

AMSER Case of the Month

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Retroperitoneal Intramuscular Myxoma Presenting as an Adnexal Mass in a 36-Year-Old Female

Christina-Regine Owens-Charles, MS4

Nova Southeastern University - Dr. Kiran C. Patel College of Osteopathic Medicine

NSU
Florida

Dr. Kiran C. Patel College
of Osteopathic Medicine
NOVA SOUTHEASTERN
UNIVERSITY

Henry Wei, DO

Emory University - Department of Radiology

Aine Marie Kelly, MD

Emory University - Department of Radiology



Patient Presentation

Age: 36

Gender: Female

Presenting symptoms: Intermenstrual bleeding, 20 lb weight gain

PMH: Uterine fibroids, dysmenorrhea, OCP use

Examination findings:

- Right adnexal fullness on palpation.
- Temp: 98F
- BP: 118/70 mmHg
- HR: 70 bpm
- RR: 16 bpm

Differential diagnoses: PCOS, endometriosis, uterine fibroids, estrogen-secreting ovarian tumor, myxoma

What Imaging Should We Order?

ACR Appropriateness Criteria

Variant 1: Abnormal uterine bleeding. Initial imaging.

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

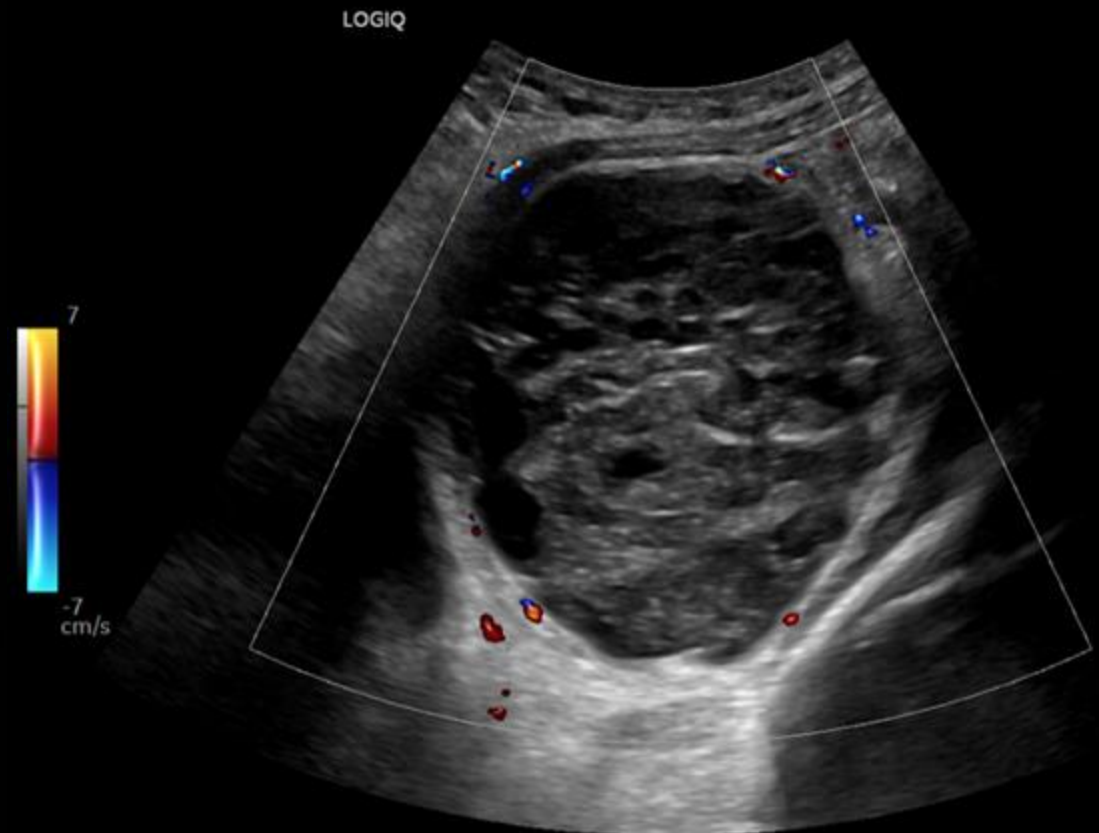
This imaging modality was ordered by the ER physician



Pelvic Ultrasound Findings (unlabeled)

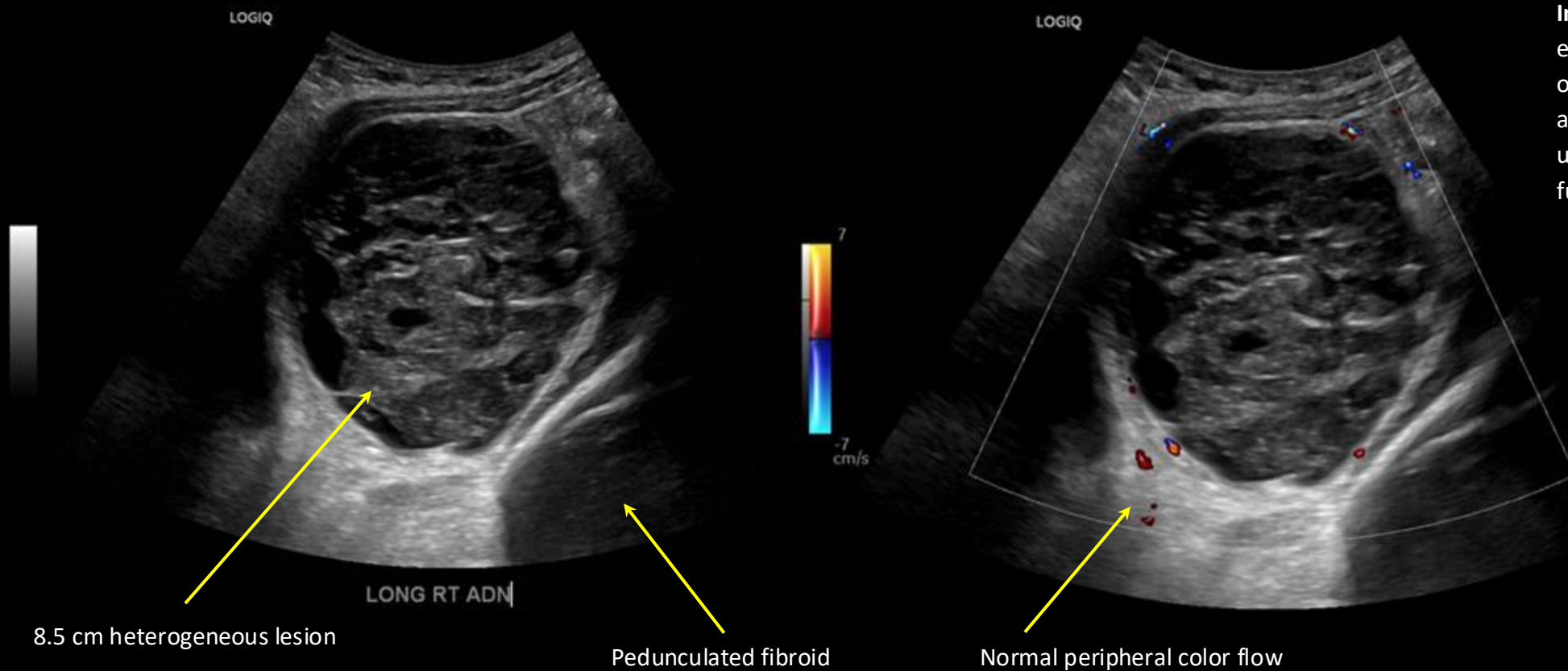


Right adnexa ultrasound



Right adnexa ultrasound
with color Doppler

Pelvic Ultrasound Findings (labeled)



Impression: 8.5 cm heterogeneous echogenicity lesion adjacent to the right ovary, with normal peripheral color flow and no internal vascularity. Pedunculated uterine fibroid. MRI recommended for further evaluation.

ACR Appropriateness Criteria

Variant 2:

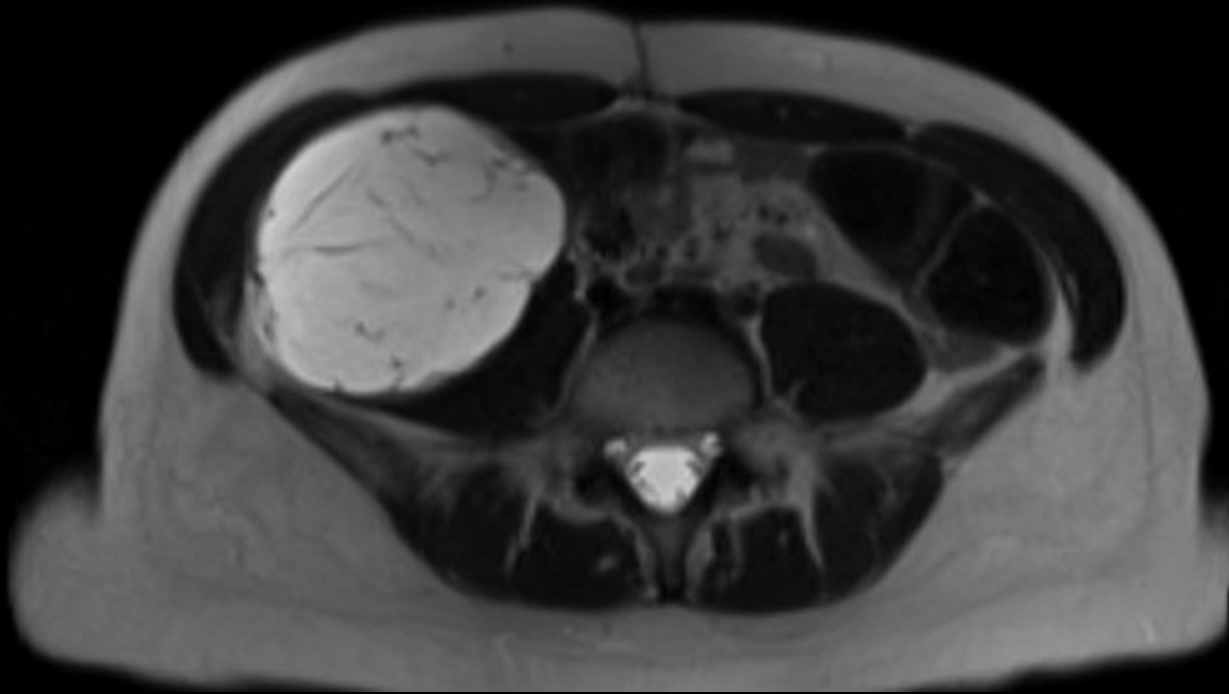
Abnormal uterine bleeding. Follow-up imaging when original ultrasound is inconclusive or further imaging characterization is needed.

Procedure	Appropriateness Category	Relative Radiation Level
US sonohysterography	Usually Appropriate	○
MRI pelvis without and with IV contrast	Usually Appropriate	○
US duplex Doppler pelvis	May Be Appropriate (Disagreement)	○
US pelvis transabdominal	May Be Appropriate (Disagreement)	○
US pelvis transvaginal	May Be Appropriate (Disagreement)	○
MRI pelvis without IV contrast	May Be Appropriate (Disagreement)	○
CT pelvis with IV contrast	Usually Not Appropriate	☼☼☼
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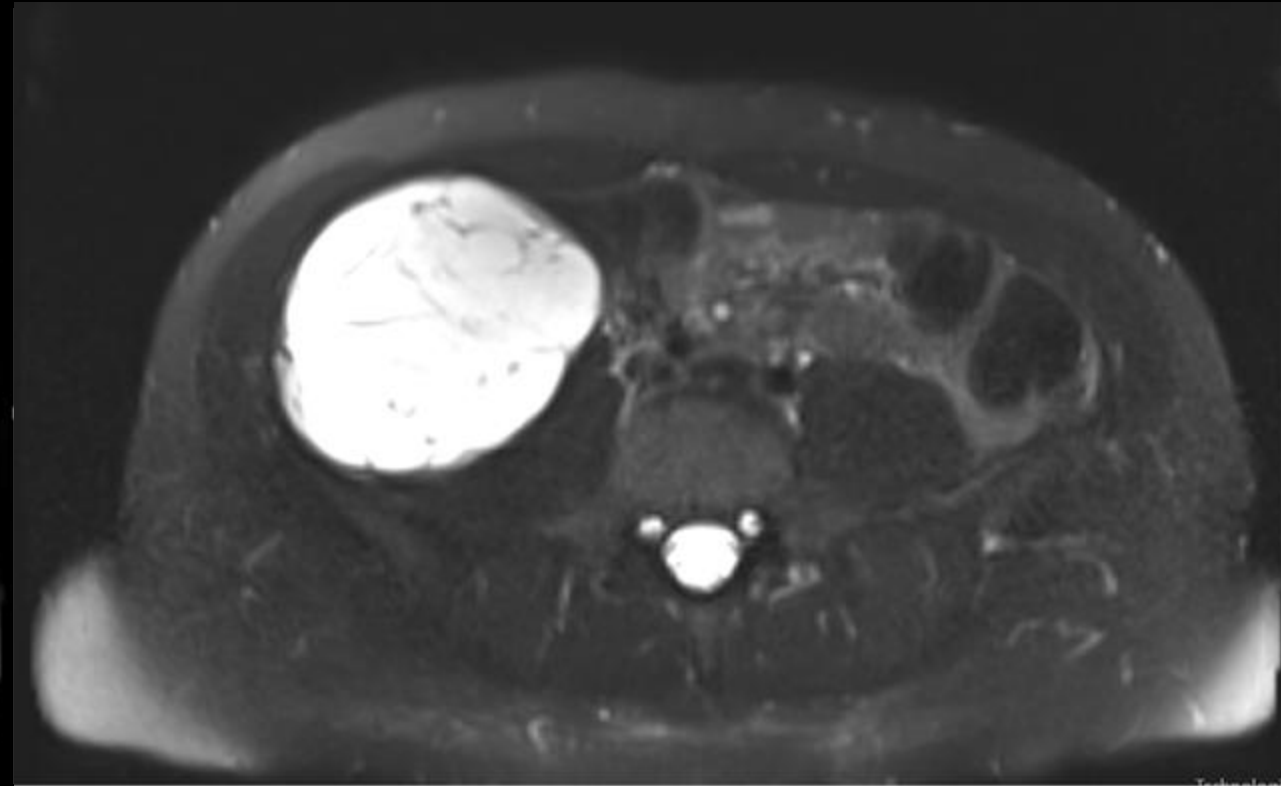
This imaging modality was ordered by the ER physician



Abdominopelvic MRI Findings (unlabeled)

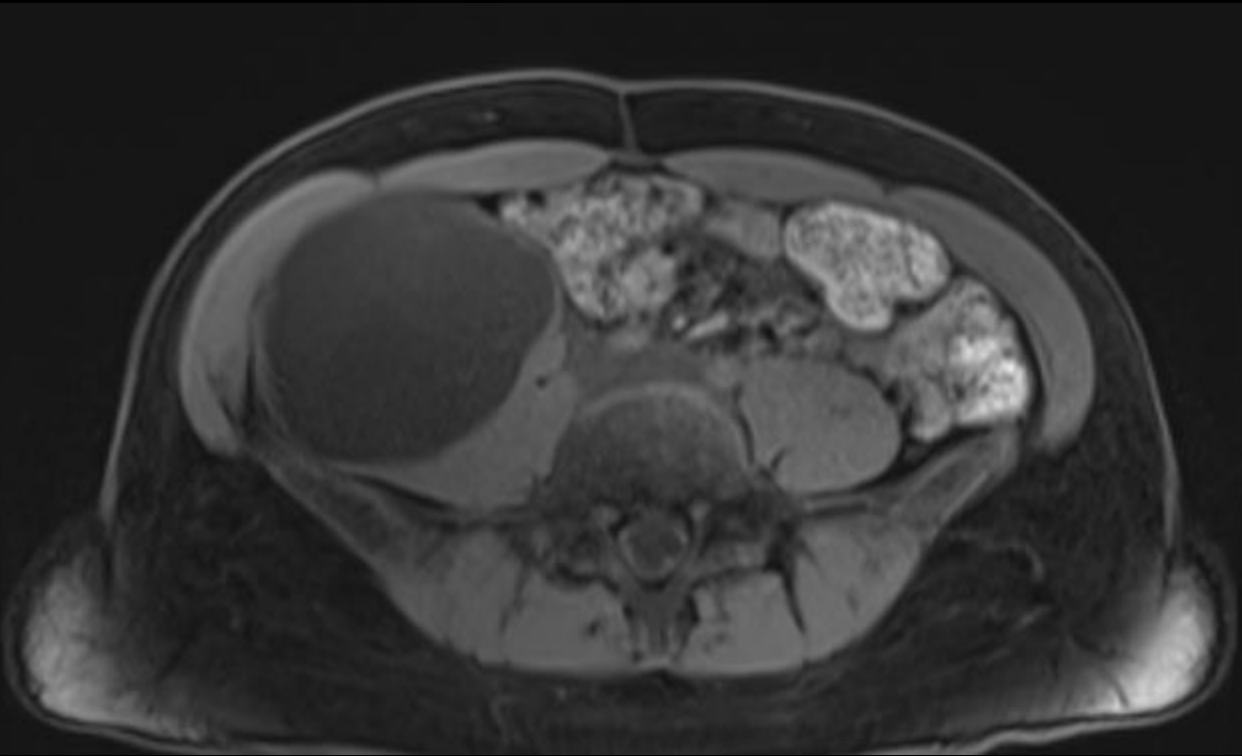


Axial T2

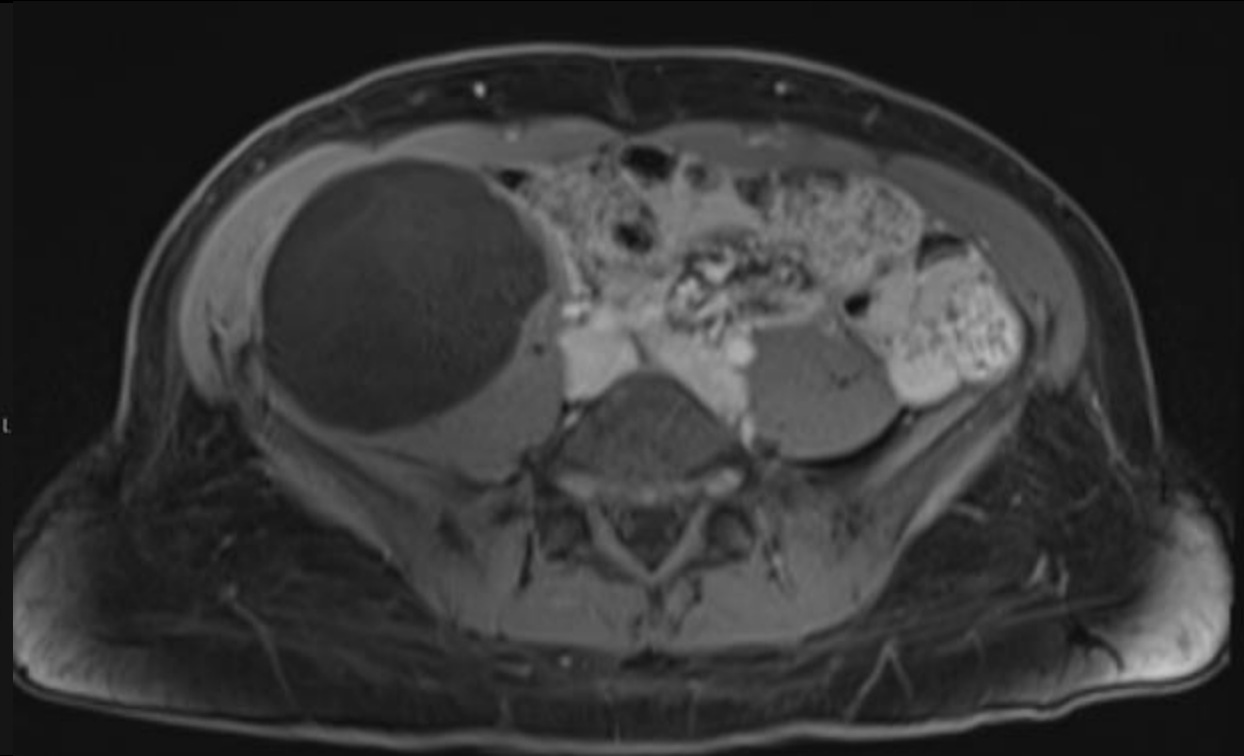


Axial T2 SPAIR (fat-saturated T2 sequence)

Abdominopelvic MRI Findings (unlabeled - cont.)



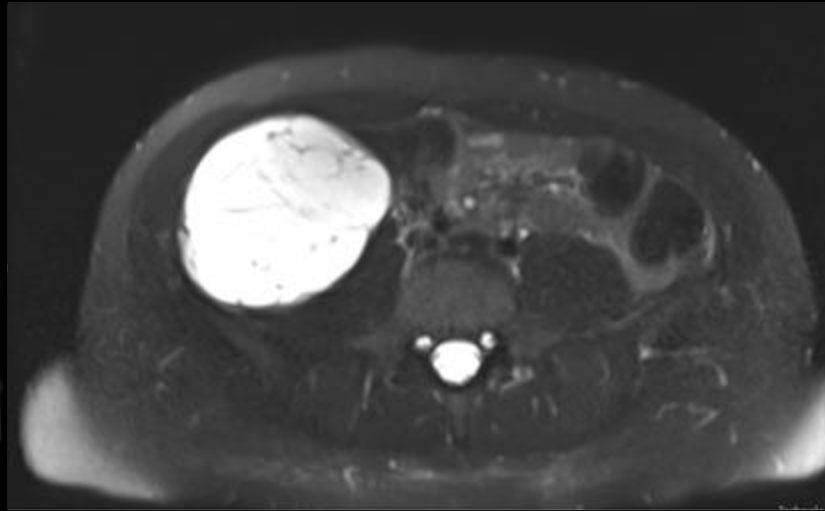
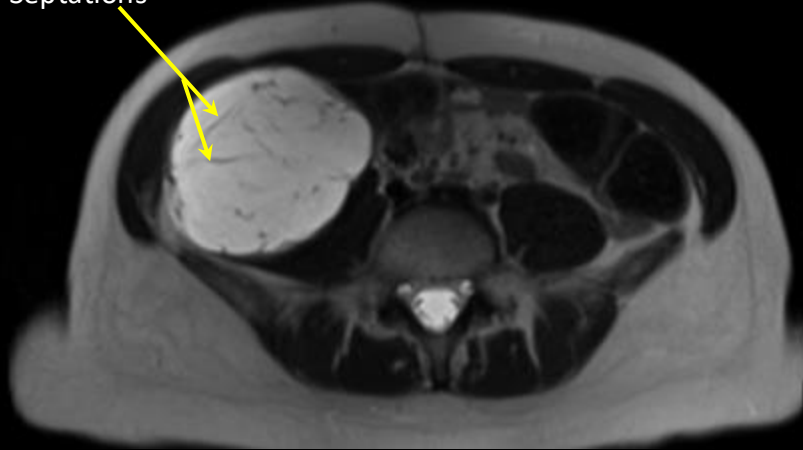
Axial T1 fat-saturated MRI, pre-contrast



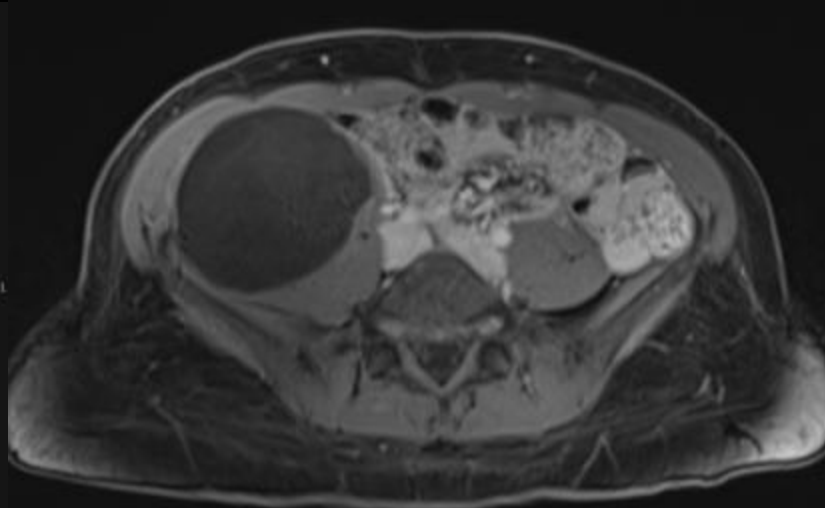
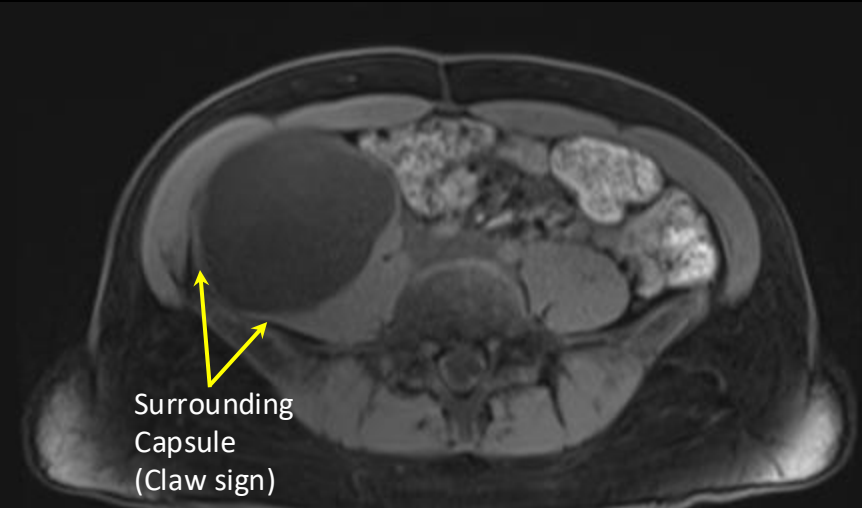
Axial T1 fat-saturated MRI, post-contrast

Abdominopelvic MRI Findings: (labeled)

Septations



Surrounding
Capsule
(Claw sign)



Impression: Multiseptated, encapsulated, T1 hypointense/T2 hyperintense lesion in the right lower quadrant without significant internal enhancement. Sharp angles on either side of the mass with normal surrounding parenchyma (claw sign) indicating retroperitoneal origin from the psoas muscle. Tissue sample and surgical consultation recommended.

Histopathological findings

Pathology: A core biopsy of the right psoas mass revealed a hypocellular myxoid neoplasm composed of bland spindle cells. No atypia or mitotic figures were identified. Skeletal muscle was not present in the specimen. The morphologic features were consistent with an intramuscular myxoma. Grossly, the biopsy yielded multiple white to clear fatty cores (0.2–1.0 cm) and 10 cc of pale pink to clear gelatinous fluid.

Final Dx:

Intramuscular myxoma of the right psoas muscle (retroperitoneal)

Case Discussion

This 36 y/o female with PMH of uterine fibroids and dysmenorrhea presented with abnormal uterine bleeding and weight gain. She was evaluated for OB GYN pathology, but was found to have a myxoma of the right psoas muscle.

Intramuscular myxomas are rare benign soft tissue tumors with a predilection for large skeletal muscles. Retroperitoneal or psoas involvement is unusual and may mimic adnexal or gynecologic masses on imaging, especially in women with concurrent uterine pathology.

The mainstay of treatment is complete surgical excision, which is usually curative. Recurrence and metastatic spread are rare. Clinical awareness of this entity is important to avoid unnecessary extensive gynecologic surgery in misdiagnosed cases.

References:

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