



PIPADOR REVISION

MRCOG Part 1 Revision Notes

The Broad Ligament

ANATOMY • LECTURE 10

VISUAL EXAMINATION REVISION NOTES

2026 Edition

MRCOG Part 1 Revision Notes

Lecture 10: The Broad Ligament

Anatomy • Visual revision edition

COLOUR CODE USED THROUGHOUT THESE NOTES

MESOSALPINX	MESOVARIUM	MESOMETRIUM	UTERINE A.	URETER	WOLFFIAN REMNANTS	IP LIGAMENT
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LEARNING OBJECTIVES — tick off as you go

- ☐ Describe the broad ligament as a double peritoneal fold.
- ☐ Identify its three components (mesometrium, mesosalpinx, mesovarium).
- ☐ List the contents of the broad ligament.
- ☐ Describe the relations of structures within it.
- ☐ Recognise embryological remnants (epoophoron, paroophoron, Gartner's duct).
- ☐ Apply broad ligament anatomy to surgery and pathology.

1 Overview

IN ONE LINE: A double sheet of peritoneum hung over the uterus, tubes and ovaries — from the side of the uterus to the pelvic wall. NOT a true ligament.

- **Anterior and posterior leaves** enclose connective tissue (**parametrium**) and many structures.
- Continuous above with the peritoneum over the tube; below with the pelvic floor peritoneum.
- Provides **little structural support**.

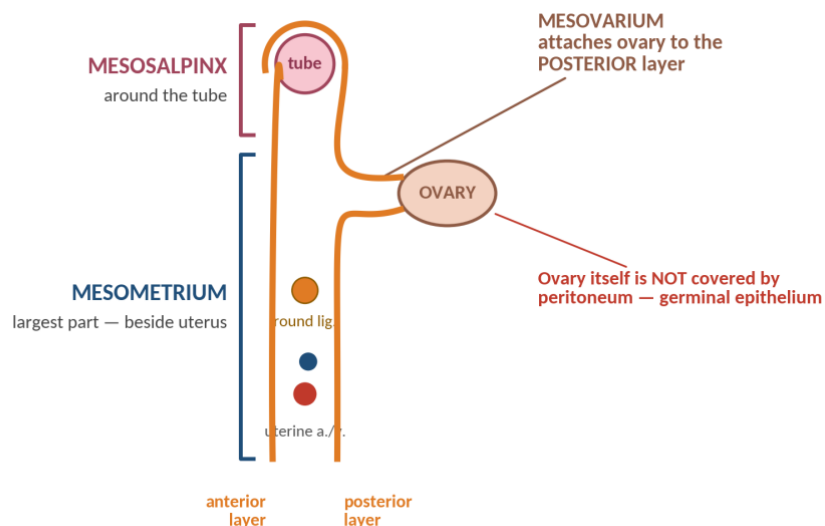


Figure 1. Sagittal section: two leaves, with the ovary hanging off the back (from Lecture 6).

2 Three Components

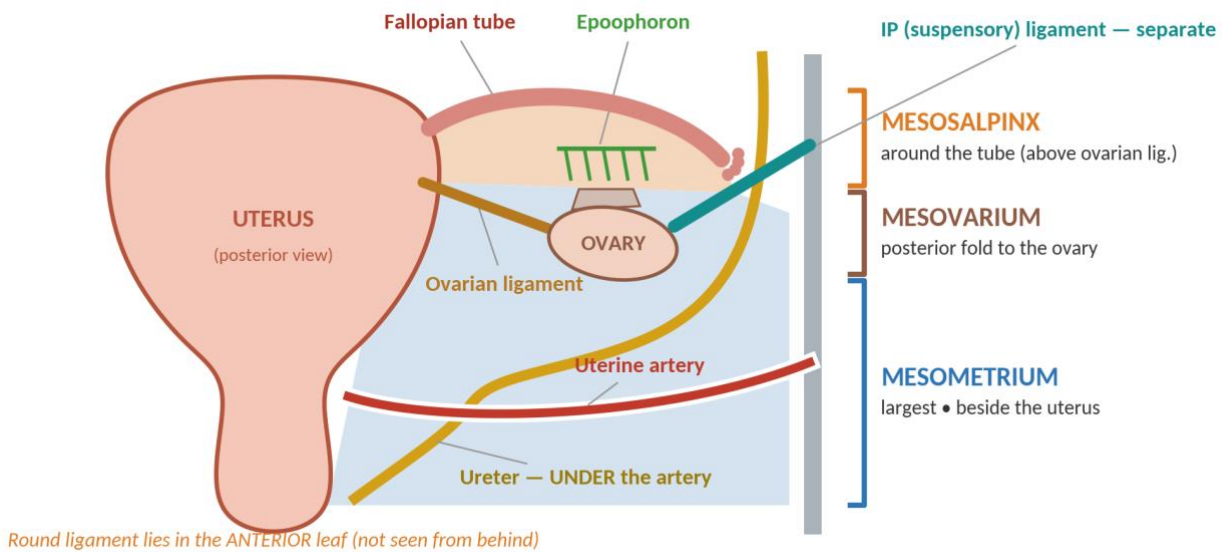


Figure 2. Posterior view of the right broad ligament — the three parts and what runs through them.

MNEMONIC / MEMORY HOOK

The Greek tells you what it wraps: meso-salpinx = tube • meso-varium = ovary • meso-metrium = uterus (the largest part)

Component	Where	Contents
Mesosalpinx	Above the ovarian ligament; mesentery of the tube	Tubal branches of uterine + ovarian vessels; epoophoron, paroophoron
Mesovarium	Short posterior fold to the ovary	Ovarian vessels, lymphatics, nerves entering the hilum; fixes the ovary to the posterior leaf
Mesometrium	Largest; uterine body → pelvic wall	Uterine artery + vein (at the base, along the top of the cardinal ligament), ureter, round ligament, venous plexus, lymphatics, nerves, parametrium; cardinal ligament in its base

3 Contents

VESSELS

- **Uterine a. + v.:** internal iliac → base of the broad ligament → uterus
- **Ovarian a. + v.:** down the IP ligament → mesovarium; anastomose with uterine vessels
- Uterine venous plexus → uterine v. → internal iliac v.
- Ovarian (pampiniform-like) plexus in the mesovarium

URETER (lower part)

- Crosses the brim at the common iliac bifurcation
- Down the side wall → base of broad ligament (parametrium)
- Passes **UNDER the uterine artery 1.5–2 cm from the cervix**
- → medially and forwards to the trigone
- **Most vulnerable here at hysterectomy**

LIGAMENTS + TUBE

- **Round ligament:** ANTERIOR leaf, cornu → deep ring
- **Ovarian ligament:** POSTERIOR leaf, ovary → cornu (behind the tube)
- **Fallopian tube:** the free upper border

LYMPHATICS + NERVES

- Uterine lymph passes through to pelvic nodes
- Pelvic (inferior hypogastric) plexus branches reach the uterus alongside the uterine artery

MNEMONIC / MEMORY HOOK

'Water under the bridge' — the ureter (water) runs under the uterine artery (bridge).

4 Embryological (Wolffian) Remnants

Mesonephric (Wolffian) remnants in the female

no testosterone → Wolffian ducts regress, leaving these

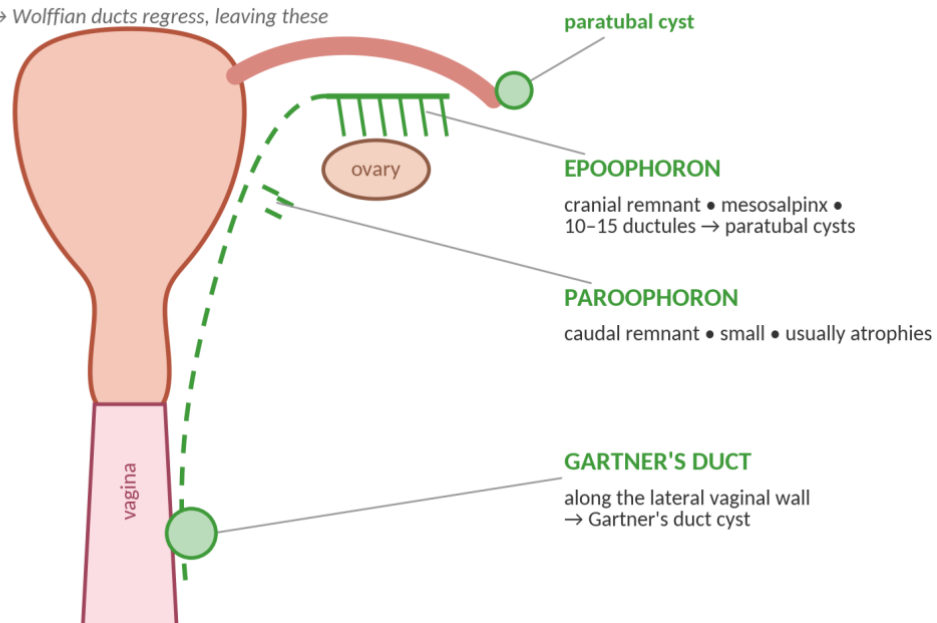


Figure 3. What the mesonephric duct leaves behind in a female.

Remnant	Where / what	Clinical
Epoophoron (organ of Rosenmüller)	Mesosalphinx, between tube and ovary; cranial mesonephric remnant; 10–15 transverse ductules	Source of paratubal cysts
Paroophoron	Small caudal remnants near the mesovarium	Usually atrophies
Gartner's duct	Caudal mesonephric remnant running down the lateral vaginal wall	Gartner's duct cyst

The small pedunculated **hydatid of Morgagni** at the fimbrial end of the tube is another common embryological remnant cyst.

MNEMONIC / MEMORY HOOK

E-P-G from top to bottom: Epoophoron (by the tube) → Paroophoron (near the ovary/uterus) → Gartner's (down the vagina).

5 Boundaries and the IP Ligament

Border	Relation
Superior	Free edge — encloses the fallopian tube
Medial	Lateral border of the uterus
Lateral	Lateral pelvic wall (obturator internus fascia)
Inferior	Base on the pelvic floor; continuous with peritoneum over bladder and rectum
Anterior leaf	→ peritoneum over the bladder (front wall of the vesicouterine pouch)
Posterior leaf	→ peritoneum over the rectum (part of the Pouch of Douglas)

SUSPENSORY (INFUNDIBULOPELVIC) LIGAMENT — separate from the broad ligament

Peritoneal fold from the **upper pole of the ovary** (and tubal infundibulum) to the **lateral pelvic wall**.

Contains the **ovarian artery and vein**, lymphatics and nerves; the ovarian vessels cross the **external iliac vessels** at the pelvic brim.

Divided at oophorectomy — the **ureter lies just deep/medial to it at the brim**.

6 Histology and Embryology

HISTOLOGY

- Mesothelium on both faces
- Between: loose areolar tissue, smooth muscle, vessels, lymphatics, nerves
- Densest at the base — parametrium / cardinal ligament

EMBRYOLOGY

- Peritoneum drapes over the Müllerian ducts as they fuse into the uterovaginal canal
- Wolffian ducts regress in females — leaving epoophoron, paroophoron, Gartner's duct
- Gubernaculum → ovarian ligament (upper) + round ligament (lower)

7 Surgical Considerations

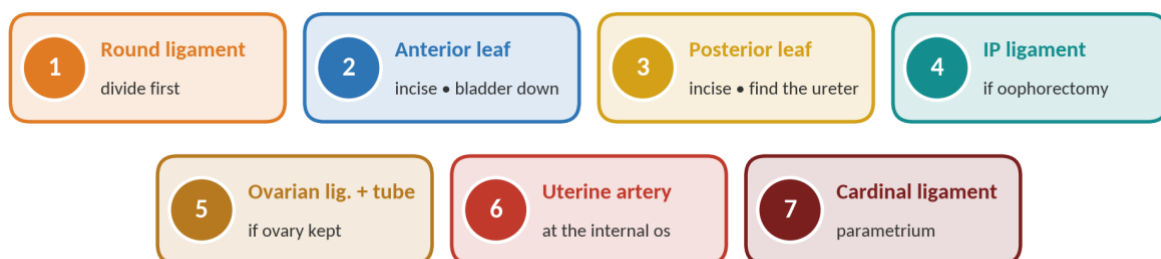


Figure 4. Opening the broad ligament at hysterectomy.

Where the ureter is injured at hysterectomy

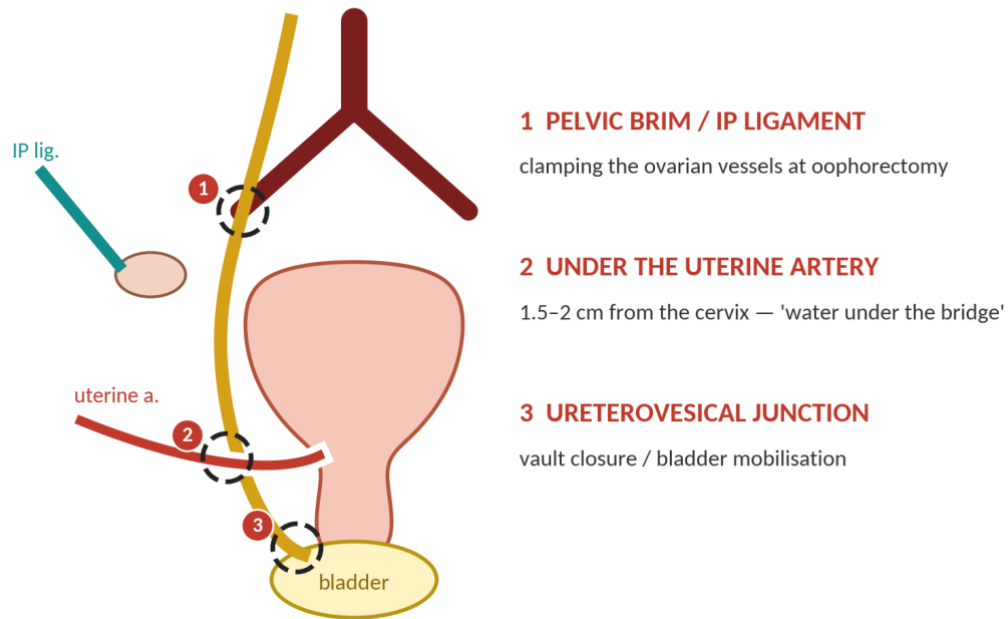


Figure 5. The three classic sites of ureteric injury.

- **Laparoscopy:** round ligament, IP ligament, ovary and tube are all visible; **Sampson's artery** in the round ligament can bleed; diathermy near the ureter risks thermal injury.

8 Clinical Correlations

BROAD LIGAMENT FIBROID

- Leiomyoma growing laterally between the leaves
- Distorts anatomy — **ureter displaced or stretched** over it
- Difficult surgery; MRI and ureteric stents may help

BROAD LIGAMENT HAEMATOMA

- After traumatic delivery, uterine rupture extending laterally, CS or surgery
- Can hold **>1 L**
- Pain, mass, instability
- Stable: observe • Unstable: **embolisation or surgery**

BROAD LIGAMENT PREGNANCY

- Rare abdominal ectopic between the leaves
- Hard to diagnose; can present late
- Surgery with high morbidity

PARATUBAL / PARAOVARIAN CYSTS

- Mesothelial or Wolffian remnant origin
- Usually benign and incidental
- **Can twist** (adnexal torsion)

GARTNER'S DUCT CYST

- Lateral vaginal wall; usually small, asymptomatic
- Large: dyspareunia, obstructed labour → excise

OTHER

- Mesonephric adenocarcinoma (rare) — cervix/vagina
- Endometriosis on broad ligament peritoneum → pain

Imaging	Use
TVS	Adnexal masses, paratubal cysts
MRI	Best for broad ligament masses, fibroids, endometriosis and ureteric relations

Imaging	Use
CT	Haematoma, ectopic pregnancy
Laparoscopy	Direct view

9 MRCOG Exam Pearls — Last-Minute Page

Numbers to know

2 Leaves (anterior + posterior)	3 Parts: mesometrium, -salpinx, -varium	3 Wolffian remnants	3 Ureter injury sites
1.5–2 cm Uterine a. crosses ureter	10–15 Epoophoron ductules	>1 L Possible haematoma volume	1st Round lig. divided first

HIGH-YIELD CHECKLIST

- ☐ Double peritoneal fold; NOT a true ligament; minimal support.
- ☐ Mesometrium (largest), mesosalpinx (tube), mesovarium (ovary).
- ☐ Contents: uterine vessels, ureter, round and ovarian ligaments, tube, lymphatics, nerves, remnants.
- ☐ Cardinal ligament lies in the base.
- ☐ Uterine artery passes ANTERIOR (over) the ureter at the base.
- ☐ IP ligament is SEPARATE; carries the ovarian vessels.
- ☐ Epoophoron (mesosalpinx) → paratubal cysts; paroophoron small; Gartner's → lateral vaginal wall cyst.
- ☐ Round ligament in the anterior leaf; ovarian ligament in the posterior leaf, behind the tube.
- ☐ Broad ligament fibroid displaces the ureter.
- ☐ Broad ligament haematoma: postpartum, can be huge; embolise or operate if unstable.
- ☐ Ureter at risk at the IP ligament, uterine artery and ureterovesical junction.

Quick-fire self-test — cover the right-hand column

Question	Answer
Largest part of the broad ligament?	Mesometrium
Which leaf carries the round ligament?	Anterior
Which leaf does the ovary hang from?	Posterior (via the mesovarium)
Is the IP ligament part of the broad ligament?	No — separate lateral fold
Where is the epoophoron?	Mesosalpinx
Gartner's duct cyst lies where?	Lateral vaginal wall
Embryological origin of Gartner's duct?	Caudal mesonephric (Wolffian) duct
Which ligament lies in the base of the broad ligament?	Cardinal (Mackenrodt's)
Three classic sites of ureteric injury at hysterectomy?	IP ligament at the brim; under the uterine artery; ureterovesical junction
Best imaging for a broad ligament mass?	MRI

Question	Answer
Management of an unstable broad ligament haematoma?	Embolisation or surgery

10 References

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