenge. *Case report:* A 60-year-old lady presented with progressively enlarging anterior neck swelling for the past six months. It was associated with discomfort on changing body position and swallowing. There was no dyspnoea, voice hoarseness, prolonged fever or loss of weight. She denied hypo- or hyperthyroid symptoms. Examination revealed a diffuse, firm and non-tender thyroid swelling measuring 11 x 5 cm. Ultrasound showed cervical lymphadenopathy bilaterally. Fine needle aspiration of the thyroid showed atypical lymphoid cells, nevertheless the core biopsy was reported as reactive lymphoid hyperplasia. She underwent a total thyroidectomy and excision of bilateral central lymph nodes. *Results:* Histopathological examination of the thyroid and lymph nodes revealed almost total effacement by neoplastic follicles composed of a mixture of centroblasts and centrocytes which were positive to B cell

and germinal centre markers however negative to BCL2 immunostain. Fluorescence in-situ hybridization studies do not show *BCL2* or *BCL6* gene rearrangement. Based on morphology and immunoprofiling, a diagnosis of classic FL was rendered. *Discussion:* BCL2-negative FL is seen in 10-15% of FL, possibly the result of undetectable BCL2 protein due to usage of antibody that target different protein epitope or absent of BCL2 gene rearrangement. BCL2-negative FL may mimic reactive lymphoid hyperplasia on small biopsy. Awareness of this rare entity is essential to allow a targeted workup and accurate diagnosis.

IAP046 Unmasking Epstein-Barr Virus-Associated Smooth Muscle Tumours: Pathogenesis, Diagnosis, And Clinical Implications

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Introduction: The first smooth muscle tumour in an organ transplant recipient was reported by Pritzker et al. in 1970, but its link to Epstein-Barr virus (EBV) was only confirmed in 1995. Epstein-Barr virus-associated smooth muscle tumours (EBV-SMTs) are rare mesenchymal neoplasms that mainly affect immunocompromised individuals, including post-transplant patients, those with HIV/AIDS, and individuals with primary immunodeficiencies. Although reported worldwide, EBV-SMTs are under-researched in Southeast Asia, particularly Malaysia, despite the region's high burden of EBV-related diseases. Clinically, EBV-SMTs may be multifocal and arise in various anatomical locations, often mimicking other spindle cell tumours. Their biological behaviour is unpredictable and does not follow the classic benign–malignant spectrum of smooth muscle tumours. Histologically, they show spindle to primitive round cells with hyperchromatic nuclei, scant cytoplasm, and intratumoural lymphocytic infiltrates. Immunohistochemistry typically shows Desmin and SMA positivity. Diagnosis requires confirmation of EBV through Epstein-Barr encoding region in situ hybridisation (EBER-ISH), the current gold standard. The mechanistic target of rapamycin (mTOR) pathway has drawn attention in EBV-SMTs, with increasing evidence suggesting that EBV-induced mTOR activation may drive tumourigenesis. This finding has therapeutic relevance, especially considering the use of mTOR inhibitors in transplant recipients. This review aims to highlight the emerging understanding of EBV-SMTs, with emphasis on pathogenesis, diagnostic challenges, and clinical implications, particularly in the Malaysian context, where systematic data remains scarce but urgently needed.

IAP047 Thyroid Lesions in Men: A Retrospective Analysis at Hospital Pakar Universiti Sains Malaysia

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Introduction: Thyroid disorders are significantly more common in women, often overshadowing their presentation in men. However, male patients with thyroid lesions may present with more aggressive pathology. This study aims to evaluate the clinicopathological profile of thyroid lesions in male patients at Hospital Pakar Universiti Sains Malaysia (HPUSM). *Material and Methods:* A retrospective review was conducted using keyword "thyroid" in the LIS database of department of pathology from 1st January 2013 to 30th June 2025. The clinicopathological parameters that included were age, histopathology types, besides the male gender. *Results*: A total of 566 thyroid cases identified of which 72 (12.7%) were male patients with average age 51.75. Among this, 20 (27.8%) were malignant, 51 (70.8%) with benign, and 1 (1.4%) with a low-risk neoplasm. Common benign entities included nodular hyperplasia (n=36) and follicular adenoma (n=5), while malignant cases encompassed papillary thyroid carcinoma (n=15), and follicular carcinoma (n=3). *Discussion and Conclusion:* This study highlighted that although males constitute a minority among thyroid cases, a significant proportion of their lesions are malignant. Early detection and thorough histopathological evaluation are crucial in improving outcomes. These insights may support future efforts to tailor gender-sensitive diagnostic and management strategies for thyroid disorders in clinical practice.

IAP049 Scary Starry T Cells – A case report

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Introduction: T-lymphoblastic lymphoma (TLBL) is a neoplasm of T lineage lymphoblast, accounting for approximately 85-90% of all lymphoblastic lymphomas. It has a wide age distribution, similar to its leukemic counterpart, most frequently occurs in adolescents. One of its morphological features is the starry-sky pattern, a prominent appearance more commonly associated with Burkitt lymphoma. *Case report:* A 5-year-old boy presented with bilateral neck swelling for two weeks. He had no history of weight loss or appetite changes, and no family history of cancer. Clinical examination revealed bilateral matted cervical lymph nodes located at levels II, III and IV, with the largest lymph node measuring 3x4 cm. An excision of the largest lymph node was performed. *Results:* Histopathological examination revealed effacement of the nodal architecture by a diffuse infiltrate of medium-sized neoplastic lymphoid cells with fine chromatin and inconspicuous nucleoli. Scattered tangible-body macrophages imparted a characteristic starry-sky appearance. Immunohistochemistry revealed the tumour cells were positive for TdT, CD3, and CD5. Bone marrow aspirate and immunophenotyping demonstrated 21% T lymphoblasts. The overall features are consistent with a diagnosis

of T- lymphoblastic lymphoma (T-LBL). *Discussion*: This case highlights the diagnostic challenge posed by the starry-sky pattern, which, while classically associated with Burkitt lymphoma, can also be seen in T-lymphoblastic lymphoma. Accurate diagnosis requires careful integration of histopathology, immunophenotyping, and clinical context. Early recognition of T-LBL is essential for prompt initiation of appropriate therapy, especially in paediatric patients.

IAP050 Unmasking Mesenchymal Elements: A Rare Case of Osseous Metaplastic Meningioma

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Introduction: Metaplastic meningioma is an uncommon subtype of WHO grade I meningioma characterised by mesenchymal differentiation within meningothelial neoplastic cells. *Case report:* A 52-year-old male presenting with a bifrontal extra-axial brain tumour. Surgical resection yielded multiple tan tissue fragments with focal haemorrhagic areas. *Results:* Histopathological assessment showed fragments of tumour tissue composed of lobules of monomorphic meningothelial cells arranged in fascicles and whorling pattern. The meningothelial cells displayed oval to spindle shaped nuclei with pseudoinclusions, eosinophilic cytoplasm and indistinct cytoplasmic borders. Osseous (bony) tissue was identified in one of the tumour fragments, embedded within the lobules of meningothelial cells. Congested vessels and psammoma bodies were noted. Mitosis was inconspicuous and tumour necrosis is not seen. The diagnosis of metaplastic meningioma was established based on these morphological features. *Discussion:* Metaplastic meningioma is an extremely rare subtype of meningioma, defined as containing focal or widespread mesenchymal components including osseous, cartilaginous, lipomatous, and myxoid or xanthomatous tissue, singly or in combination. The diagnosis of metaplastic meningioma can be challenging due to its rarity and spectrum of morphological features. This case underscores the importance of recognising metaplastic elements within meningiomas to avoid misclassification, given their benign biological behaviour.

IAP051 Meningioangiomatosis in a Paediatric Patient: A Rare Cause of Intractable Seizures

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Introduction: Meningioangiomatosis (MA) is a rare hamartomatous lesion characterised by leptomeningeal and meningovascular proliferation. *Case report:* A nine-year-old male with a six-year history of seizures underwent MRI, revealing an ill-defined cortical-based lesion in the left frontal lobe with differential diagnosis of Dysembryoplastic Neuroepithelial Tumour (DNET), Focal Cortical Dysplasia (FCD) and Oligodendroglioma. Intraoperatively, a vascular intra-axial tumour was seen in the subcortical region. *Results:* Histopathological evaluation demonstrated proliferation of bland spindle-shaped meningothelial cells surrounding small blood vessels within leptomeningeal and superficial intracortical area, arranged in fascicles and whorl-like pattern. There were dysmorphic neurons scattered within the cortex, intermingling between the meningothelial proliferations. Calcifications were observed in areas and mitotic figures were inconspicuous. Immunohistochemistry showed focal EMA positivity and a low Ki-67 index (~1%). No malignant features were observed. These findings were in keeping with a diagnosis of meningioangiomatosis. *Discussion:* Meningioangiomatosis is a rare and heterogeneous lesion characterised by meningovascular proliferation, predominantly located in the leptomeninges and cerebral cortex. It is often associated with seizures in paediatric and adult populations and may be sporadic or associated with neurofibromatosis type 2. MA poses several diagnostic challenges due to its rarity, overlapping features with other lesions, and variable presentation. MA may mimic cortical meningioma due to similar whorled architecture and EMA positivity. Despite its infiltrative appearance, MA is non-neoplastic and lacks malignant features. In patients exhibiting a triad of young age of onset, epilepsy, and imaging findings of a cortical/subcortical calcified lesion, meningioangiomatosis should be taken into consideration as a differential diagnosis.

IAP053 Leukaemic Infiltration or GVHD? Liver Biopsy in a Post-Transplant Patient with Relapsed B-ALL

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Introduction: Relapsed B-acute lymphoblastic leukaemia (B-ALL) involving the liver is uncommon and can mimic or coexist with other hepatic pathologies, particularly in post-allogeneic stem cell transplant (allo-SCT) recipients. Differentiating leukemic infiltration from graft-versus-host disease (GVHD) is crucial for appropriate clinical management. *Case report:* A 41-year-old man with diabetes mellitus and a history of relapsed B-ALL post-allo-SCT in 2023 presented with biochemical evidence of hepatic dysfunction, including severe transaminitis and hyperbilirubinemia. His post-transplant course had been complicated by acute gastrointestinal GVHD (stage 2) and chronic GVHD involving the oral cavity and liver. *Results:* Liver biopsy revealed preserved lobular architecture with six portal tracts infiltrated by medium-to-large neoplastic lymphoid cells. These exhibited a high nuclear-to-cytoplasmic ratio, fine chromatin, and inconspicuous nucleoli. Immunohistochemistry showed positivity for CD79a, TdT, PAX5, BCL2, and CD34, and negative for CD3, CD5, CD20, and CKAE1/AE3, with a Ki-67 index of >90%. The background liver showed mild bile duct injury, ductular reaction, and moderate fibrosis at infiltration sites. Perl's stain confirmed marked hepatic

haemosiderosis (Scheuer grade 3). *Discussion:* The biopsy findings supported both leukemic infiltration and features suggestive of hepatic GVHD. However, the dense neoplastic infiltrate suggested relapsed B-ALL as the predominant cause of hepatic dysfunction. Coexisting hepatic iron overload may have further contributed to liver injury. This case highlights the critical role of liver biopsy in distinguishing overlapping pathologies in post-transplant patients to guide tailored management.

IAP054 Molecular Testing: A Cornerstone in the Modern Diagnosis and Management of Astrocytoma

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Introduction: The 2021 WHO reclassification transformed astrocytoma from a purely histologic diagnosis into a biologically defined tumour family, mandating integrated molecular–histologic reporting. Key alterations—*IDH1/2* mutation, *ATRX* loss, *TP53* mutation, 1p/19q codeletion status and homozygous *CDKN2A/B* deletion—now determine grading, prognosis and therapeutic eligibility. *Case report:* A 33-year-old woman previously diagnosed in 2013 with right frontal diffuse astrocytoma, WHO Grade 2, re-presented 12 years later with breakthrough seizures and left-sided numbness. MRI revealed a right frontotemporal and insular mass, suggesting malignant transformation. After craniectomy and tumour debulking, histology showed hypercellularity, moderate pleomorphism, hyperchromatic nuclei and atypical cells with multinucleation. Mitosis was 3/10hpf with no necrosis or microvascular proliferation seen. Immunohistochemistry confirmed IDH-1 expression (R132H mutation), ATRX loss and p53 expression (TP53 mutation); FISH demonstrated hemizygous CDKN2A/B deletion. A final diagnosis of Astrocytoma, IDH mutant, WHO Grade 3 was rendered. She awaits further multidisciplinary oncology management. *Discussion:* Implementation of the European Association of Neuro-Oncology (EANO) molecular panel in routine practice reclassifies diffuse gliomas, upgrades *IDH*-mutant cases with *CDKN2A/B* homozygous deletion. It also refines survival stratification through MGMT promoter methylation status, and uncovers actionable alterations such as *BRAF V600E*, *FGFR* and *NTRK* fusions. While CDKN2A/B hemizygous deletion does not confer WHO grade 4, studies have suggested a correlation with poorer outcomes and higher recurrence rates. *Conclusion:* Comprehensive molecular work-up therefore underpins accurate diagnosis, personalised therapy, and access to biomarker-driven trials. Establishing the EANO-endorsed test set as a core service standard is pivotal for optimising patient outcomes and for accelerating the development of targeted treatments in glioma.

IAP055 PD-L1 Expression, Mismatch-Repair Status and Tumour-Infiltrating Lymphocytes in Triple-Negative Breast Carcinoma

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Introduction: This retrospective study aims to explore the relationship between tumour-infiltrating lymphocytes (TILs), programmed death-ligand 1 (PD-L1) and DNA mismatch repair (MMR) proteins in triple-negative breast cancer (TNBC) as potential predictive biomarkers for treatment response and prognosis. *Materials and Methods:* A total of 130 archival TNBC tissue samples (2012 – 2024) were analysed using immunohistochemistry (IHC) for CD4+ and CD8+ TILs, PD-L1 22C3 (combined positive score, CPS), and four MMR proteins (MLH1, MSH2, MSH6 and PMS2). PD-L1 positivity was defined as CPS ≥ 10; loss of any MMR protein expression denoted deficient MMR (dMMR). *Results:* Median patient age was 55 years (range, 27 – 89); 78% of tumours were histological grade 3 and 14% had evidence of metastasis. PD-L1 positivity was observed in 29 cases (22.3%). Mean CD4+ and CD8+ densities were 3.15 and 4.15 cells/high-power field, respectively, and were significantly higher in PD-L1-positive than PD-L1-negative tumours ($p = 0.019$; $p < 0.001$). dMMR was present in 20 tumours (15.4%); 90% of dMMR and 85.5% of proficient-MMR (pMMR) tumours were PD-L1-low, and neither TIL subset differed by MMR status ($p = 0.279$; 0.850). Linear regression revealed only a weak association between MMR and PD-L1 expression ($P=0.076$). *Conclusions:* PD-L1 expression in TNBC cancer is more strongly associated with the presence of CD4+ and CD8+ TILs than with MMR status. dMMR tumours are typically PD-L1–low and show no TIL enrichment. These results support the potential role of combined PD-L1 and TILs assessment as predictive immune biomarkers in TNBC and highlight the limited influence of MMR status in this context.

IAP056 Local Evaluation of the HLB Panagene PANAMutyper™ RT-PCR EGFR Mutation Assay on the Bio-Rad CFX96 Platform for NSCLC

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Introduction: Accurate, rapid epidermal growth factor receptor (EGFR) mutation testing is mandated by Malaysian and international guidelines as a first-line biomarker in early and advanced non-squamous non-small-cell lung carcinoma (NSCLC), with a target turnaround time of ≤10 working days. The PANAMutyper™ R EGFR real-time polymerase chain reaction (RT-PCR) kit detects

47 hotspot variants at 0.1–0.5 % mutant allele frequency. We evaluated its performance on the Bio-Rad CFX96 Dx platform. *Materials and Methods:* Eleven formalin-fixed, paraffin-embedded (FFPE) NSCLC representing a range of EGFR mutations, together with kit-supplied positive and negative controls, were analysed. Each specimen had been genotyped previously in a College of American Pathologists (CAP)–accredited laboratory using an established PCR assay, providing reference results for concordance assessment. Genomic DNA was extracted from selected blocks with the Exgene™ FFPE DNA Extraction System. Real-time PCR amplification was then performed on the Bio-Rad CFX96 Dx platform with the PANAMutyper™ R EGFR kit following the manufacturer's protocol. Analytical performance parameters—concordance (accuracy), limit of detection, and minimum DNA-input requirement—were systematically recorded. *Results:* Pilot runs achieved 100 % concordance across ten mutant and one wild-type samples. Dual-mutation cases were mis-called when input DNA was <5 ng μL^{-1}. Hands-on time was 40 minutes, and total turnaround was 4.5 hours, satisfying guideline expectations. *Discussion and Conclusion:* Early data indicate that the PANAMutyper™ assay meets accuracy and speed benchmarks, aligning with Malaysia's sequential-testing algorithm for high-prevalence EGFR populations. Completion of full validation—including expanded sample size, reproducibility and external quality assessment—will enable accredited implementation, supporting prompt and targeted-therapy decisions in EGFR-driven NSCLC.

IAP057 Adult Intussusception Unwrapped: The Ileal Hamartoma Behind the Obstruction

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Introduction: Intussusception is a rare condition in adults, and unlike in children, an underlying cause is usually identified. In extremely rare cases, this may be due to a simple intestinal hamartoma serving as the lead point. Here, we present a rare case of ileal intussusception in an adult caused by a benign intestinal hamartoma. *Case report:* A 34-year-old Malay male presented with a two-day history of abdominal pain and vomiting. Physical examination revealed mild infraumbilical tenderness without guarding, and the white cell count was elevated. CT imaging demonstrated ileo-ileal intussusception with surrounding inflammation and retroperitoneal lymphadenopathy. Surgical resection revealed a broad-based polyp with cystic architecture and mucosal congestion. Histopathological examination showed a hamartomatous lesion composed of gastric-type mucin-secreting glands, adipose tissue and smooth muscle. Ischemic changes were noted in the adjacent ileal mucosa, likely due to intussusception-induced obstruction. *Discussion:* Adult intussusception, accounting for 1%–5% of bowel obstruction cases, typically arises from a pathological lead point and presents with nonspecific symptoms resembling chronic obstruction. While imaging may suggest the diagnosis, preoperative identification remains challenging. In this case, a benign ileal hamartomatous polyp served as the lead point. Though hamartomas are developmental anomalies, some carry malignant potential, warranting surgical excision. Their mobility and growth via peristalsis increase the risk of intussusception, obstruction, and mucosal compromise. Delayed intervention can lead to ischemia, necrosis or bleeding. This underscores the need for timely surgical treatment and histopathological confirmation and highlights hamartomas as important differential considerations in adult intussusception.

IAP059 From Indolent to Aggressive: Blastoid Mantle Cell Lymphoma Following Follicular Lymphoma

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*Introduction***:** Follicular lymphoma (FL) is a typically indolent B-cell neoplasm that may transform, most often into diffuse large B-cell lymphoma. Transformation into blastoid mantle cell lymphoma (MCL), a rare and aggressive entity, is exceedingly uncommon and poses significant diagnostic and therapeutic challenges. *Case Report:* A 64-year-old woman with a prior diagnosis of FL in 2018, who received only one cycle of chemotherapy before defaulting treatment. In 2022, she presented with a one-week history of right axillary swelling and epigastric discomfort. Examination revealed a firm, matted right axillary lymph node (10×8 cm). CT scan thorax-abdomen demonstrated widespread lymphadenopathy and splenomegaly. *Results:* Histological examination of tru-cut biopsy from the axillary node revealed diffuse infiltration by medium to large lymphoid cells with blastoid features. The Ki-67 proliferation index exceeded 80%. Immunohistochemically, the tumour cells were positive for CD20, CD5, Cyclin D1, SOX11, and BCL2, but negative for CD10 and CD23, supporting a diagnosis of blastoid MCL. The immunophenotype differed from her previous FL, confirming a biologically distinct process rather than conventional transformation. *Discussion:* This case highlights a rare and aggressive lymphoma evolution, raising possibilities such as clonal divergence or composite lymphoma. It emphasises the importance of repeat biopsy and full immunophenotyping in patients with disease progression to ensure accurate diagnosis and appropriate management.

IAP060 Clinicopathological Study of Colorectal Carcinoma in the Anatomic Pathology Unit, Hospital Al-Sultan Abdullah, UiTM.

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Introduction: Colorectal carcinoma (CRC) is one of the most common cancers worldwide and presents with varied clinical and pathological features. Local clinicopathological data are crucial for epidemiological accuracy, enhancing diagnosis, and informing

treatment decisions. *Materials and methods:* CRC cases diagnosed from January 2018 to September 2024 were retrieved from the Anatomic Pathology Unit, Hospital Al-Sultan Abdullah, UiTM. Only cases with complete data were included. Demographic data, tumour location, histological type, grade, and TNM staging were analysed. *Results:* A total of 151 cases were included; the mean age at diagnosis was 65 years, with a male-to-female ratio of 0.94:1. Malays comprised most of the cohort (74.2%), followed by Chinese (18.5%) and Indians (5.3%). The most common tumour site was the sigmoid colon (33.1%), followed by the right colon (31.8%). Adenocarcinoma (NOS) was the predominant subtype (90.1%). Other subtypes included mucinous adenocarcinoma (8.6%), signet ring cell and neuroendocrine carcinoma (1.3%). The majority were moderately differentiated (82.1%), with a pT3 stage (53.0%), followed by pT4a (33.8%). No significant associations were found between age, gender, and race with tumour location, histological subtype, grade, or stage ($p > 0.05$). *Discussion and Conclusion:* This study presents local clinicopathological data on CRC. The incidence of CRC is slightly higher among females, and the predominant race was Malay, which differs from the trend in Malaysia (male-predominant and highest incidence in the Chinese population). The other parameters align with the national data.

IAP061 Fumarate hydratase -Deficient Leiomyoma: A Rare but Crucial Diagnostic Entity

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Introduction: Fumarate hydratase (FH)-deficient leiomyoma is a rare subtype of uterine fibroid, comprising approximately 1.4% of cases. While many occur sporadically, some are associated with hereditary leiomyomatosis and renal cell carcinoma (HLRCC) syndrome, an autosomal dominant condition caused by germline *FH* mutations. Recognition of this entity is clinically significant due to its potential implications for cancer risk and familial screening. *Case report:* We report two cases involving nulliparous women aged 30 and 33 who presented with multiple uterine fibroids and underwent myomectomy. Grossly, the lesions were firm, tan, whorled, and oedematous. Microscopically, both cases exhibited features characteristic of FH-deficient leiomyoma, including increased cellularity, spindle cells with eosinophilic macronucleoli, perinuclear halos, cytoplasmic eosinophilic inclusions, bizarre nuclei, multinucleation, alveolar-type oedema, Schwannoma-like growth, and hemangiopericytoma-like vessels. Patchy lymphoplasmacytic infiltrates were observed; mitotic figures and necrosis were absent. Immunohistochemistry showed diffuse h-caldesmon positivity and complete loss of FH expression, confirming the diagnosis. These morphologic features may mimic leiomyosarcoma, but lack true malignancy. Accurate recognition is crucial to avoid misdiagnosis and overtreatment. *Discussion:* Importantly, the histologic features of FH-deficient leiomyoma may serve as a clue to underlying HLRCC syndrome. In such cases, pathologists play a pivotal role in prompting clinical evaluation, including family history assessment and confirmatory germline testing. Early detection of HLRCC through uterine pathology allows timely surveillance and intervention, potentially improving outcomes for both patients and at-risk relatives.

IAP062 Extraskeletal Ewing Sarcoma, a mimicker of Granulosa Cell Tumour: Diagnostic confirmation with CD99, NKX 2.2 Immunostaining and Fluorescent in situ Hybridization (FISH)

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Abstract

Introduction: Sex cord-stromal tumours of the ovary, though often rare, frequently factor into differential diagnoses due to their intriguing morphology. The most common malignant form, adult granulosa cell tumour (AGCT), can mimic various surface epithelial neoplasms. AGCTs exhibit a wide range of patterns, often mixed, with the diffuse pattern being the most common, characterized by densely packed cells with scant cytoplasm, giving a "small blue cell tumour" appearance. *Case report:* We present a case of a 36-year-old female with abdominal distension. CT scan showed multiple solid-cystic lesions, pelvic lymphadenopathy, and no visible normal ovaries, suggesting ovarian malignancy. The patient underwent a hysterectomy and bilateral salpingo-oophorectomy. Intraoperatively, the pelvic tumour was multiloculated and adhered to serosa of uterus, fallopian tubes, ovaries, intestine and peritoneum, though the ovaries appeared normal. Microscopic examination revealed monomorphic malignant cells arranged in diffuse sheets, rosettes, and trabeculae, had pale nuclei with prominent nuclear grooves, resembling AGCT. However, immunohistochemical studies showed the cells were negative for sex-cord stromal markers like inhibin, calretinin, SF1, and FOXL2, but strongly positive for CD99 and NKX2.2. They were also negative for WT-1, BCOR, FLI-1, and ERG. Fluorescent in situ hybridization (FISH) confirmed the presence of an EWSR1 gene rearrangement, diagnosing Extraskeletal Ewing Sarcoma (EES). *Discussion:* EES is a highly malignant tumour, characterized by small round cells of neuroectodermal origin. Although rare in the gynaecologic tract, EES is an aggressive tumour that shares morphologic and immunohistochemical features with other common gynaecologic neoplasms and should always be considered in differential diagnoses.

IAP063 Not All That Squamous Is Malignant: Ruptured Thyroglossal Duct Cyst Mimicking Thyroid Tumour

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Introduction: The presence of squamous islands within the thyroid is rare, as squamous cells are not native to thyroid tissue. When encountered, both malignant and benign differentials must be considered. This case describes a rare presentation of a ruptured

thyroglossal duct cyst clinically mimicking a thyroid tumour. *Case Report:* A 45 years old female with non-toxic multinodular goitre presented with a TIRADS 4 solid isthmic nodule. FNAC, performed twice, was reported as a benign follicular nodule. Due to persistent clinical and radiological suspicion, an isthmusectomy was done. Grossly, a firm, greyish fibrotic nodule (20 × 10 × 10 mm) was seen. Histology showed irregular islands of squamous epithelium with reactive nuclear features, surrounded by fibroblast proliferation and mixed inflammation. Adjacent thyroid showed multinodular hyperplasia. Findings were consistent with remnants of a ruptured thyroglossal duct. *Discussion:* Although midline location suggests an embryologic remnant, thyroglossal duct tissue usually presents as a cyst. In this case, cyst rupture triggered inflammation and fibrosis, forming a solid pseudo-mass that mimicked a neoplasm. WHAFFT (worrisome histologic alterations following FNAC) was unlikely, as the lesion predated aspiration. Malignant mimics were excluded: PTC with squamous metaplasia was ruled out due to absence of nuclear features in adjacent follicles; mucoepidermoid carcinoma was excluded by absence of intermediate/mucinous cells; and primary squamous carcinoma was unlikely due to absence of invasion or high-grade cytology. *Conclusion:* This case highlights the importance of correlating clinical, radiological, cytological, and histological findings. Recognising this benign entity helps avoid overtreatment.

IAP064 A Rare Tumour in Rare Territory: Patellar Epithelioid Malignant Peripheral Nerve Sheath Tumour

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Introduction: Epithelioid malignant peripheral nerve sheath tumour (MPNST) is a rare and diagnostically challenging subtype, particularly when presenting in atypical sites. Cutaneous and superficial soft tissue involvement is exceedingly uncommon and may mimic benign entities such as sebaceous cysts. Here, we report a case series of two patients with patellar-based epithelioid MPNST. *Case Report:* Case 1 involved a 75-year-old man with a clinically superficial right knee swelling, initially diagnosed as a sebaceous cyst. Case 2 was a 35-year-old man with a large, slow-growing, painless knee mass. Both tumours were firm, well-circumscribed, and located in the subcutaneous tissue overlying the patella. Both lesions were initially presumed to be benign. *Results:* Histology revealed sheets and cords of pleomorphic epithelioid cells with vesicular nuclei, prominent nucleoli, and abundant eosinophilic cytoplasm. Mitoses were high (>10/10 HPF) in both cases, with necrosis and haemorrhage. Immunohistochemically, both tumours showed diffuse S100 positivity with loss of epithelial (CK AE1/AE3), melanocytic (HMB45, MelanA), and myogenic (SMA, Desmin) markers. INI-1 was retained in the second case. *Discussion:* Epithelioid MPNST can present deceptively as benign-appearing superficial lesions. The unusual anatomical location over the patella further complicates clinical suspicion, as such sites are rarely associated with MPNST. Despite their seemingly innocuous presentations, both patients developed distant metastases following surgical excision and adjuvant radiotherapy, emphasising the aggressive nature of this tumour. Awareness of this rare variant, particularly in atypical locations, is critical to avoid misdiagnosis and to ensure appropriate management.

IAP065 Sclerosing Angiomatoid Nodular Transformation: A Case Report

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Introduction: Sclerosing angiomatoid nodular transformation (SANT) is a rare benign vascular lesion in the spleen. It often mimics a tumour clinically and radiologically. *Case report:* A 53-year-old woman was incidentally found to have splenomegaly. Ultrasound and computed tomography (CT) scans of the abdomen at three-month intervals showed a heterogeneous solid lesion at the superior pole of the spleen which had enlarged from 4.0×4.3×4.0 cm to 4.2×4.5×4.0 cm. The lesion was mildly FDG-avid on PET-CT (SUVmax 4.0), the malignant or benign aetiology of which could not be determined. The patient was otherwise asymptomatic and negative for Mycobacterium tuberculosis infection. A laparoscopic splenectomy was performed. *Results:* Macroscopically, the spleen contained a 4.5cm solid multilobulated brownish lesion in the superior pole. Microscopically, it was composed of multiple coalescent nodules containing irregular slit-like and rounded vascular spaces (capillaries, sinusoids and small veins) lined by CD31 and/or CD34-positive bland endothelial cells, surrounded by variable fibrosclerotic stroma. CD34 highlighted the myofibroblasts. The features were consistent with SANT. The excision margin was clear. *Discussion:* SANT is an uncommon non-neoplastic lesion occurring exclusively in the spleen. It is more common in females, with a mean age of 48 years. Its aetiology and pathogenesis are unknown however, a secondary exaggerated sclerotic and neoangiogenic splenic reaction has been postulated. Microscopically, differential diagnoses include vascular neoplasms such as haemangioma, Littoral cell angioma, haemangioendothelioma, angiosarcoma and hamartoma. Awareness of the entity is essential to avoid misdiagnosis as SANT has a good prognosis and is cured by complete excision.

IAP066 Integrating TI-RADS Classification and Bethesda System To Improve Thyroid Nodule Diagnosis

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Introduction: Effective stratification of thyroid nodules is crucial for guiding clinical and surgical decisions, helping to prevent unnecessary procedures. This study examines the correlation between ultrasound-based TI-RADS classification, cytology-based Bethesda system, and final histopathological outcomes in patients with thyroid nodules. *Materials and Methods:* A retrospective cohort study was carried out at Hospital Pakar Universiti Sains Malaysia (HPUSM), analysing 200 cases from 2012 to 2022. Patients included underwent thyroid ultrasound, fine-needle aspiration cytology (FNAC), and surgical excision. Diagnostic tests assessed the associations between TI-RADS and the Bethesda system, with histopathological findings. *Results:* Most patients were female (84.4%) and over 50 years old. Most nodules were classified as TI-RADS 3-4 and Bethesda II. Histopathological evaluation confirmed 71.5% of nodules as benign. Both TI-RADS and Bethesda systems showed statistically significant associations with histopathological outcomes. TI-RADS 5 and Bethesda V–VI nodules had malignancy confirmation rates of 82.1% and 88.9%, respectively. TI-RADS demonstrated higher sensitivity (71.9%) but lower specificity (53.8%) compared to Bethesda (sensitivity 59.6%, specificity 85.3%). *Discussion and Conclusion:* The findings highlight the complementary roles of TI-RADS and the Bethesda system in thyroid nodule evaluation. TI-RADS acts as a sensitive initial screening tool, while the Bethesda system offers greater specificity for confirming malignancy. When both systems indicate malignancy, diagnostic accuracy increases significantly. An integrated approach improves clinical decision-making, reduces overtreatment, and optimises patient outcomes.

IAP067 Beyond the Usual: Breast, Pituitary, and Gastric Metastases from Clear Cell Renal Cell Carcinoma

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Introduction: Clear cell renal cell carcinoma (ccRCC) commonly metastasizes to the lungs, bones, and liver, but can rarely involve other sites including the breast, pituitary and stomach. These unusual metastases can mimic primary tumours, posing diagnostic challenges. *Case Report:* We report three such cases of following nephrectomy: a 60-year-old woman with a mammographically suspicious left breast lump six months post-ccRCC diagnosis; a 62-year-old man presenting with diplopia and a pituitary lesion four months after diagnosis of ccRCC; and a 77-year-old man with upper gastrointestinal bleeding one year later, in whom OGDS revealed an 8mm pedunculated gastric polyp. *Results:* Histologically, all three lesions showed malignant cells with mildly pleomorphic, hyperchromatic nuclei and clear to eosinophilic cytoplasm. Immunohistochemistry revealed CD10 positivity in the breast and pituitary lesions, and CKAE1/AE3 positivity in the gastric polyp. The malignant cells were negative for CK7 and CK20, supporting metastatic ccRCC. *Discussion:* These unusual metastatic sites illustrate the unpredictable metastatic pattern of ccRCC. Histopathologists must remain vigilant, particularly in patients with a known history of RCC as such metastases can clinically and radiologically mimic primary lesions. Integration of clinical history, radiological findings, histological features, and targeted immunohistochemical studies are keys to accurate diagnosis.

IAP068 PRAME expression in melanocytic neoplasms: A single institution experience

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Introduction: Preferentially Expressed Antigen in Melanoma (PRAME) immunohistochemistry has recently emerged as a valuable diagnostic adjunct in differentiating malignant melanomas from benign melanocytic lesions. *Materials and Methods:* This retrospective cross-sectional study evaluated PRAME expression in 27 melanoma cases and 38 benign melanocytic nevi. Its expression was scored based on the proportion and intensity of nuclear staining. Additionally, a combined scoring system was incorporated by multiplying the proportion score (PS) and intensity score (IS). *Results:* 70% of melanomas show diffuse staining (>75% of tumour cells), of which 88.9% cases showing expression in over 50% of tumour cells with moderate to strong intensity. Regarding the combined score, 77.8% of melanomas were strongly positive (score 9–12) while only 3.7% cases scored negative (score 0). In contrast, 92.1% of benign nevi were completely negative for PRAME, and none showed diffuse staining. Subsequently, the sensitivity and specificity of PRAME for melanoma detection was analysed using various cut-off values i.e. proportion scores of ≥3 (>50% of tumour cells) and 4 (>75% of tumour cells), as well as combined scores of ≥5 and ≥9. The sensitivity and specificity were highest when using a proportion score cut-off of ≥3 (50%) and a combined score cut-off of ≥5. *Discussion and Conclusions:* These findings were comparable with current literatures, supporting PRAME as a valuable marker in aiding melanoma diagnosis. Further research is warranted to establish its role in other ambiguous melanocytic neoplasms. This study represents the earliest Malaysian cohort evaluation of PRAME's diagnostic utility in melanocytic neoplasms.

IAP069 The Immunohistochemical Expression of P53 in Pituitary Adenoma and Its Correlation with Clinical, Radiological and Pathological Parameters

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Introduction: Although most pituitary adenomas (PAs) behave indolently, a subset exhibits aggressive features. We evaluated p53 expression and its correlation with clinicopathological features in PAs. *Materials and Methods:* Immunohistochemistry for p53 and Ki67 were performed on formalin-fixed, paraffin-embedded sections of 61 histologically confirmed PAs. p53 positivity was defined as >10 strongly positive nuclei per 10 high-power fields; Ki67 positivity as ≥3%. Clinical, radiological, hormonal, and pathological data were analysed using chi-square and t-tests. *Results:* p53 positivity was observed in 47.5% (n=29) of cases. p53-positive tumours exhibit higher Ki67 index (2.77 ± 1.03% vs. 1.62 ± 0.98%, $p < 0.001$). Most p53-positive tumours show Ki67 of ≥3% (77.8% vs. 34.9%, p=0.002). There were no significant associations with demographic variables, clinical symptoms, hormonal profiles, Knosp grade, tumour size, or postoperative recurrence. *Discussion and Conclusion:* p53 overexpression is significantly associated with elevated Ki67 index, indicating increased proliferative activity. However, its lack of association with clinical or radiological aggressiveness limits its standalone prognostic value. Further prospective studies are needed to determine its clinical utility.

IAP070 Colonic Metastasis from Lung Adenocarcinoma: Tumour Marker Drift and Diagnostic Pitfalls

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Introduction: Lung adenocarcinoma commonly metastasizes to the brain, bone, and liver; however, gastrointestinal involvement, particularly in the caecum, is infrequently observed. It may manifest as bowel obstruction, clinically and histologically resembling primary colorectal carcinoma. *Case report:* A 57-year-old man with a history of non-small cell lung adenocarcinoma (adrenal, nodal, and liver metastases) presented with chronic constipation. Colonoscopy revealed an irregular caecal mass measuring over 1 cm with associated luminal narrowing, causing obstructive symptoms disproportionate to the mass size. *Results:* Microscopically, the caecal mass biopsy revealed malignant epithelial cells infiltration from the submucosa to the surface mucosa of the colon, arranged in sheets, nests, trabeculae, and irregular glandular patterns. Immunohistochemistry revealed strong CK7 positivity, focal Napsin A expression, and negative staining for CK20, TTF-1 with a high Ki-67 proliferative index of approximately 40%, supporting the diagnosis of metastatic pulmonary adenocarcinoma. The patient was referred to hospice care and subsequently succumbed to disease progression within three months of diagnosis. *Discussion:* Accurate differentiation between metastatic lung adenocarcinoma and primary colorectal carcinoma relies on integrated immunohistochemical profiling. A $CK7^+/CK20^-$/Napsin $A^+/CDX2^-$ phenotype strongly indicates pulmonary origin, even when TTF-1 is lost, a phenomenon termed tumour marker drift. This marker drift is a diagnostic pitfall that may lead to misdiagnosis as primary colorectal carcinoma. These patients typically present with advanced disease and poor prognosis, necessitating palliative care, as in our case. Comprehensive evaluation combining clinical history, detailed histopathology, and multiparametric immunohistochemistry is critical to avoid misdiagnosis and incorrect staging.

IAP071 More Than a Rectal NET: Imaging Clues Unveil Underlying Diffuse Ganglioneuromatosis

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Introduction: Rectal neuroendocrine tumours (NETs) are increasingly detected during colorectal screening and are often straightforward to diagnose histologically. Diffuse intestinal ganglioneuromatosis is a rare benign neural proliferation, often associated with syndromic conditions such as neurofibromatosis Type 1 (NF-1). When present together, it may be overlooked unless clinical or radiological clues prompt further evaluation. *Case report:* A 41-year-old woman presented with several months of per rectal bleeding. CT scan showed eccentric wall thickening at the mid rectum with a distal component, as well as multiple subcutaneous and cutaneous nodules over the chest and abdomen, raising suspicion of neurofibromatosis (NF). She underwent ultralow anterior resection (ULAR). *Results:* Grossly, a nodular fungating mass was seen at the distal rectum measuring (45mm), with diffusely thickened background colonic wall. Histology revealed a well-differentiated NET, Grade 1, positive for Synaptophysin and Chromogranin. The surrounding bowel wall showed diffuse neural proliferation involving the submucosa and muscularis propria, which were positive for S100, SOX-10 and CD34, consistent with diffuse ganglioneuromatosis. *Discussion:* The NET was easily recognised, but the neural component was initially underappreciated. Radiological suspicion of NF prompted re-evaluation, leading to the diagnosis of diffuse ganglioneuromatosis. This case emphasises the importance of correlating imaging with histology and recognising significant pathology within the background tissue of the resection specimen.

IAP072 Coexisting Ileal MALT Lymphoma and Extensive Amyloidosis: A Rare Case with Histopathological Correlation

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Introduction: Mucosa-associated lymphoid tissue (MALT) lymphoma is an indolent B-cell lymphoma that most commonly affects the stomach. Involvement of the ileum is rare. Amyloidosis, resulting from extracellular deposition of misfolded protein, is uncommonly associated with MALT lymphoma. This case highlights a rare coexistence of both conditions. *Case report:* A 62-year-old woman presented with lower abdominal pain and weight loss for three weeks. CT scan revealed a 7cm circumferential mass involving the distal ileum to the ileocaecal valve with abdominal lymphadenopathy. She underwent right hemicolectomy. *Results:* Grossly, a 6.5cm polypoid, ulcerated mass was identified in the ileum and ileocaecal valve, with enlarged haemorrhagic lymph nodes. Microscopy showed diffuse infiltration by small- to medium-sized atypical lymphocytes with architectural distortion and follicular colonization. These cells were positive for CD20 and BCL2, negative for CD5, CD10, Cyclin D1, CD21 and CD23. Ki67 index was ~20%. Extensive amyloid deposition was seen in the mucosa, submucosa, vasculature and lymph nodes, confirmed by Congo red stain with apple-green birefringence. Kappa/lambda ratio was 5.1:1, supporting light chain restriction. *Discussion:* This case emphasises the importance of recognising amyloid on H&E, confirming with special stain, especially in B-cell lymphoproliferative disorders, where localized AL-type amyloidosis may coexist.

IAP074 High-grade follicular cell-derived non-anaplastic thyroid carcinoma: A report of two cases of two different subtypes

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Introduction: High-grade follicular cell-derived non-anaplastic thyroid carcinomas are a new entity introduced in the 2022 WHO classification of thyroid neoplasms. They are follicular neoplasms with high-grade behaviour, without anaplastic carcinoma features. They comprise two subtypes: "poorly differentiated thyroid carcinoma" (PDTC) and "high-grade differentiated thyroid carcinoma" (HGDTC). We presented two cases which fall under the two subtypes. *Results:* The first patient was a 22-year-old woman with left anterior neck swelling. A biopsy was performed on the left thyroid and cervical lymph node. Both showed diffuse infiltration by monomorphic cells with round nuclei, small nucleoli, and scanty eosinophilic cytoplasm. Occasional large, bizarre cells and cells with convoluted nuclei were also seen; mitosis was 3 per $2mm^2$. The cells were positive for TTF-1 and PAX8 and negative for other relevant markers. The tumour was diagnosed as PDTC. The second patient was a 60-year-old woman with thyroid swelling. A total thyroidectomy showed a large tumour in the left lobe, infiltrating into the surrounding extrathyroidal area. The tumour cells are pleomorphic vesicular nuclei, small nucleoli with nuclear clearing, and occasional nuclear grooving. Mitosis was up to 6 per $2mm^2$. Lymphovascular and perineural infiltration were seen. The right lobe was not involved. The lymph nodes were free of tumour. The tumour was diagnosed as HGDTC. The clinicopathological features of these cases are presented. *Conclusion*: Two instances of high-grade follicular cell-derived non-anaplastic thyroid carcinomas are presented along with their distinct clinicopathological features. The details of these cases add to the current data on this rare tumour.

IAP075 Rare Coexistence of Low-Grade Glioma And Arteriovenous Malformation : A Neurohistopathological Perspective.

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Introduction: The coexistence of low-grade glioma (LGG) and an arteriovenous malformation (AVM) within the same anatomical region is exceptionally rare, presenting diagnostic and therapeutic challenges. *Case report:* An 8-year-old boy presented with recurrent seizures and was initially diagnosed radiologically as having a vascular lesion. MRI revealed a left frontal intra-axial lesion with haemorrhagic and calcified features. The patient underwent craniotomy and en bloc resection. Histopathological analysis revealed a diffuse LGG exhibiting biphasic architecture, mild pleomorphism, and loss of ATRX expression, consistent with WHO Grade II Glioma. Additional staining such as IDH-1 mutation is not detected, Ki67 low activity is detected, GFAP is strongly positive. Adjacent tissue revealed malformed, hyalinised vessels with venous arterialisation and intramural elastic lamina, confirming an AVM. *Results:* Imaging findings were inconclusive, highlighting limitations in distinguishing overlapping CNS lesions. Histopathology demonstrated typical LGG features and immunoprofile, alongside vascular elements diagnostic of AVM. *Discussion:* This rare case raises hypotheses including tumour-induced angiogenesis, hemodynamic stress-induced gliomagenesis, or shared embryological origins. It also highlights the essential role of histopathological analysis in differentiating CNS pathologies and the need for a multidisciplinary approach in managing complex paediatric brain lesions.

IAP076 The Chameleon Returns: Recurrent Transformed Mediastinal Grey Zone Lymphoma Post Treatment.

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Introduction: Mediastinal grey zone lymphoma (MGZL) is a rare lymphoma with overlapping clinical, histological, and immunophenotypic features of classical Hodgkin lymphoma (cHL), particularly the nodular sclerosis subtype, and primary mediastinal B-cell lymphoma (PMBCL). It typically affects young adults and presents as a bulky mediastinal mass. These overlapping features make diagnosis challenging and require detailed pathological and molecular analysis. Due to its rarity, treatment is not standardized and often combines approaches used for cHL and PMBCL. *Case report:* A 29-year-old Malay woman was diagnosed with MGZL in March 2021. She received six cycles of R-EPOCH chemotherapy followed by 20 sessions of consolidation radiotherapy, achieving complete remission by January 2022. In August 2024, during her 16th week of pregnancy, she developed a neck swelling. Neck ultrasound revealed a TIRADS 5 thyroid mass and bilateral cervical lymphadenopathies. A biopsy of the thyroid mass demonstrated diffuse large B-cell lymphoma (DLBCL), non-germinal centre, anaplastic variant (CD30-positive). She underwent four cycles of R-ICE chemotherapy from December 2024 to February 2025. A PET-CT in May 2025 showed new FDG-avid lymphomatous activity involving the thyroid, right supraclavicular, and right hilar nodes. An excisional biopsy of the right supraclavicular lymph node in July 2025 confirmed classical Hodgkin lymphoma. *Conclusion:* This case demonstrates possible phenotypic changes in MGZL following therapy. It emphasises the need for repeat biopsies in relapsed or treatment-resistant cases and reflects the biological adaptability of this lymphoma subtype, suggesting the need for continued research.

IAP077 HER2-Low Breast Cancer in a Malaysian Single-Institution Cohort: Clinicopathological Insights and Emerging Therapeutic Opportunities

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Introduction: HER2-low breast cancer, defined by immunohistochemistry (IHC) scores of 1+ or 2+ with negative fluorescence in situ hybridization (FISH), has recently emerged as a distinct therapeutic entity. Unlike HER2-positive tumours, which are typically more aggressive, HER2-low cases may exhibit more favourable biological behaviour and treatment responsiveness. This study aimed to compare the clinicopathological characteristics of HER2-low and HER2-positive breast cancers within a single-institution cohort. *Materials and Methods:* A retrospective analysis was conducted on 525 breast cancer cases diagnosed between 2018 and 2024, using data extracted from the Laboratory Information System (LIS). HER2 status was classified based on IHC and FISH results. Molecular subtypes were determined using hormone receptor status. Statistical analyses were performed using IBM SPSS version 27, employing one-sample t-tests and Wilcoxon signed-rank tests to assess differences in clinicopathological variables. *Results:* Of the 525 cases, 455 (86.67%) were invasive carcinoma of no special type. HER2-low tumours comprised 31.05% of cases, while HER2-positive tumours accounted for 31.24%. Luminal A was the most prevalent molecular subtype (51.05%), followed by Luminal B (13.52%), HER2 enriched (17.71%) and Triple Negative (17.71%). Among HER2-low tumours, 81.6% were Luminal A and 18.4% were Triple Negative. *Discussion and Conclusion:* HER2-low breast cancer showed a strong association with hormone receptor positivity, particularly Luminal A subtype. Although HER2 status was not an independent prognostic factor for disease-free survival, hormone receptor status remained more predictive. In our cohort, 31.05% were HER2-low, reflecting a significant subset potentially eligible for novel therapies such as trastuzumab deruxtecan. This aligns with global findings, where up to 55% of HER2-negative cases fall into the HER2-low category. These findings emphasise the importance of standardized HER2 scoring and support integrating HER2-low classification into clinical practice to improve therapeutic stratification and access to emerging targeted treatments.