

# AMSER Case of the Month

## July 2022

25 yo female presents to ED with vaginal spotting  
bright red blood with clots

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# Patient Presentation

- 25 yo female presents to ED with vaginal spotting bright red blood with clots
- ROS: Negative other than vaginal bleeding
- PMHx: IUD in place
- PSHx: Negative
- FamilyHx: Non-contributory

# Pertinent Labs

- Beta HCG: 3,905
- CBC with differential: Normal (appropriate hematocrit, platelet)

What Imaging Should We Order?

# Select the applicable ACR Appropriateness Criteria

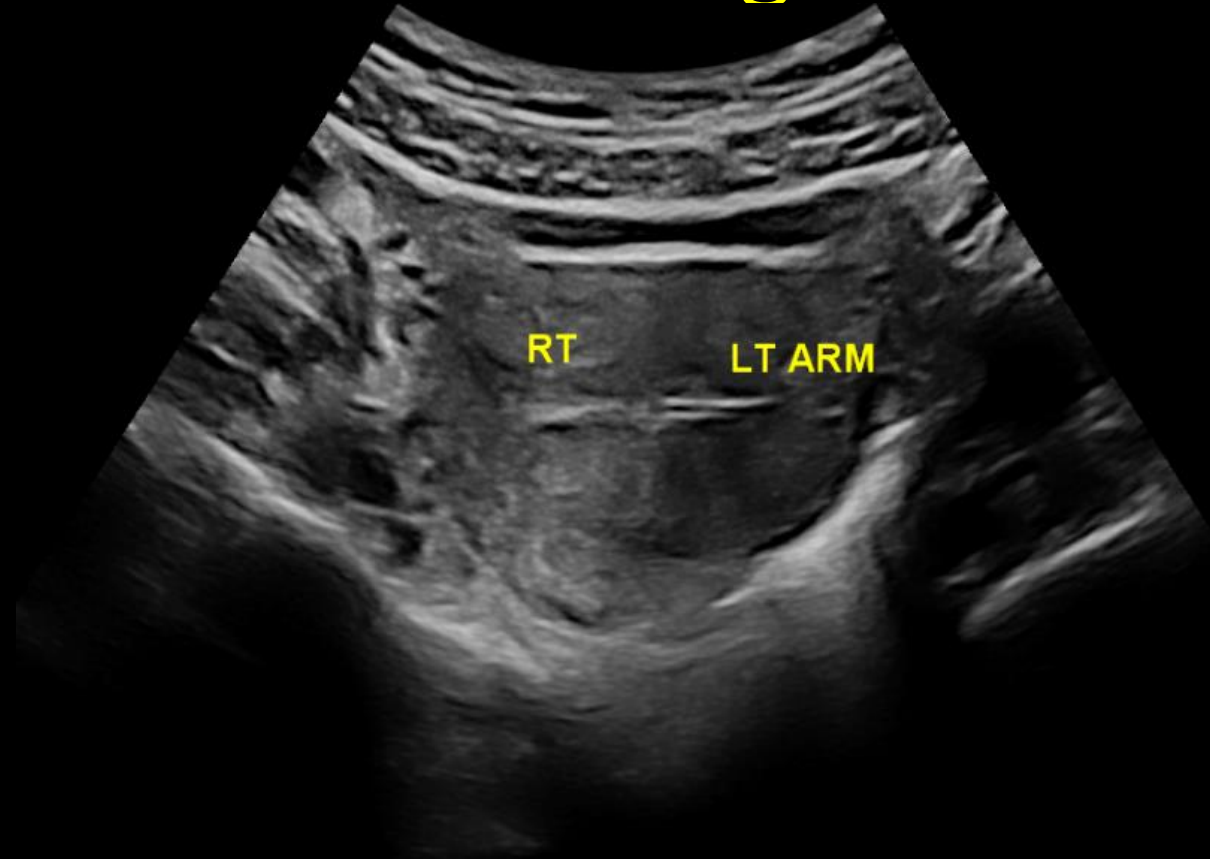
**Variant 1: Abnormal uterine bleeding. Initial imaging.**

Procedure	Appropriateness Category	Relative Radiation Level
US duplex Doppler pelvis	Usually Appropriate	0
US pelvis transabdominal	Usually Appropriate	0
US pelvis transvaginal	Usually Appropriate	0
US sonohysterography	May Be Appropriate (Disagreement)	0
MRI pelvis without and with IV contrast	Usually Not Appropriate	0
MRI pelvis without IV contrast	Usually Not Appropriate	0
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	⊕⊕⊕⊕

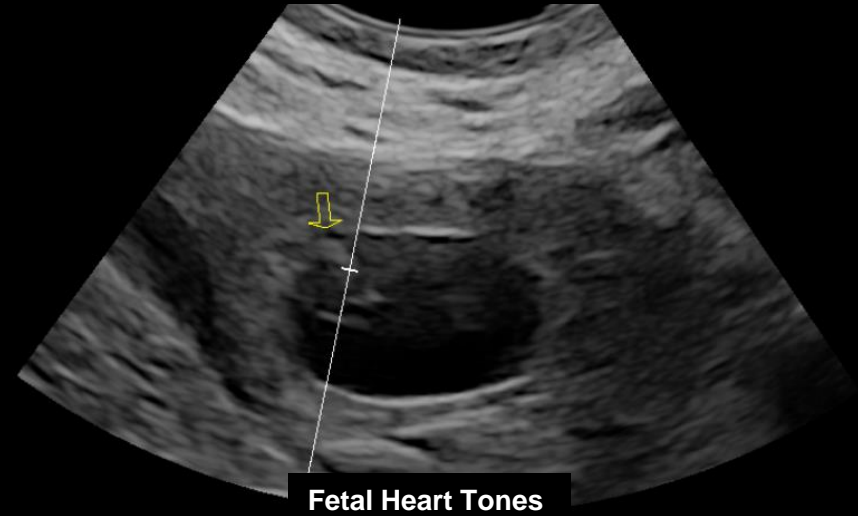
This imaging modality was ordered by the ER physician



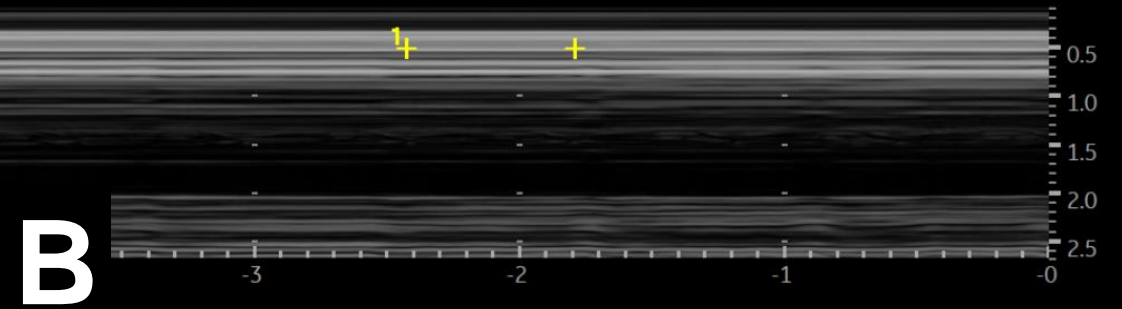
# Findings



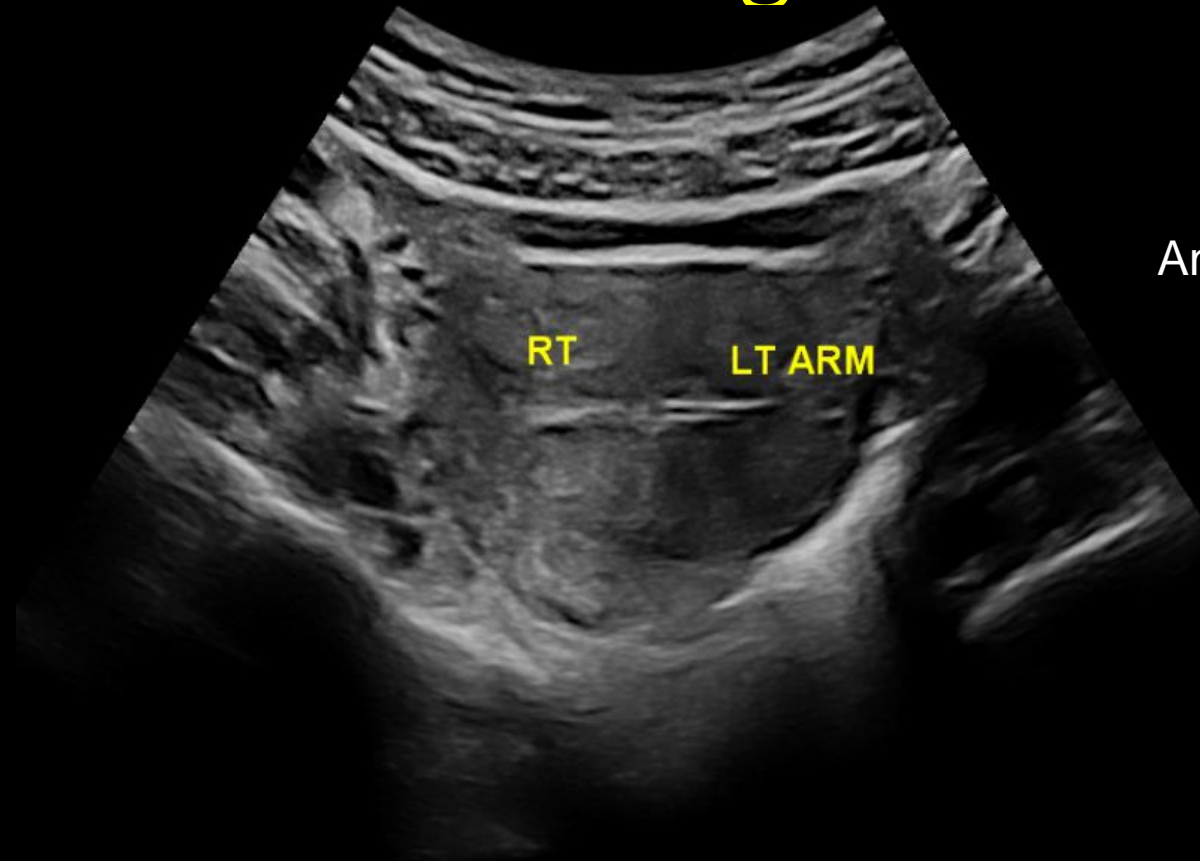
# Findings



Fetal Heart Tones



# Findings



An IUD is present

Fig 1. Transabdominal ultrasound of the uterine fundus which demonstrates the two arms of the IUD within the endometrial cavity.

# Findings

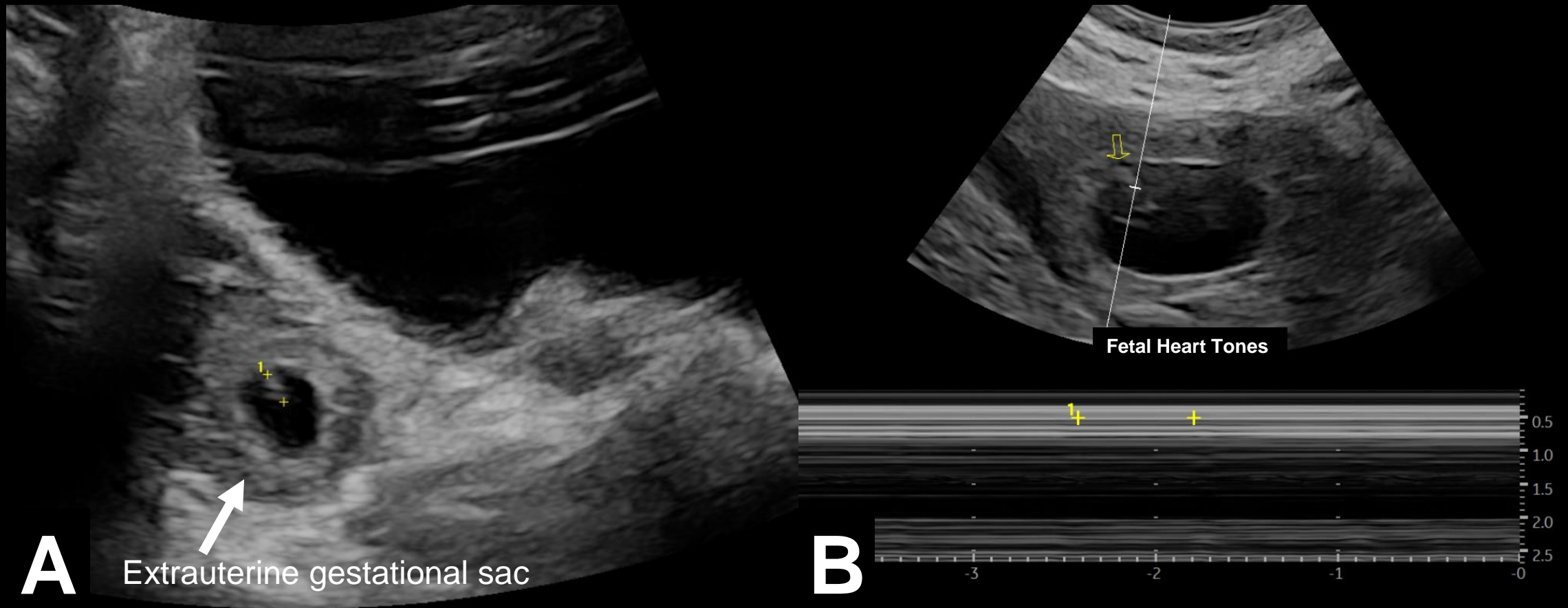


Fig 2. Transabdominal images of the extrauterine adnexal located gestational sac (A). The sac contains a fetal pole with a slow fetal heart tone appreciated on ultrasound M mode (B).



Final Dx:

Right adnexal ectopic pregnancy with a well-situated IUD in the uterine cavity

# Case Discussion

Ectopic Pregnancy		
	+ IUD	- IUD
Rates of pregnancy (per 1000 woman-years)	Levonorgestrel IUD: 0.5 Copper IUD: 0.46	6.9
Risk of ectopic pregnancy	Levonorgestrel IUD: 1 in 2 Copper IUD: 1 in 16	1 in 50

- If pregnancy does occur in patients with an IUD, there is high risk of ectopic pregnancy

# Case Discussion

Intrauterine pregnancy with an IUD compared to without an IUD

- Increased maternal risks
  - Infection: septic abortion, chorioamnionitis
- Increased fetal risks
  - Miscarriage, preterm birth, abruption

Risks associated with intrauterine pregnancy (% of pregnant women)			
	+ IUD		- IUD
	In-situ	Removed	
<b>Chorioamnionitis</b>	<b>7</b>	<b>4</b>	<b>0.7</b>
<b>Miscarriage</b>	<b>47-57</b>	<b>20-54</b>	<b>10-26</b>
<b>Preterm birth</b>	<b>18</b>	<b>14</b>	<b>7</b>

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