Adnexal mass in Postmenopausal women

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Introduction

- Excluding malignancy is the **main priority** in postmenopausal women with an adnexal mass
- Urgent conditions (eg, adnexal torsion, tubo-ovarian abscess) may also occur in postmenopausal women, and are more likely to be associated with malignancy

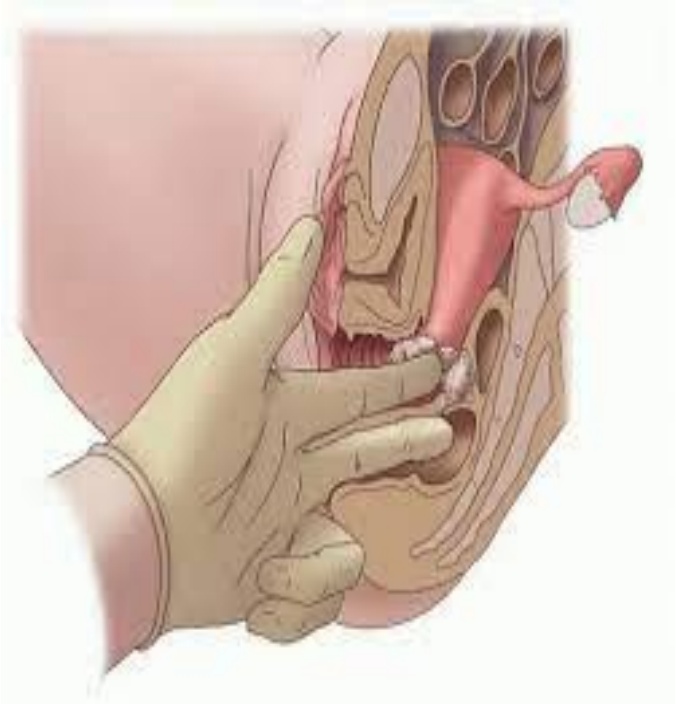
Clinical finding

- **Pelvic pain or pressure** is the most common symptom associated with an adnexal mass

- Ovaries are not usually palpable in postmenopausal women, and a finding of a **palpable ovary** in this population should prompt pelvic imaging to assess for an ovarian or tubal neoplasm

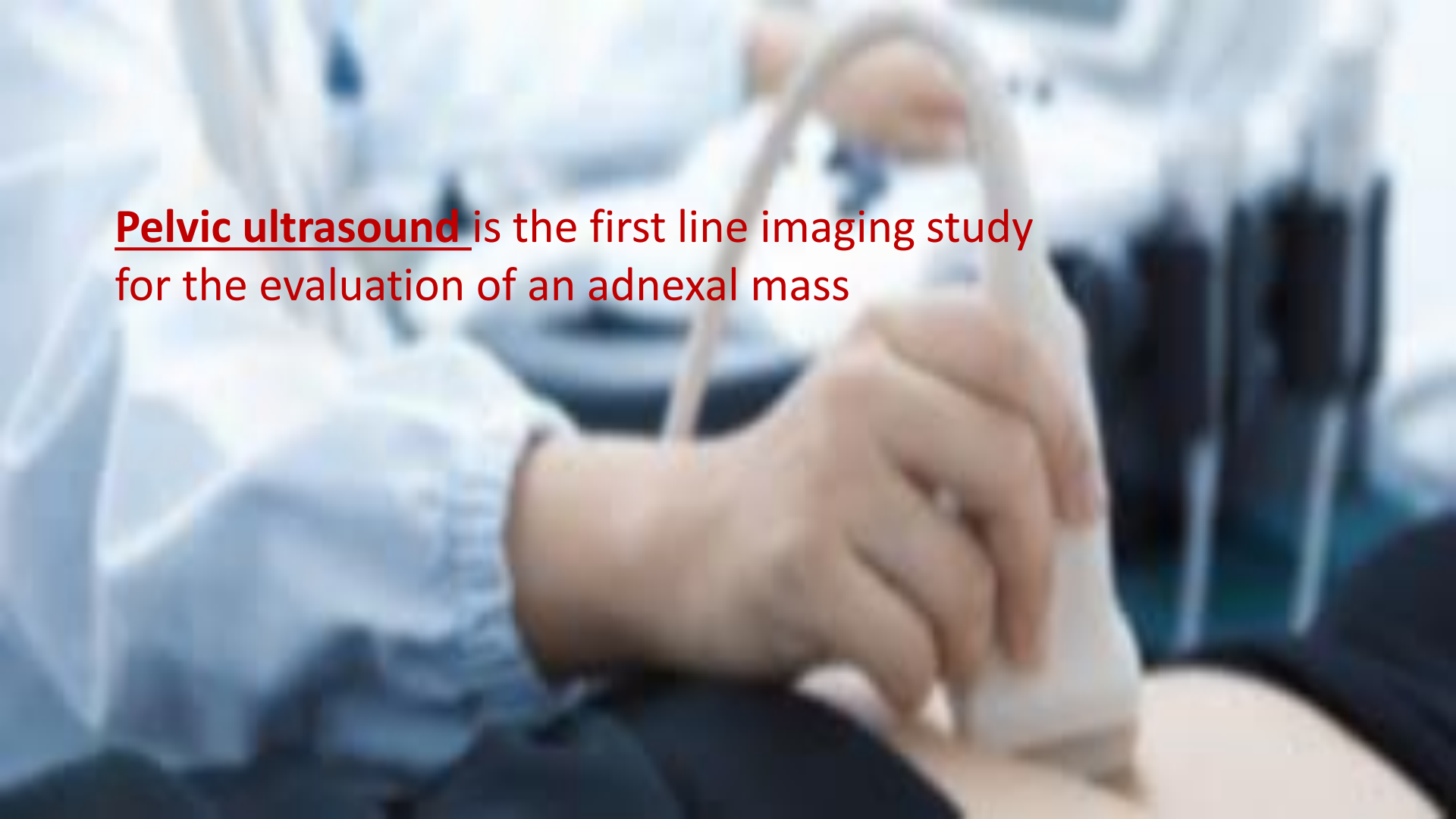
Clinical finding

- The size, consistency, and mobility of a mass, if present, should be noted
- **Rectovaginal examination** is performed to allow palpation of the ovary posteriorly



Features that are suggestive of malignancy

- Solid mass
- Irregular or fixed mass
- Posterior cul-de-sac nodularity
- Tenderness on pelvic examination
- Abdominal distention and ascites
- Abdominal mass



Pelvic ultrasound is the first line imaging study for the evaluation of an adnexal mass

Step one:
Is it a simple cyst?

Simple cysts are characterized by:

- Round or oval shape
- Anechoic fluid filling the cyst cavity
- Thin walls
- No internal flow with color Doppler imaging

Simple cyst

- Cysts greater than 1 cm in size should be documented
- Practices may choose any threshold from 3 to 5 cm as a justifiable cutoff for not following a simple cyst in a postmenopausal woman
- **The 5 cm cutoff is advised only for "exceptionally well visualized cysts."**

Simple cyst

- Initial repeat imaging is advised in 3 to 12 months, depending on the features of the cyst and the clinical concern of the patient and clinician
- Further imaging follow-up after two years should be pursued on a case-by-case basis using clinical parameters

Step two:

Are there characteristics of specific entities?

The B-features are:

(1) Unilocular cyst (any size)

(2) Solid components (not present or **less than 7 mm** in diameter)

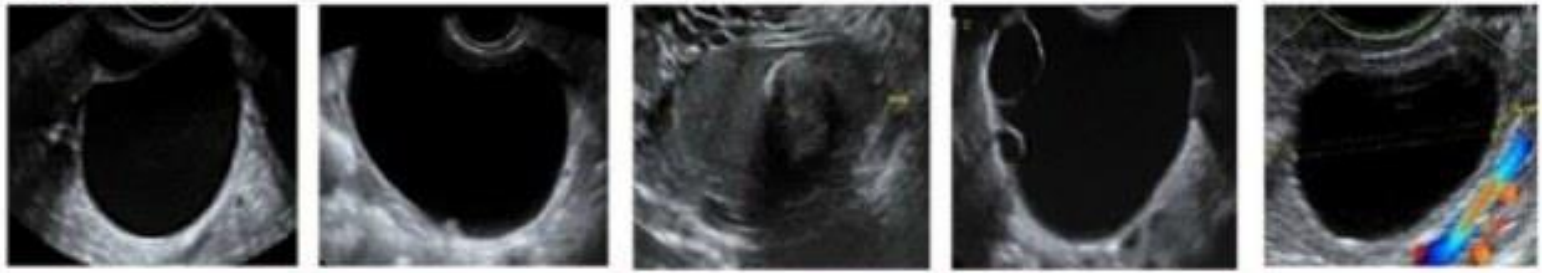
(3) Presence of acoustic shadowing

(4) Smooth multilocular cyst (**less than 10 cm** in diameter)

(5) No blood flow

The B-features :

Benign features



Unilocular cyst	Tumour with largest solid component <7 mm	Acoustic shadows	Smooth multilocular tumour <100 mm	Colour score 1 (no blood flow)

Continue…

The M-features are:

(1) Irregular solid tumor

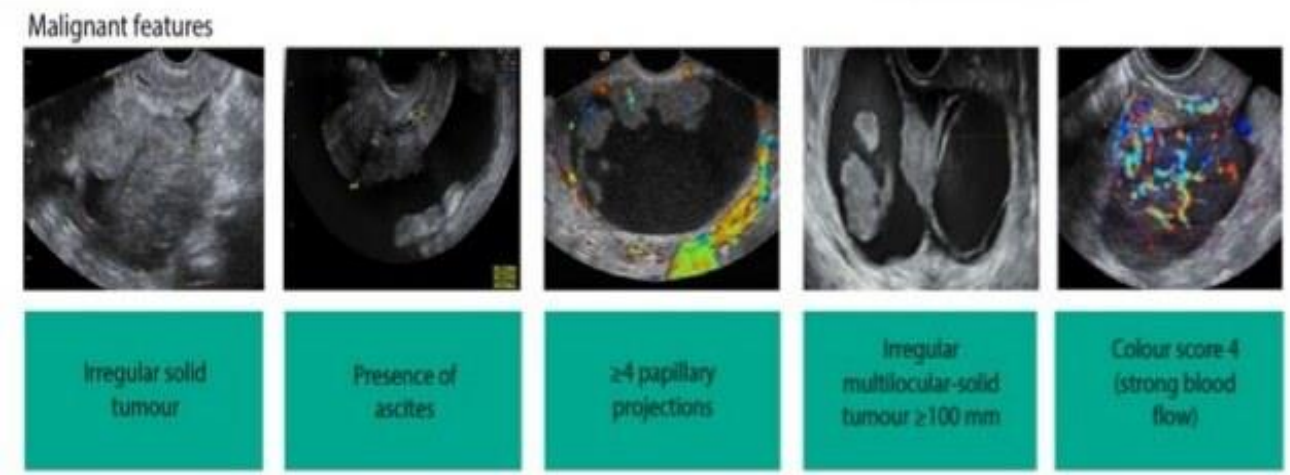
(2) Ascites

(3) At least four papillary structures

(4) Irregular solid-multilocular tumor, largest diameter over 10 cm

(5) Very strong color flow

The M-features:



Step three:
Follow-up ultrasound or additional testing?

- If the surgeon removing the tumor has oncologic training and is **able to effectively stage** ovarian cancer

- If the mass does prove to be malignant, then preoperative MRI distinction between a benign neoplasm and an ovarian malignancy may not be really needed

- CT is not a primary modality for evaluation of adnexal masses


Serum Biomarkers

Serum Biomarkers

- Measure **CA 125** in all postmenopausal women with an adnexal mass
- **Human epididymis protein 4 (HE4)** : A component of the Risk of Malignancy Algorithm (ROMA) and serum Overa tests
- HE4 levels have been reported to be **significantly lower** in premenopausal compared with postmenopausal women

Serum Biomarkers

Recommendation of 2016 ACOG :

- Referral of postmenopausal women with an adnexal mass and **CA 125 levels >35 units/mL**
- Referral of premenopausal women with an adnexal mass based on the judgment of the clinician after considering both the CA 125 level and other clinical factors

Serum biomarkers

- **CEA** may be elevated in malignancies that produce the protein, particularly mucinous cancers associated with the gastrointestinal tract or ovary
- Upper limit of normal for CEA
  - ✓ Non-Smokers:3.8 mcg/L
  - ✓ Smokers:5.5 mcg/L

Serum biomarkers

- Cancer antigen 19-9 **(CA 19-9)** is a mucin protein that may be elevated in ovarian cancer

Serum biomarkers

- **OVA1**

2 up-regulated: [CA] 125 II, Beta 2 macroglobulin

3 down-regulated: Transferrin, Transthyretin, Apolipoprotein A1

- Postmenopausal women:
  - Low probability of malignancy: OVA1 <4.4
  - High probability of malignancy: OVA1 ≥4.4

Serum biomarkers

- **Overa**:
  - ✓CA 125 II
  - ✓Human epididymis protein 4 (HE4)
  - ✓Apolipoprotein A1
  - ✓FSH
  - ✓Transferrin

- Low risk of malignancy <5.0
- High risk of malignancy ≥5.0

PLAN

Surgical exploration: most complex ovarian masses

Exceptions to:

- Benign masses , stable in size and appearance (eg, a mass with an appearance consistent with an endometrioma that was documented prior to menopause)
- Ovarian cysts with a simple sonographic appearance (unilocular, thin walls, anechoic fluid) that are <10 cm in diameter are unlikely to be malignant

Plan

- In simple cyst draw a serum CA 125, and if the result is <35 units/mL and no symptoms or risk factors associated with ovarian cancer are present

Summary

- **High risk** – Features of malignancy (ie, solid, nodular, thick septations)
- **Intermediate risk** – Not anechoic and/or unilocular, but no features of malignancy (eg, a mass with thin septations or low level echoes)
- **Low risk** – Anechoic unilocular fluid filled cysts with thin walls

Summary

- High risk: Surgical exploration
- Intermediate risk: Management based upon
  - ✓Coexisting tumor
  - ✓Marker levels
  - ✓Risk factors
  - ✓Symptoms
- Low risk: Surveillance rather than surgery

Notice

- For postmenopausal women with a mass with an intermediate or low risk appearance, surgical exploration is required if a serum tumor marker is elevated

Notice

- Surgical exploration rather than surveillance is suggested for postmenopausal women with a mass size **≥10 cm** in diameter

THANK YOU