

# ❑ FEMALE GENITAL ORGANS

The Uterine tube, Ovaries & Vagina

## ❑ Ischiorectal Fossa

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**2024-2025**

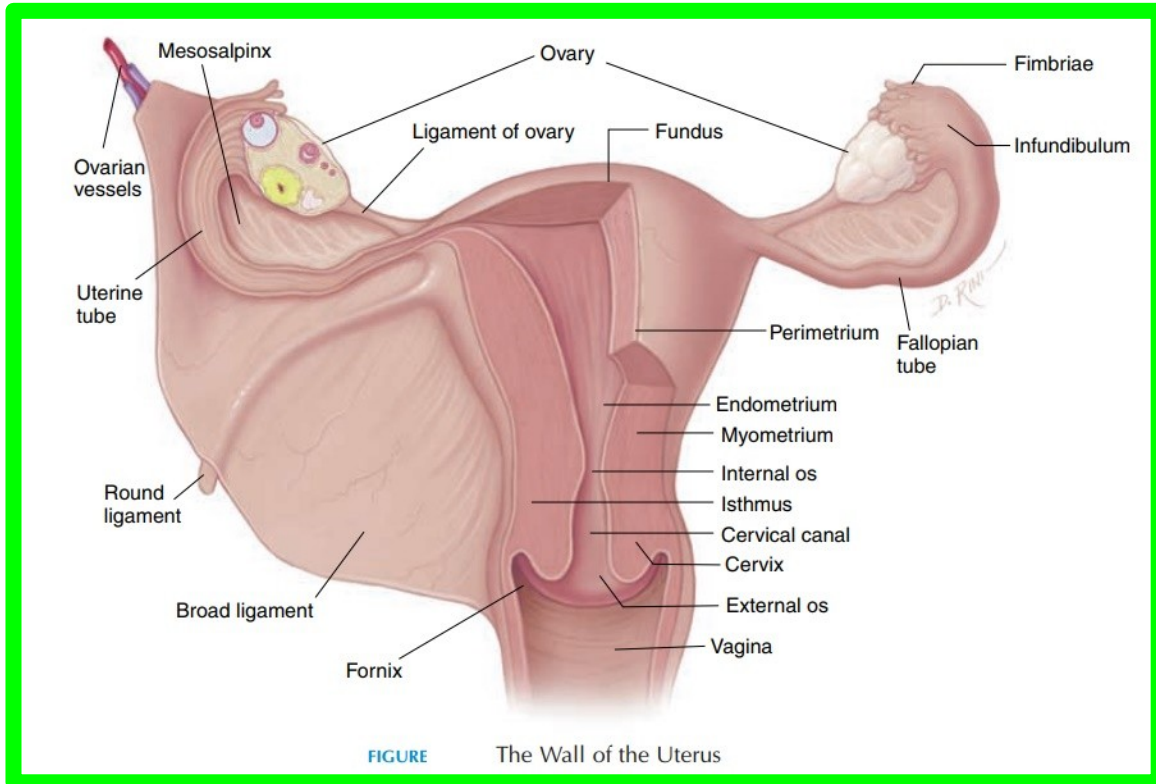
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# Uterine Tube

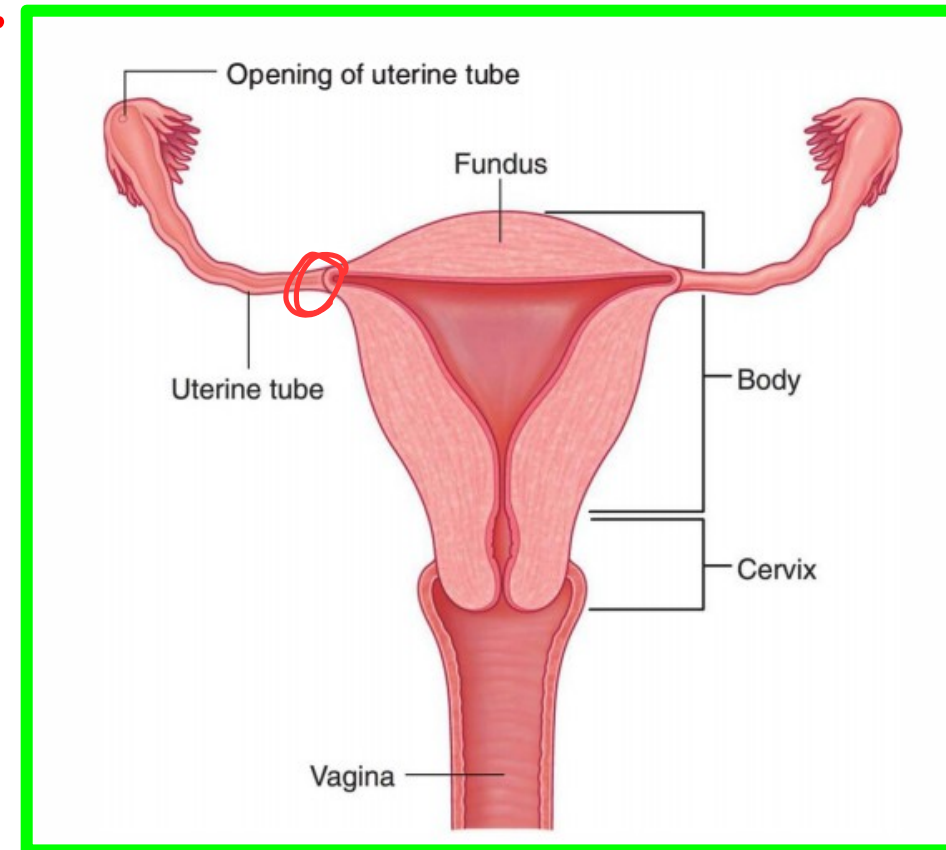
Fallopian tube.

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- ❖ The two tubes run in the free border of the broad ligament.
- ❖ It is about 10 cm long and has 2 ends.
- a- The medial end opens in the uterine cavity at the junction of the fundus with the body.
- b- The lateral end opens in the peritoneal cavity.



Fimbriae



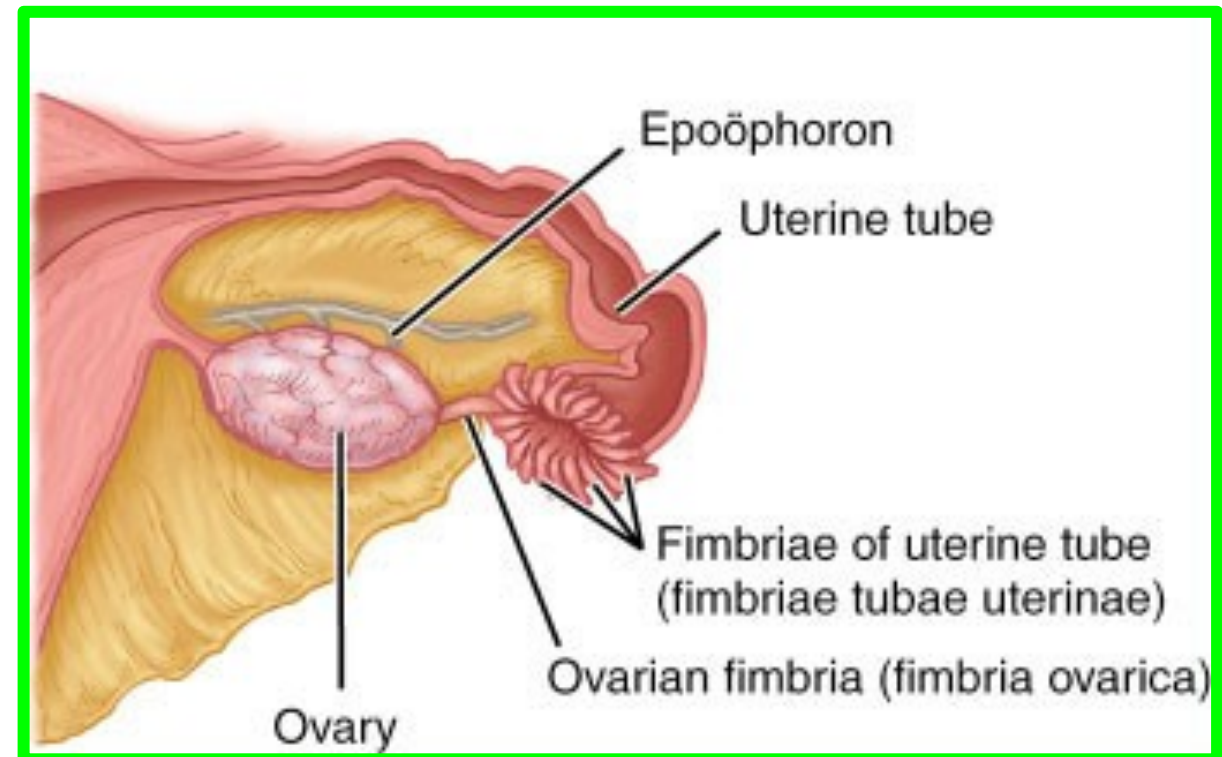
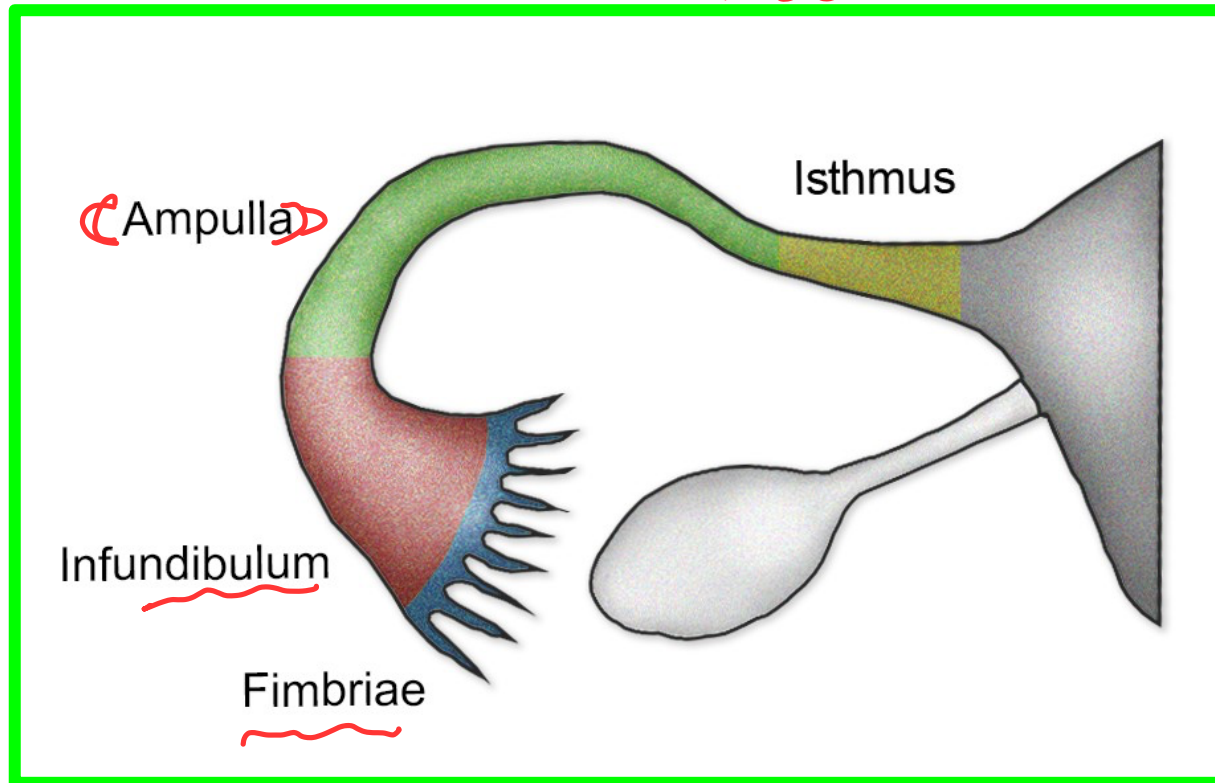
# Uterine Tube

**\*\*Parts of the tube:** From the lateral to the medial end, ➤

**1- Infundibulum:** a funnel-shaped which open in the peritoneal cavity.

- It has a number of processes called **fimbriae**. One of these fimbriae is large and extends to the ovary and called **ovarian fimbria**.

**2- Ampulla:** a dilated, tortuous and thin-walled.

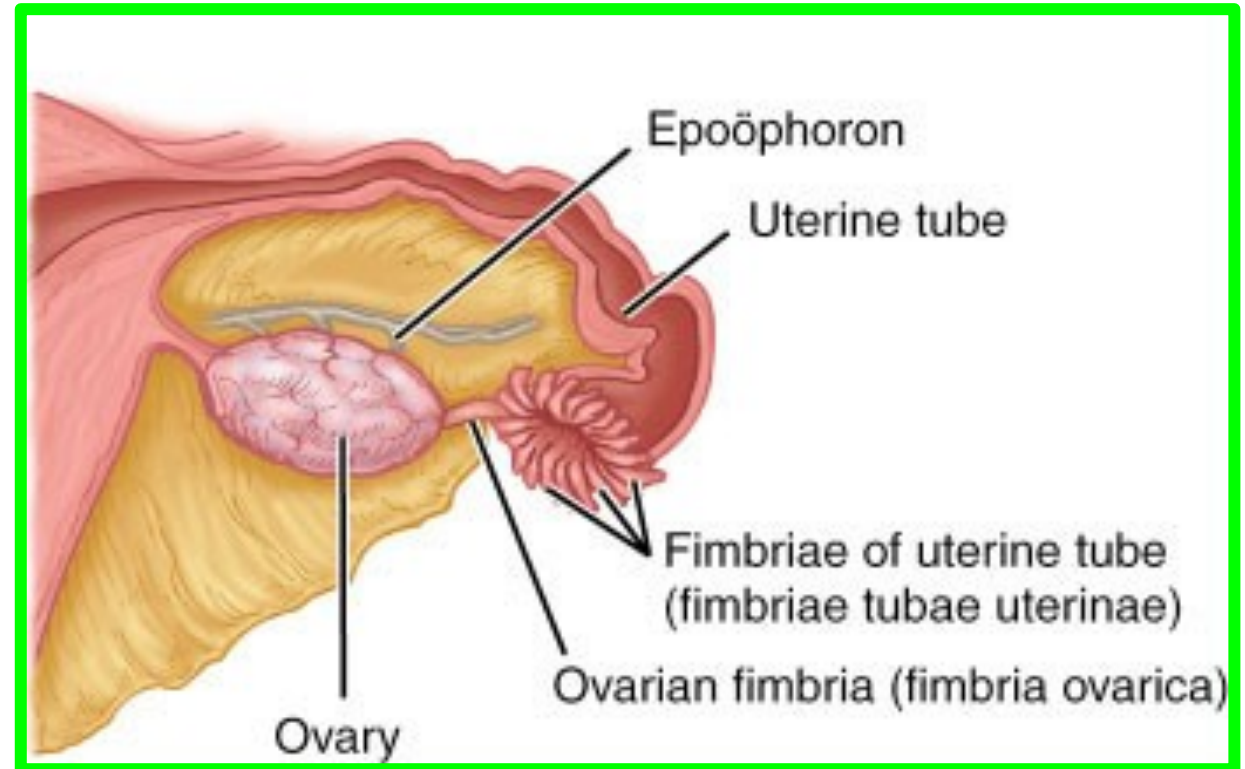
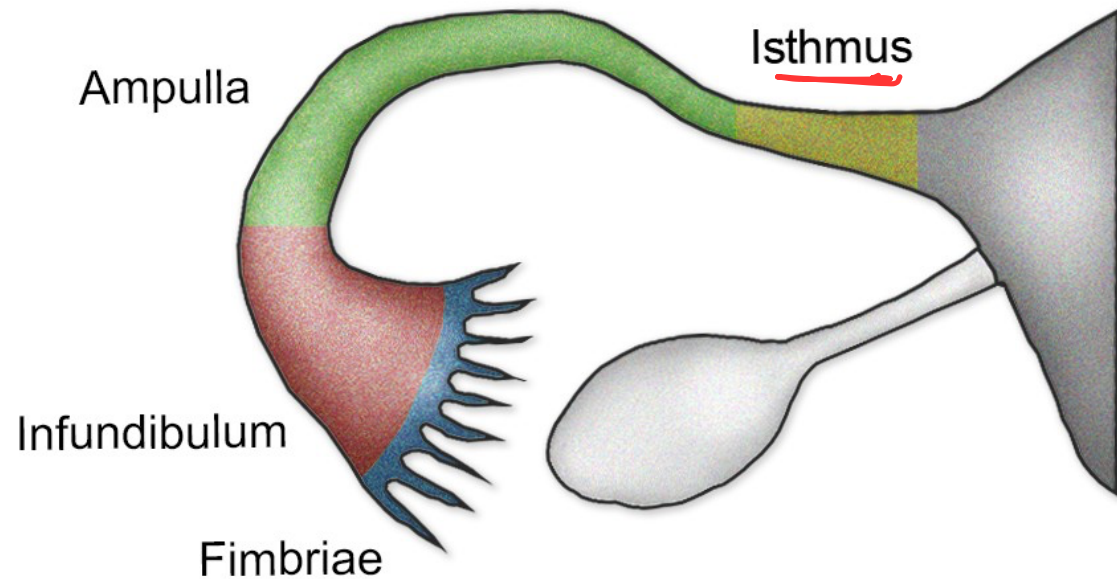


# Uterine Tube

3- **Isthmus**: a narrow straight part, constituting the medial 1/3 of the tube.

4- Intramural part: the part inside the uterine wall (narrowest part).

الجزء  
الداخل





# Uterine Tube

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**\*\* Arterial supply:** 1) The lateral part by the ovarian artery.

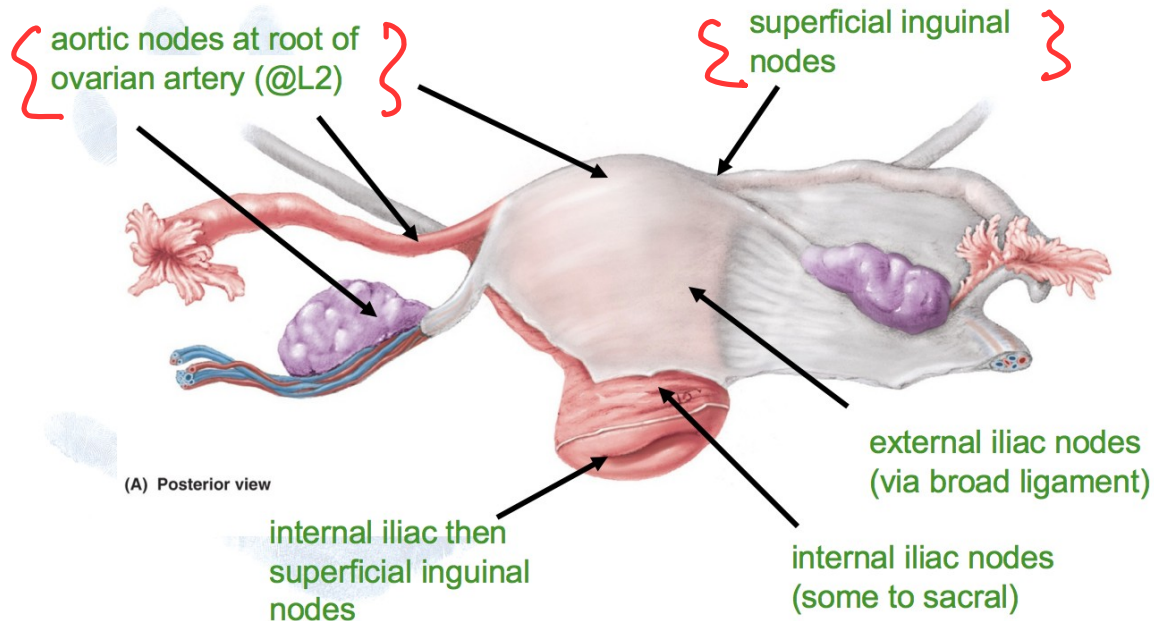
2) The medial part by the uterine artery.

**\*\* Venous drainage:** by veins accompanying the arteries. فهم

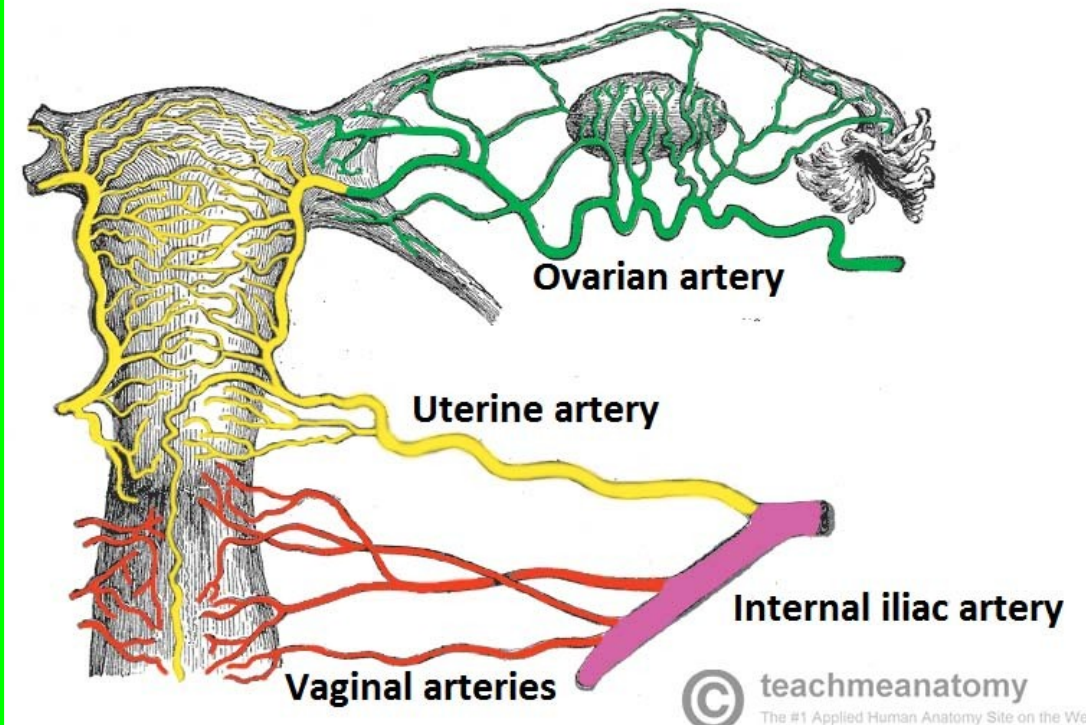
**\*\* Lymphatic drainage:** to the preaortic and para-aortic **lymph nodes**.

**\*\* Nerve supply:** - Sympathetic from T 10 to L 2. - Parasympathetic S2,3,4.

## Lymphatic drainage



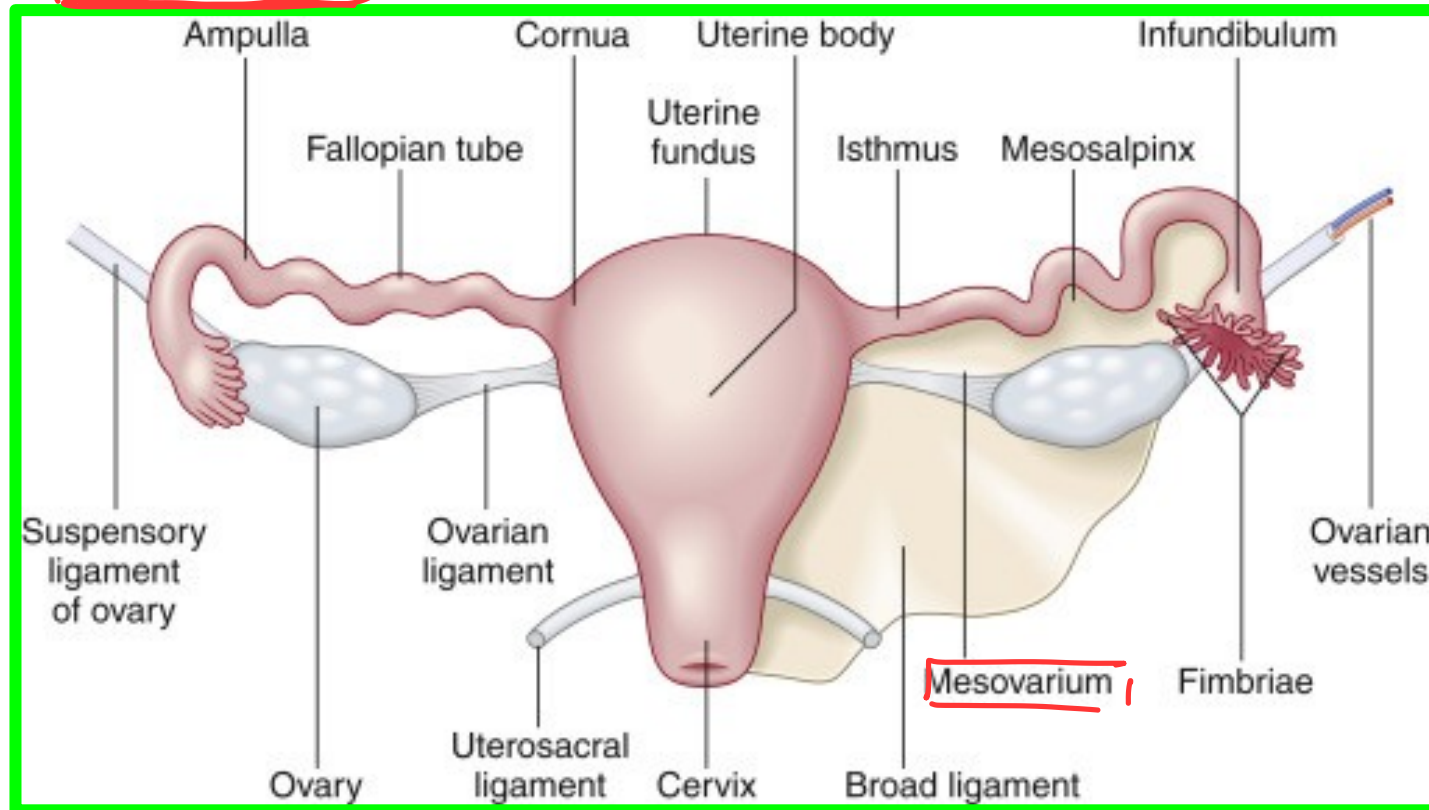
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# Ovaries

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- ✓ One on each side, these are **the primary female sex organs.**
- ✓ Each ovary is attached to the upper surface of the broad ligament **by** the **(mesovarium)** *very small*
- \*\* Dimensions** (**1 cm** thickness) (**2 cm** breadth) (**3 cm** Length) *1 - 2 - 3 cm*
- \*\* Weight** from **2 to 3.5 gm**



# Ovaries

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**\*\*General features and Relations, The ovary has:**

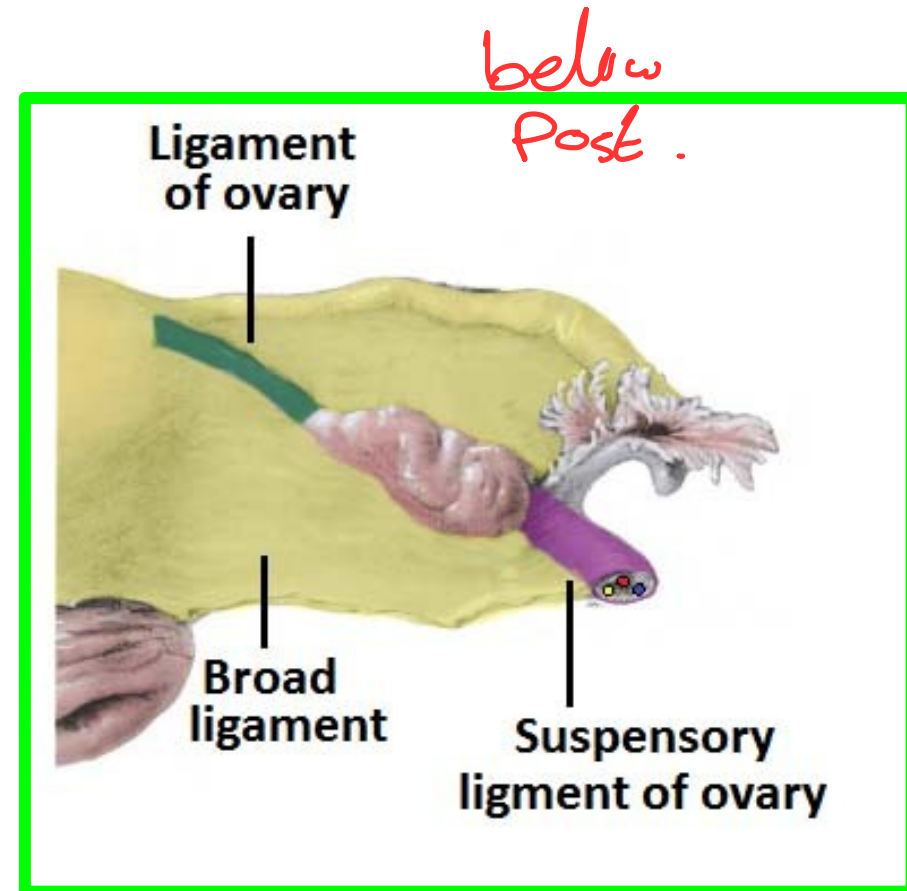
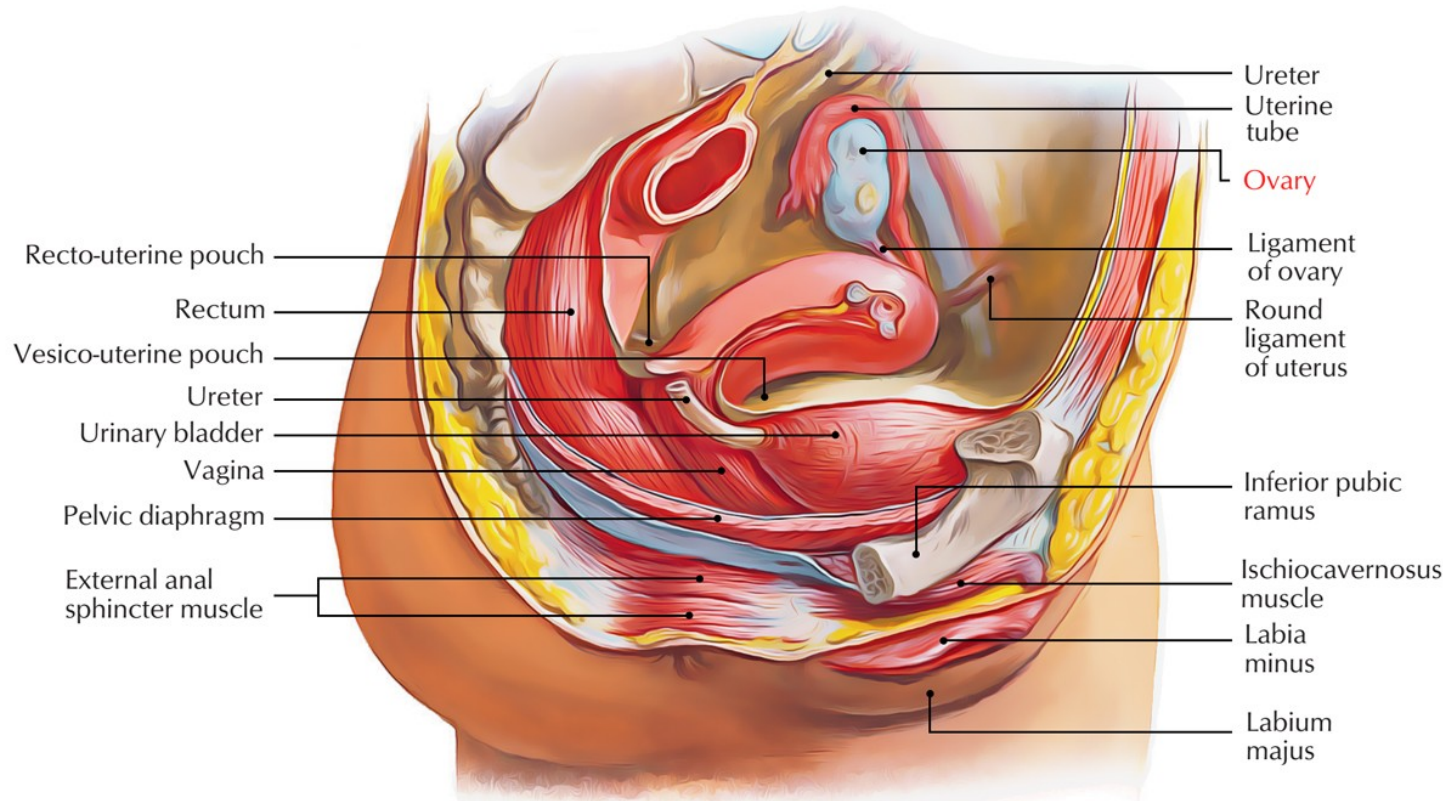
**2 surfaces:**

① **Lateral surface:** lies in the floor of the ovarian fossa. (On lateral pelvic wall)

② **Medial surface:** is covered by the uterine tube.

2 end. 2 surfaces  
2 borders.

ext. iliac v. + ureter ( )





# Ovaries

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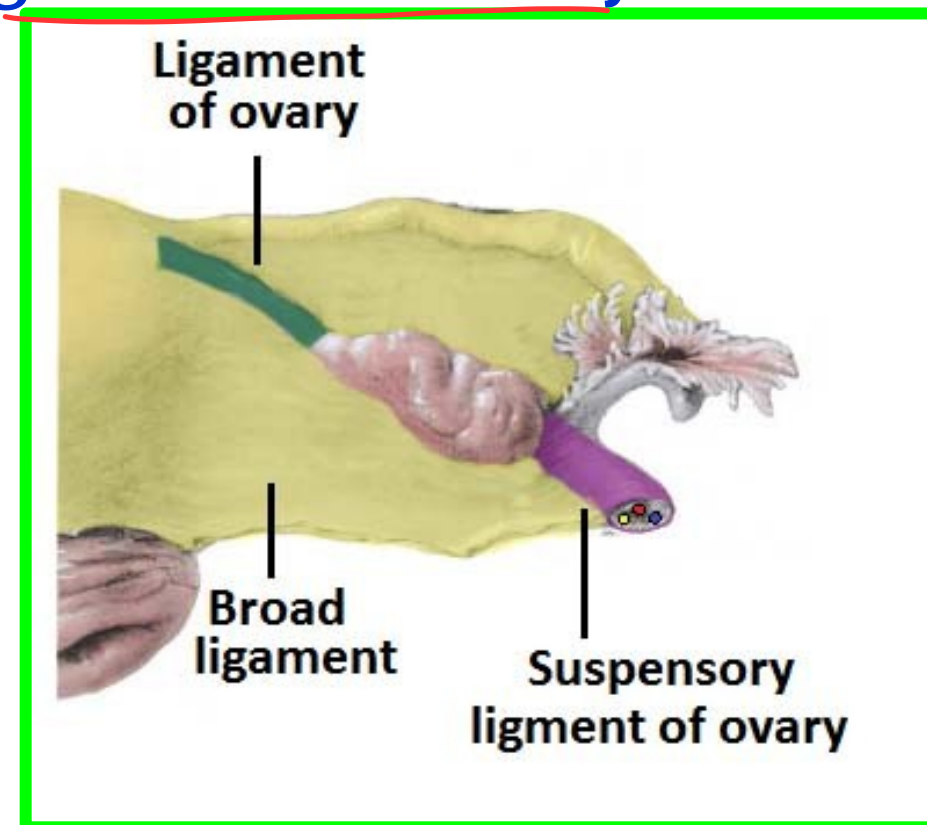
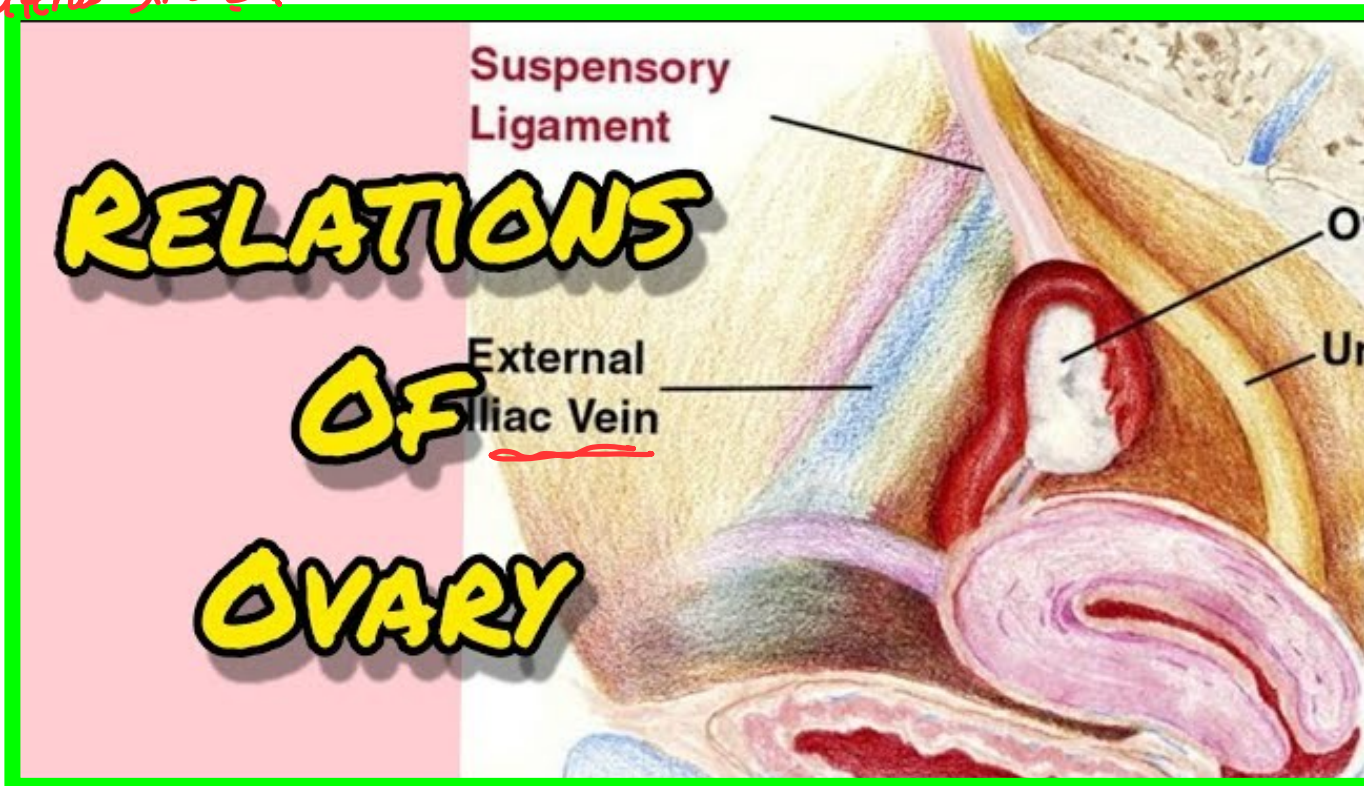
B- 2 ends:

1- Tubal (Upper) end: gives attachment to

- 1) Ovarian fimbria of the tube.
- 2) The suspensory ligament of the ovary.

2- Uterine (Lower) end: gives attachment to the ligament of the ovary.

uterus is not





# Ovaries

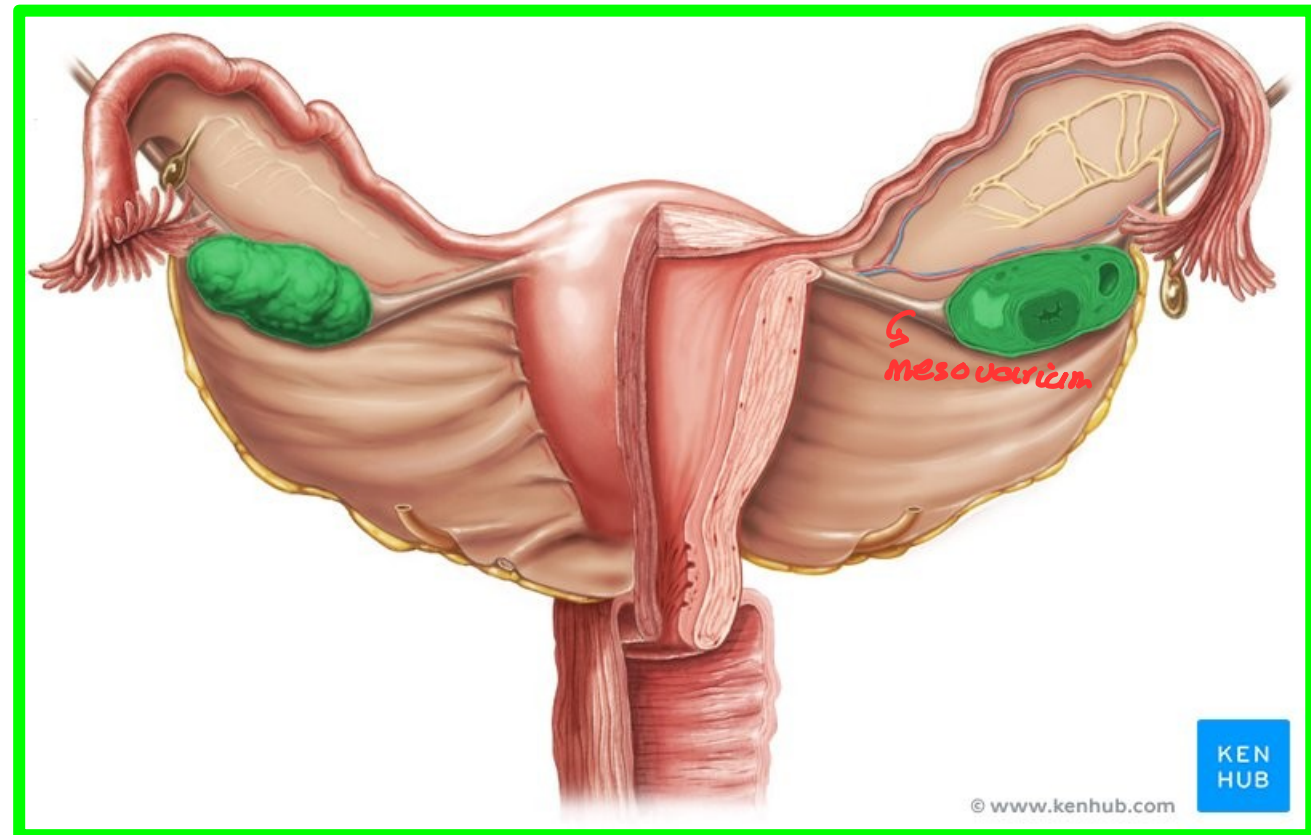
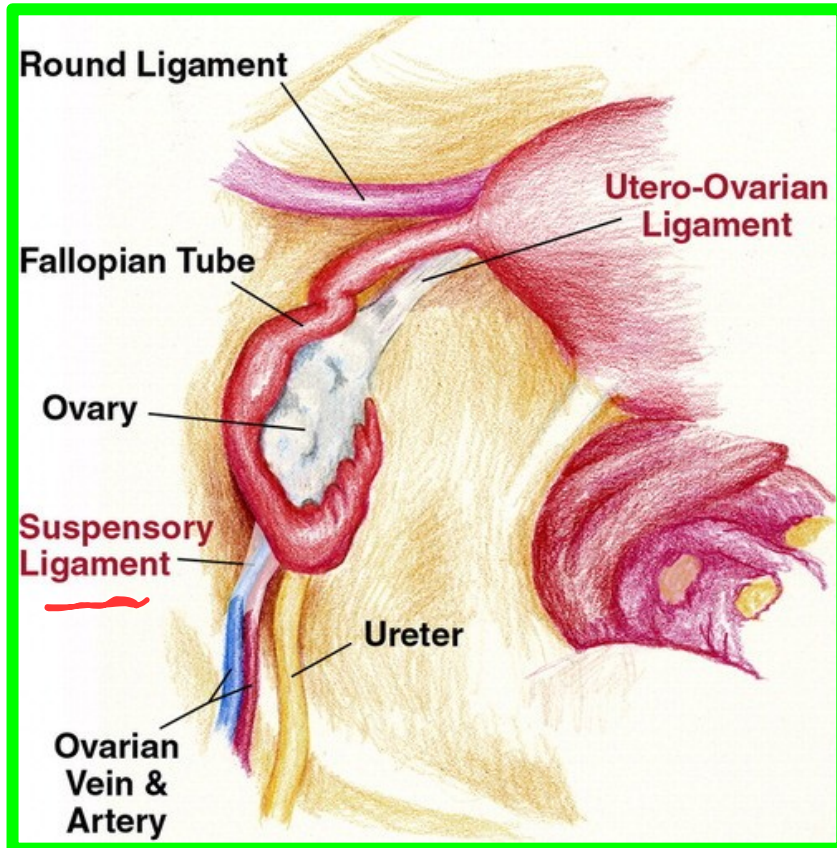
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2 borders:

1- **Free border:** directed backward.

2- **Attached border:** attached to the upper layer of the broad ligament by the mesovarium.



## \*\* Ligaments of the ovary

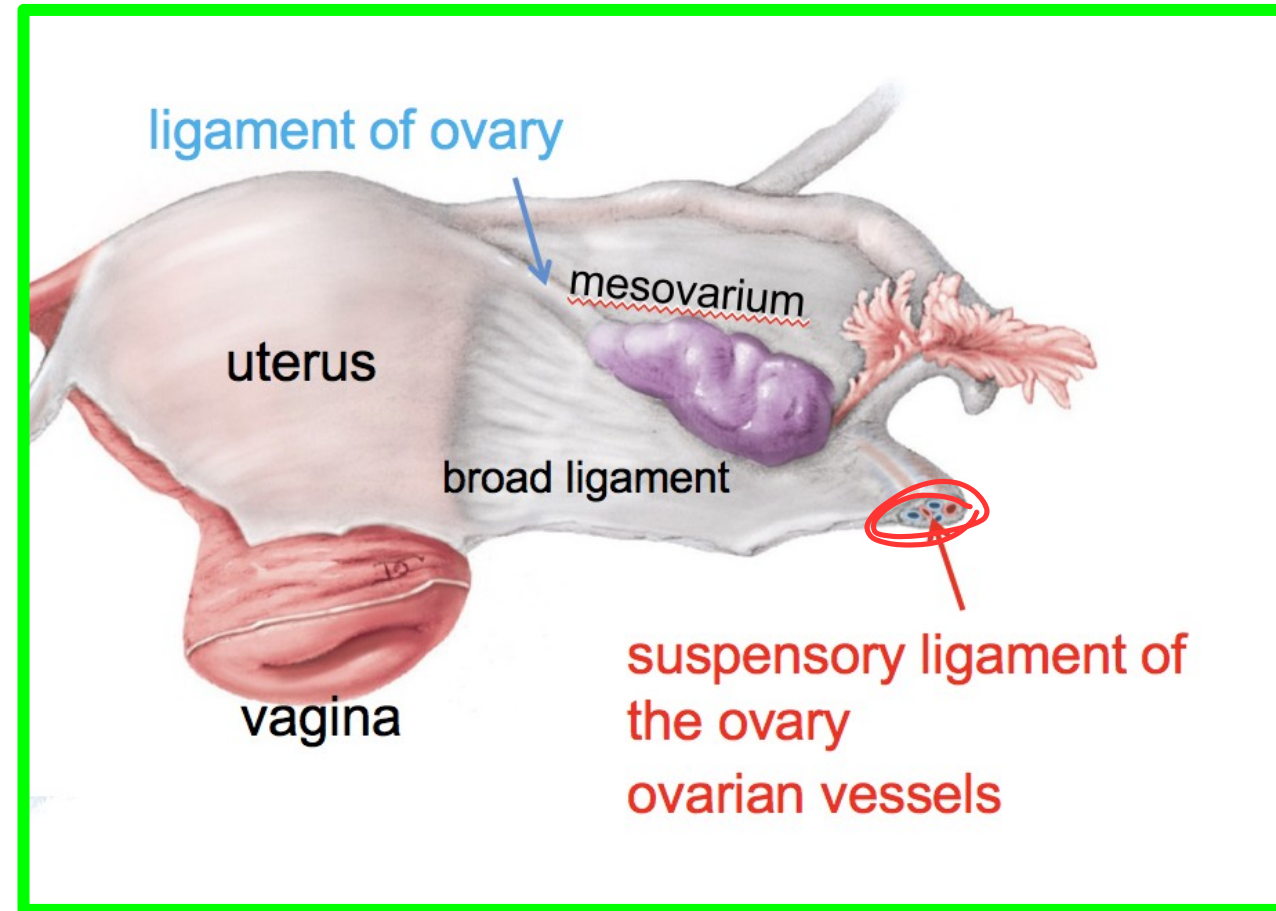
1- **Suspensory ligament of the ovary**, it extends from the ovary to the side wall of the pelvis and contains the ovarian vessels and nerves.

2- **Round ligament of the ovary**. It connects the ovary with the uterus below and behind the uterine tube.

Round of uterus ← اما الـ مامي

3- **Mesovarium (peritoneal relation)** between the upper surface of the broad ligament and ovary. It contains the ovarian vessels and nerves.

تدخل منه للسuspensory حتى تصال مع الـ Mesovarium



# Ovaries

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**\*\* Arterial supply:** the <sup>gonadal (L2)</sup> **ovarian artery** from abdominal aorta.

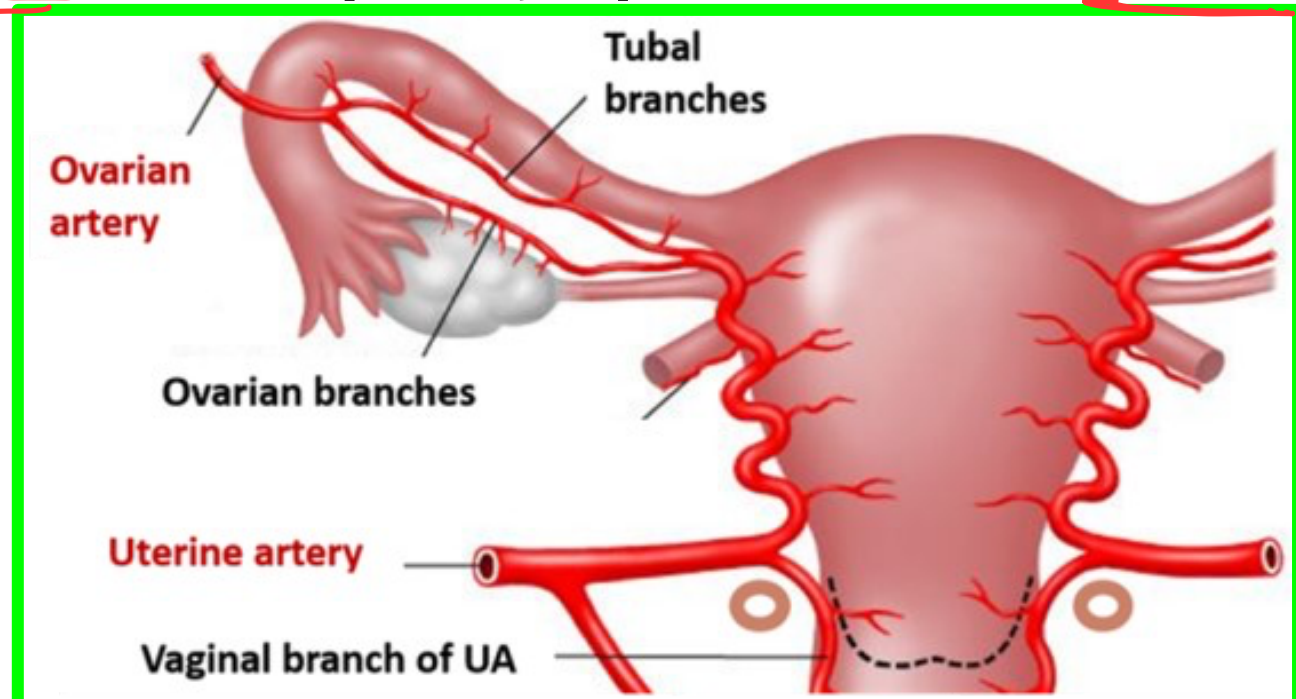
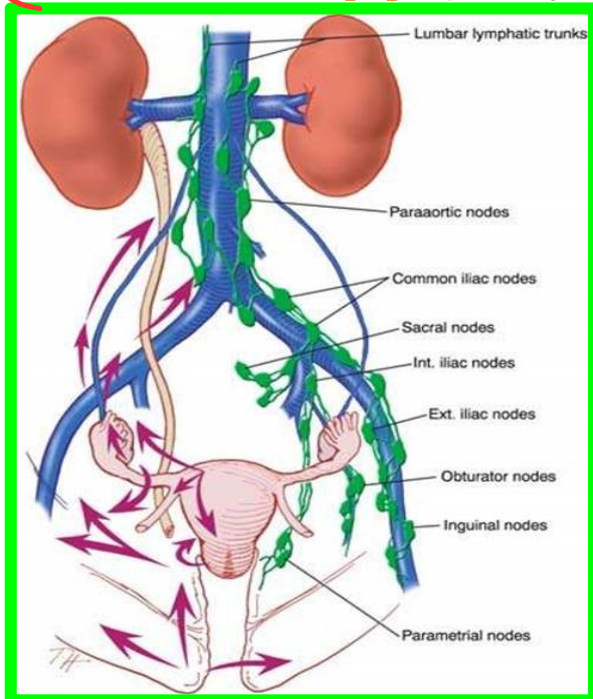
**\*\* Venous drainage:** The ovarian veins.

1) The **right ovarian vein** drains into the **inferior vena cava**;

2) The **left ovarian vein** drains into the **left renal vein**.

**\*\* Lymphatic drainage:** Into para-aortic lymph nodes.

**\*\* Nerve supply:** sympathetic from T<sub>10, 11</sub> while parasympathetic from S<sub>2, 3, 4</sub>.





# Vagina

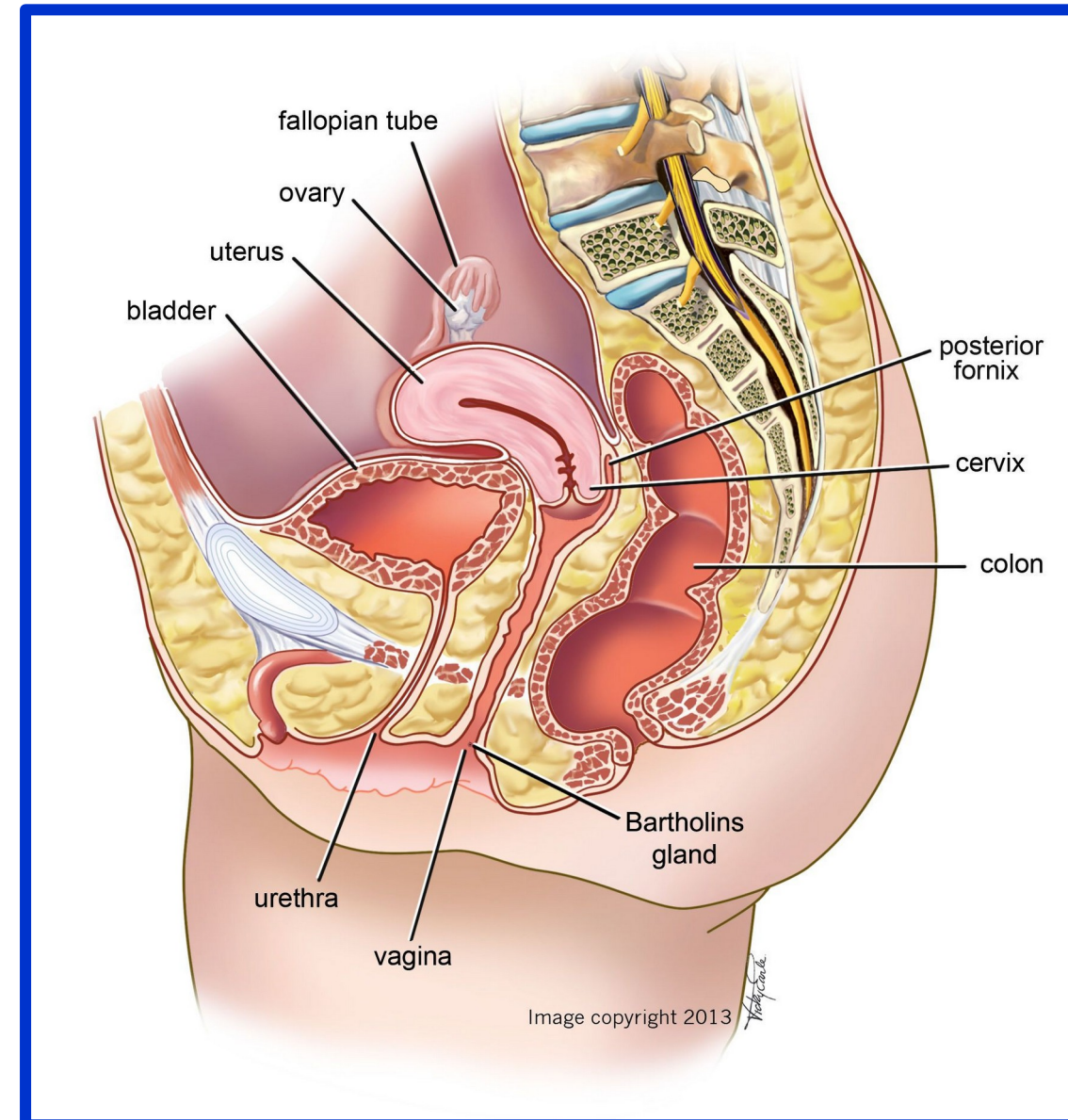
✂ This is the canal connecting the uterus with the vestibule, ٣

**\*\* Direction;** - From below, it is directed upwards and slightly backwards.

**\*\* Walls;** ٥ اظول ٢ walls (anterior and posterior) which are contact with each other.

**\*\* Diameter;** lower part 2.5 cm while the upper part 5 cm.

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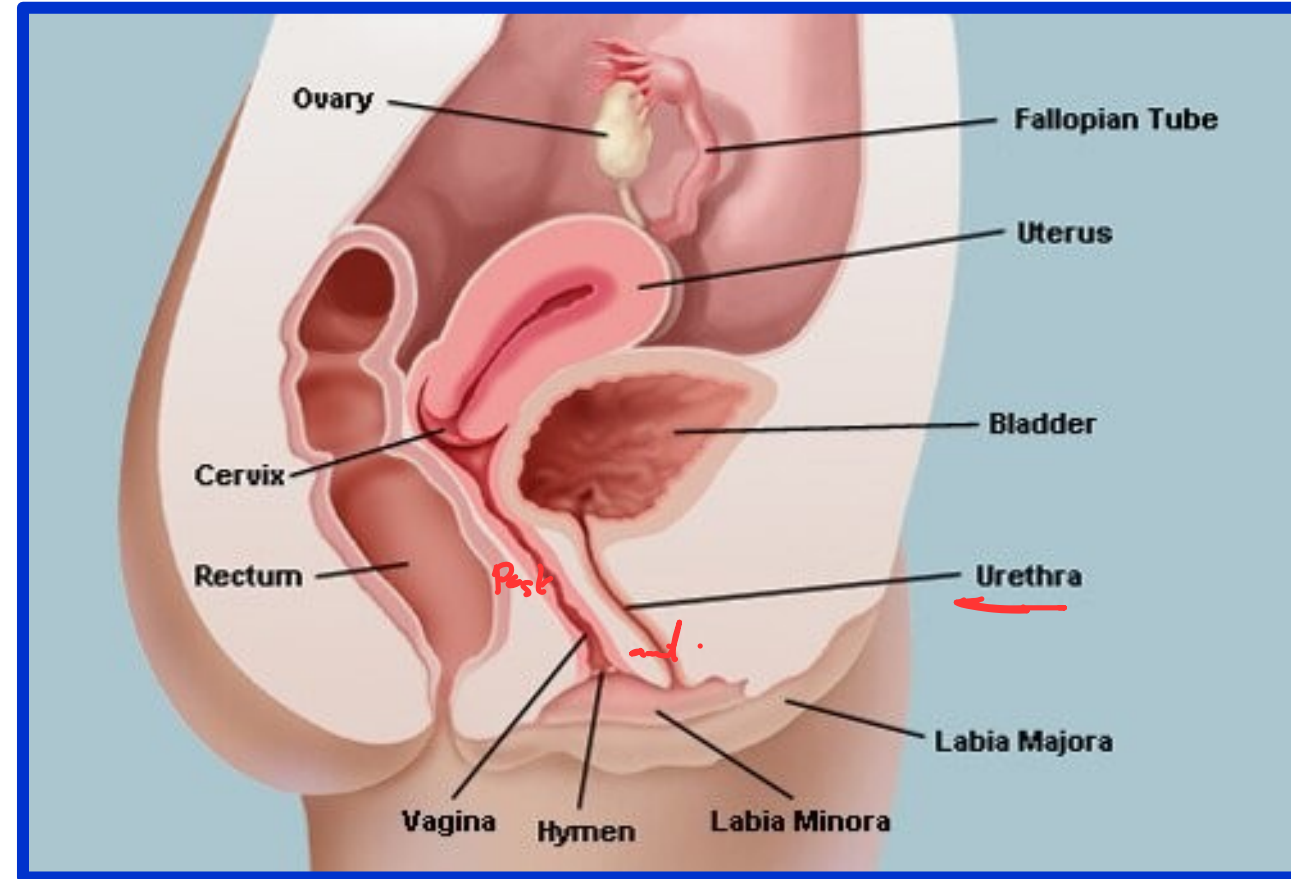


# Vagina

## \*\* Relations:

1- The anterior wall of the vagina is short (7.5 cm).

✓ It is closely related to the base of the urinary bladder and urethra.



2- The posterior wall of the vagina is longer (9 cm).

a- Upper 1/4 is covered by peritoneum of the rectovaginal pouch. *or Douglas Pouch or Recto-uterine pouch.*

b- Middle 2/4 is directly related to the rectum.

c- Lower 1/4 is separated from the anal canal by the perineal body.

# Vagina

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~~3~~ Laterally:

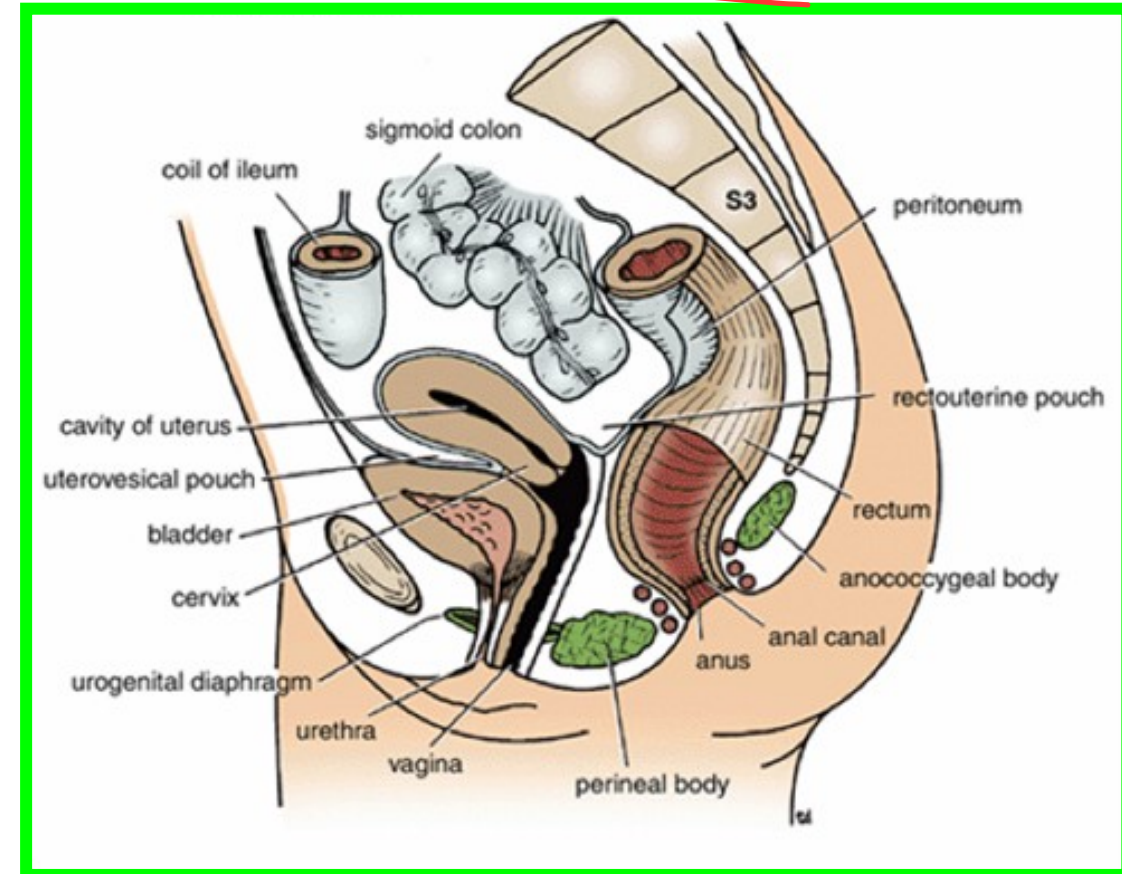
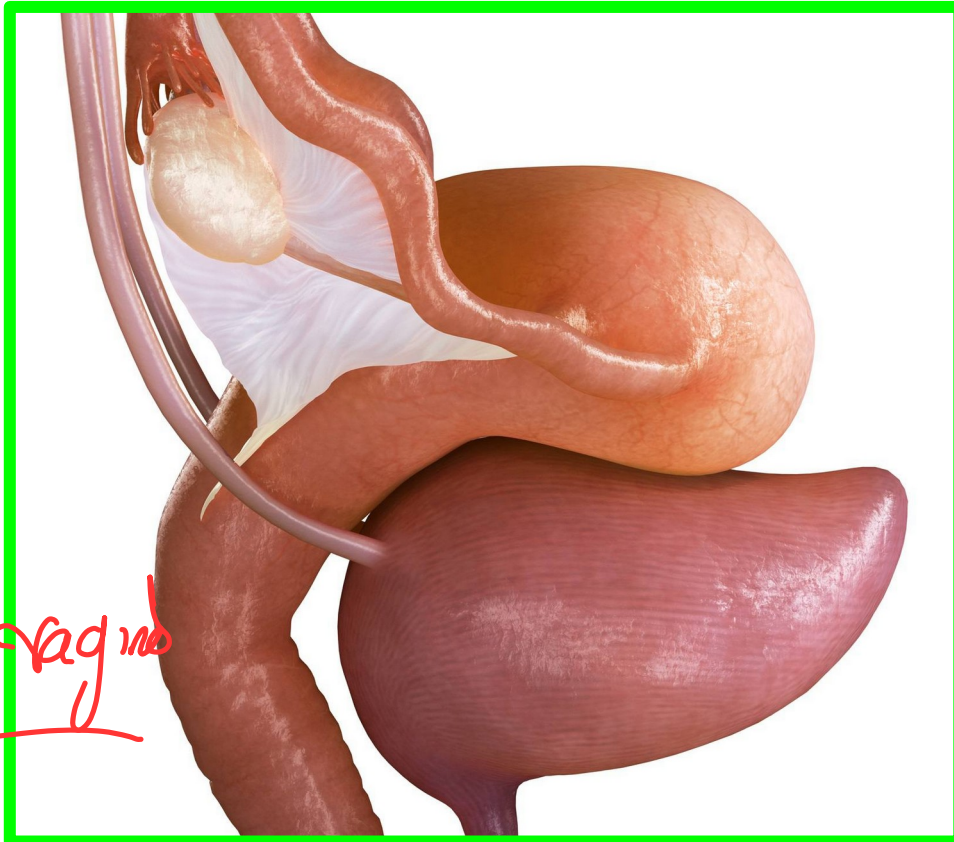
a- Upper part is related to the ureter.

b- Middle part is to the levator ani. (**Sphincter vaginae**)

*ant. fibers.*

*in male levator prostatic*

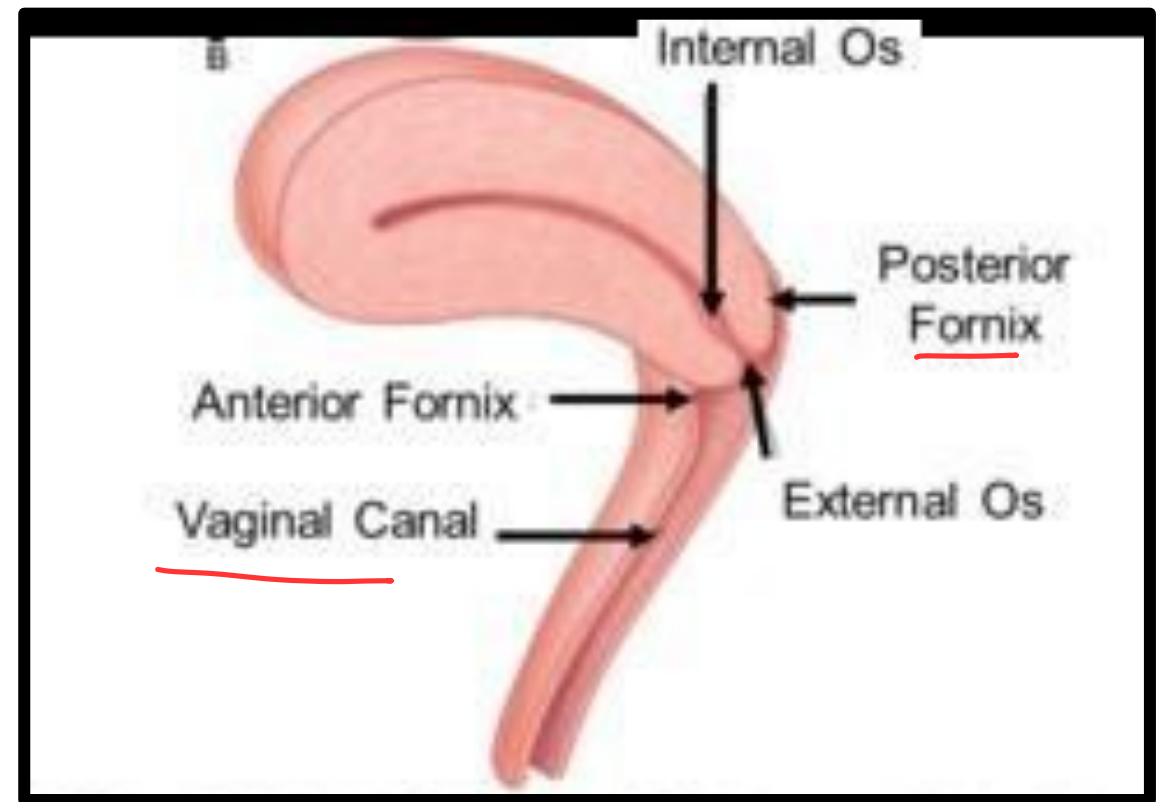
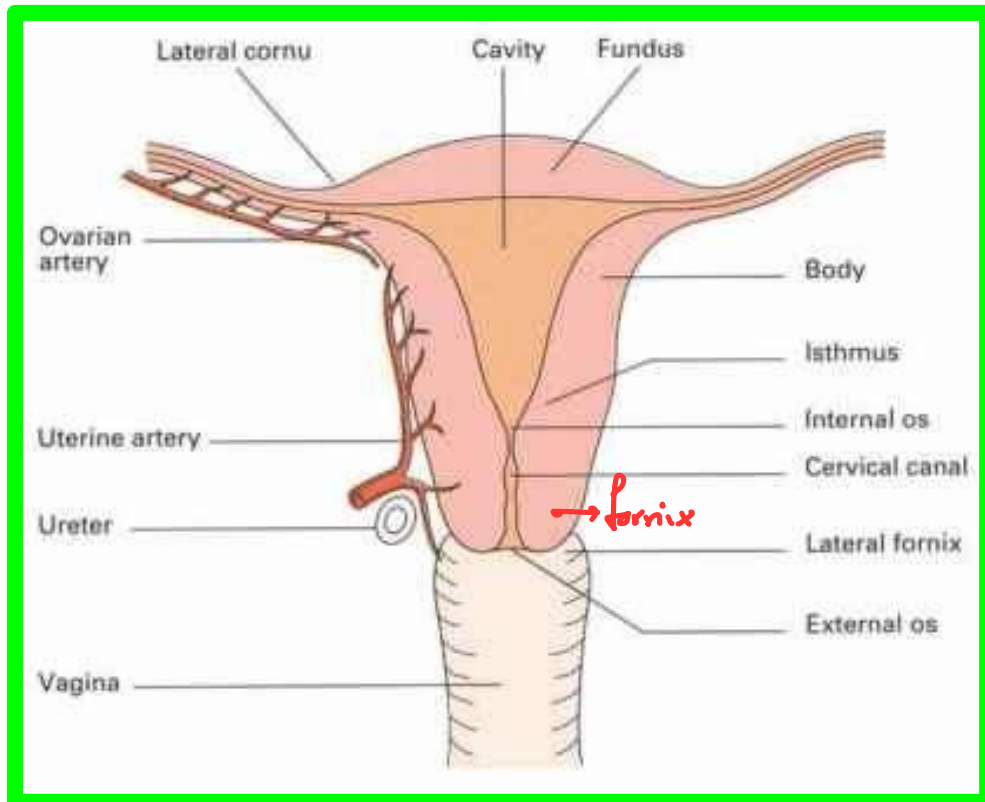
c- Lower part transverses the deep and superficial perineal pouches.



# Vagina

## \*\* Fornices of the vagina:

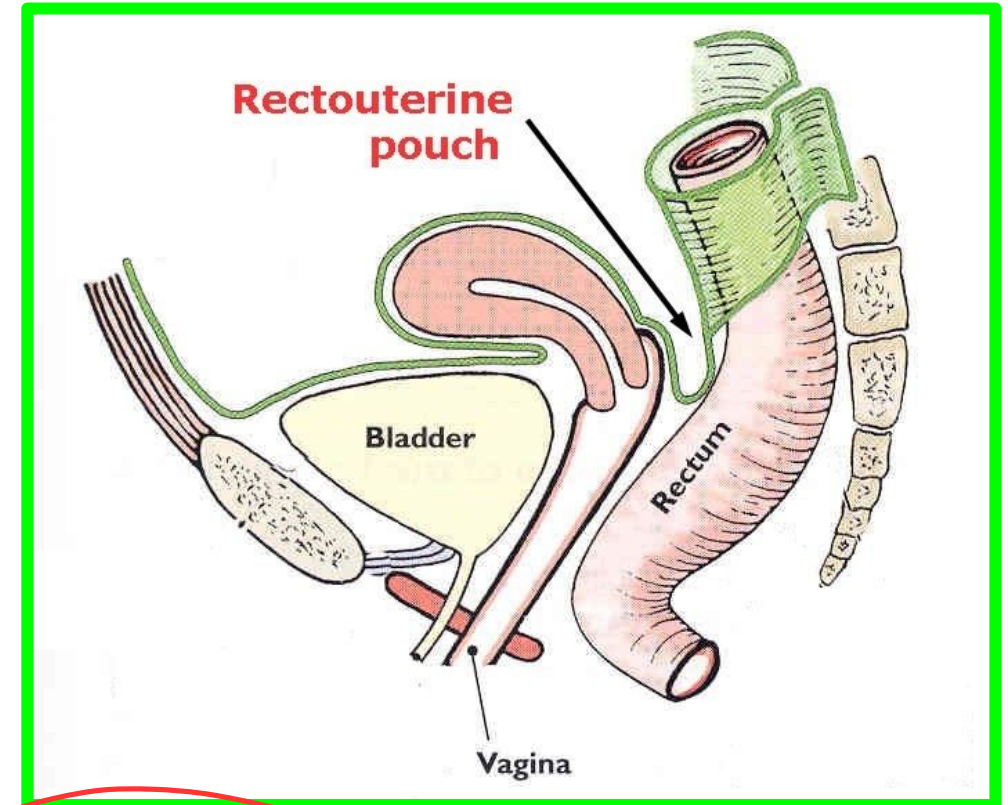
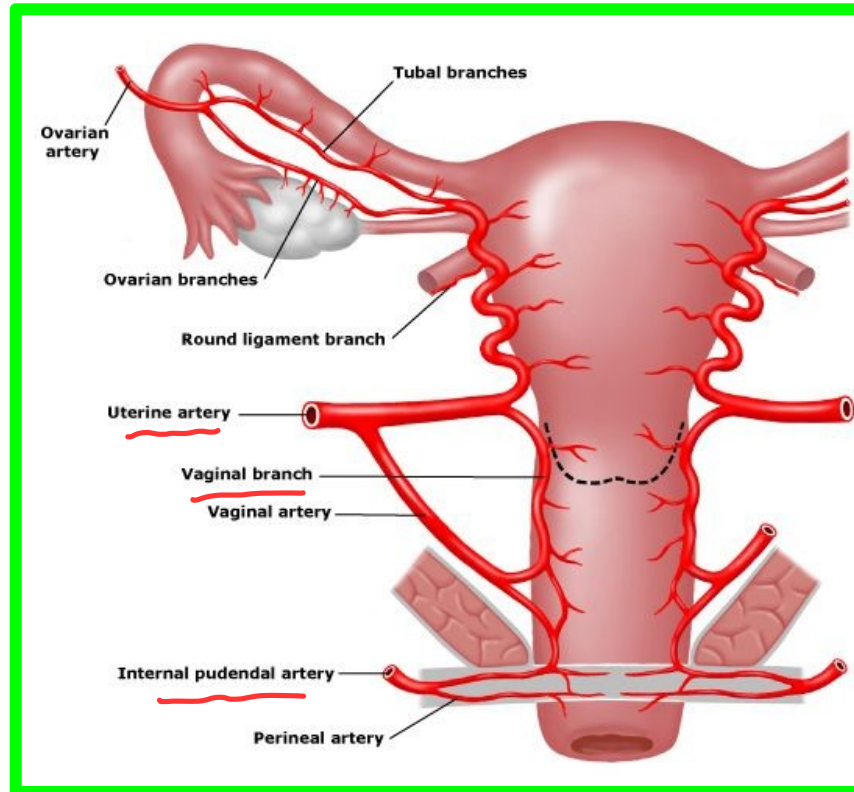
- ☐ These are the recesses of the upper part of the vagina which surrounds the vaginal part of the cervix (anterior, posterior and 2 Lateral).





**\*\* Peritoneal covering of the vagina:**

**Only the upper part of the posterior wall by peritoneum of rectovaginal pouch.**

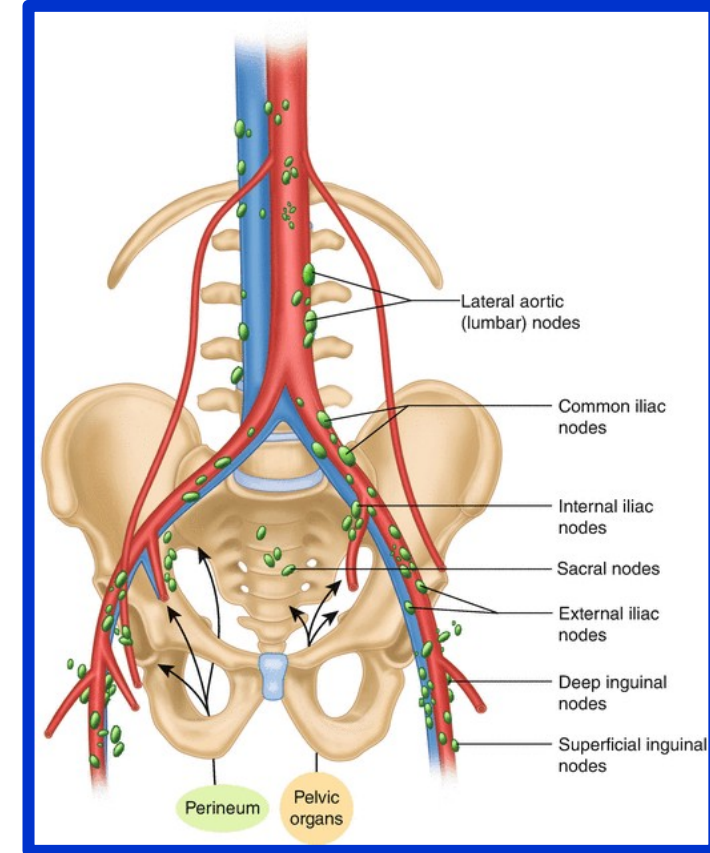
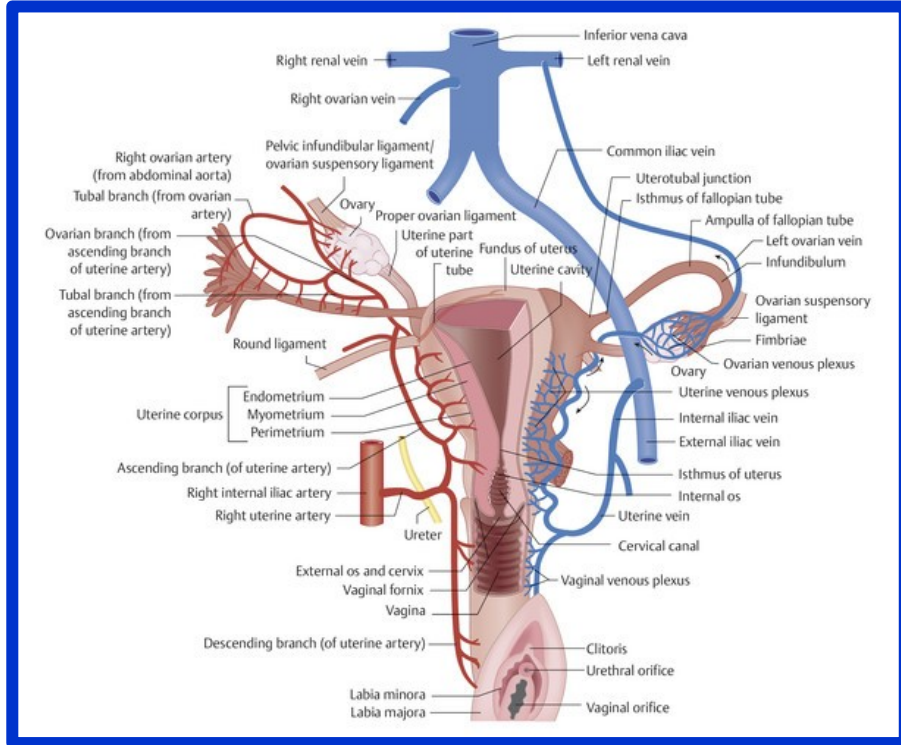


**\*\* Arterial supply:**

- 1) Vaginal artery.
- 2) Uterine artery.
- 3) Internal pudendal artery.
- 4) Middle rectal artery.



**\*\* Venous drainage: to the vaginal venous plexus → internal iliac vein.**



**\*\* Lymphatic drainage:**

- ~~a~~ The upper part drains into the external iliac lymph nodes.
- ~~b~~ The middle part drains into the internal iliac lymph nodes.
- ~~c~~ The lower part drains into the superficial inguinal lymph nodes.

*upper → ext.*

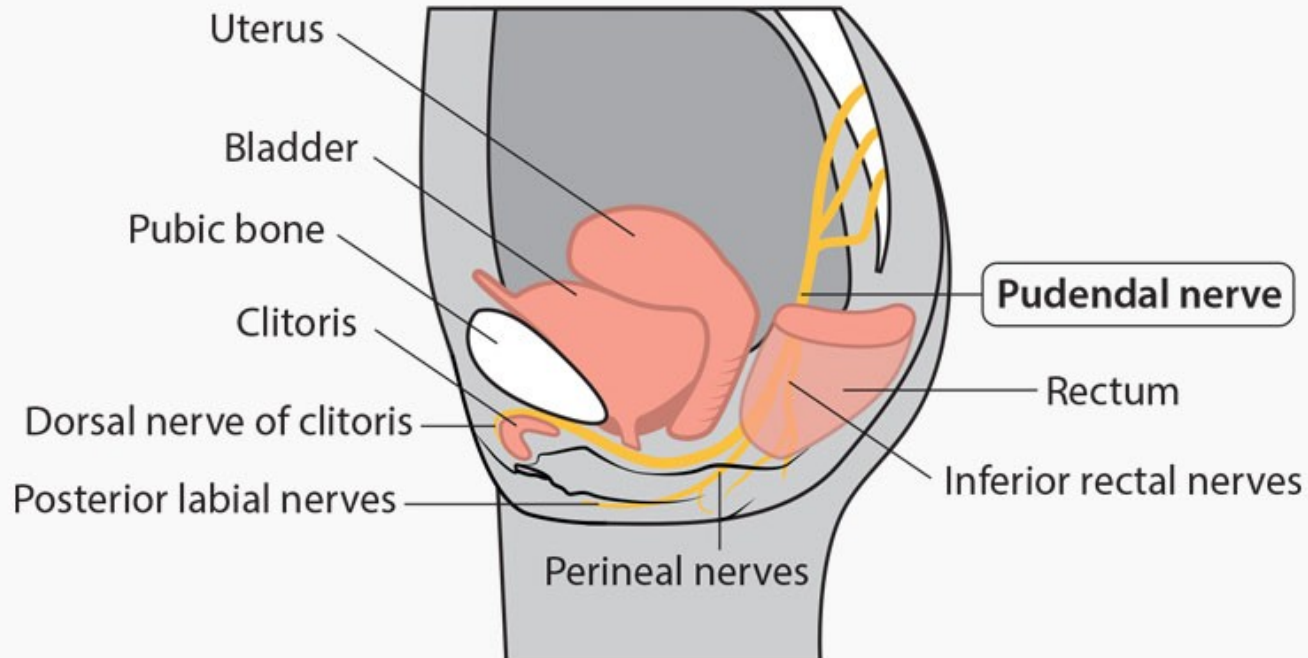
# Vagina

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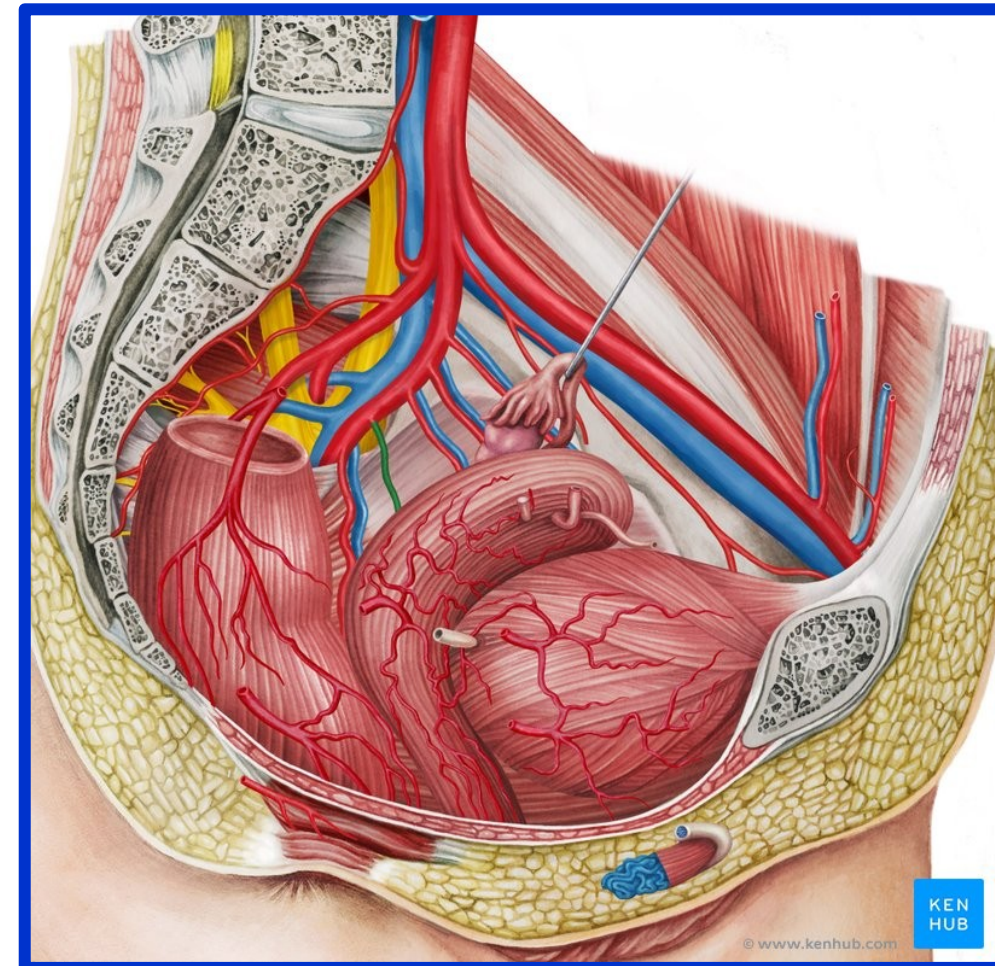
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## \*\* Nerve supply:

- ❖ Upper 2/3 supplied by sympathetic and parasympathetic.
- ❖ Lower 1/3 pain sensitive and supplied by pudendal nerve.



**Female Pudendal Nerve**



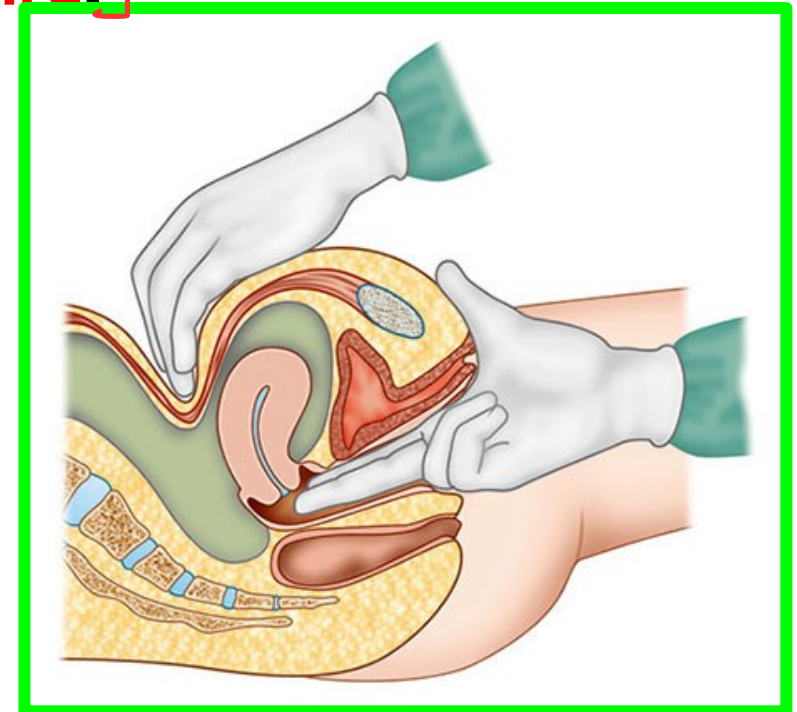
# Vagina

## \*\* Applied anatomy:

### 1- Vaginal examination:

بالا (Index) Rectum

- This is done by inserting both index and middle fingers through the vagina.
- The structures felt are:
  - ✓ [Cervix of the uterus and Fornices of the vagina]
  - ✓ [Anteriorly: The base of urinary bladder and urethra.]
  - ✓ Posteriorly: Rectovaginal (Douglas) pouch.





# Vagina

(BU)

**Bimanual examination:** With the two fingers of the right hand inserted high up into the vagina, pressure is done by the left hand on the suprapubic part of the anterior abdominal wall.

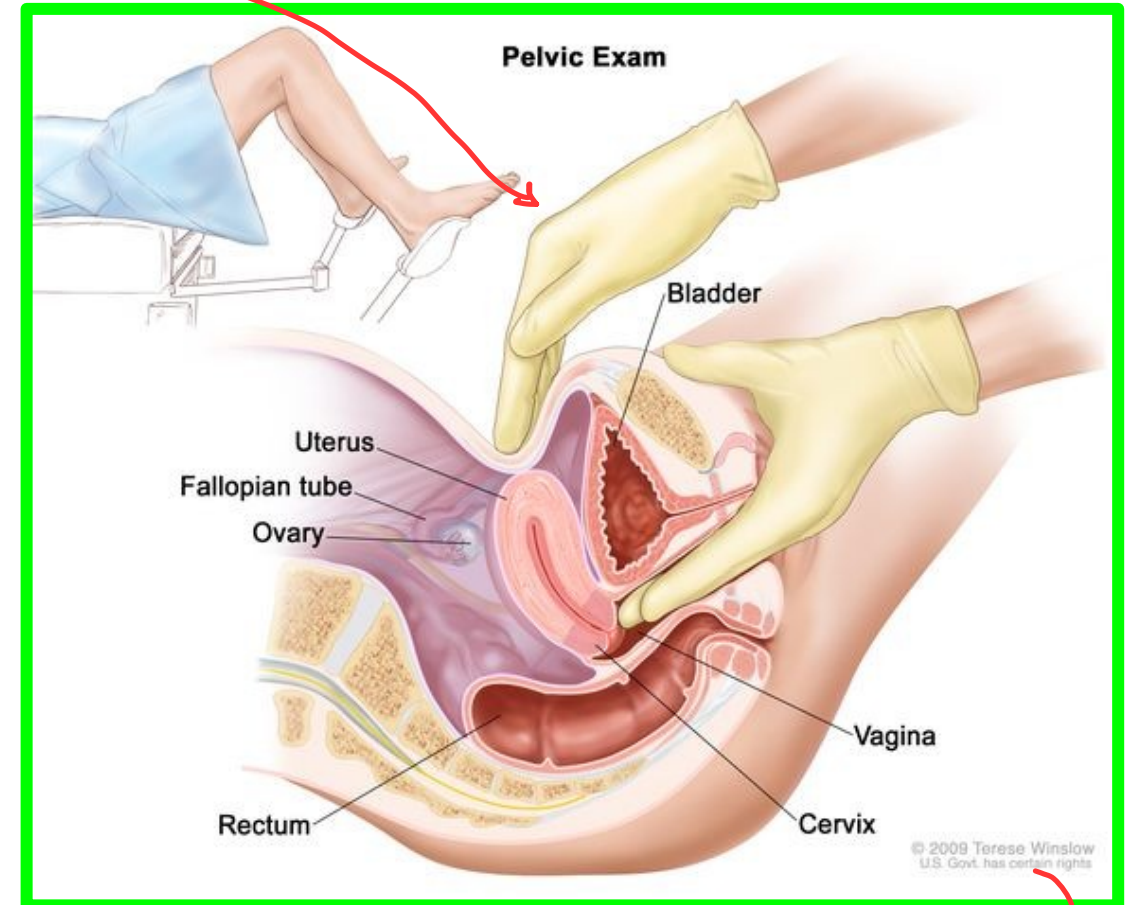
❖ By this method, the size and characteristics of the uterus can be evaluated.

The size of uterus

- بعد الولادة بحسب shrinkage للرحم

حتى ان BU يصبح لها لا تقوفا التنزف

في فترتهم بحسب حشو ومنزل الحبيبة و تنزف بعد الولادة  
duffy.



د مولى  
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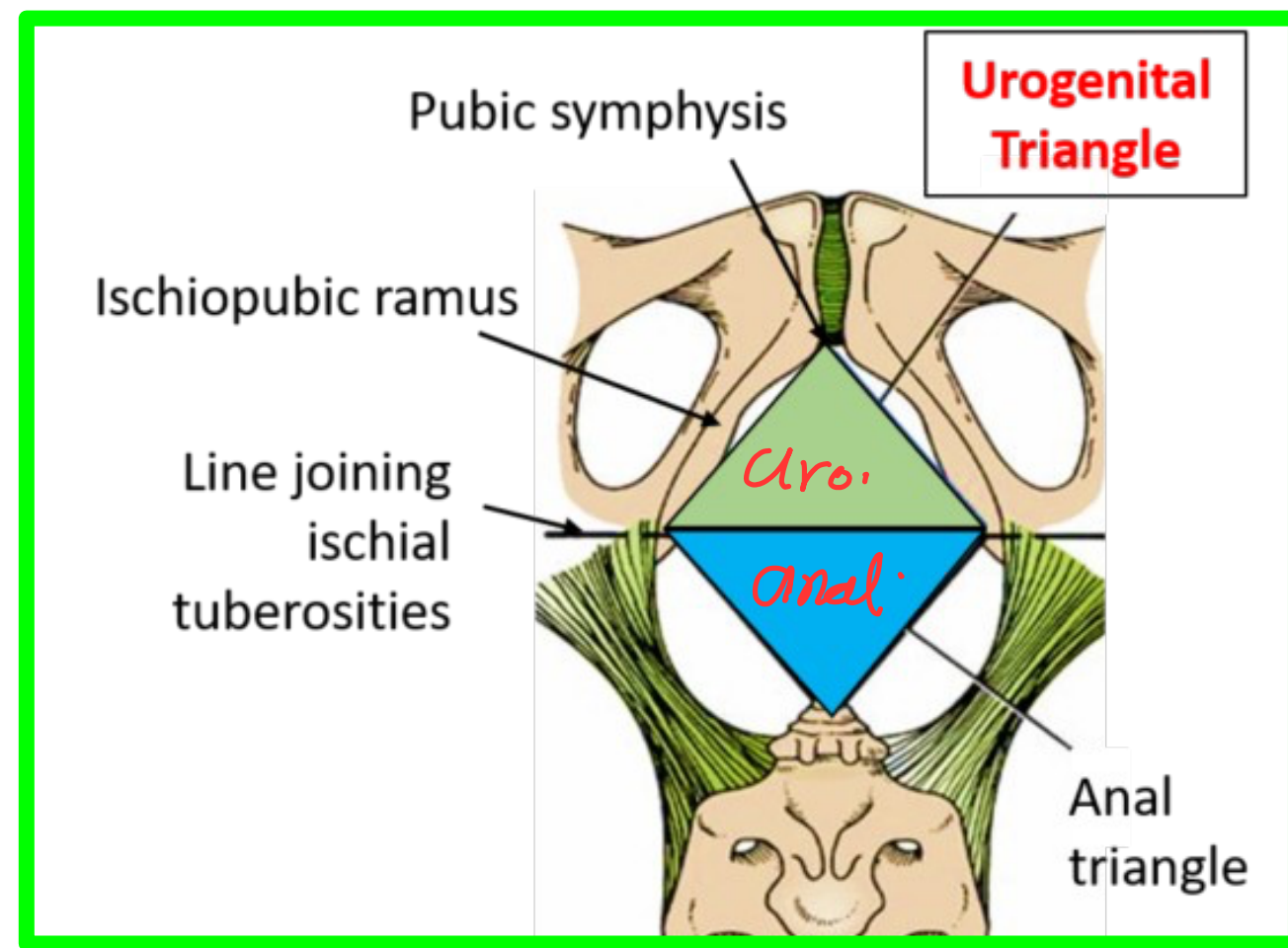


# Ischiorectal Fossa

## ANAL TRIANGLE

❖ Diamond-shaped perineum divided by a broken line into the:

- ❖ Urogenital triangle
- ❖ Anal triangle.



- 1) Urogenital triangle anteriorly, contains superficial and deep perineal pouch.
- 2) Anal triangle posteriorly, contains anal canal and ischiorectal Fossa.

# Ischiorectal Fossa

**\*\* Shape:** a wedge-shaped

**\*\* Position:** space on each side of the anal canal.

**\*\* Boundaries (walls):**

**1. Lateral wall:** vertical.

❖ It is formed by the obturator internus, obturator fascia and ischial tuberosity.

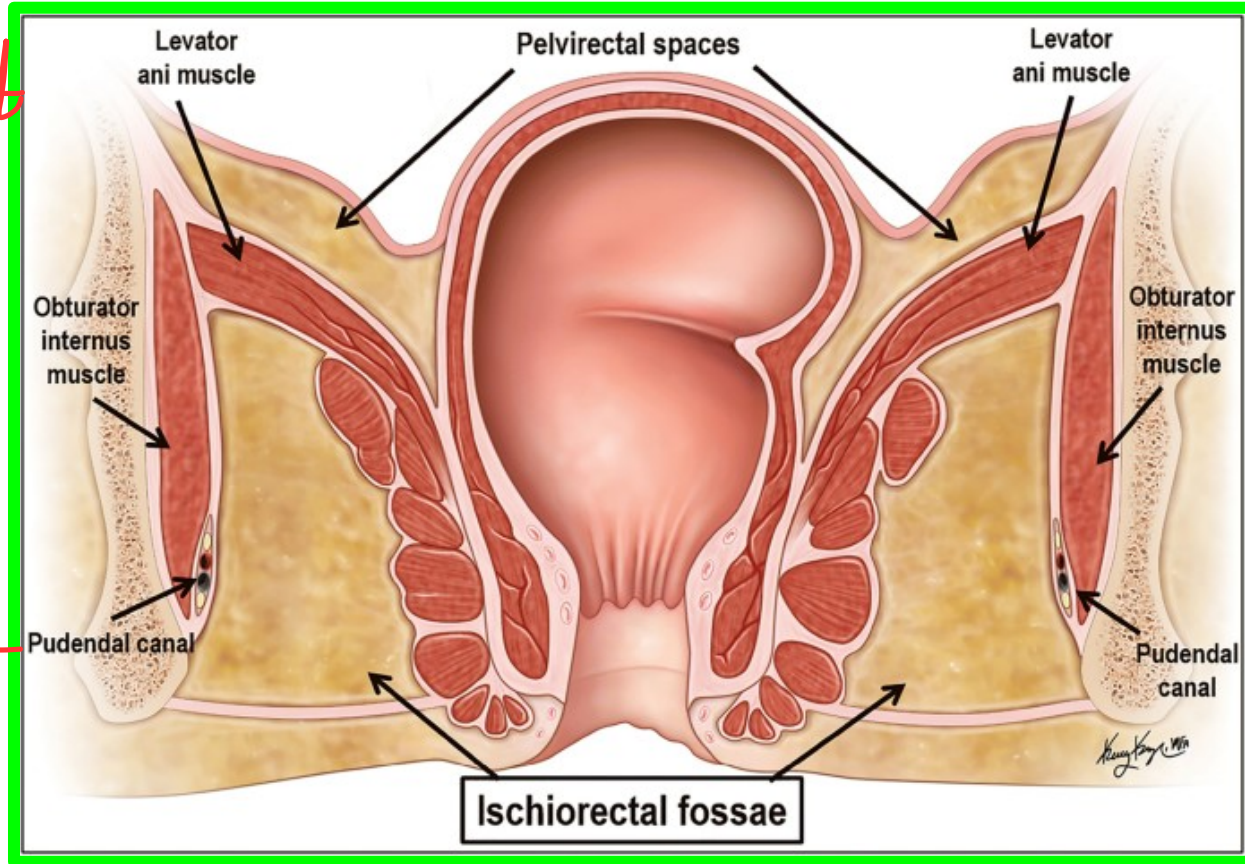
❖ The obturator fascia is split to form the pudendal canal (its contents pudendal nerve and internal pudendal vessels).

فيلد بـ فـ

رشد

تنفس

VS + N



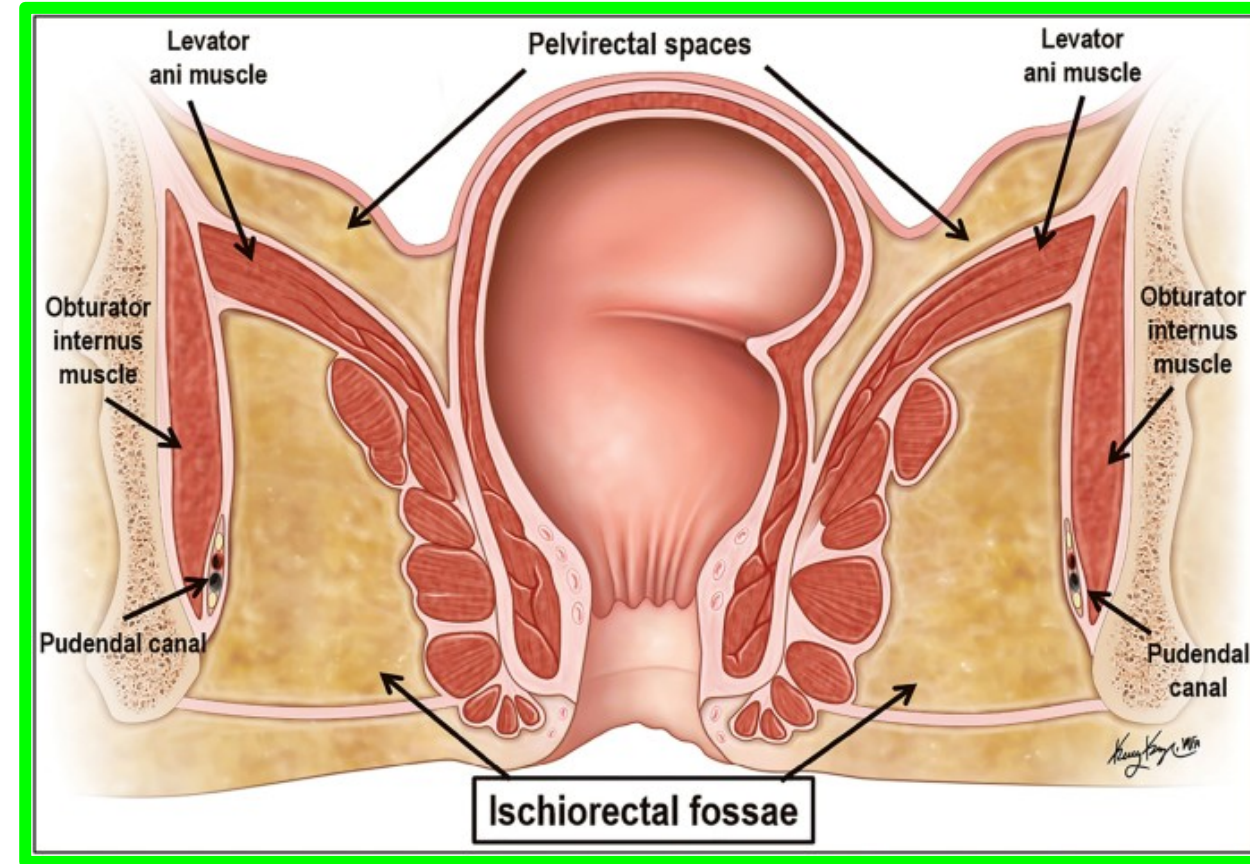
# Ischiorectal Fossa

2- Medial wall: <sup>منحنى</sup> sloping <sup>①</sup> muscles

- Upper part: the levator ani muscle.
- Lower part: the external anal sphincter. *(muscles)*

3- The base: <sup>on each side</sup> is directed downward and is formed by the peri-anal skin and fascia. *No muscles.*

4- The apex: <sup>Medial + lat. wall.</sup> is directed upward and is formed by the meeting obturator internus and levator ani muscles.

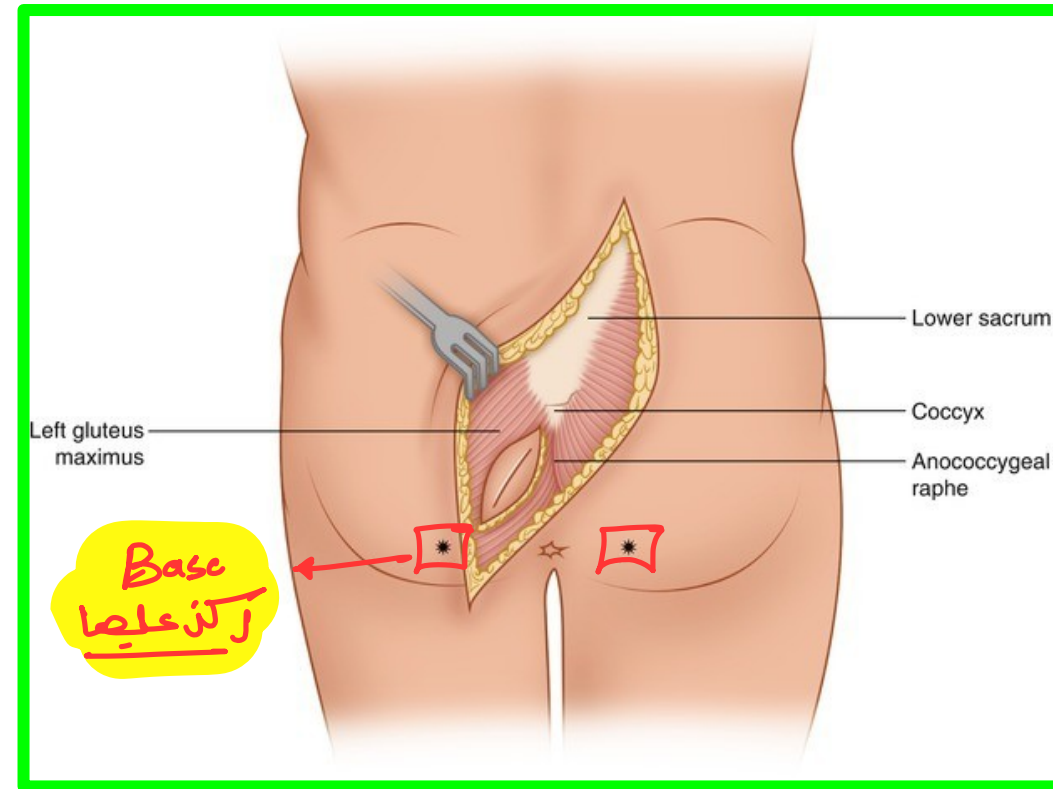




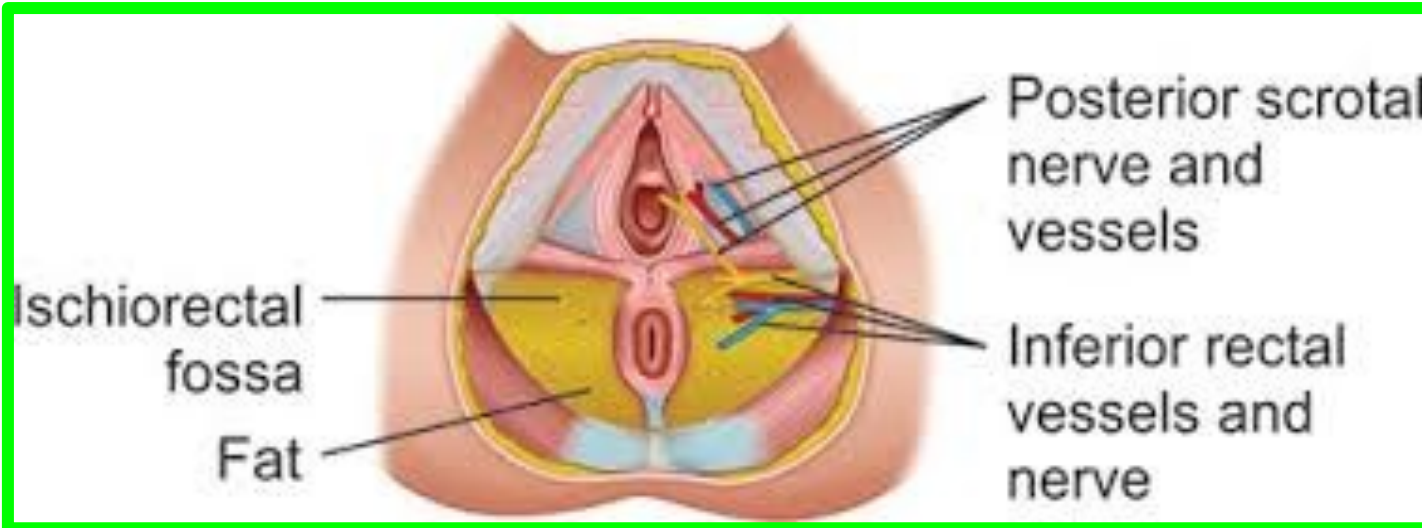
# Ischiorectal Fossa

5- **Anterior boundary:** superficial and deep perineal pouches and their contents.

6- **Posterior boundary:** sacrotuberous ligament and gluteus maximus muscle.



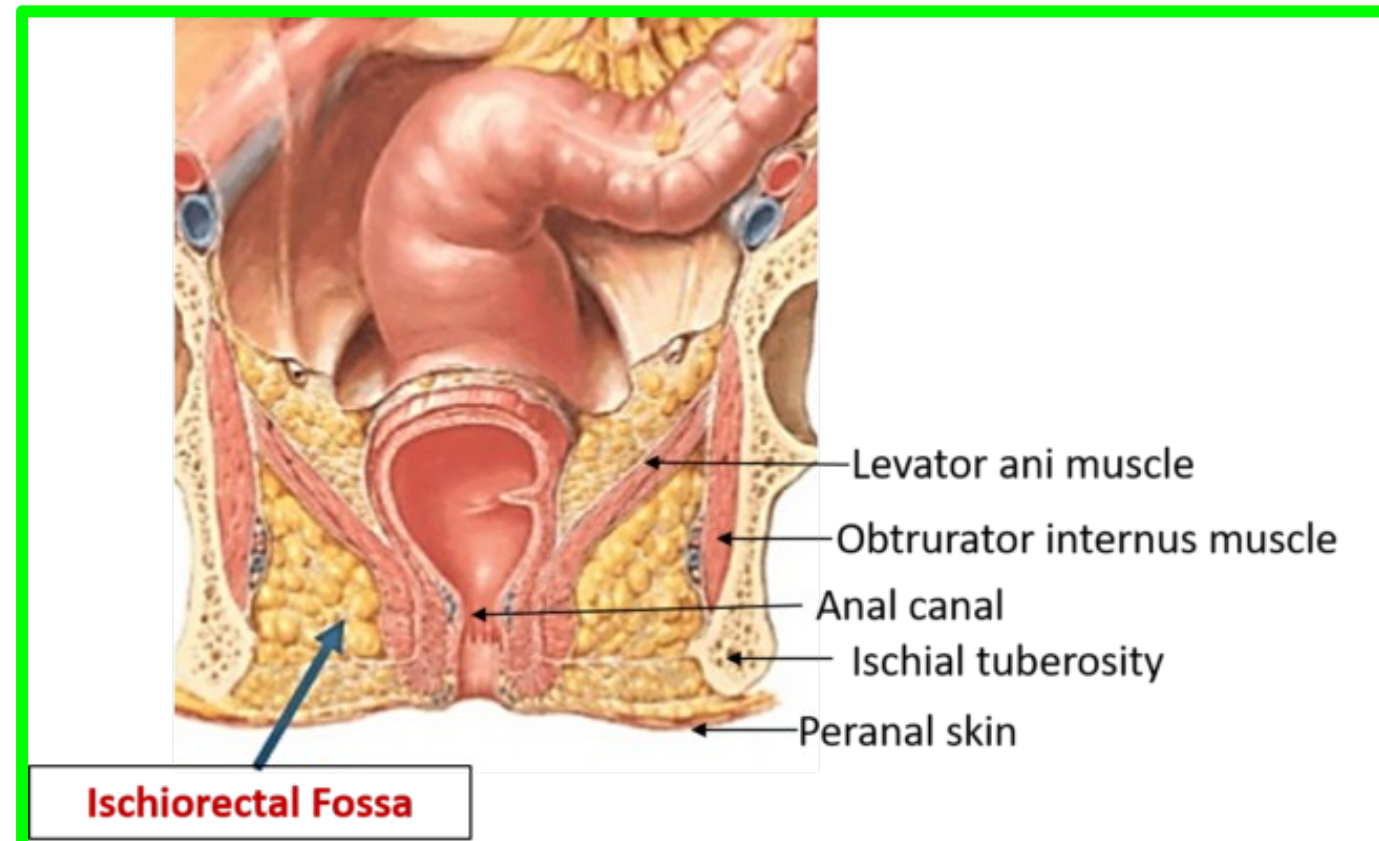
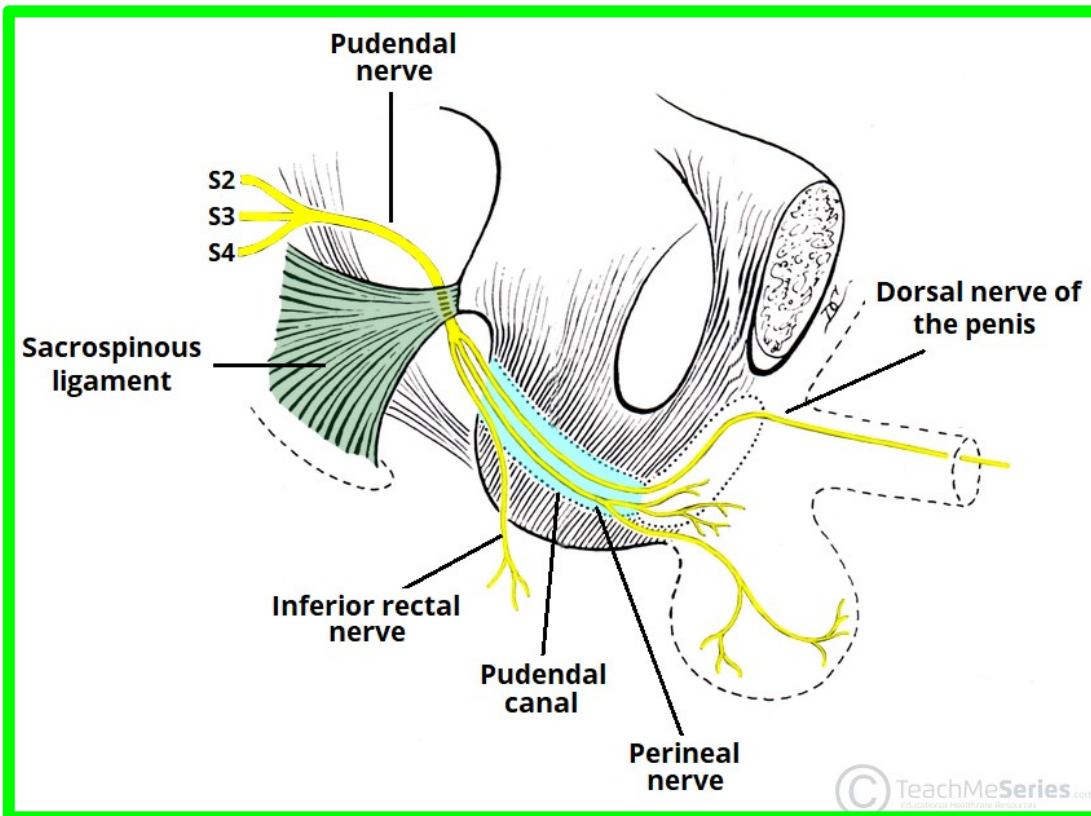
للتفصيل واقفة الـ ant. ← Uro.  
الـ post. ← Anal.



# Ischiorectal Fossa

## \*\* Contents:

- 1- Ischiorectal pad of fat allows distension of the anal canal during defecation.
- 2- Pudendal canal and its contents (pudendal nerve and internal pudendal vessels).



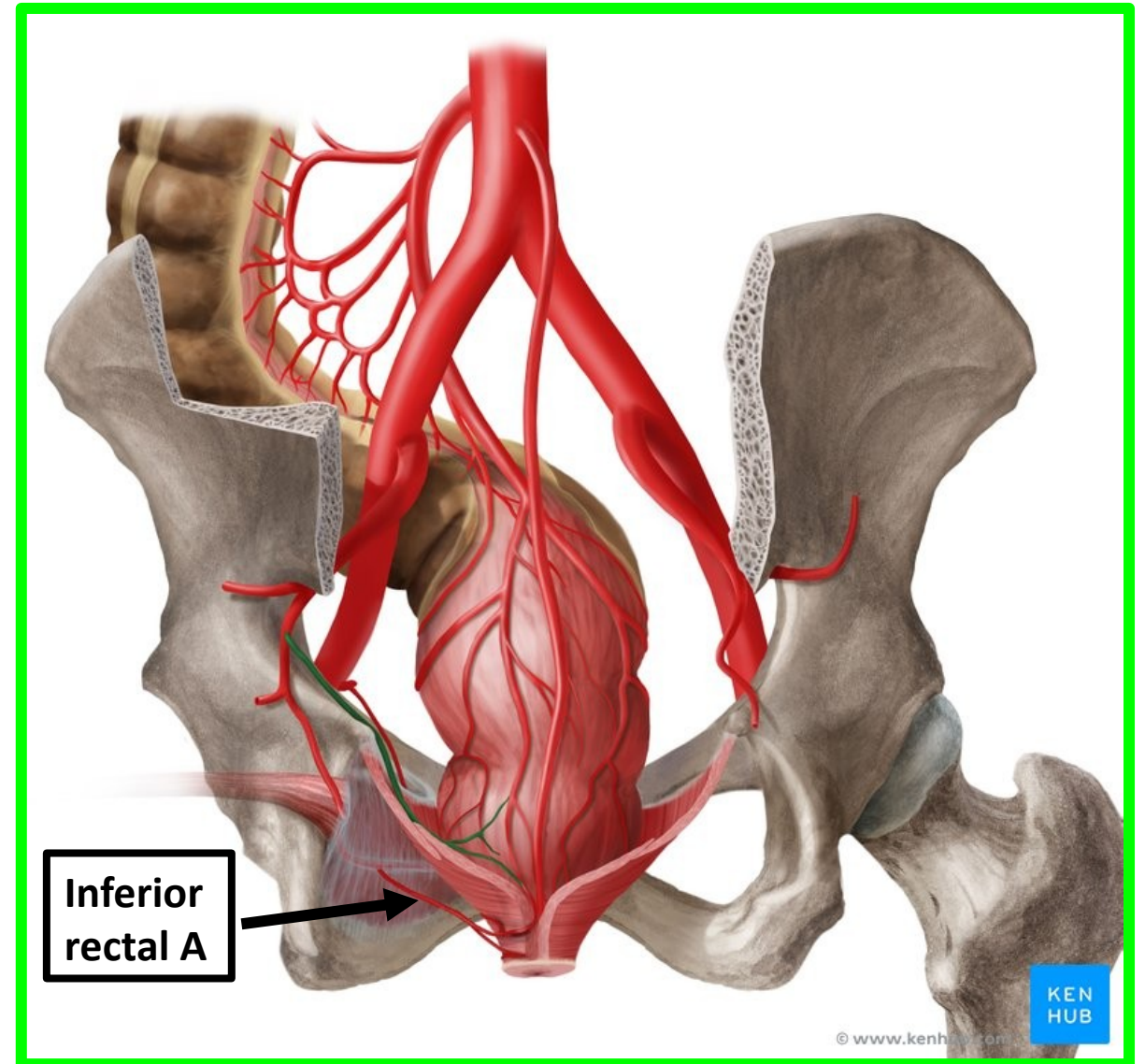
# Ischiorectal Fossa

## \*\* Contents:

### 3- Inferior rectal vessels: <sup>Art. + V.</sup>

❖ The artery arises from the internal pudendal artery in the pudendal canal.

❖ <sup>من ال Lat</sup> It crosses the fossa to reach the anal canal.





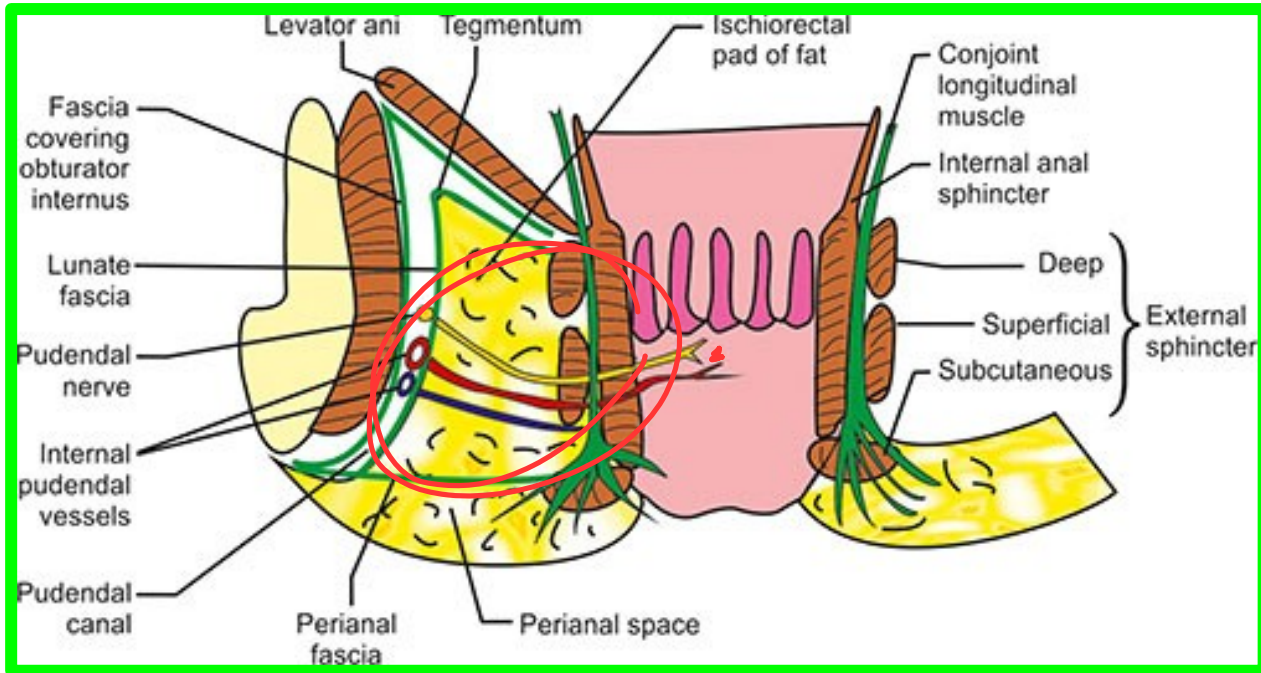
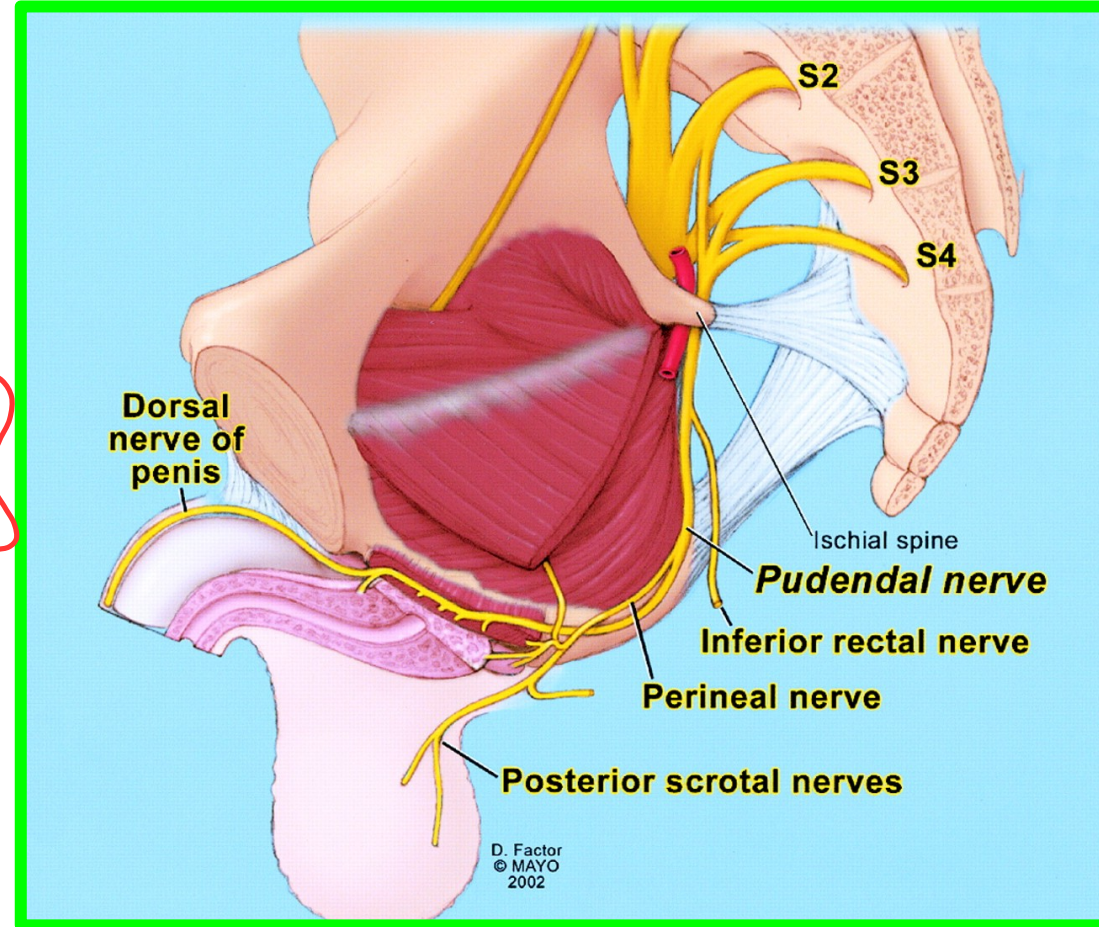
# Ischiorectal Fossa

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## \*\* Contents:

### 4 Inferior rectal nerve:

- ❖ It is a branch of the pudendal nerve in the pudendal canal.
- ❖ It crosses the fossa to supply the levator ani, and external anal sphincter.



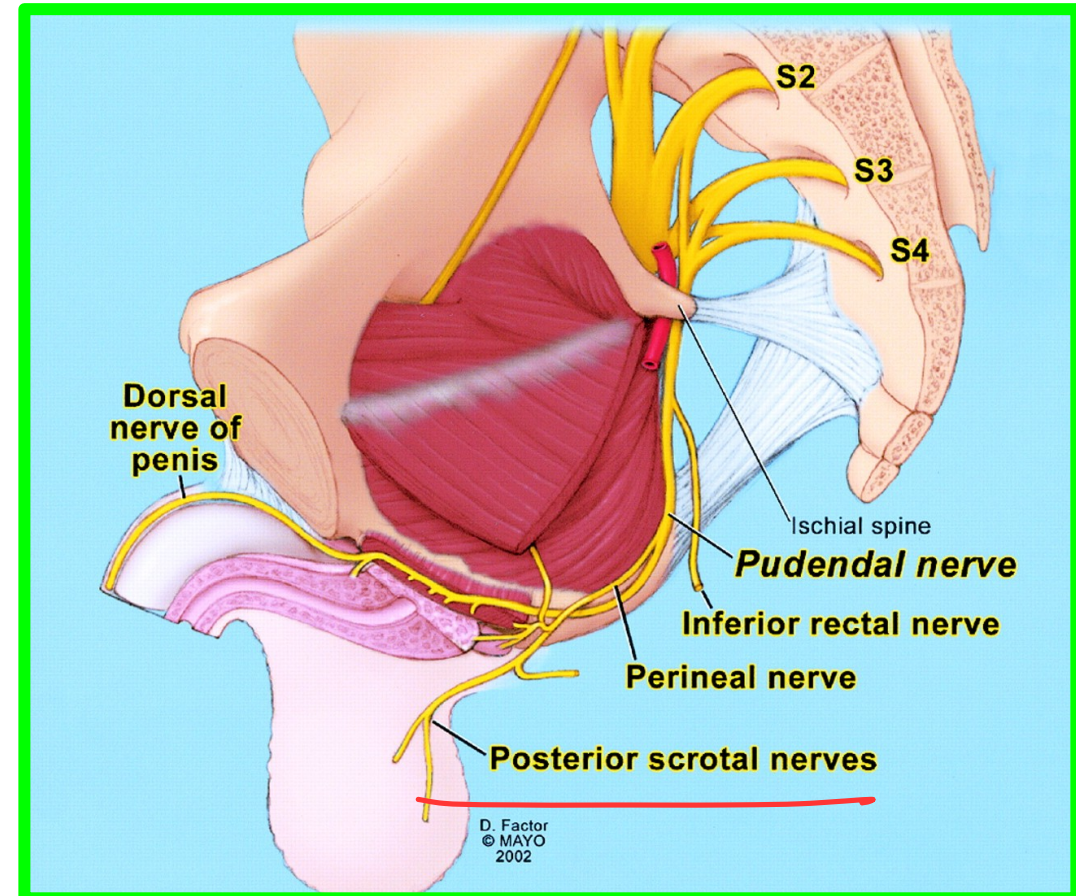
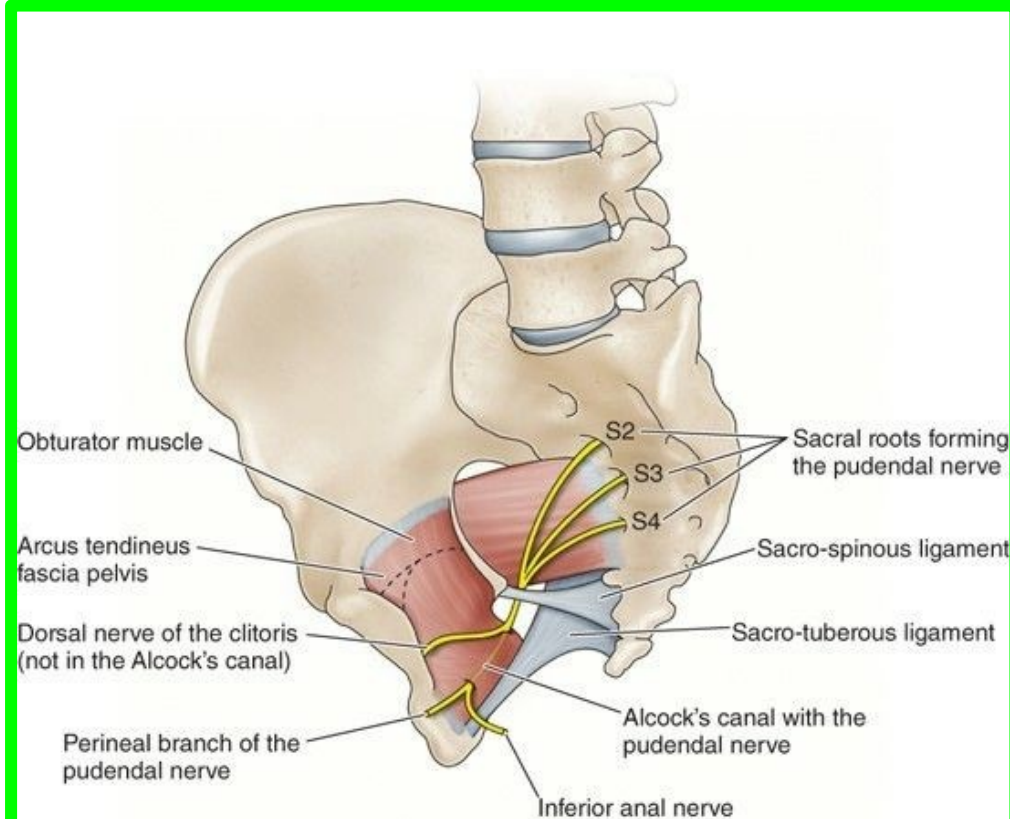


# Ischiorectal Fossa

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## \*\* Contents:

- 5- Perineal branch of the 4th sacral nerve.
- 6- Posterior scrotal nerves and vessels: to the scrotum (in male)
- 7- Posterior labial nerves and vessels: to the labia majora (in female).



# Ischiorectal Fossa

## \*\* Applied anatomy:

1- Infection of the ischiorectal fossa leading to an **ischiorectal abscess**.

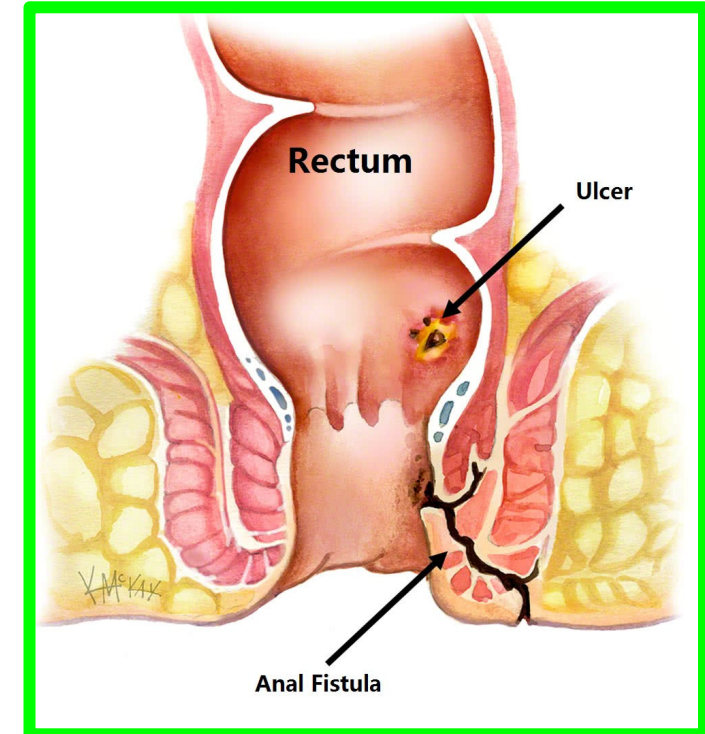
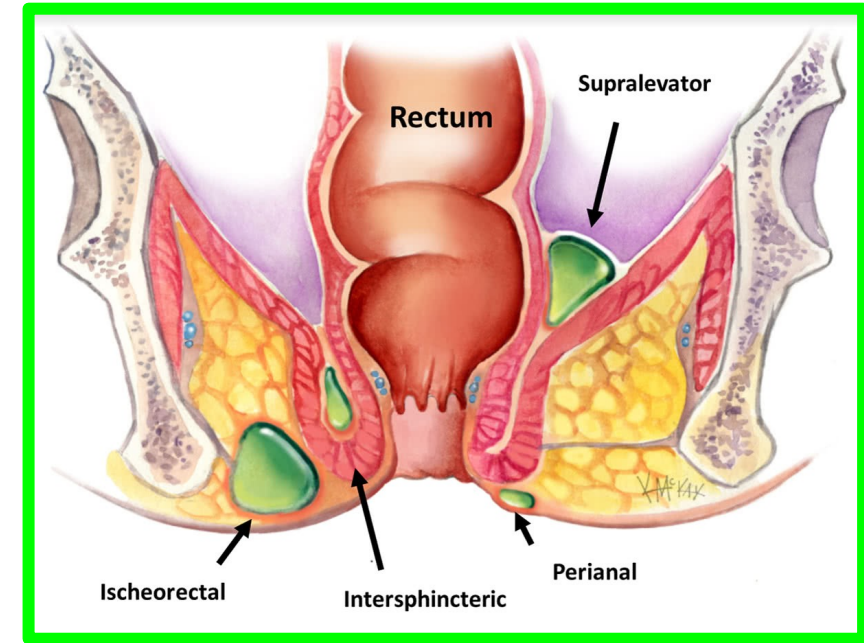
من البكتيريا

2- If the abscess opens into the anal canal, it produces **anal fistula**.

3- If the abscess opens into the skin, it produces **an external sinus**.

أو

perianal abscess





# Ischiorectal Fossa

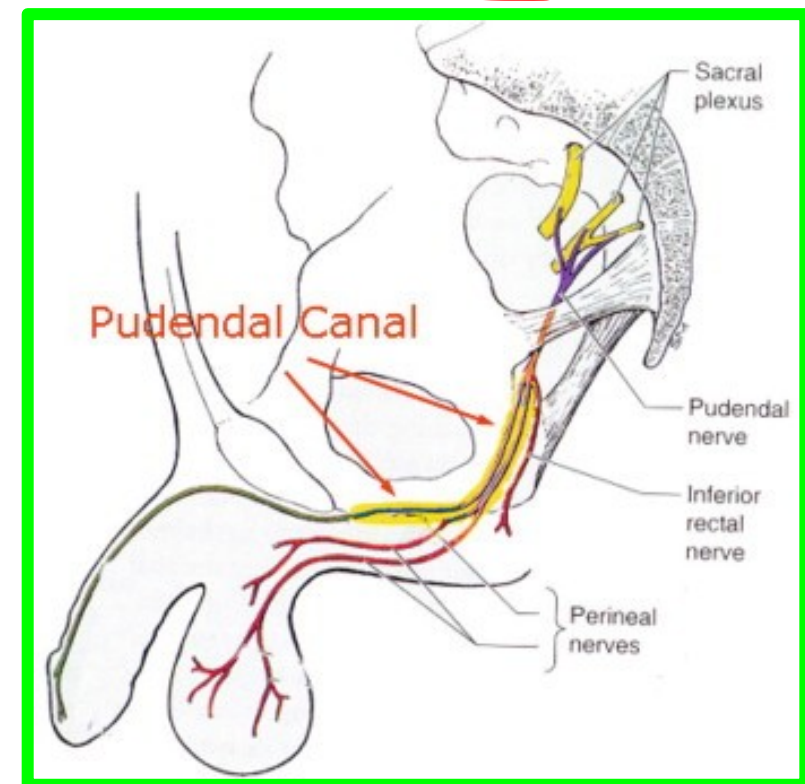
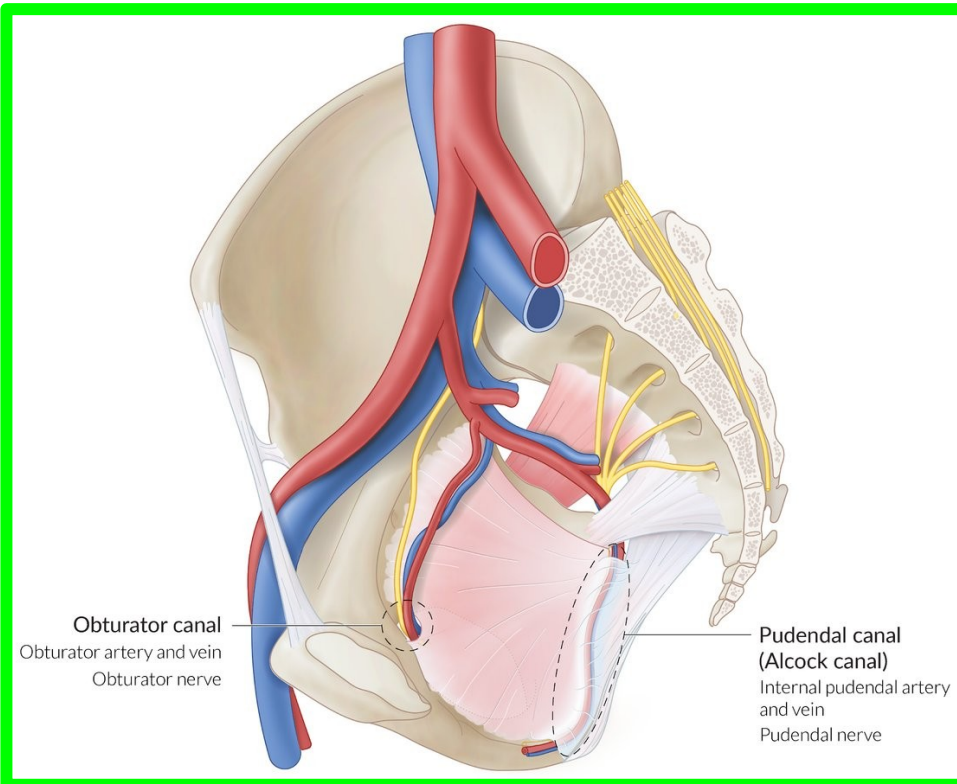
# Pudendal canal

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- \*\* Definition:** It is a tunnel in the lateral wall of the ischiorectal fossa.
- \*\* Formation:** It is formed by splitting of the obturator fascia.
- \*\* Begins:** at the lesser sciatic foramen.
- \*\* Ends into** the deep perineal pouch.
- \*\* Contents:** **Pudendal nerve** and **internal pudendal vessels**.







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