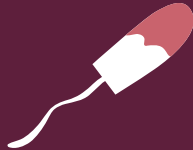
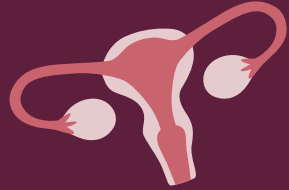
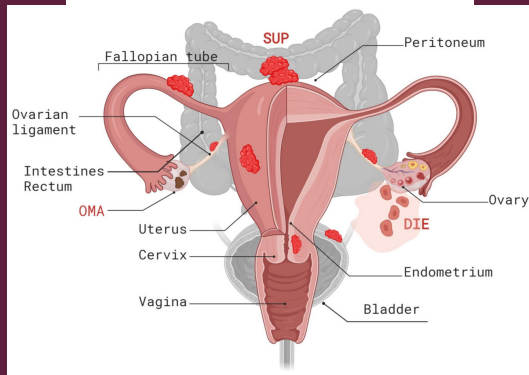
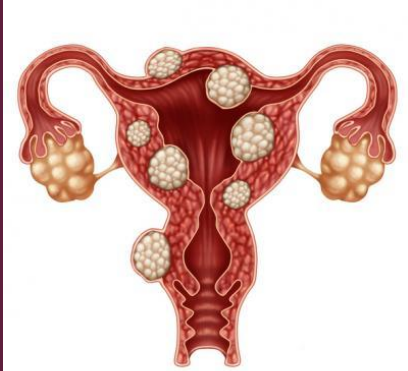


Endometriosis/ Endometrioma

**Swronima R., Musbah J., Regina Mae M.,
Shweta R.**



What is Endometriosis?



– **Functioning endometrial tissue (glandular + stromal) is present outside the uterus**

- ovary (m/c), fallopian tube, broad ligament, uterus, peritoneum, cul-de-sac, bladder
- **Ectopic tissue** responds to hormones → **cyclically bleeds and proliferates.**

Two forms:

- **diffuse** (m/c)
- **localized** (endometrioma)

Etiology of Endometriosis

1. Retrograde Menstruation (Sampson's Theory) ★

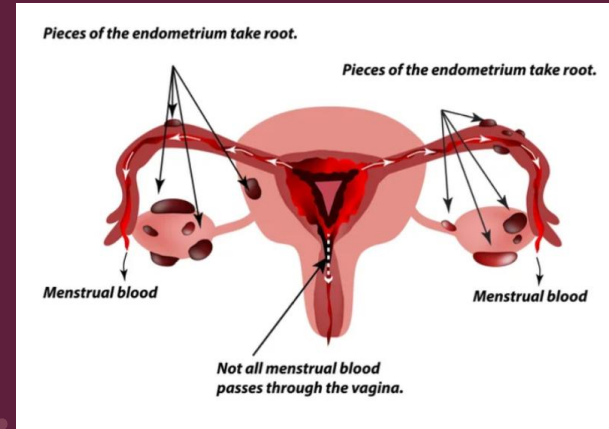
2. Coelomic Metaplasia

3. Lymphatic/Vascular Spread (Halban's Theory)

4. Embryonic Rest Theory

5. Genetic Factors

6. Environmental Triggers



What is Endometrioma?

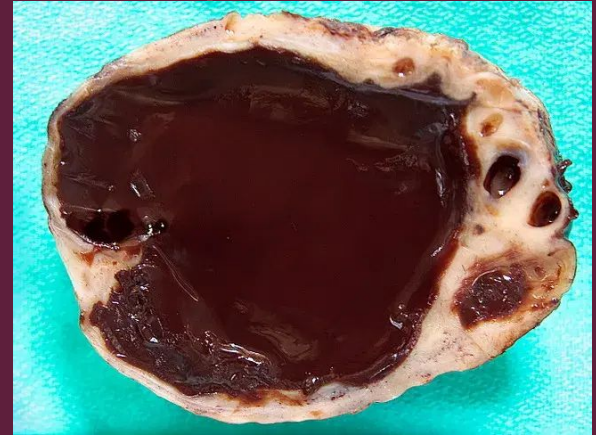
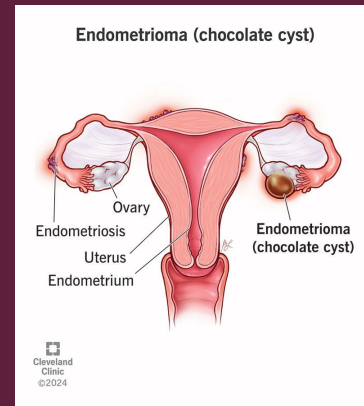
- Type of **ovarian cyst** formed when **ectopic endometrial tissue** (endometriosis) invades the ovary and bleeds cyclically, forming a **chocolate cyst**.

- **Chocolate cyst** is a cyst filled with thick, old, dark blood. It has a characteristic "**chocolate**" appearance.

- Occurs in **35–40%** of women with endometriosis.



- Causes, signs, and symptoms mirror endometriosis but are **localized to the ovary**.





Epidemiology



- ♥ - Affects **10%** of reproductive aged women
- More common in women aged **25-40 years**
- Ovarian endometriomas found in **17-44%** of women with endometriosis
- Risk factors:
 - Early menarche/Late menopause
 - Short menstrual cycles
 - Family history
 - Nulliparity

ENDOMETRIOSIS IS AN
INFLAMMATORY DISEASE
AFFECTING AROUND
190 MILLION WOMEN
AROUND THE WORLD.



**1 OUT OF 10 WOMEN WILL
EXPERIENCE
ENDOMETRIOSIS**



Signs & Symptoms



Pelvic pain
linked with
menses



Heavy
periods



Pain during or
after sex



Infertility



Pain with bowel
movement or
urination



Lower
abdominal pain



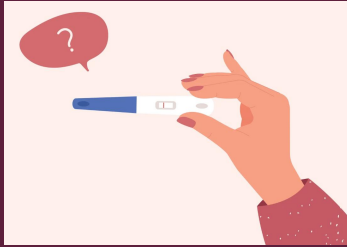
Bloating,
constipation



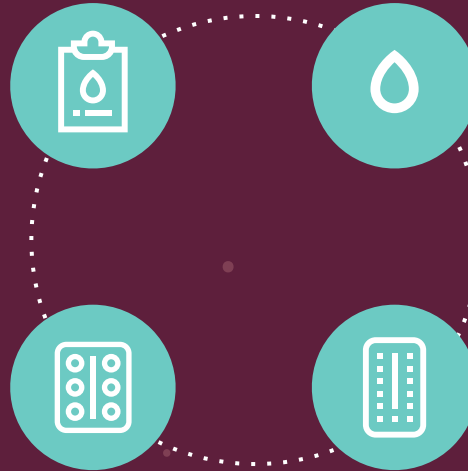
Fatigue, nausea

Complications of Endometriosis

Infertility



Chronic Pelvic Pain

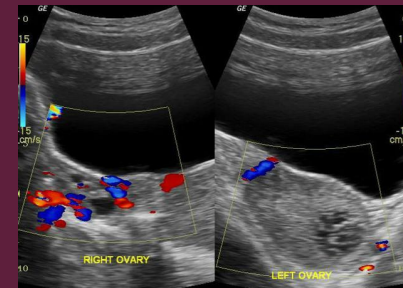


Adhesions & Fibrosis

(-) Sliding Sign



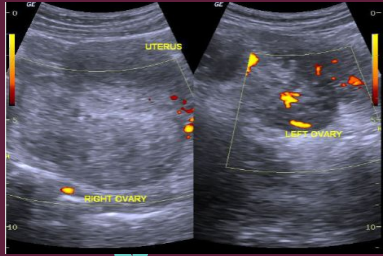
Ovarian Torsion



Complications of Endometrioma

Ovarian Torsion

Cyst weight increases mobility → twisting of ovary



Infection (rare)

May mimic tubo-ovarian abscess.
fever, Pelvic pain, leukocytosis

Cyst Rupture

Spillage of old blood into pelvis → peritonitis

Adhesion

Cyst often adheres to bowel, uterus, peritoneum

Malignancy Risk (rare)

Especially in large or long standing endometriomas; Clear Cell or Endometrioid Carcinoma

Sonographic Appearance: ♡ Endometrioma





Echogenicity: Homogeneous low-level internal echoes
"ground-glass" appearance

Texture: Uniform, no septations or solid components

Shape: Round or oval, well-defined margins

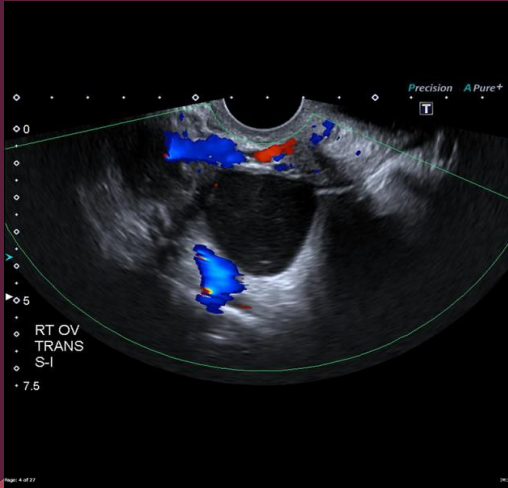
Size: Typically 2–10 cm, persistent across cycles

Walls: Smooth, regular; may show peripheral vascularity

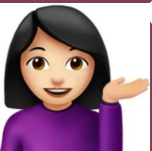
Doppler: No internal flow; peripheral flow may be seen

Mobility: Limited mobility, often fixed due to adhesions

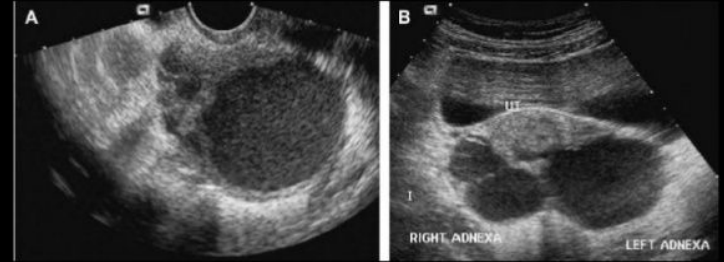
Compressibility: Non-compressible



TIP: When you see a **well-circumscribed adnexal cyst with ground-glass echoes, no internal flow, and it persists over time, think endometrioma.**



“Kissing Ovaries” Sign



Endometrioma.

(A) Transvaginal grayscale image demonstrates a left ovarian cyst with low-level echoes.

(B) Transabdominal grayscale image of the pelvis with bilateral endometriomas demonstrates the “kissing ovaries” sign. (UT, uterus.)

Aboubakr Elashar



- **“Kissing Ovaries”** = ovaries positioned closely together
- Strong marker of severe endometriosis

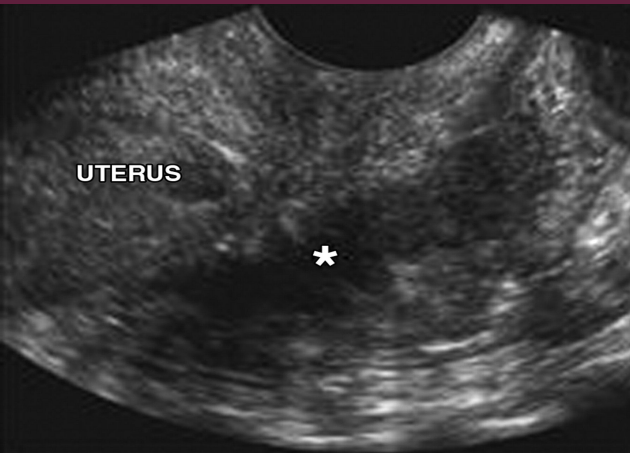
Sonographic Appearance: Endometriosis (Non-Ovarian)



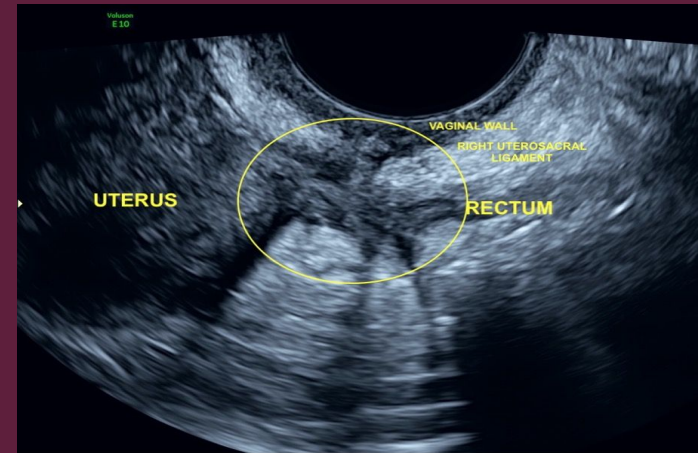
- While endometriomas are easier to spot, non-ovarian endometriosis can be subtle and harder to detect

- We can visualize:

- **Pelvic adhesions** (ovaries or uterus stuck and don't move normally)
- **Fluid in posterior cul-de-sac** may suggest endometriotic implants
- **Hypoechoic linear/nodule masses** near uterus or bowel (suggestive of deep infiltrating endometriosis)



Hypoechoic solid mass with spiculation in posterior cul-de-sac.

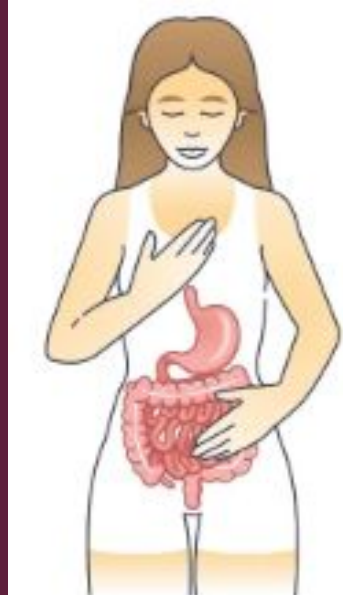


Nodule of deep endometriosis in the right uterosacral ligament.

Differential Diagnosis of Endometriosis

Irritable Bowel Syndrome (IBS)

- upper abdominal pain
- pain after eating
- mucus in bowel movement
- upset stomach



How is this similar?

- diarrhea
- cramps
- abdominal pain
- constipation
- bloating

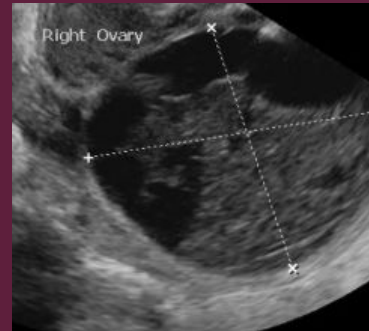
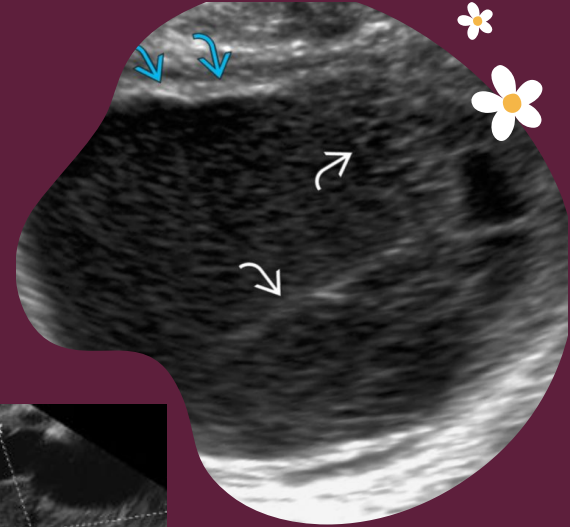
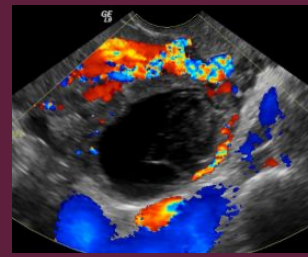


Differential Diagnosis of Endometrioma

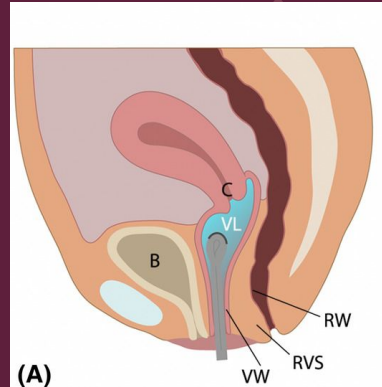
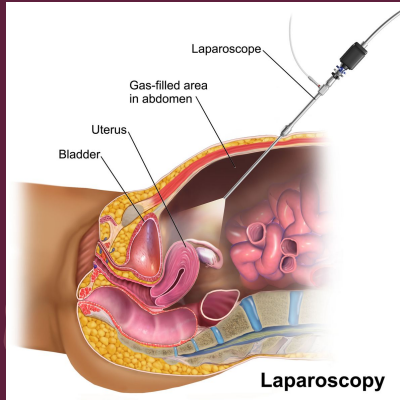
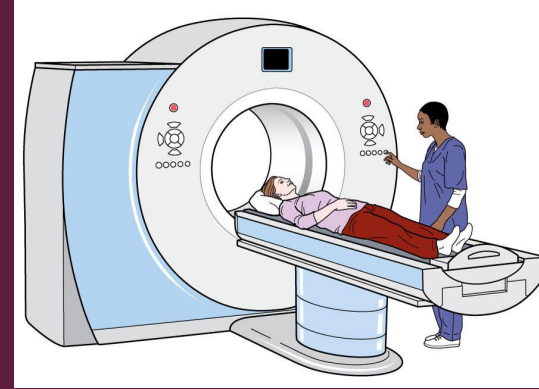


Hemorrhagic Cyst

- Hemorrhagic cysts contains blood & varies in appearance
 - usually have free-fluid in PCDS
 - reticular internal pattern**
 - usually acute, resulting from bleeding into follicular or CL cyst during menses
 - acute pain
 - resolve within a few menstrual cycles



Other Imaging Modalities



- MRI
- CT SCAN
- LAPAROSCOPY ★
- SONOVAGINOGRAPHY
- RECTAL WATER CONTRAST TVUS

TREATMENT

Step 1: Assess Symptoms & Goals

- Pain only?
- Infertility?
- Desire for pregnancy now or later?

Step 2: Medical Treatment (if no pregnancy desire)

- NSAIDs → for pain
- Hormonal suppression:
 - OCPs
 - Progestins
 - GnRH agonists/antagonists
 - LNG-IUD

Step 3: Consider Surgery

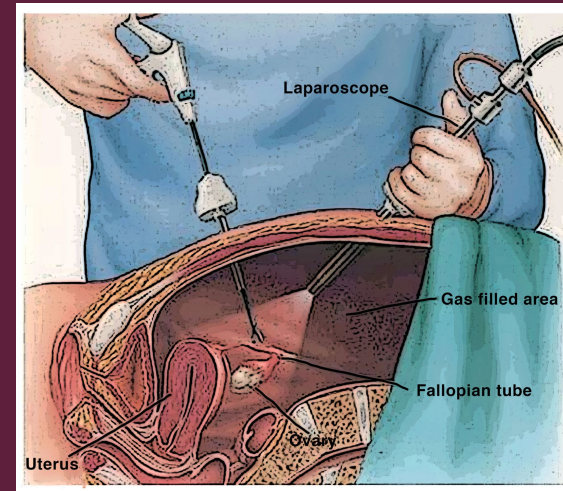
- If medical therapy fails
- If severe symptoms
- If endometrioma ≥ 4 cm
- Laparoscopy → diagnose + treat

Step 4: Fertility Planning

- Surgery for minimal/moderate disease
- IVF for advanced disease or failed surgery

Step 5: Definitive Surgery (no fertility desire)

- Hysterectomy + BSO → severe, recurrent, or post-menopausal cases



TREATMENT SPECIFIC TO ENDOMETRIOMA

- If small (<4 cm) & asymptomatic

- Observation
- Hormonal suppression to prevent growth

- If symptomatic or >4 cm

- **Laparoscopic cyst removal** → preferred surgical option
- Avoid simple drainage → high recurrence risk

- If infertility

- Remove cyst before IVF (especially if >4 cm)
- Consider IVF for moderate/severe disease

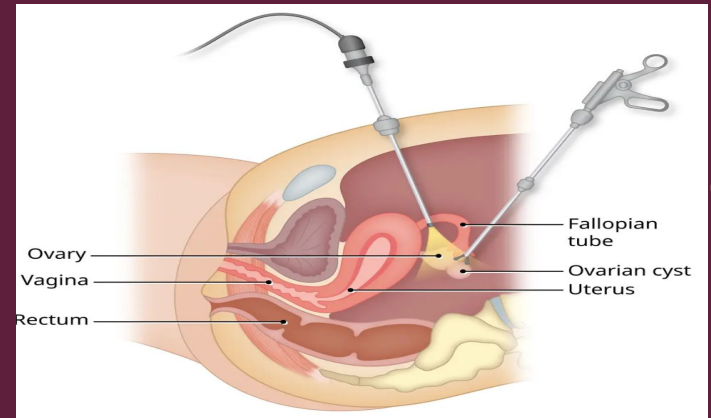


- After surgery

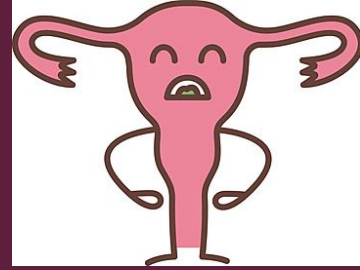
- Hormonal therapy to reduce recurrence

- If no fertility desire

- Consider definitive surgery (hysterectomy + BSO)



PROGNOSIS



- **Endometriosis:** Chronic, estrogen-dependent; recurrence common after conservative therapy; fertility often reduced.
- **Endometrioma:** Chronic ovarian manifestation; recurrence 20–40% after surgery; may impair ovarian reserve; malignant transformation rare (<1%).



References

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