2020 Virtual Pathology Course

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46 year-old female with adnominal mass
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Disclosure

• No conflict of interest to disclose
Clinical history

- 46 year-old female with abdominal pain
- Untrasound of abdomen found a small mass
- Confirmed by MRI: a well circumscribed T2 hyperintense mass, 2.5 x 4.2 cm, cranial to an abutting junction of the pancreatic body and tail.
- Mass was resected (virtual slide).
The specimen is entirely submitted for histology exam.

Maximum size of the nodule: 7.5 mm
Flow Cytometry

Mature lymphocytes > 97%. T-cells show no aberrant phenotype; B-cells are polytypic.
Differential Diagnosis

• Follicular dendritic cell sarcoma
• Interdigitating dendritic cell sarcoma
• Intranodal palisaded myofibroblastoma  
  (prominent hemorrhage, amianthoid fibers)
• Inflammatory myofibroblastic tumor
• Angiomatoid fibrous histiocytoma  
  (Circumscribed, fibrous pseudocapsule)
• Lymphoepithelioma-like carcinoma
• Metastatic malignancies:  
  – Melanoma  
  – Spindle cell carcinoma  
  – Gastrointestinal stromal tumor (GIST).  
  – Malignant peripheral nerve sheath tumors
CD21, nodule
CD35
Follicular Dendritic Cell Sarcoma

- Uncommon neoplastic proliferation of spindled to ovoid cells.
- Most FDCS arisen from lymph nodes, at least one-third occur in extranodal sites.
- At least some morphologic features of normal FDCs.
- A broad differential diagnosis: spindle cell proliferation/neoplasm
- Characteristic immunophenotypic profile.
  - Relatively specific (may have partial loss): CD21, CD23, CD35, clusterin
  - Sensitive but not specific: D2-40, Fascin
  - Misleading markers (variably positive): CD68, S100, EMA
- Ki-67 usually low, 1-25%
- ~20% harbors BRAF V600E mutation
Some Clinical Associations

• Castleman disease
• Angioimmunblastic T-cell lymphoma (AITL)
• Follicular lymphoma
• Dysregulated immune system:
  – Paraneoplastic pemphigus
  – Myasthenia gravis
Prognosis of FDCS

- Local recurrences are common, occurring in approximately 40% to 50% of cases.
- Common metastatic sites: liver, lung, and lymph nodes.
- The mortality rate is approximately 20%, usually after a protracted course.
Prognostic Factors of FDCS

• Tumors arising in lymph nodes are often indolent, with low rate of metastases (approximately 10%).

• Unfavorable prognostic factors:
  – intra-abdominal location,
  – large tumor size (greater than 6 cm)
  – Coagulative necrosis,
  – mitotic count greater than 5 mitoses per 10 highpower fields,
  – Significant cellular atypia

• Intraabdominal location is the single most important unfavorable prognostic (relapse rate as high as 80%).
Follow up 4 years later

No clinical presentation;
No new adenopathy.