AMSER Case of the Month
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61-Year-Old Female with Acute, Post Menstrual Pelvic Pain

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Patient Presentation

- A 61 y.o. G4P2022 with no significant past medical history presents with 5 days of pelvic pain. Her pain began suddenly and radiated to her right leg and right lower back. It was associated with nausea, vomiting, and mild diarrhea. She denies fever, hematochezia, and melena.
- Her LMP was at age 50. She had a bilateral tubal ligation in her 20s. She has never had an abnormal pap smear with her most recent being 2 months ago. Her mother and aunt both had endometrial cancer in their 40s. She denies any post-menstrual bleeding.
- Abdominal Exam: obese, with involuntary guarding in all four quadrants. Pain worst in LLQ.
- Pelvic Exam: Bimanual exam showing no cervical motion tenderness,. Unable to palpate uterus or adnexa due to pain intolerance.

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Pertinent Labs

CBC
- WBC: 23.19
- HgB: 8.7
- MCV: 66
- RDW: 34.1

BMP
- WNL

INR
- WNL

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What Imaging Should We Order?

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ACR Appropriateness Criteria

Variant 1: **Postmenopausal acute pelvic pain. Initial imaging.**

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

These imaging modalities were ordered by the ER physician

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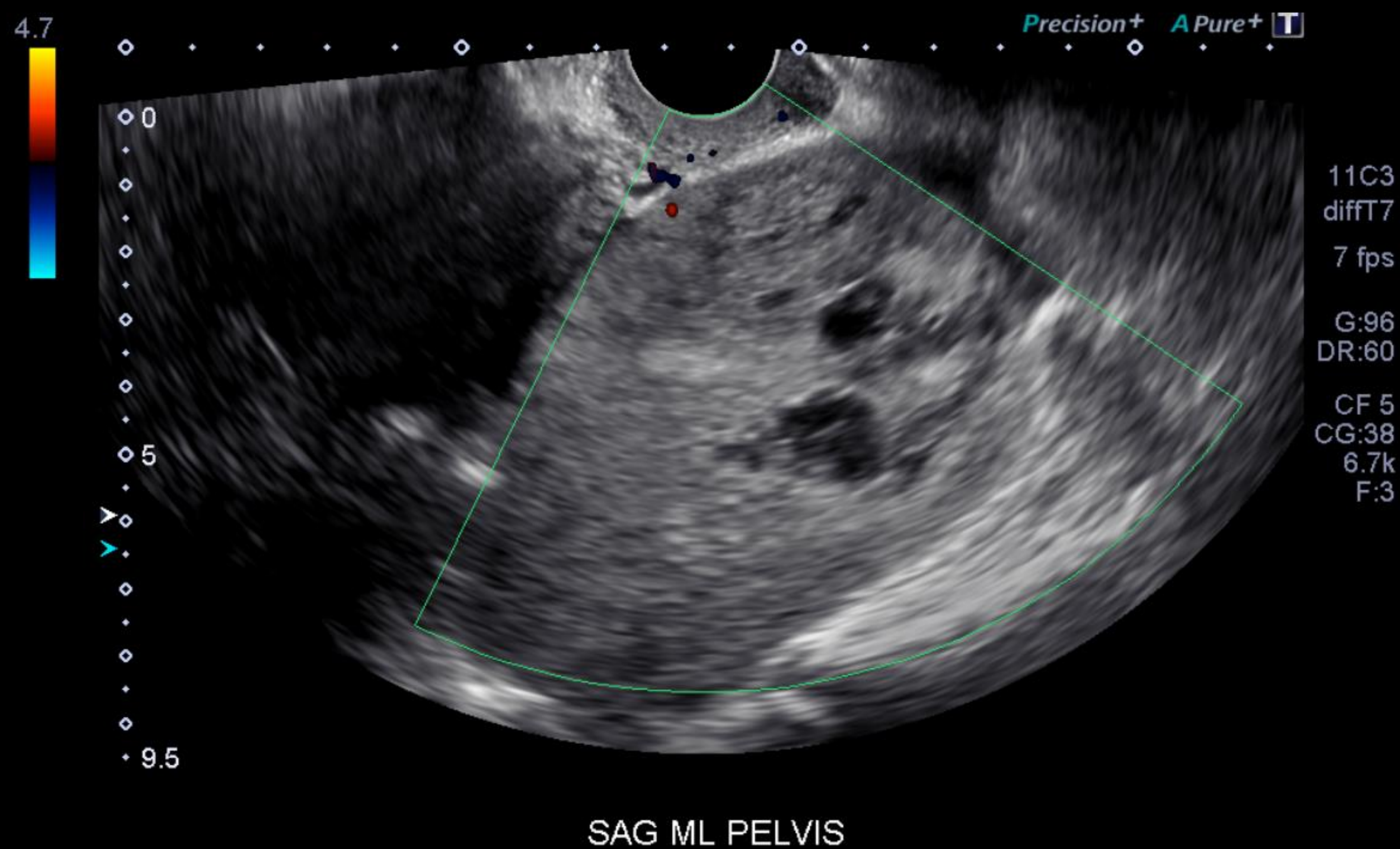
Transvaginal US Findings (unlabeled)



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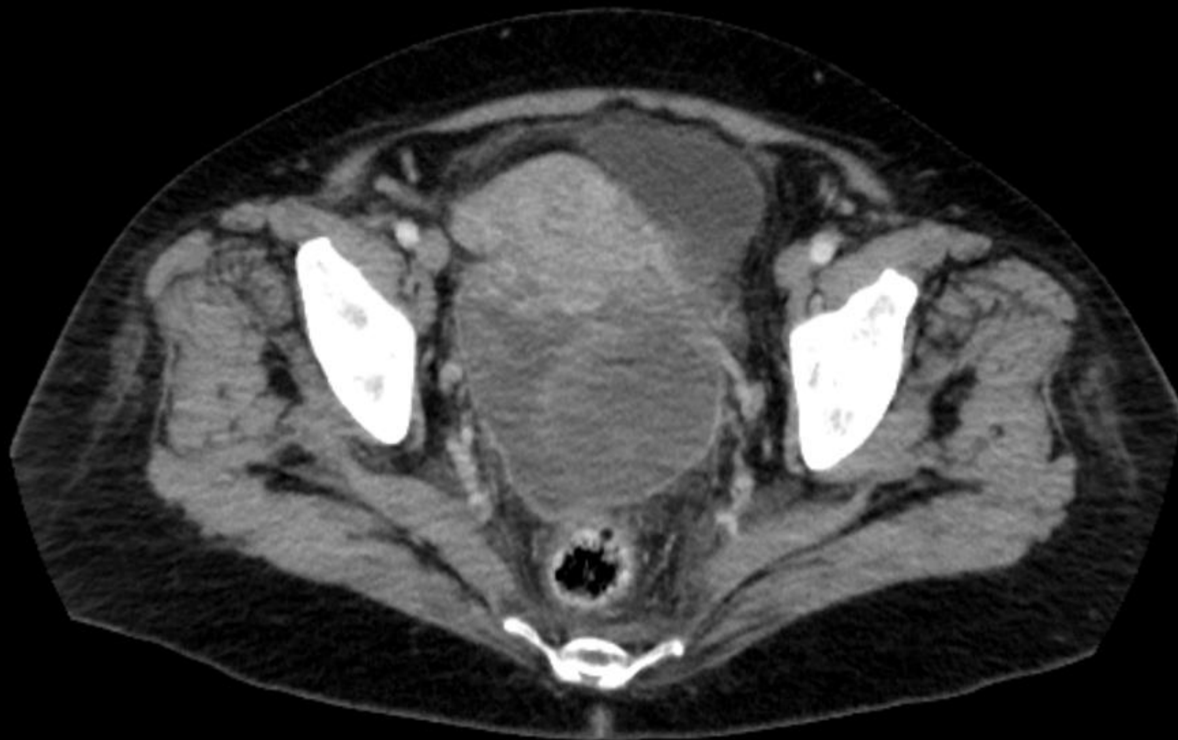
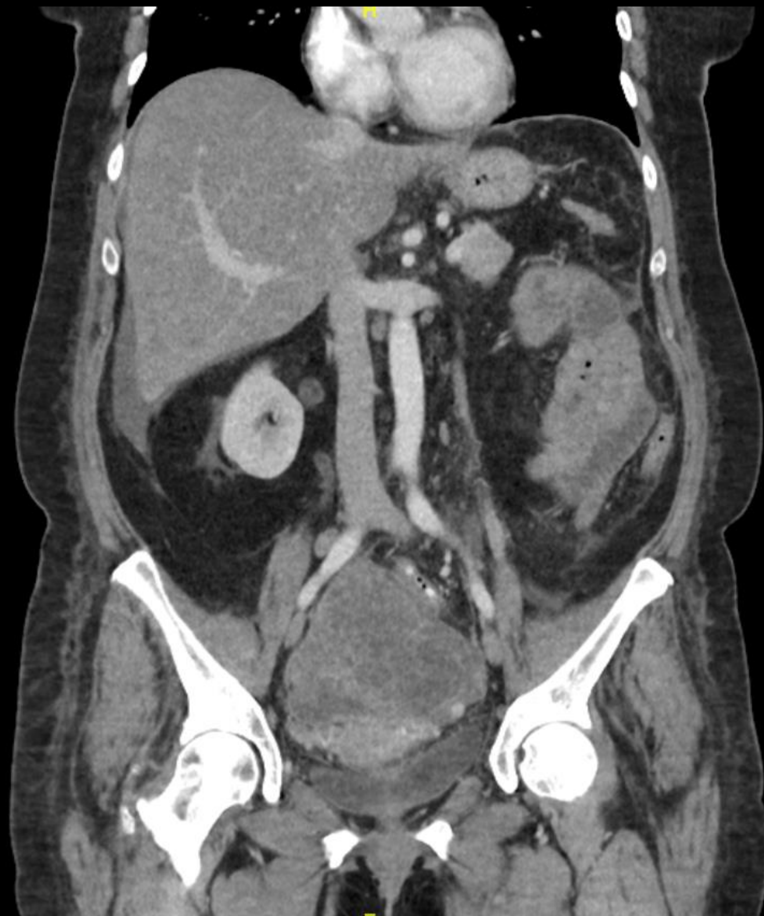
CT with IV Contrast Findings (unlabeled)





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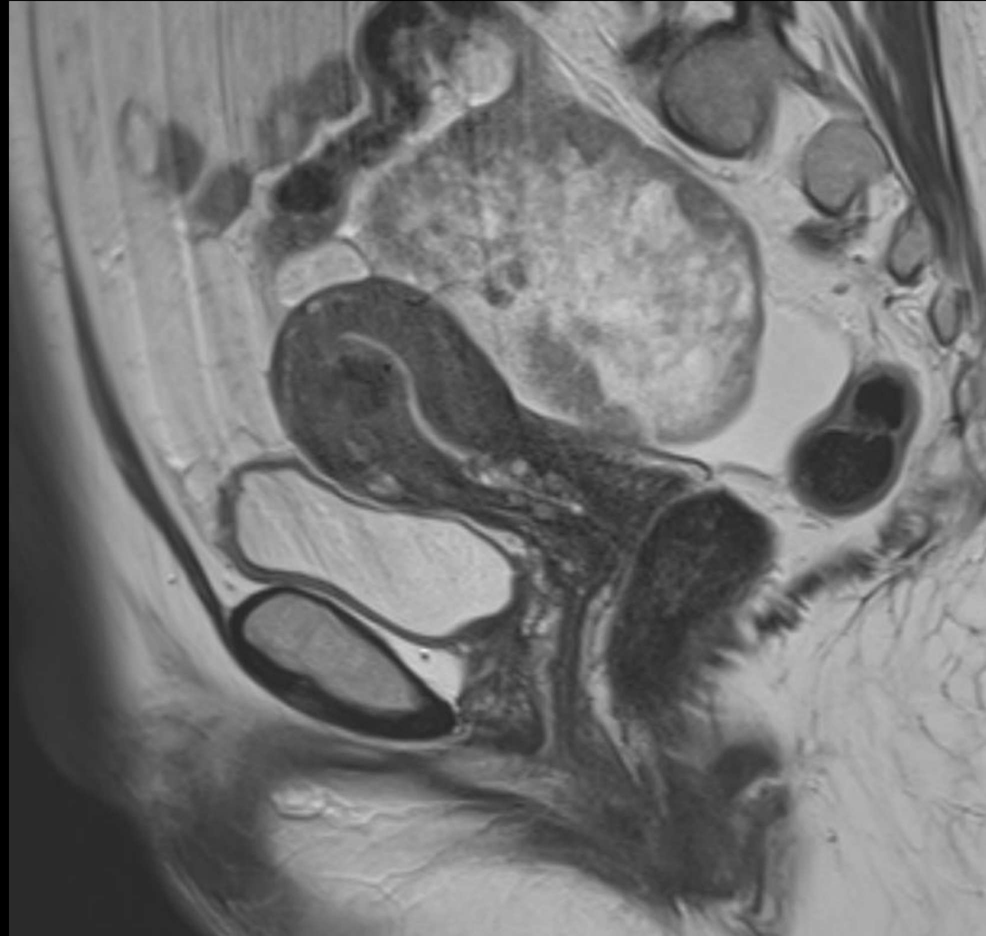
MRI With Contrast Findings (unlabeled)



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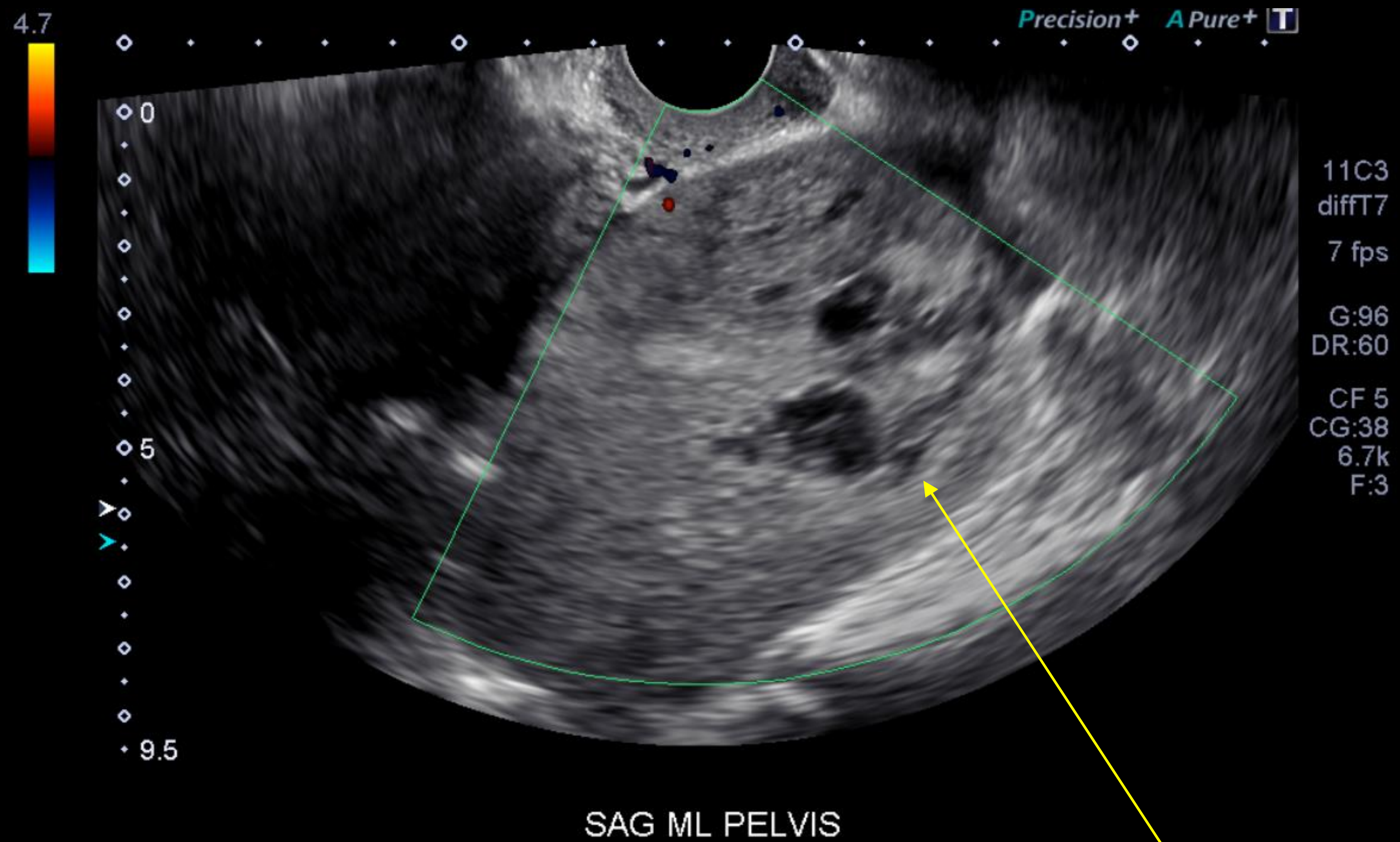
Transvaginal US Findings (labeled)



Normal uterus and left ovary were visualized. Right ovary was not visualized transabdominally or transvaginally.

Mid pelvic solid mass with cystic components with minimal to no vascular flow

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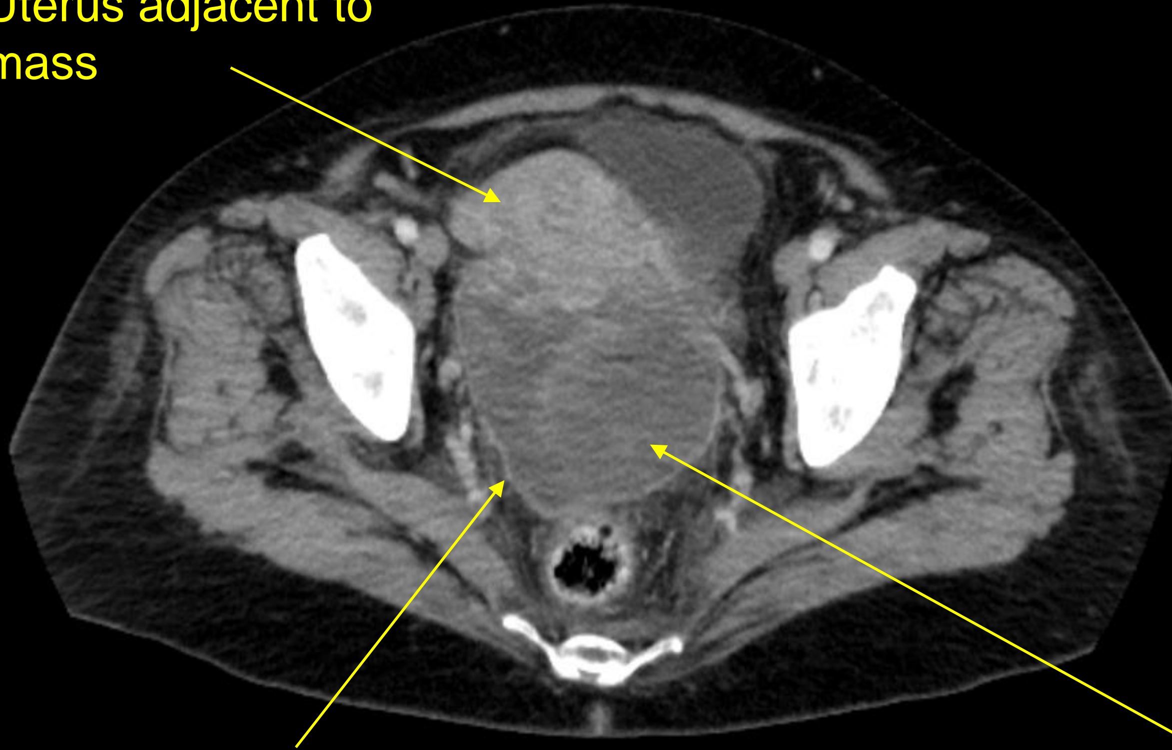
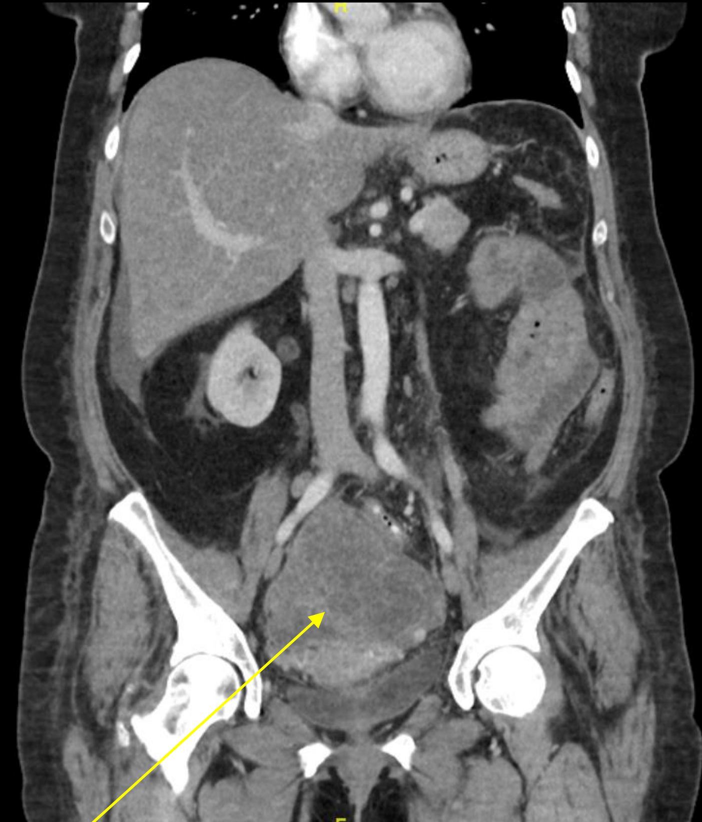
CT with IV Contrast Findings (labeled)





Uterus adjacent to mass

Enhancement of peritoneal reflections, explaining involuntary guarding

Hypodense 12.9cm mass in the pelvis interposed between the uterus and sigmoid colon

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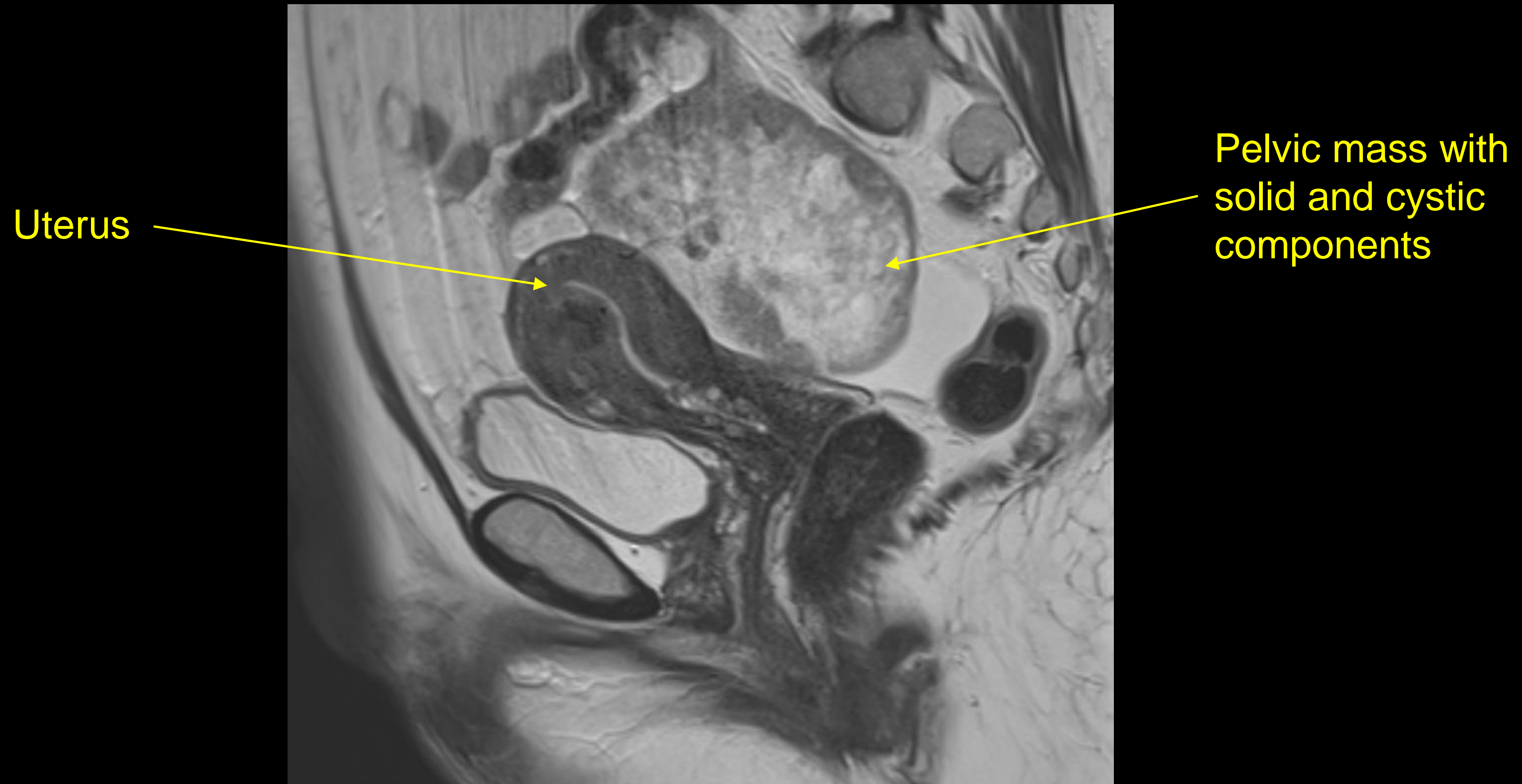
MRI With Contrast Findings (labeled)



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Final Dx:

Mitotically Active Cellular Fibroma leading to Ovarian Torsion

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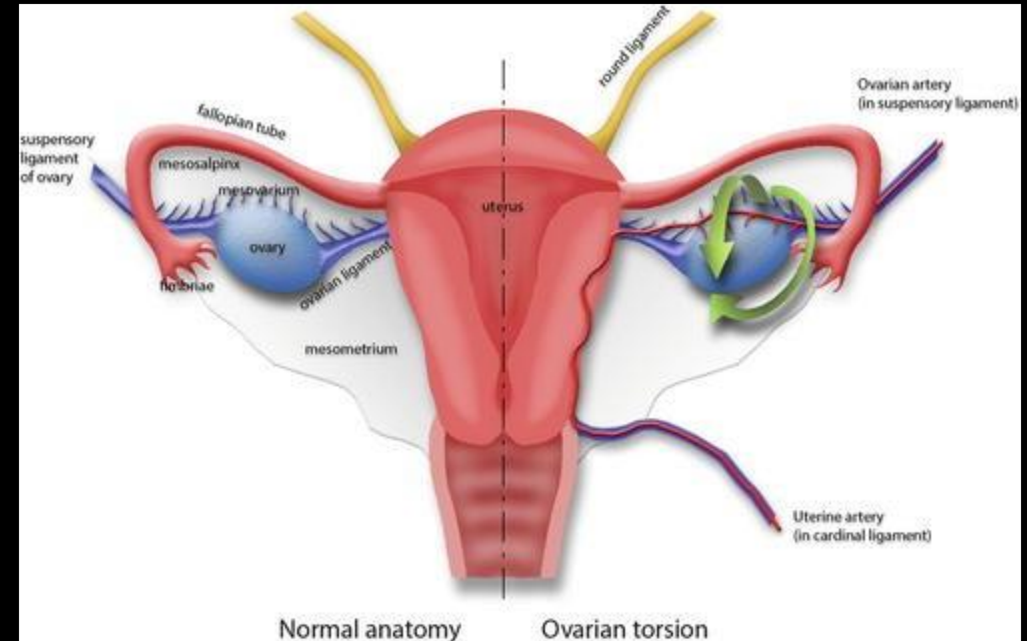
Case Outcome

- Laparoscopic bilateral salpingo-oophorectomy performed with removal of necrotic mass (pictured on the right) without complications

- Pathology revealed mitotically active cellular fibroma with extensive hemorrhage and necrosis due to torsion

Ovarian Torsion

- Pathophysiology: Twisting of fallopian tube on ovarian vascular supply leading to ischemia
- Most commonly from an adnexal mass (50-80% of cases)
- Absence of vascular flow on doppler US is 100% sensitive and 97% specific.
- Normal vascularity on doppler US does NOT rule out intermittent torsion



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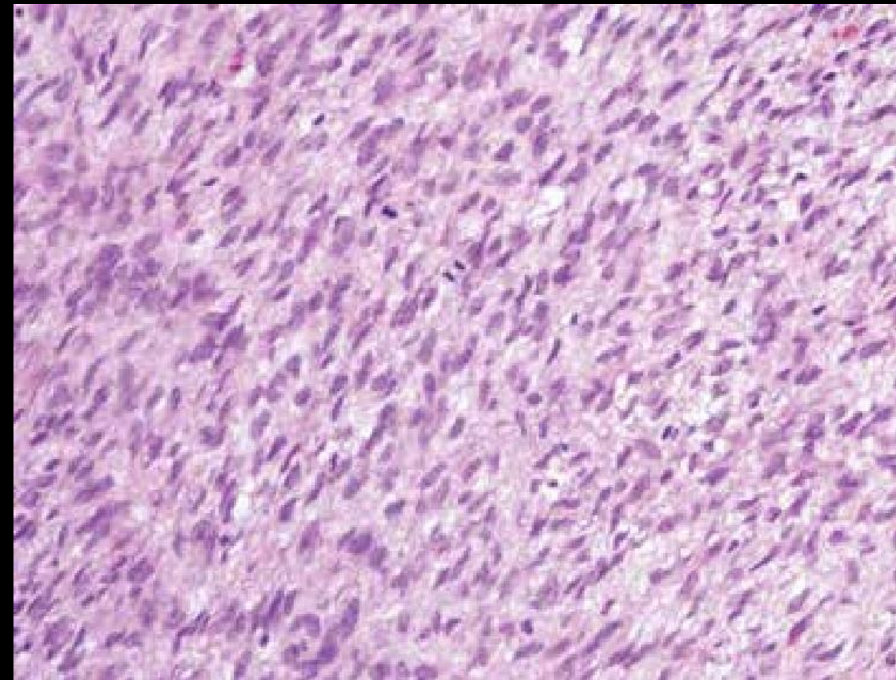
Mitotically Active Cellular Fibroma

- Rare subtype of Ovarian Fibroma, a tumor originating from sex cord stromal cells
- Defined as fibroma with > 4 mitoses in 10 HPF with mild to moderate atypia
- Intermediate between fibroma (benign) and fibrosarcoma (malignant)
- Tx: Surgical Resection



Microscopic appearance of mitotically active cellular fibroma at 40x magnification (Yildrim et al 2015)

References:

Nanni M., Merola M.G., Ianniello S., Orazi C., Schingo P.M., Trinci M. (2016) Ovarian Torsion. In: Miele V., Trinci M. (eds) Imaging Non-traumatic Abdominal Emergencies in Pediatric Patients. Springer, Cham. https://doi.org/10.1007/978-3-319-41866-7_14

Adel Anan, R., Dixon A., et al. (2021). Ovarian Torsion. Radiopedia. https://radiopaedia.org/articles/ovarian-torsion?lang=us

Strickland, K. (2020). Ovarian and Sex Cord Tumors: Fibroma. Pathology Outlines. https://www.pathologyoutlines.com/topic/ovarytumorfibroma.html

Yildirim, Nuri & Saatli, Bahadir & Akalın, Fatma & Ulukuş, Çağnur & Obuz, Funda & Saygili, Ugur. (2015). Mitotically active cellular fibroma of the ovary: A case report. Journal of Turkish Society of Obstetric and Gynecology. 12. 53-55. 10.4274/tjod.11298.

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