

 **Kansas Club cases (05/2023)**

1. **47-year-old female right ovarian tumor**.

**Sertoli-Leydig cell tumor moderately and focally poorly differentiated with heterologous elements and retiform elements.**

The representative sections of the 19 cm right ovarian mass show a sex cord-stromal tumour with a lobulated outline composed of admixed Sertoli cells and Leydig cells. The Sertoli cells are present as cords and nests, rather than as open tubules. Clusters of Leydig cells are

variably interspersed. Heterologous enteric-type mucinous epithelium and retiform elements are present.

1. **30-year-old male small bowel resection, section from mesenteric fat.**

**Granulomatosis with polyangiitis (Wagener’s granulomatosis)**

1. **44-year-old male, section from appendix.**

**Schistosomiasis**

1. **80-year-old female Left breast mass**

**Tall cell carcinoma with reverse polarity (previously called solid papillary carcinoma with reverse polarity)**

Immunohistochemical profile

S100 and calretinin positive

OR and PR negative (0-1%)

Her 2 neu negative

P63 negative

TTF-1 negative

1. 45-year-old female 1.9cm Right middle lung lobe nodule.

**Mucoepidermoid Carcinoma**

Low grade muco-epidermoid carcinoma (MEC) characterised by large cystic spaces filled with mucin and lined by tall columnar mucinous cells in addition to smaller mucous glands and also smaller more complex and infiltrating cords and sheets of cytologically bland cells that show a mixture of mucinous, oncocytic and solid features.

Dpas highlighted the abundant mucin present.

Staining is diffusely positive with keratin MNF116, CK7, CK5-6.

There is patchy staining with p63 and p40, most notable in a solid sheet area.

Staining is negative with TTF-1, thyroglobulin, Pax-8, synaptophysin and CDX2. Proliferation is negligible with MIB1 staining.

No necrosis, cytologic atypia or mitotic activity seen.

1. **55-year-old male, Total thyroidectomy and left neck dissection**

**Differentiated High grade carcinoma (High grade Papillary Thyroid Carcinoma)**

The left lobe was extensively replaced by a tumour showing a broadly solid and insular growth pattern, with retention of papillary carcinoma nuclear alterations. The presence of necrosis and >5 mitoses per 2mm2, while lacking anaplastic morphology is consistent with a differentiated high-grade carcinoma (high grade papillary thyroid carcinoma).

1. **17-year-old female, Right posterior thigh lesion? pyogenic granuloma.**

**Epithelioid fibrous histiocytoma with morphologically malignant transformation)**

Skin with an unencapsulated multinodular dermal lesion, with extension

into subcutaneous tissue. The superficial component of this lesion is composed of relatively

monomorphic histiocytoid cells with palely eosinophilic cytoplasm, a

few of which are binucleate and the morphology is really very typical

of epithelioid fibrous histiocytoma. There is an adjacent component of tumour consisting of large polygonal or epithelioid cells with copious clear cytoplasm, immunopositive for

NKI-C3 indicating prominent lysosomal content and essentially representing clear cell change within the epithelioid FH. More strikingly, however, there is abrupt transition to an essentially anaplastic component consisting of sheets of much larger atypical cells with polygonal morphology, having copious palely eosinophilic cytoplasm and large bizarre vesicular nuclei, some having prominent nucleoli. Mitoses are surprisingly infrequent in this very highly atypical component.

Immunohistochemistry demonstrates positivity for ALK-1 (diffuse cytoplasmic), D2-40, CD68, CD163 and CD10. Patchy weak positivity is seen for SMA. EMA demonstrates multifocal weak positivity. Lesional cells are negative for cytokeratins (MNF-116, CAM5.2, 34betaE12, AE1/AE3), CD45, CD3, CD20, CD30, S100, Melan A, SOX-10, CD34, CD31, Factor VIII, lysozyme, desmin, NSE, CD1a, CD21, p63 and GFAP.

1. **62-year-old female, hysterectomy.**

**Mesonephric-like adenocarcinoma of the endometrium.**

There are variable architectural patterns including ductal, tubular

and glomeruloid areas and variable cytologic features including areas

of overlapping vesicular nuclei and areas of flattened cuboidal cells.

Immunohistochemistry shows flat negative oestrogen and progesterone

receptor, strong diffuse nuclear TTF1 staining, focal areas of nuclear

GATA3 staining, focal calretinin staining and extensive luminal CD10

staining.

Mismatch repair protein immunohistochemistry shows intact expression

(no loss of MLH1, PMS2, MSH2 or MSH6).

1. **58-year male, Atypical skin lesion left leg.**

**Malignant Glomus Tumor/Glomangiosarcoma.**

The immunohistochemistry shows staining with antigen receptor and actin smooth muscle. There is negative staining with carcinoma markers keratin, Ber EP4 and CEA and EMA. There is negative staining with melanocyte markers, melan A and SOX-10 as well as CD34.

1. **26-year-old Female, endometrial curetting.**

**Endometrioid adenocarcinoma resembling cutaneous pilomatrix carcinoma/ Endometrioid adenocarcinoma with diffusely aberrant Beta catenin expression.**

Fragments of a high-grade carcinoma with nests of tumour cells with peripheral basaloid cells and central necrosis with shadow/ghost cells. In addition, there are areas of conventional low grade endometrioid adenocarcinoma as well as areas of background endometrium with prominent squamous morule formation including a focal area with amyofibromatous stroma. Immunohistochemistry shows positive staining for Oestrogen Receptor, Progesterone Receptor and PAX-8 within low grade component with complete absence in high grade component. P53 shows wild-type pattern. CDX2 shows foci of strong positive staining. Intact mismatch repair protein expression and diffuse aberrant nuclear and cytoplasmic B-Catenin expression.