AMSER Case of the Month October 2025

32-year-old woman 20 weeks pregnant with right lower abdominal pain.

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Patient Presentation

- **HPI:** 32-year-old woman, G4P0030, 20 weeks pregnant with a history of endometriosis status post laparoscopy in 2023, presenting to the ED with progressive right lower quadrant pain described as sharp and stabbing, rated 7/10 in severity and worse with movement. She notes nausea, body aches, and chills, but reports she has had a cold for the past week. She denies contracts, vaginal bleeding or loss of fluid. She notes positive intermittent fetal movement. This is an IVF pregnancy with this as their third round of IVF. Her ultrasound from one week ago showed a 10cm right ovarian mass.
- **PMHx:** Endometriosis, PCOS, IVF Pregnancy, HTN, DM2
- **Vitals:** Temp: 36.4 C, Pulse: 137, Resp: 18, SpO2: 98%, BP: 128/60
- **Physical Exam:** No acute distress, abdomen is soft and tender on the right side with guarding, normoactive bowel sounds, no lower extremity edema, unlabored respirations.

Pertinent Labs

- WBC: 6.6
- HGB: 11.4 (L)
- PLT: 176
- CREATININE: 1.0
- BUN: 10
- Lactate: 1.5
- Glucose: 161 (H)

What Imaging Should We Order?

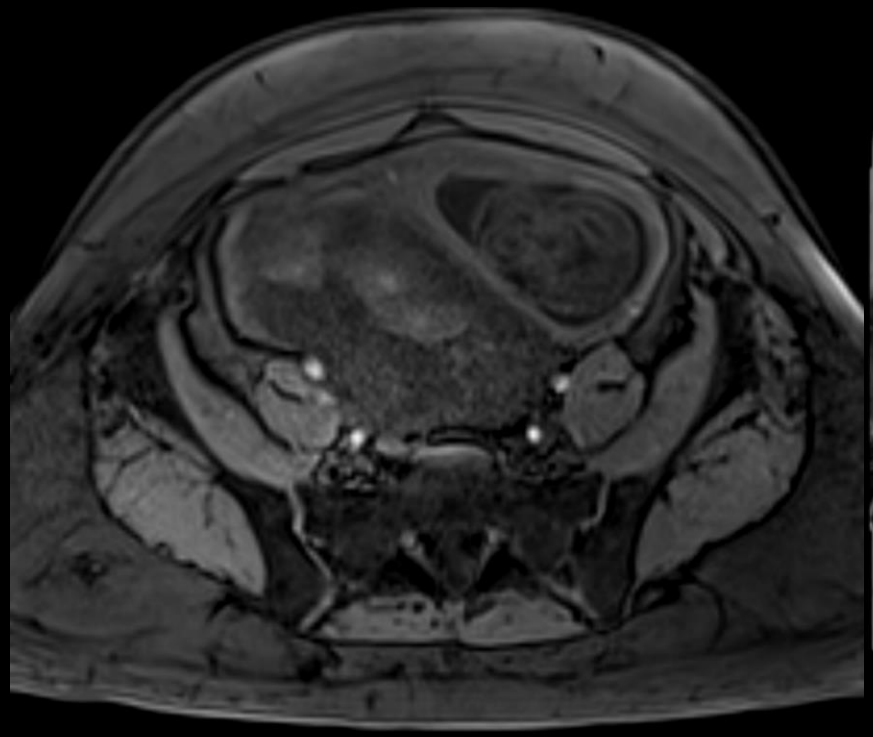
Select the applicable ACR Appropriateness Criteria

Variant 3: **Pregnant woman. Right lower quadrant pain, fever, leukocytosis. Suspected appendicitis. Initial imaging.**

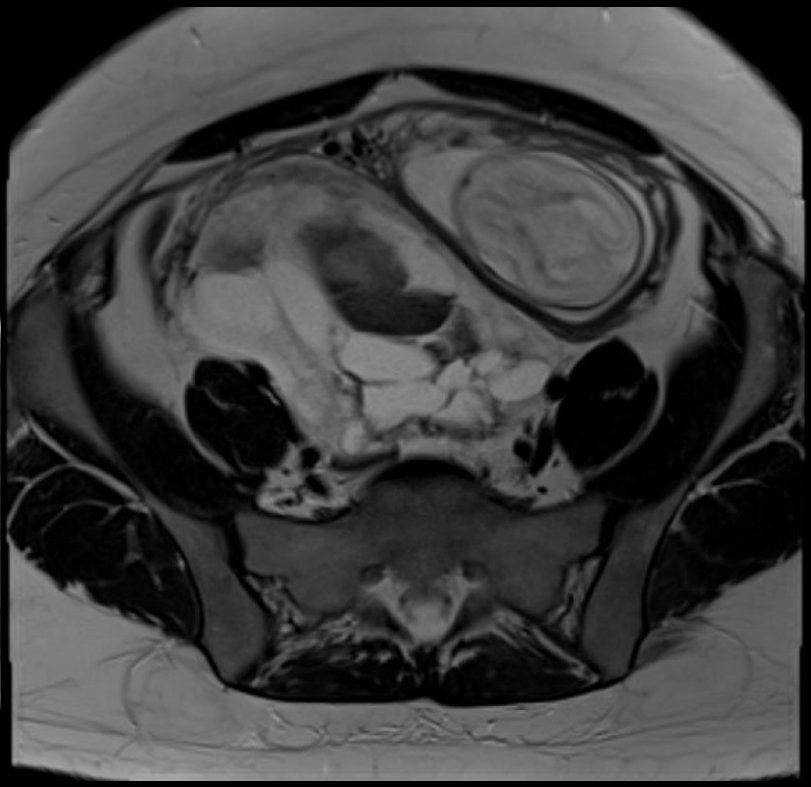
Procedure	Appropriateness Category	Relative Radiation Level
US abdomen	Usually Appropriate	O
MRI abdomen and pelvis without IV contrast	Usually Appropriate	O
US pelvis	May Be Appropriate	O
CT abdomen and pelvis with IV contrast	May Be Appropriate	☢☢☢
CT abdomen and pelvis without IV contrast	May Be Appropriate	☢☢☢
CT abdomen and pelvis without and with IV contrast	Usually Not Appropriate	☢☢☢☢
MRI abdomen and pelvis without and with IV contrast	Usually Not Appropriate	O
WBC scan abdomen and pelvis	Usually Not Appropriate	☢☢☢☢
Radiography abdomen	Usually Not Appropriate	☢☢
Fluoroscopy contrast enema	Usually Not Appropriate	☢☢☢

This imaging modality was ordered by the ER physician

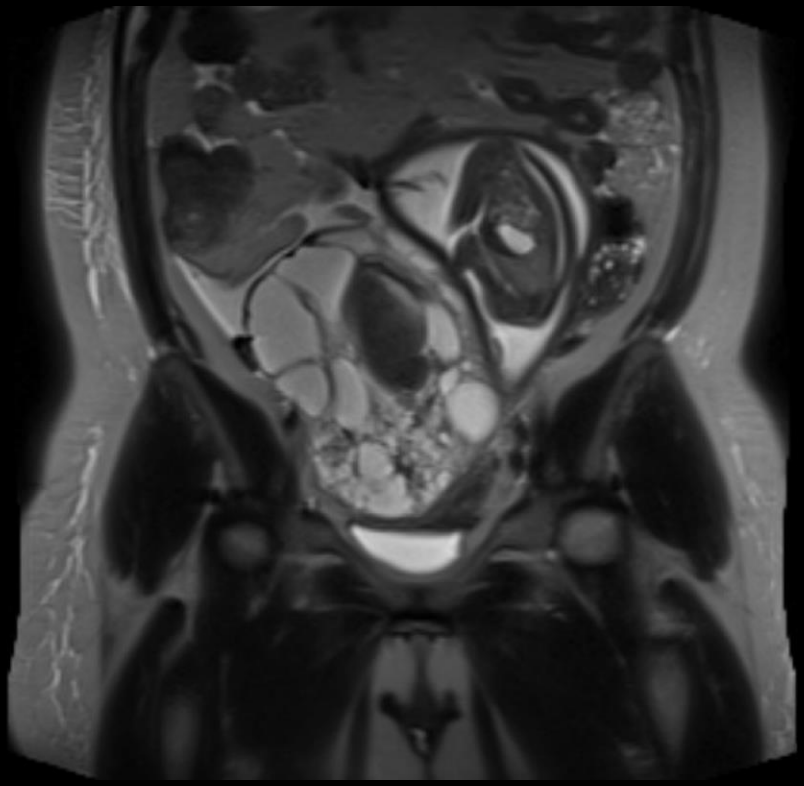
Findings (unlabeled)



Axial VIBE FS PRE



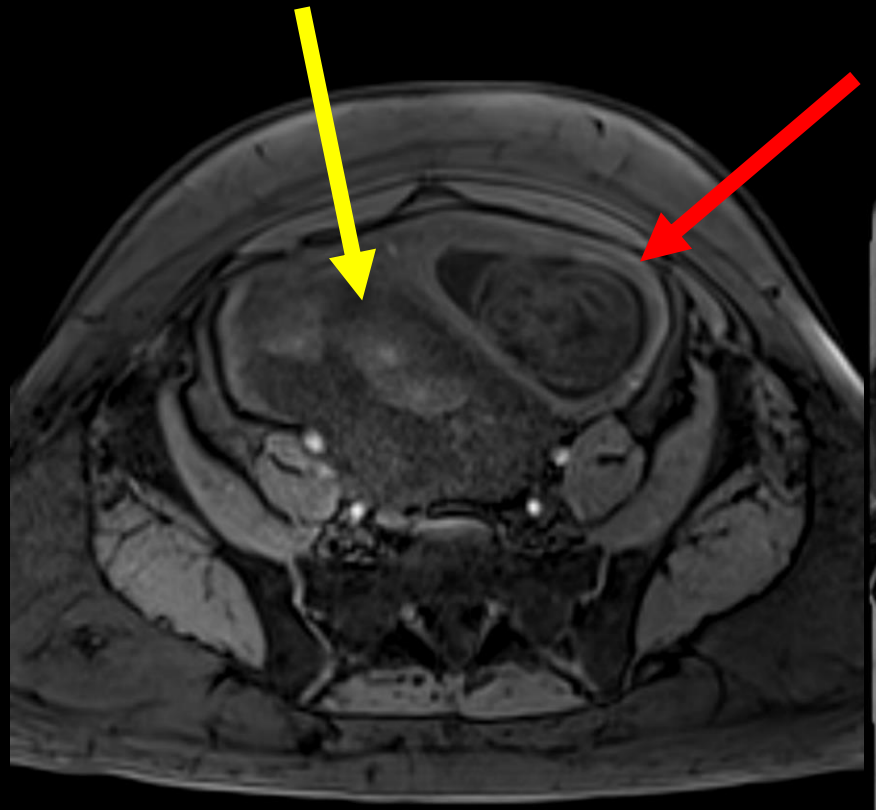
Axial T2 HASTE



Coronal T2 HASTE

Findings (labeled)

Layering T1 hyperintense components



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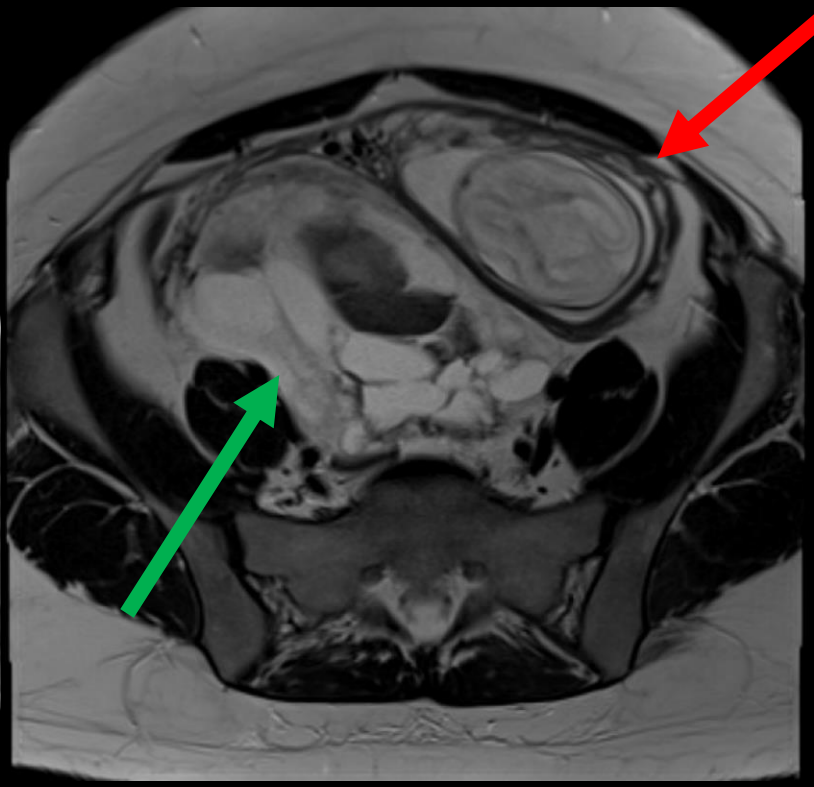
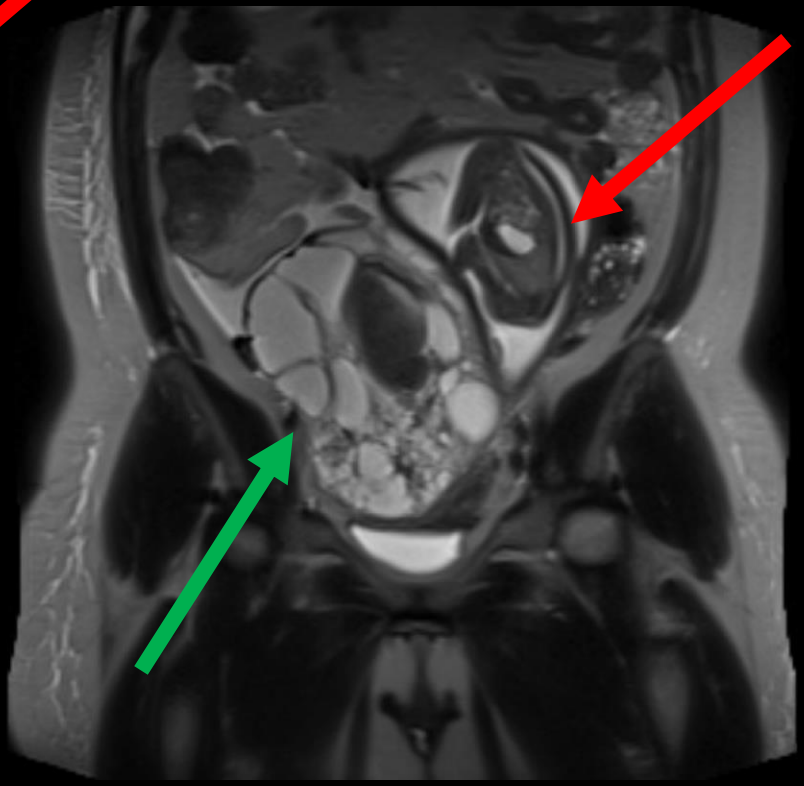


Axial T2 HASTE

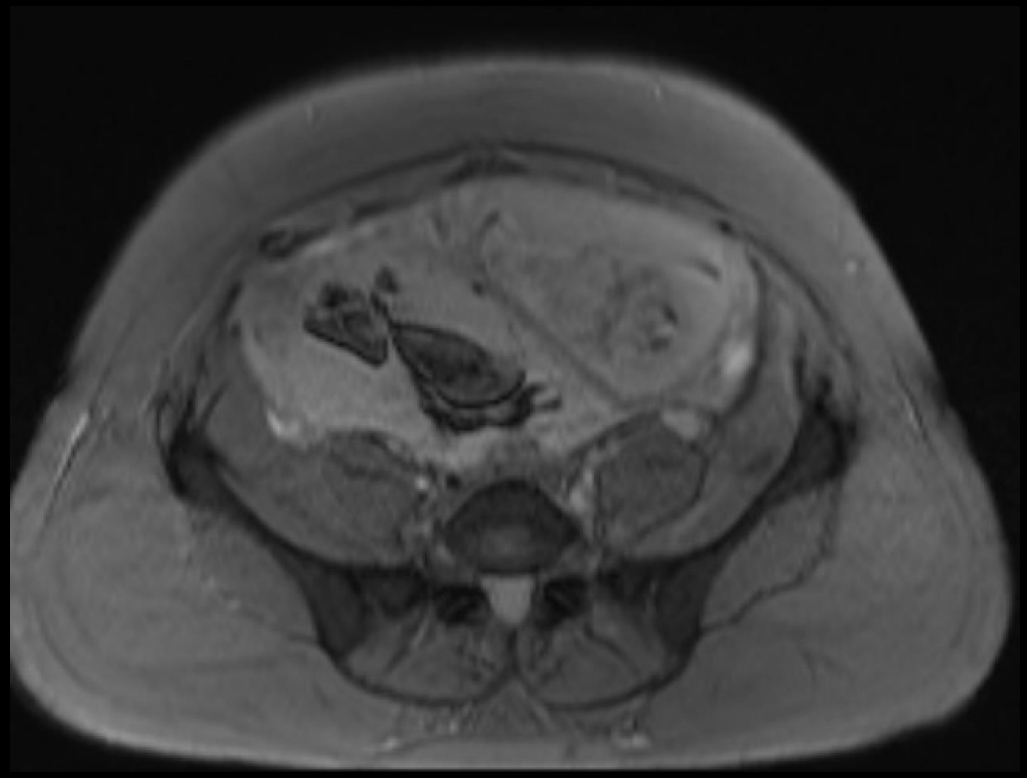
Single intrauterine gestation



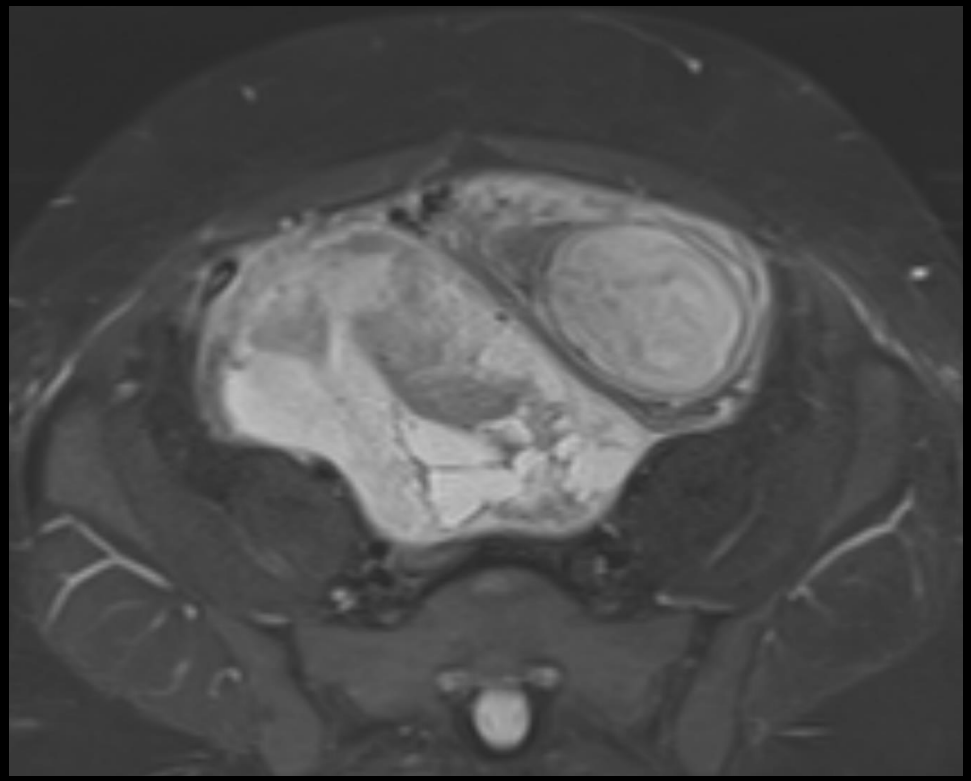
Coronal T2 HASTE

There is a large complex cystic lesion in the right adnexa. The right ovary cannot be separated from the underlying cystic lesion.

Findings: (unlabeled)



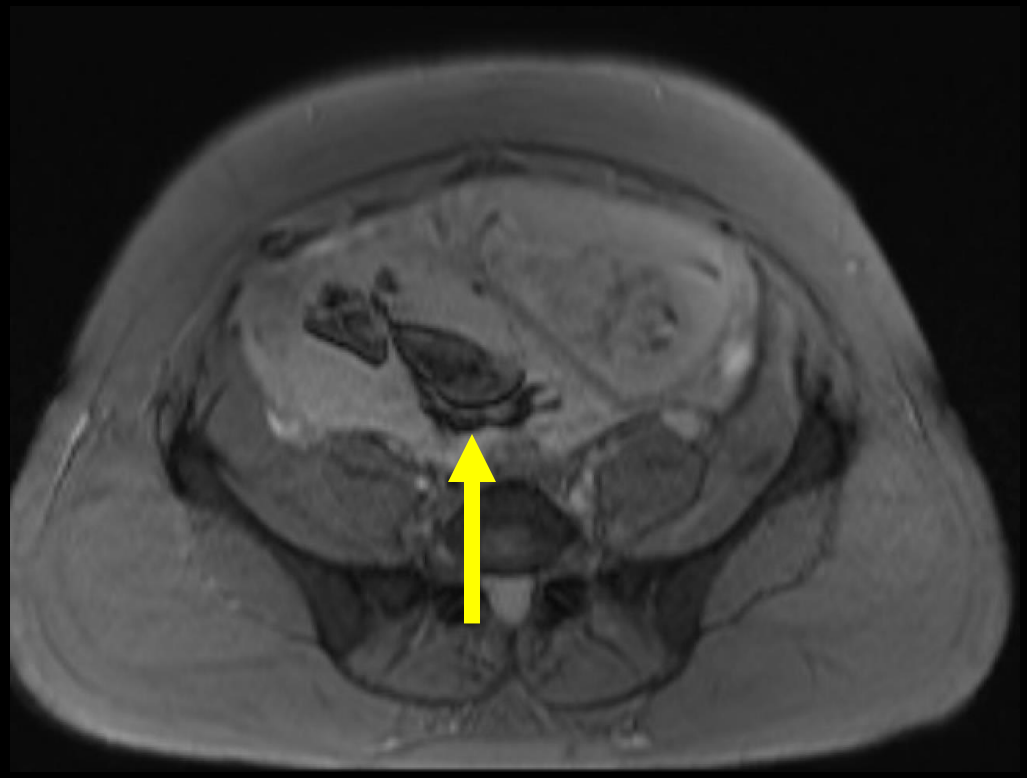
Axial T2 GRE



Axial STIR

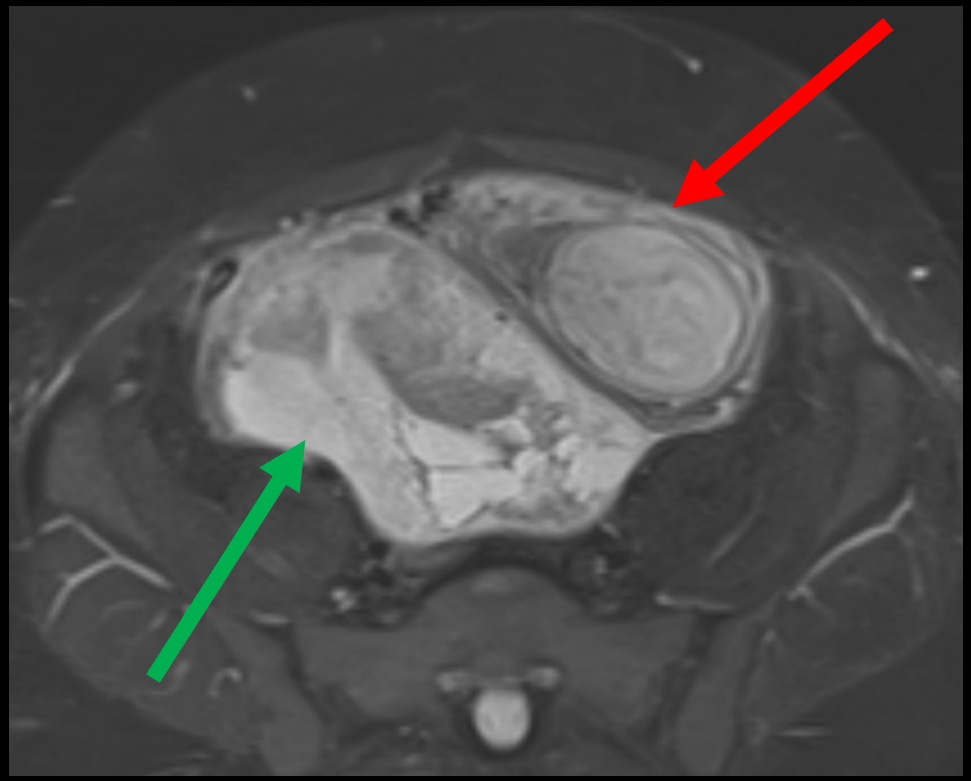
Findings: (labeled)

Single intrauterine gestation



Susceptibility artifact from blood product

Axial T2 GRE



Complex cystic adnexal mass with edema adjacent to the gravid uterus

Axial STIR

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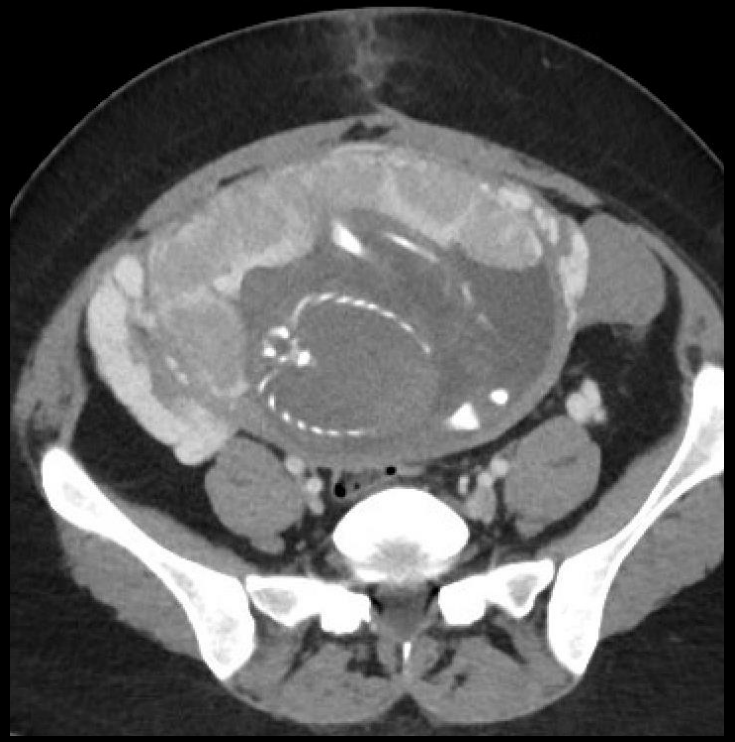
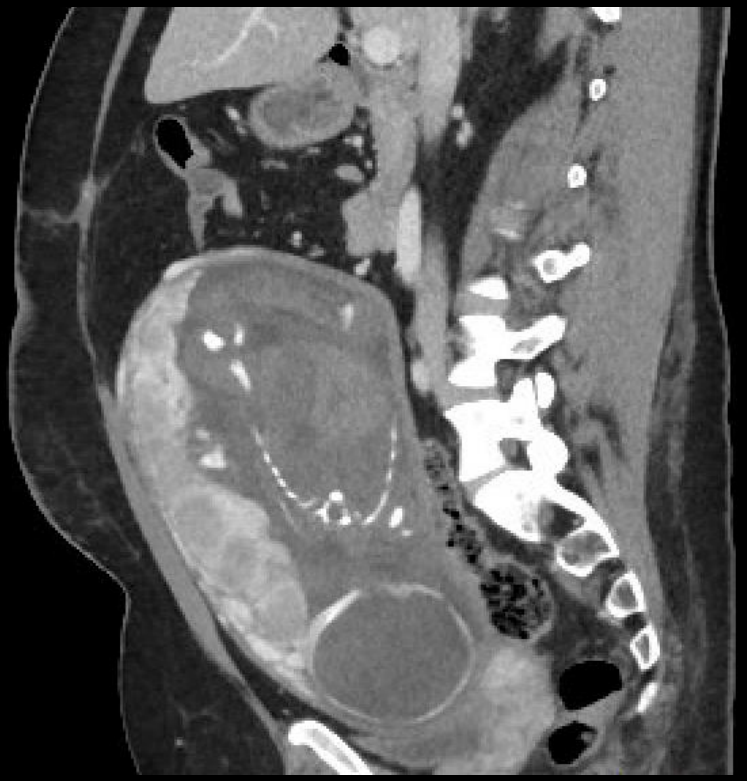
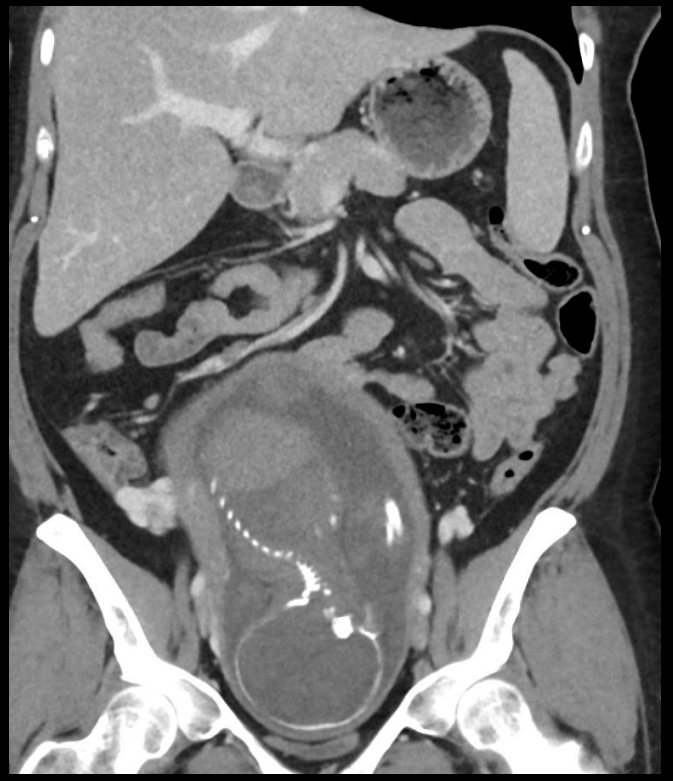
Findings: (unlabeled)



Axial contrast enhanced CT



Sagittal contrast enhanced CT



Coronal contrast enhanced CT

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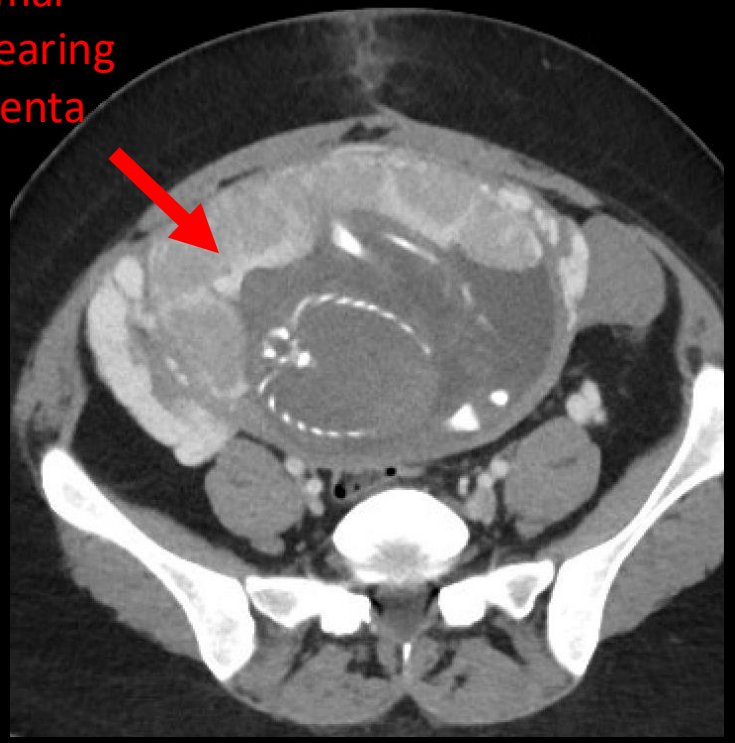
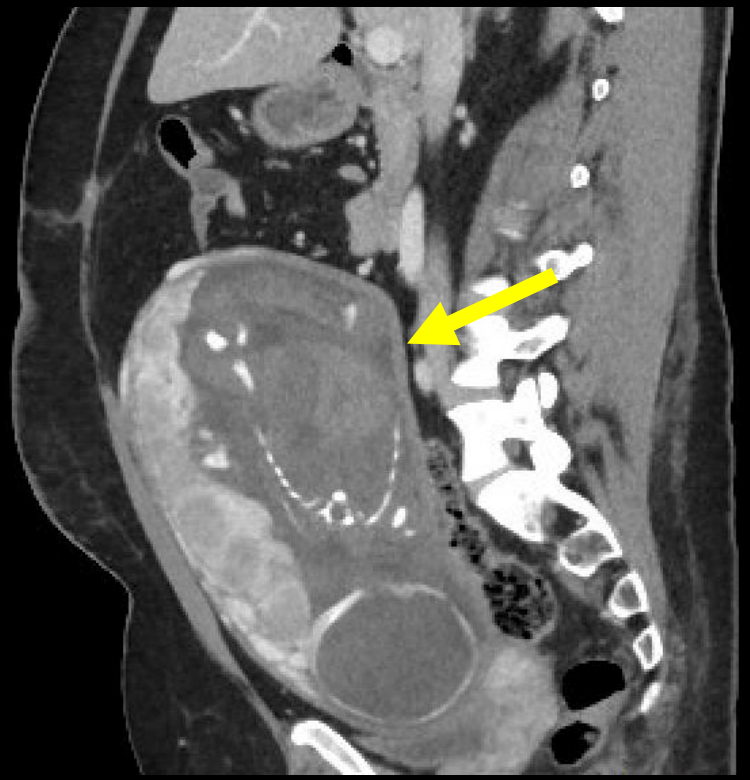
Findings: (labeled)

Post operative imaging shows no residual adnexal mass

Normal appearing placenta

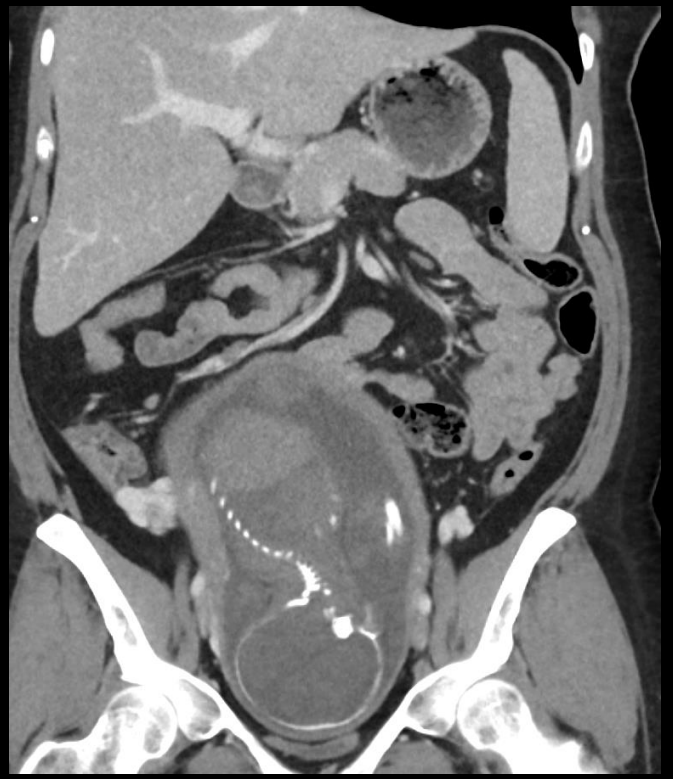


Axial contrast enhanced CT



Sagittal contrast enhanced CT

Single intrauterine gestation



Coronal contrast enhanced CT

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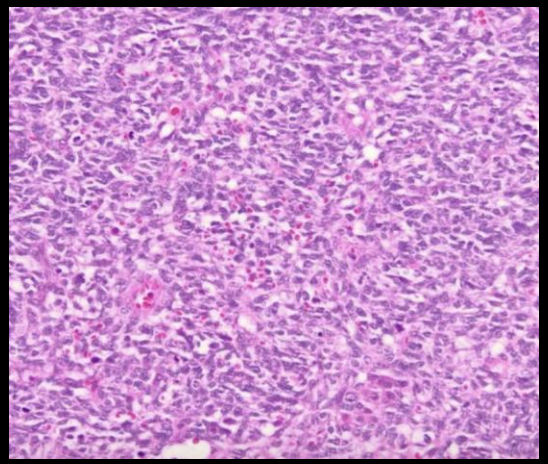
Final Dx:

Sertoli Leydig Cell Ovarian Tumor

Case Discussion: Sertoli Leydig Cell Ovarian Tumor

- Ovarian Sertoli Leydig cell tumors are rare sex cord stromal tumors that can present with androgenic or nonspecific symptoms.
- Diagnosed by excision of mass and immunohistochemical staining. Pathology showed Sertoli cells comprised of spindled cells with focal areas of cords and nests of intermediate to high-grade morphology, positive for SF-1 and cytokeratin, and positive for inhibin and calretinin in the Leydig cell component.



Mertz & Banet (2024)

Patient underwent diagnostic laparoscopy and right ovarian cystectomy. Her right ovary was replaced with a hemorrhagic, necrotic friable mass measuring 20 cm. Pathology revealed Sertoli Leydig cell tumor. She had a normal vaginal delivery and has completed 3 cycles of chemotherapy with bleomycin, etoposide and cisplatin with no recurrence.

References:

Castro, B. G. R., Souza, C. P., Andrade, C., Vieira, M. A., Andrade, D. A. P., & Reis, R. D. (2019). Ovarian Sertoli-Leydig Cell Tumors: Epidemiological, Clinical and Prognostic Factors. Rev Bras Ginecol Obstet, 41(7), 440-448. https://doi.org/10.1055/s-0039-1693056 (Tumores de celulas de Sertoli-Leydig ovarianos: fatores epidemiologicos, clinicos e prognosticos.)

Liggins, C. A., Ma, L. T., & Schlumbrecht, M. P. (2016). Sertoli-Leydig cell tumor of the ovary: A diagnostic dilemma. Gynecol Oncol Rep, 15, 16-19. https://doi.org/10.1016/j.gore.2015.12.003

Mertz, M., & Banet, N. (2024). Sertoli-Leydig cell tumors: an overview of key findings. Int J Gynecol Cancer, 34(7), 1111-1112. https://doi.org/10.1136/ijgc-2023-004780

Shanbhogue, A. K., Shanbhogue, D. K., Prasad, S. R., Surabhi, V. R., Fasih, N., & Menias, C. O. (2010). Clinical syndromes associated with ovarian neoplasms: a comprehensive review. Radiographics, 30(4), 903-919. https://doi.org/10.1148/rg.304095745