AMSER Rad Path Case of the Month

70 y/o F presents with acute worsening N/V, abd pain in setting of 8 months of bloating & early satiety

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Patient Presentation

- HPI: Pt presents to outside hospital with 24 hours of acute N/V and abd pain, in setting of early satiety & bloating x8 months. Found to have new pelvic mass on CT A/P w/o contrast and transferred to AHN for Gyn Onc consult.
- PSH: TAH + RSO w/ bowel resection, LSO for Ectopic, Lap cholecystectomy, appendectomy
- PMH: HTN, Hypothyroidism, Depression, GERD
- Meds: HCTZ-valsartan, amlodipine, levothyroxine, sertraline, trazodone, omeprazole
- Allergies: NKDA

Patient Presentation

- ObHx: G1P0
- GynHx: Menopause at 39 s/p TAH, RSO; HPV (+) prior to TAH; Denies hx of STI

Patient Presentation

- Physical Exam: VSS; Abd soft, non-tender to palpation, mildly distended w/ palpable mass in lower abd. Normoactive bowel sounds. Pelvic exam declined.
- Labs:
  - **CA 125**: 10
  - **CEA**: <1.8
  - **CA 19-9**: 15

What Imaging Should We Order?

Applicable ACR Appropriateness Criteria

Postmenopausal Subacute or Chronic Pelvic Pain

Variant 1: **Postmenopausal subacute or chronic pelvic pain, localized to the deep pelvis. Initial imaging.**

Procedure	Appropriateness Category	Relative Radiation Level
US pelvis transvaginal	Usually Appropriate	O
US duplex Doppler pelvis	Usually Appropriate	O
US pelvis transabdominal	Usually Appropriate	O
MRI pelvis without and with IV contrast	May Be Appropriate	O
CT abdomen and pelvis with IV contrast	May Be Appropriate	☢☢☢
CT pelvis with IV contrast	May Be Appropriate	☢☢☢
MRI pelvis without IV contrast	May Be Appropriate (Disagreement)	O
CT abdomen and pelvis without and with IV contrast	Usually Not Appropriate	☢☢☢☢
CT abdomen and pelvis without IV contrast	Usually Not Appropriate	☢☢☢
CT pelvis without and with IV contrast	Usually Not Appropriate	☢☢☢☢
CT pelvis without IV contrast	Usually Not Appropriate	☢☢☢
Radiography abdomen and pelvis	Usually Not Appropriate	☢☢☢

This imaging modality was ordered by admitting medicine service

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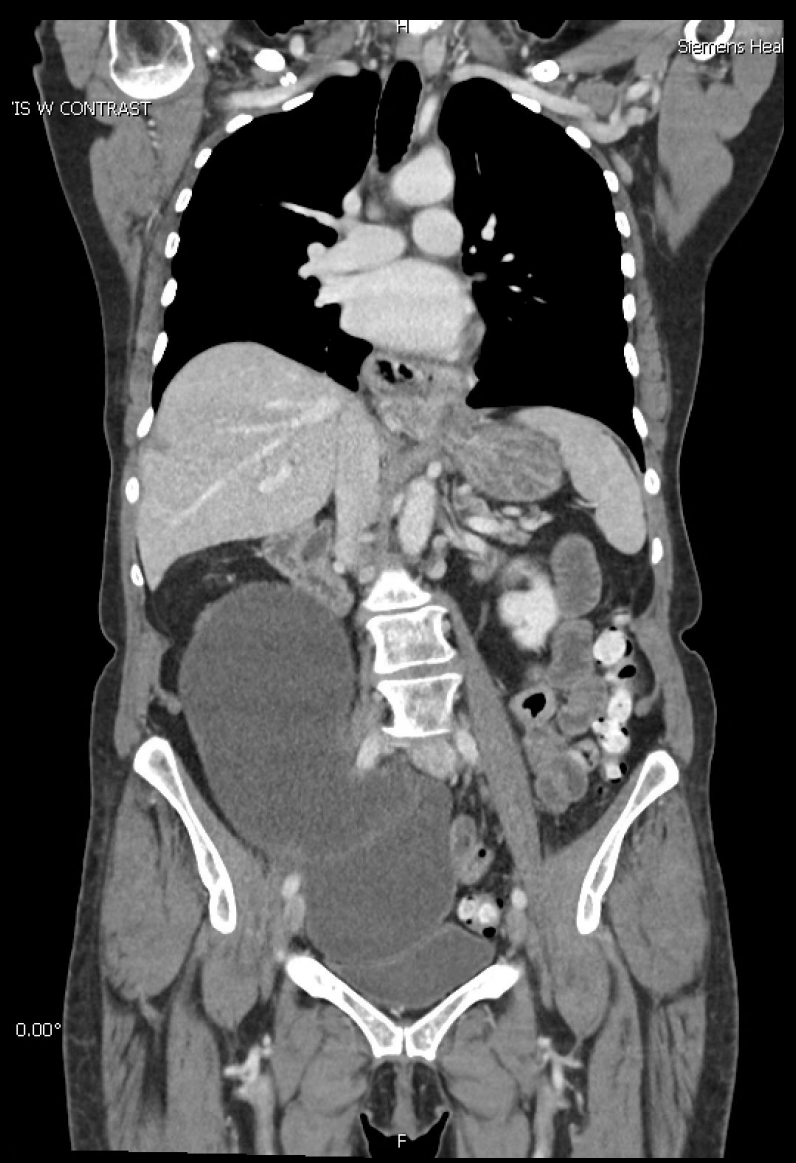
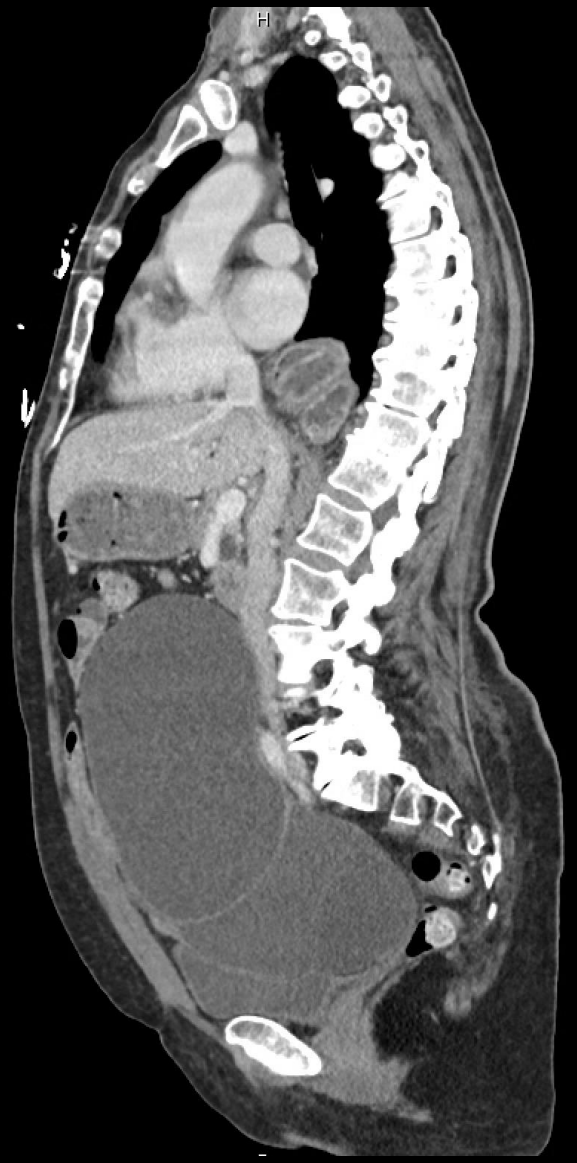
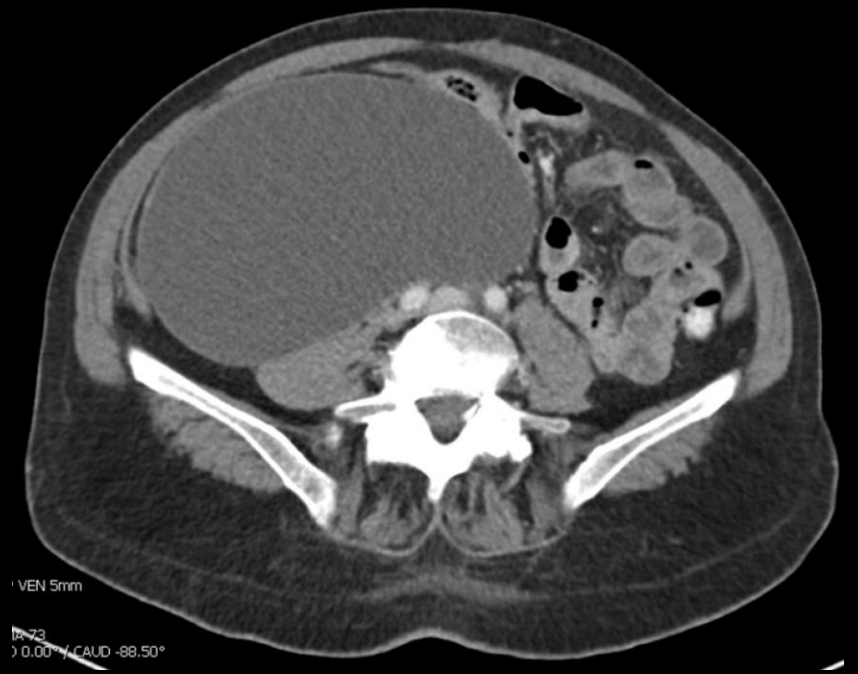
Radiology Findings (unlabeled)







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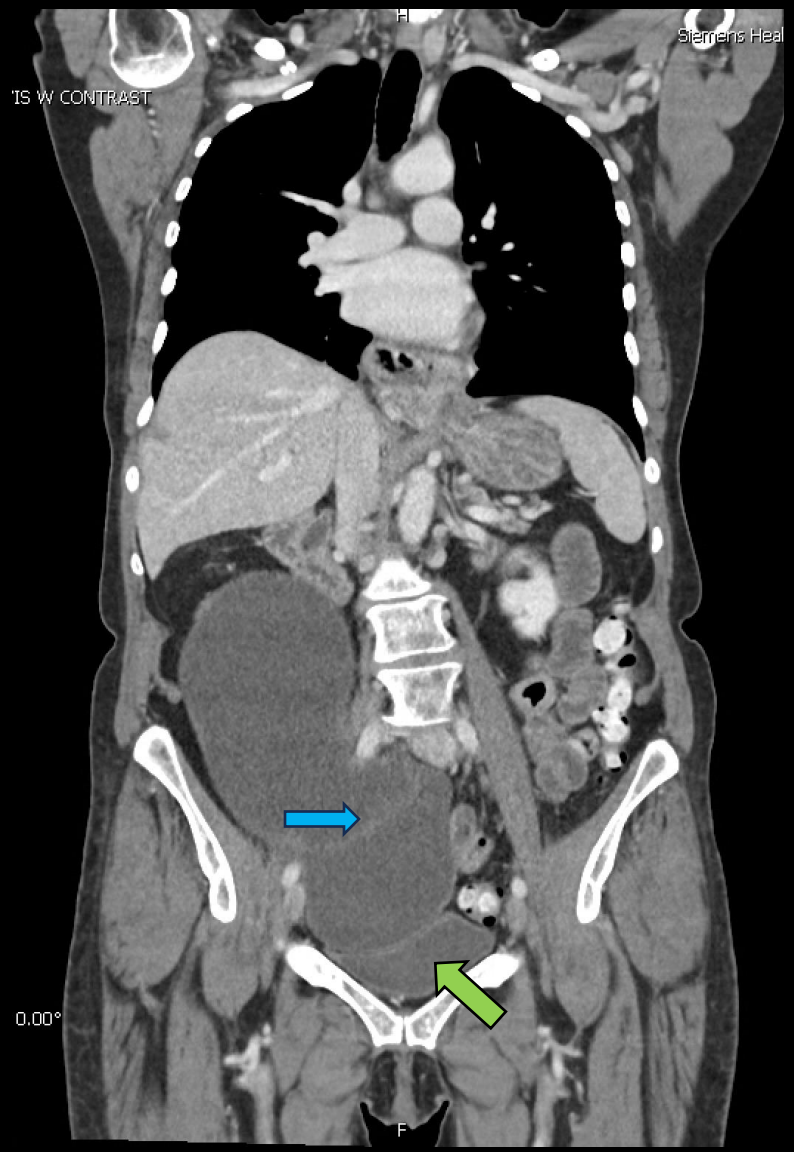
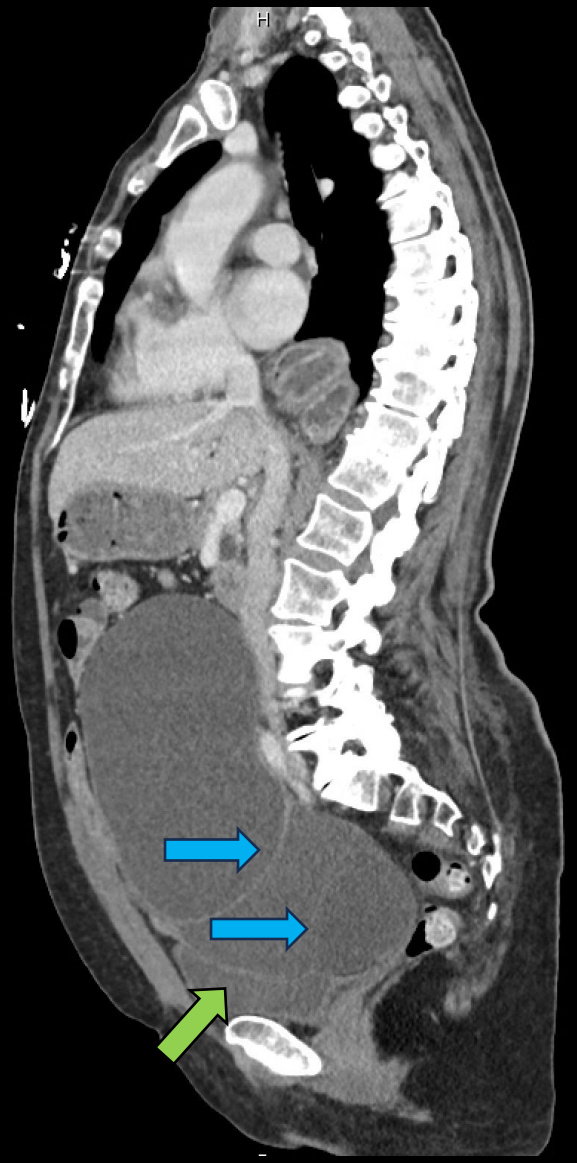
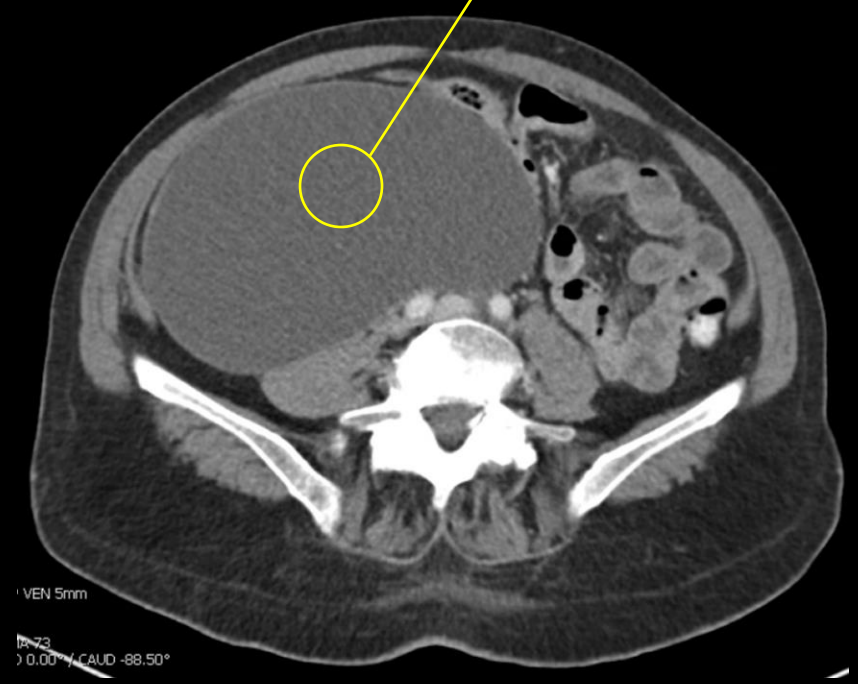
Radiology Findings (labeled)

Multiloculated Cystic Lesion measuring 21.6 x 9.2 x 16.2 cm





Mean Hounsfield Units: +11.42, Consistent w/ Water



Blue Arrows indicating Septations

Green Arrows indicating Bladder

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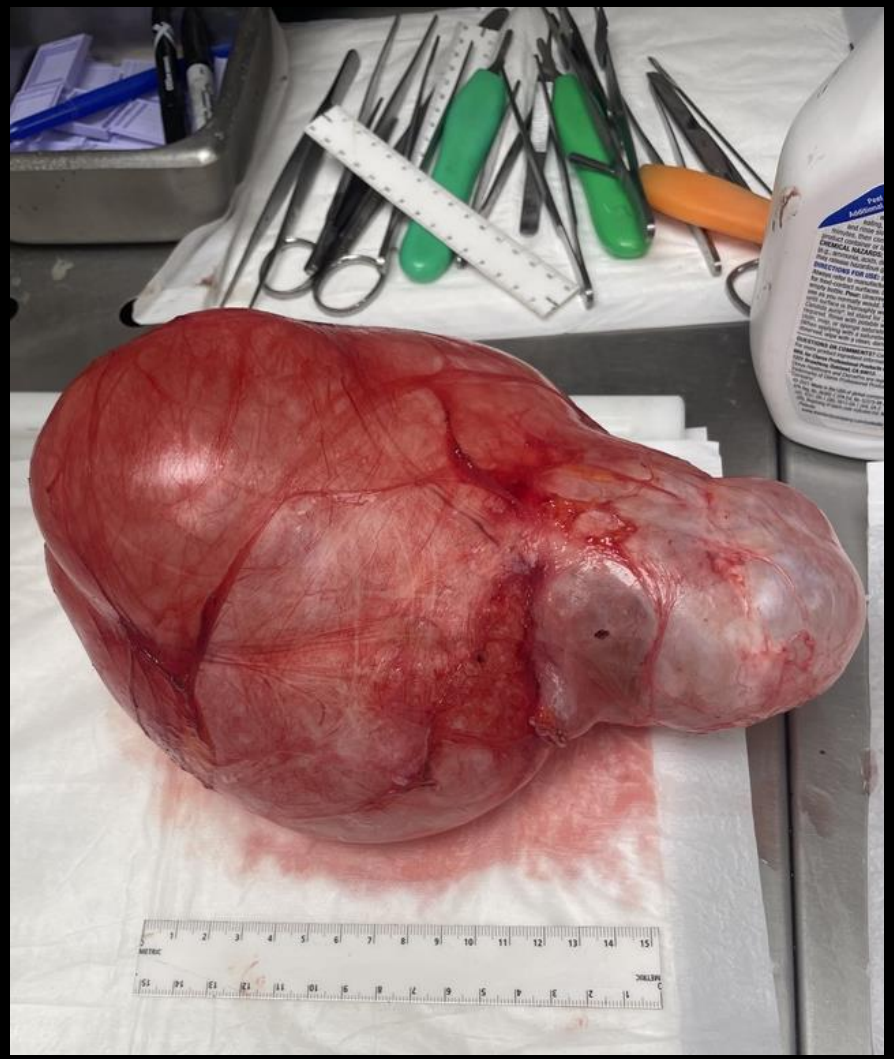
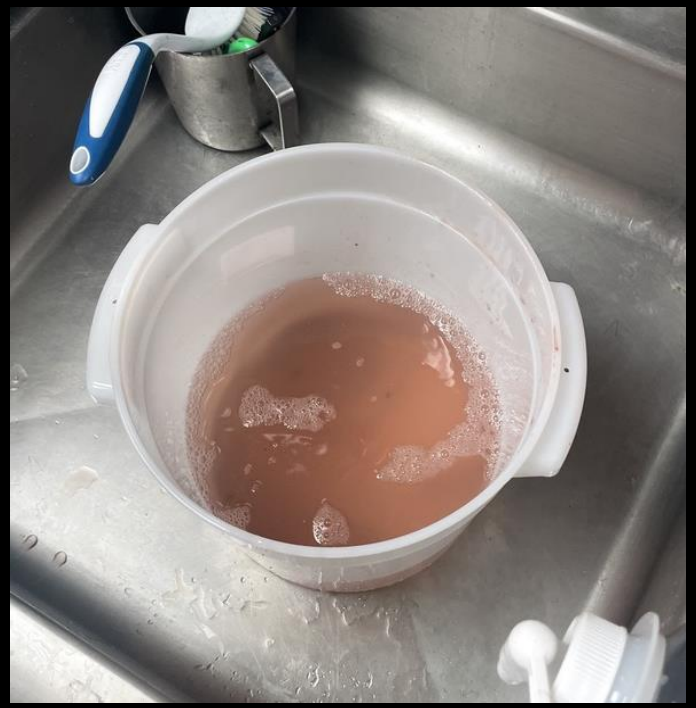
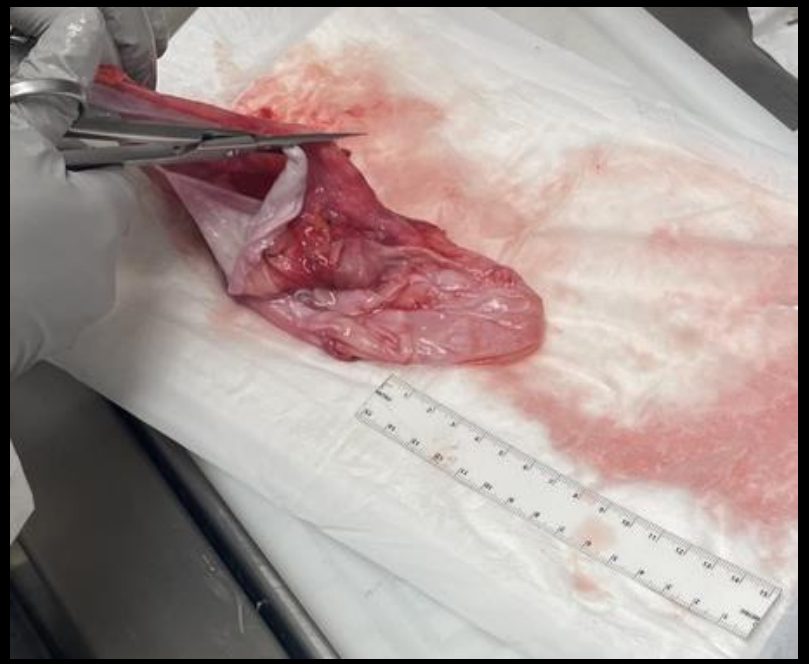
DDX Based on Imaging

- DDX:
  - Cystadenoma vs. GI Duplication Cyst vs. Peritoneal Cyst
  - Less likely Borderline or Malignant mass from ovarian remnant, given normal tumor markers & cystic appearance

Gross Findings



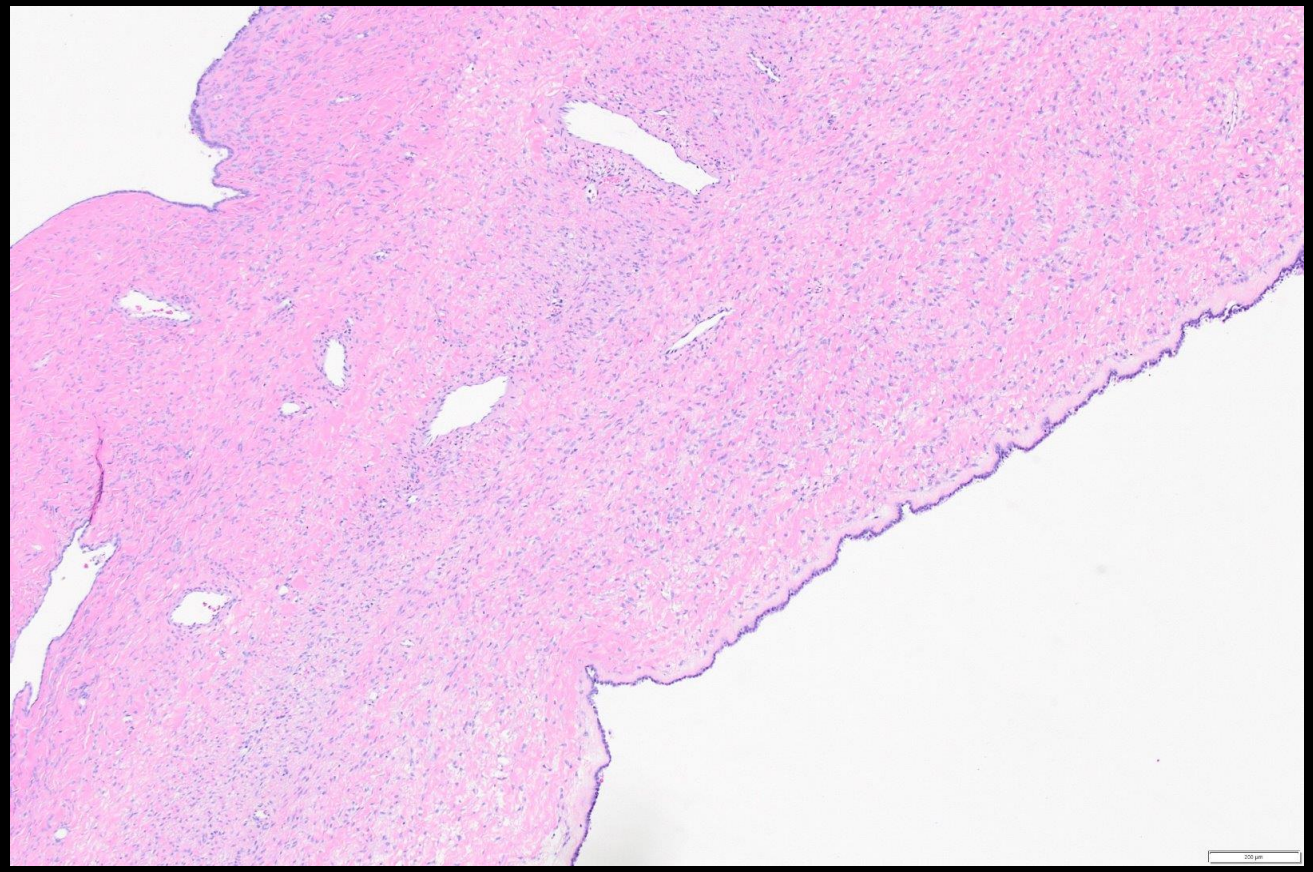


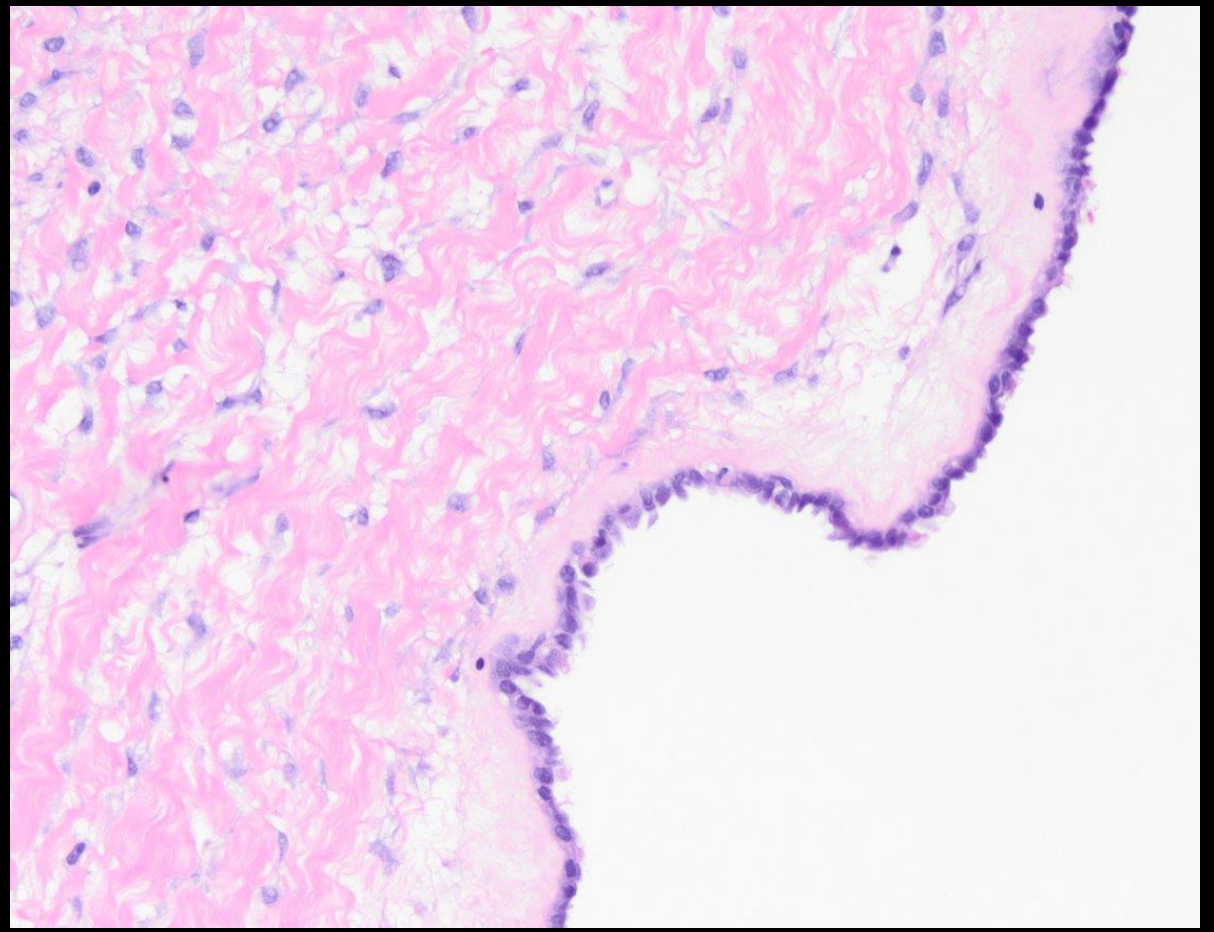


Final Dx:

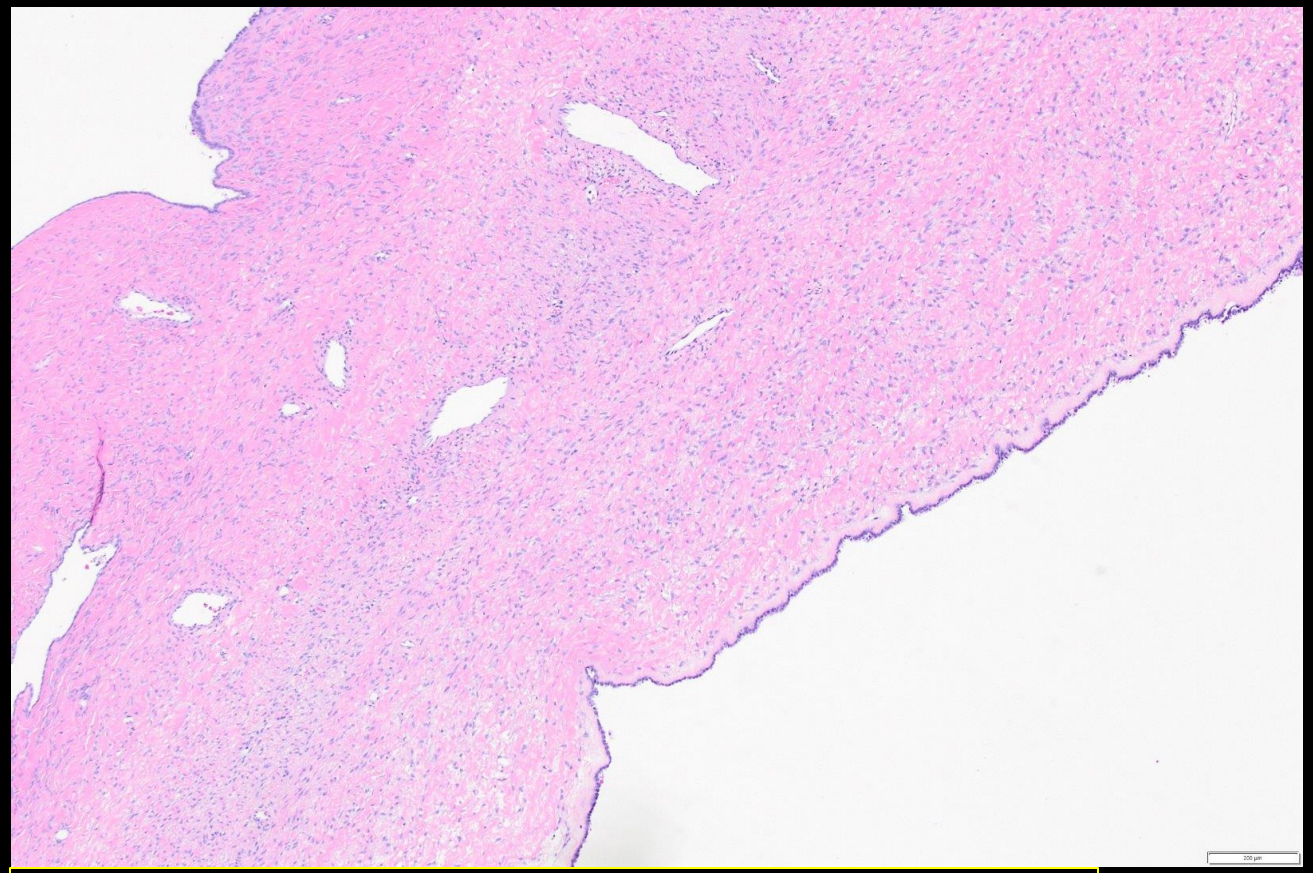
Benign Mucinous Cystadenoma

Pathology Findings (unlabeled)

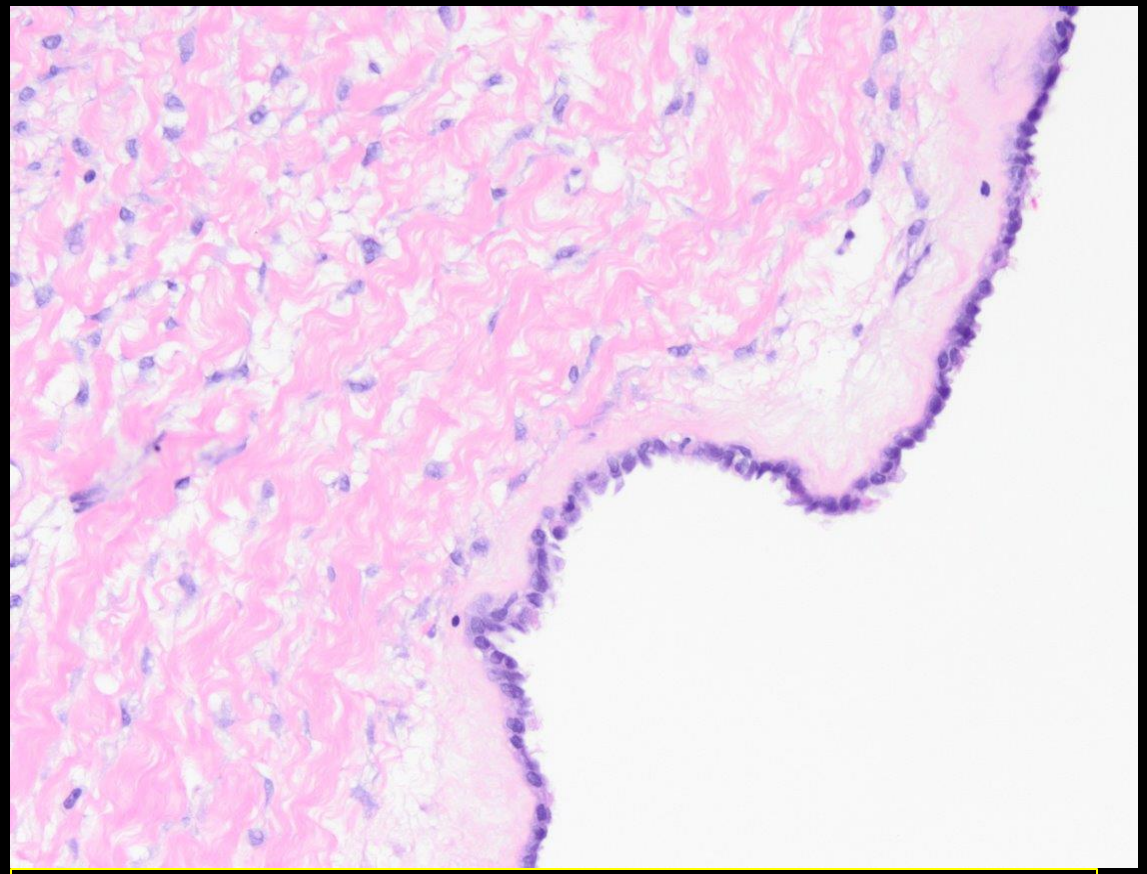




Pathology Findings (labeled)



Benign mucinous cyst at 4x: Dense fibrous tissue lined by a single layer of flat cells with no cytologic atypia



Benign mucinous cyst at 20x: Simple cuboidal cell lining without cytologic atypia

Case Discussion: Adnexal Mass

- Definition: Mass on an appendage of the Uterus
  - Can be on Ovary, Fallopian Tube, or Uterine Ligaments
- Will have a Wide Differential
- Important to determine Benign vs. Malignant probability
- Important Things to Consider:
  - Ovarian vs. Extra-Ovarian
  - Solid vs. Cystic
  - Pre vs. Post-menopausal

Case Discussion: Adnexal Mass

- Presentation:
  - Often Asymptomatic
  - May have Pelvic Pain, Palpable Mass, Acute Abdomen (w/ rupture)
- Imaging:
  - First Line: **Transvaginal US**
  - CT, MRI, PET are NOT recommended for initial evaluation
  - CT or MRI may be used to further define mass

DDX for Adnexal Mass

- Benign Gyn
  - Functional Cyst
  - Endometrioma
  - Tubo-ovarian Abscess
  - Ectopic Pregnancy
  - Mature Teratoma
  - Cystadenoma
  - Paratubal Cyst
  - Leiomyoma
- Malignant Gyn
  - Ovarian CA:
    - Epithelial
    - Germ Cell
    - Stromal
  - Metastatic CA
- Non-Gyn
  - GI/ Urologic process
    - Abscess
    - Diverticulum
    - Primary/ Metastatic CA

Case Discussion:

- Main Complications of Adnexal Mass:
  - Ovarian Torsion
  - Rupture/ Peritonitis
  - Malignant Transformation

Case Discussion:

- Reminder: Very important to determine Benign vs. Malignant probability of an Adnexal Mass
- Findings concerning for malignancy:
  1. >10 cm
  2. Papillary/Solid components
  3. Irregular shape
  4. High Blood Flow on Color Doppler US
  5. Ascites
  6. Elevated CA-125

References:

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