Interesting case conference

4/15/13
31-year-old female
-presented to UofM for second opinion regarding a left renal mass
-originally diagnosed in 2010 incidentally with CT scan
-she was asymptomatic until December of 2012, when she began experiencing flank pain. She denies hematuria

Image-guided needle core biopsy with touch prep cytology performed of the renal mass
Hypocellular
Thick capillary vessels
Thickened capillary vessels
Spindle cells
Thickened capillary vessels
Thickened capillary vessels
Core Biopsy

Bland spindle cells
Thick walled vessels
Other immunostaining results:

**POS**
- calponin
- Melan-A
- SMA

**NEG**
- PanCK
- TTF-1
- CD34
- S-100
Final Diagnosis:

- Negative for malignancy.
- Consistent with angiolipoma.
Angiomyolipoma

- benign tumor belonging to the PEComa family of tumors
- occur in young adults with tuberous sclerosis (multiple and bilateral lesions) and in patients without tuberous sclerosis sporadically (young and middle aged women)
- most are reliably diagnosed by imaging due to fat content; fat-poor tumors tend more to be sampled via FNA and/or core biopsy.
Cytology of Angiomyolipoma

- paucicellular specimens
- classically have mature fat, blood vessels, and smooth muscle cells but the fat and thick vessels may not be seen on FNA
- mostly have smooth muscle cells on FNA smears with none to moderate atypia (large spindled cells with a “stringy” appearance rather than vacuolated/granular like RCC)
- DDX: sarcomas and sarcomatoid RCC; stains for HMB-45 and/or melanA can be very helpful with this differential, especially in cases of AML with marked atypia
- Atypia is permissible in angiomyolipomas and do not necessarily portend aggressive behavior.
- epithelioid angiomyolipomas can have metastatic potential=> cells with abundant cytoplasm and prominent nucleoli, necrosis and mitoses can be seen (DDX: clear cell RCC)