

# ❑ FEMALE GENITAL ORGANS

The Uterine tube, Ovaries & Vagina

## ❑ Ischiorectal Fossa

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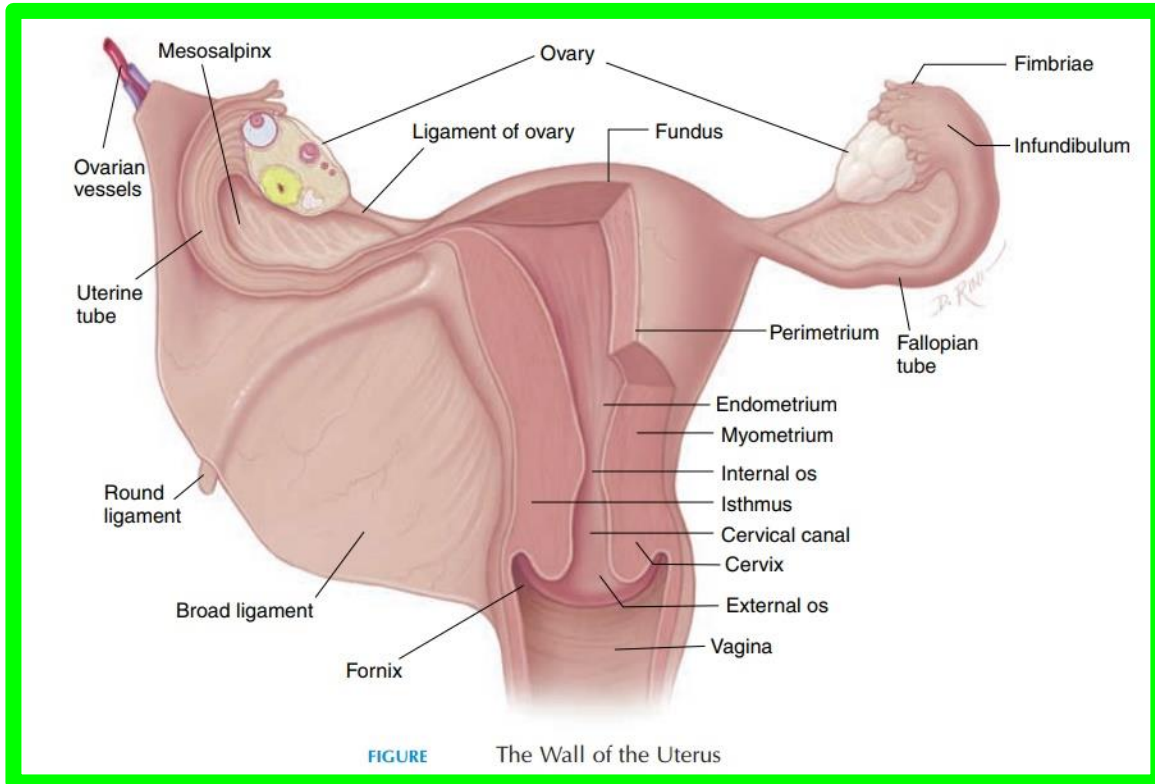
**2023-2024**

**Monday 13 May 2024**

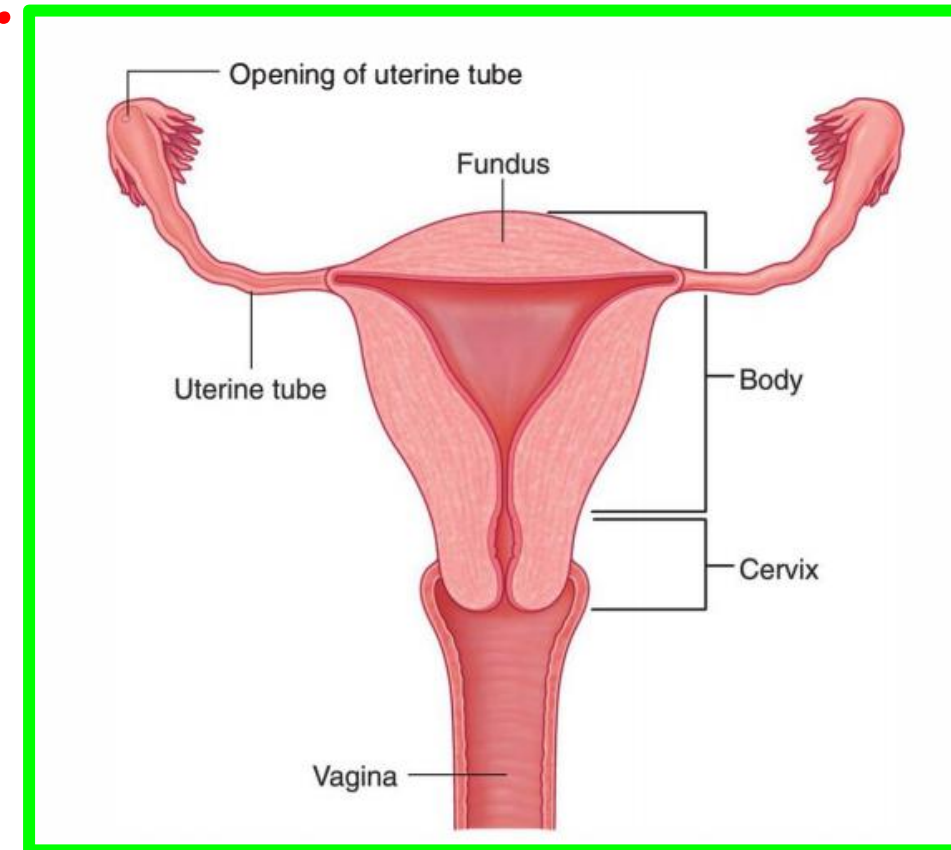
# Uterine Tube

Dr. Aiman Qais Al Maathidy  
Monday 13 May 2024

- ❖ 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**.



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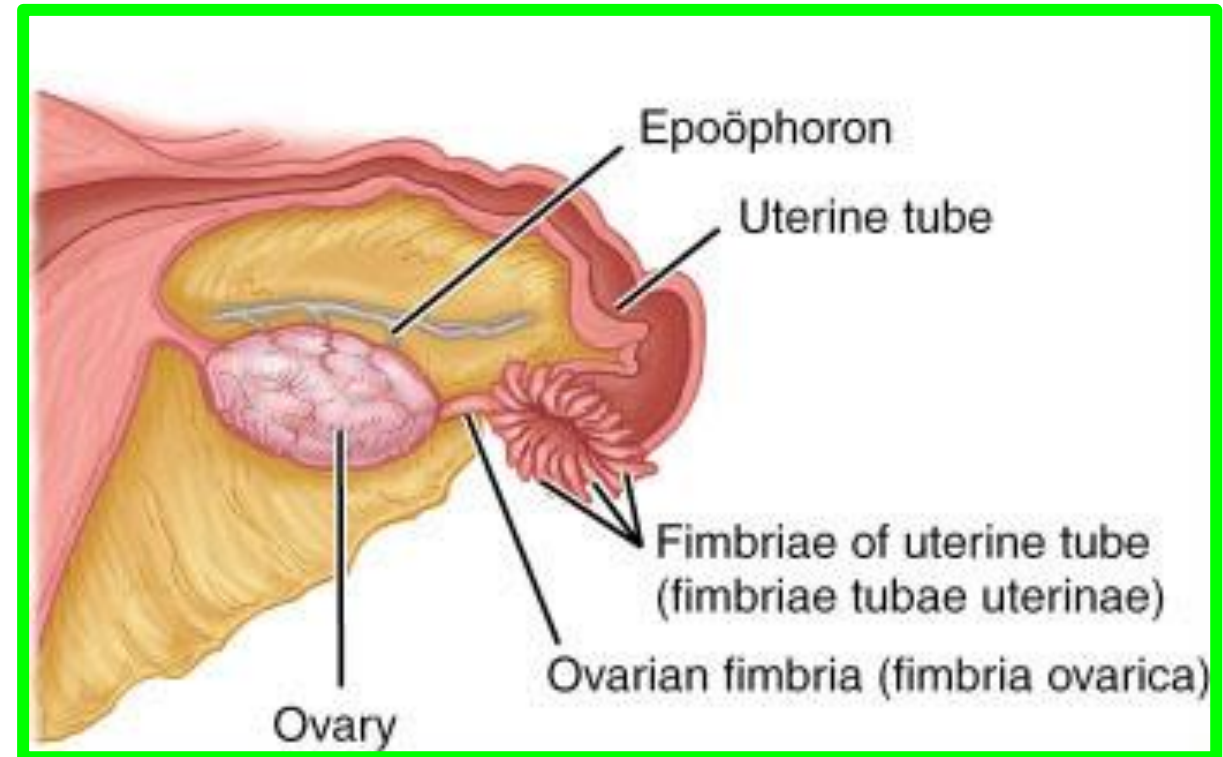
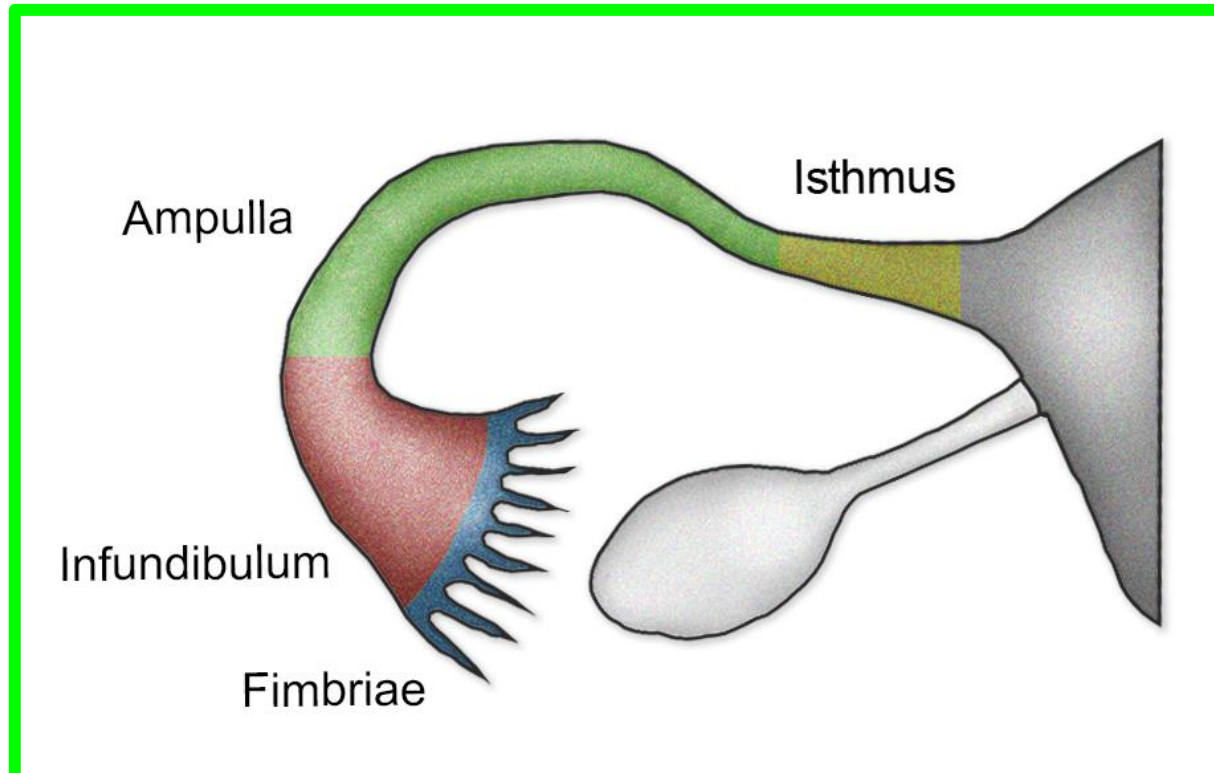
# Uterine Tube

**\*\* 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**.

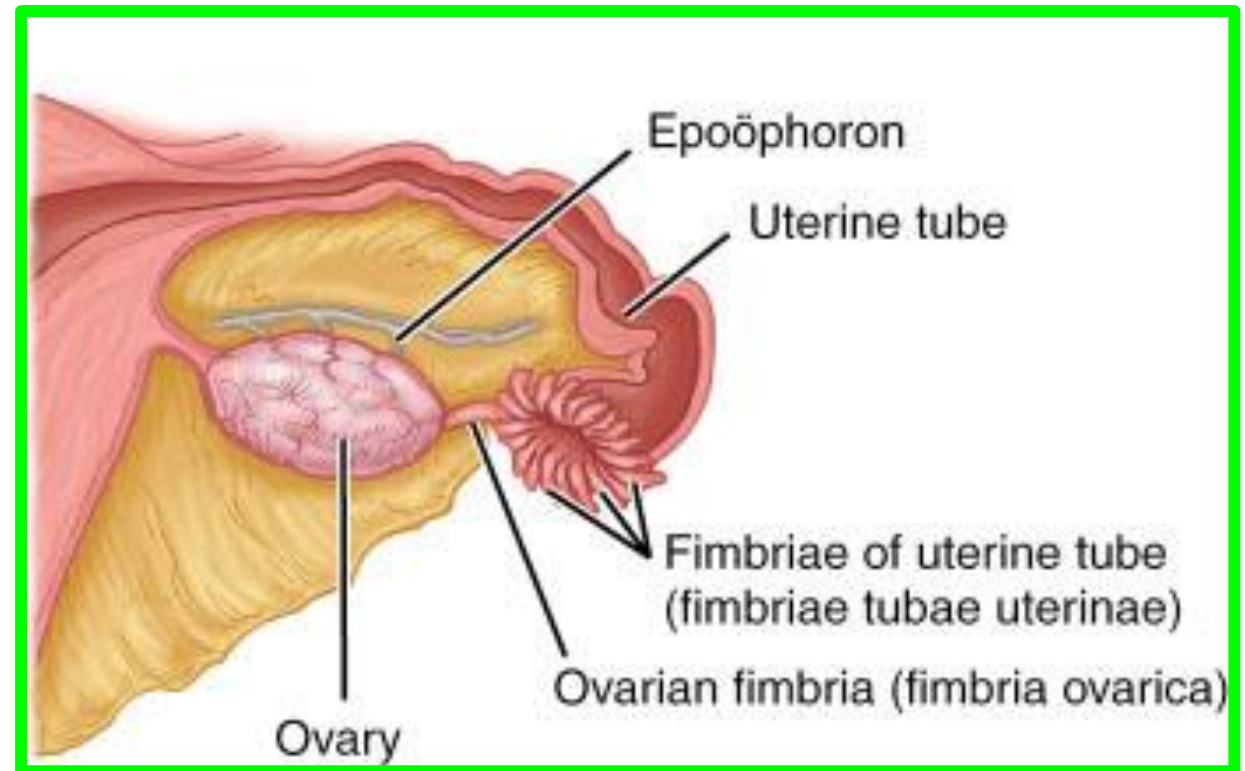
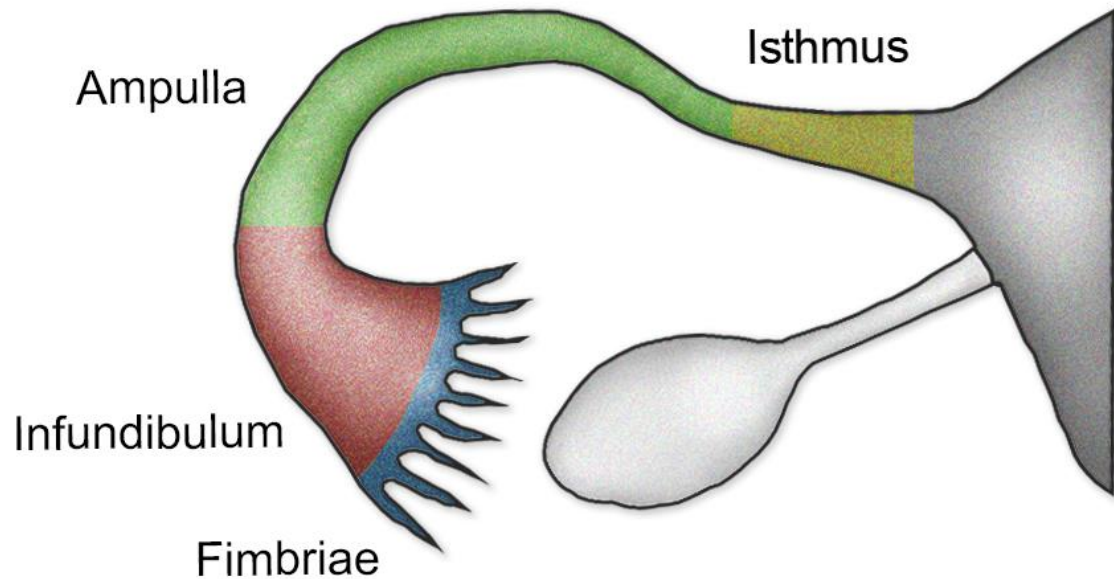
**2- Ampulla:** a dilated, tortuous and thin-walled.



# 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).



# Uterine Tube

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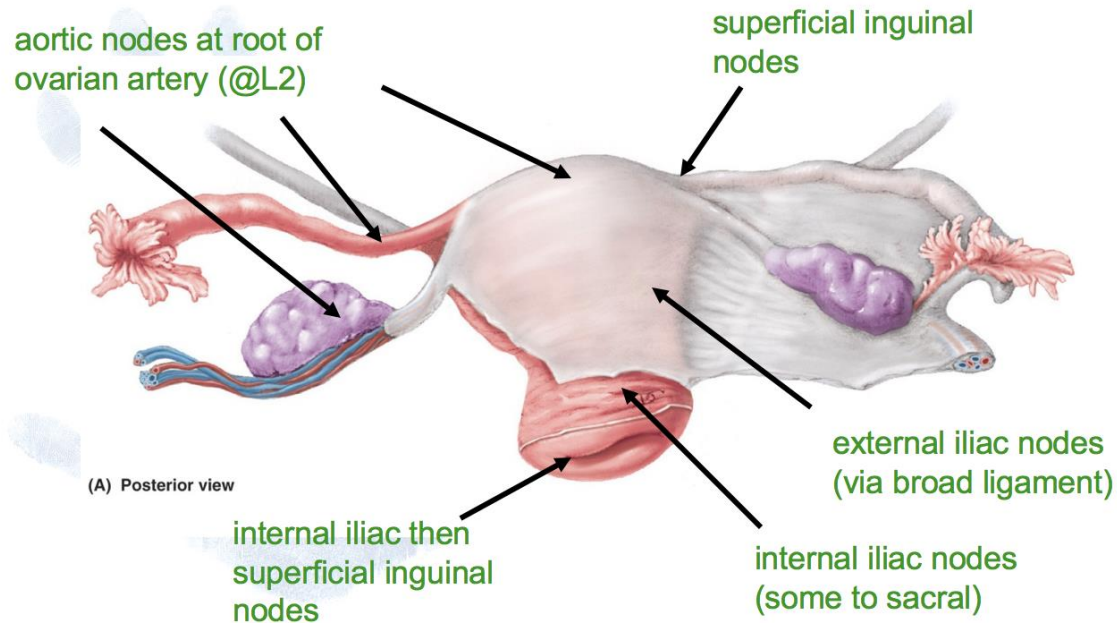
**\*\* Arterial supply:** 1) The lateral part by **the ovarian artery.**  
2) The medial part by **the uterine artery.**

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

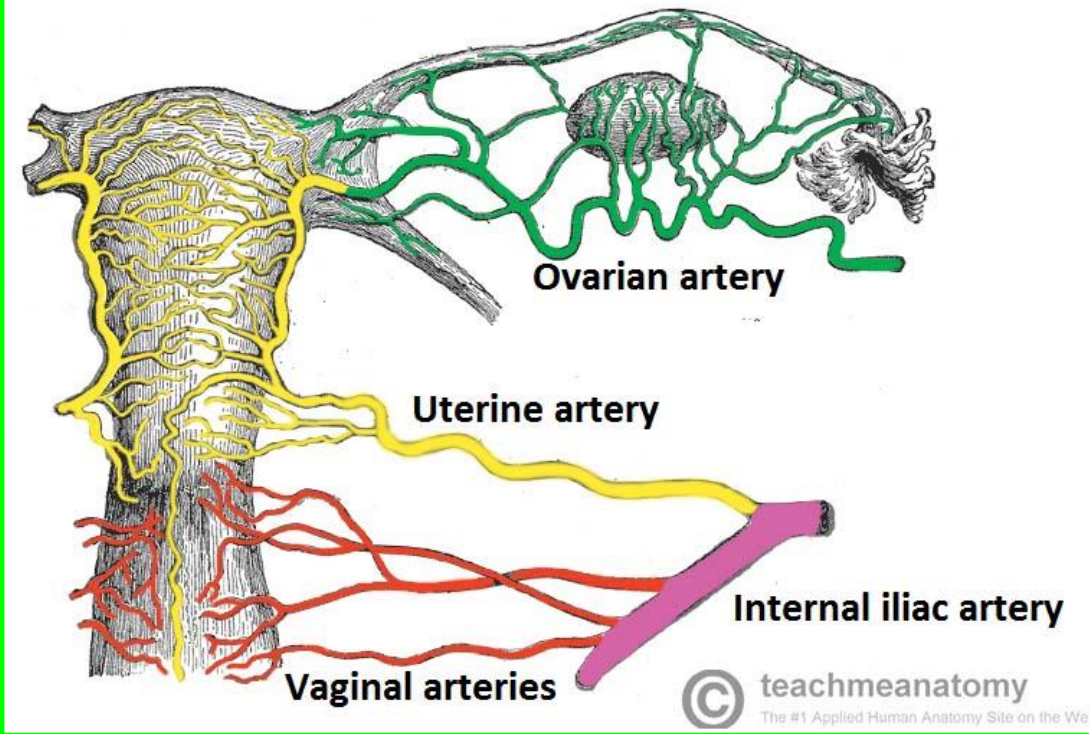
**\*\* Lymphatic drainage:** to the preaortic and para-aortic **lymph nodes.**

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

## Lymphatic drainage



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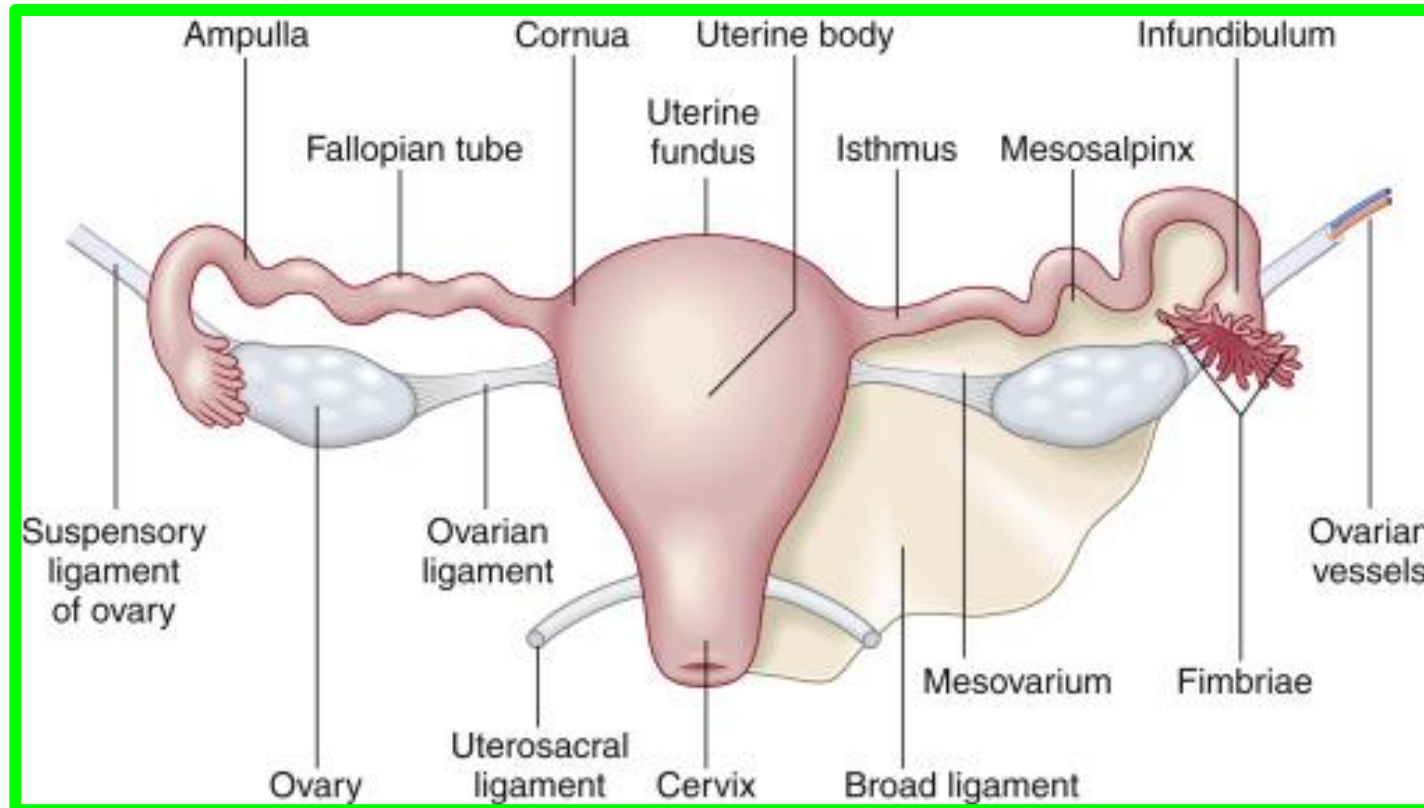


# Ovaries

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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.
- \*\* **Dimensions** (1 cm thickness) (2 cm breadth) (3 cm Length)
- \*\* **Weight** from 2 to 3.5 gm



# Ovaries

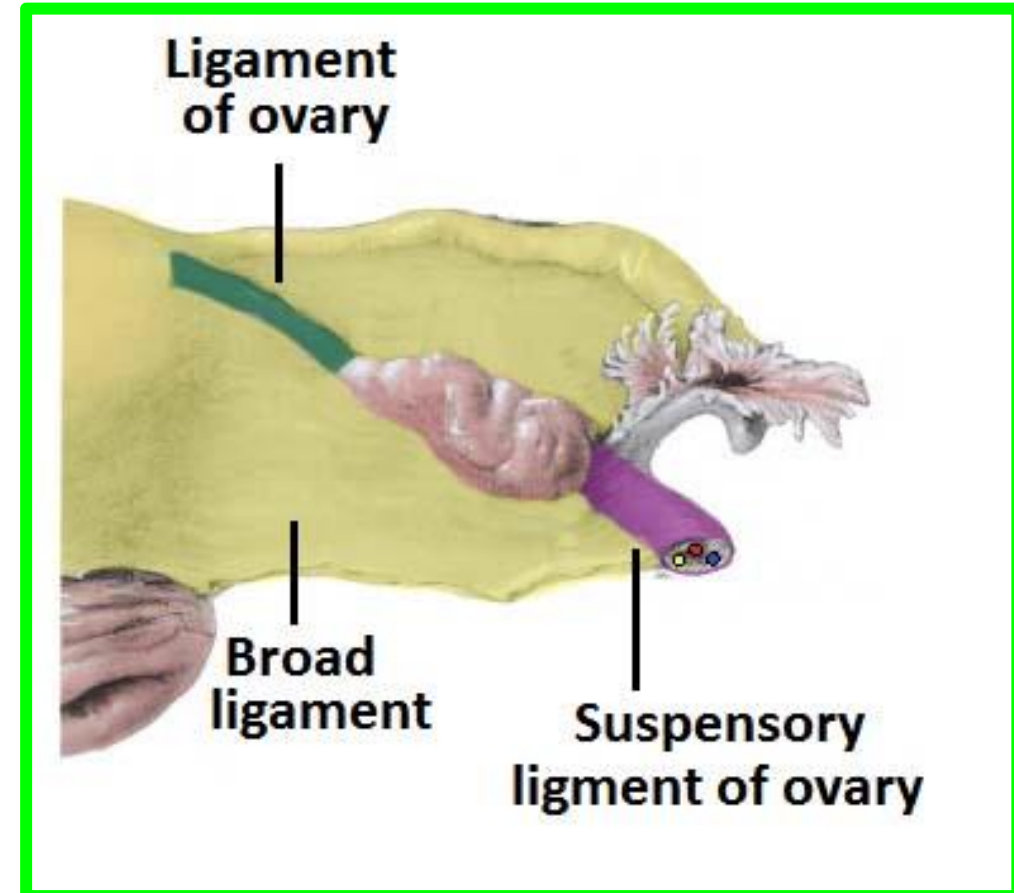
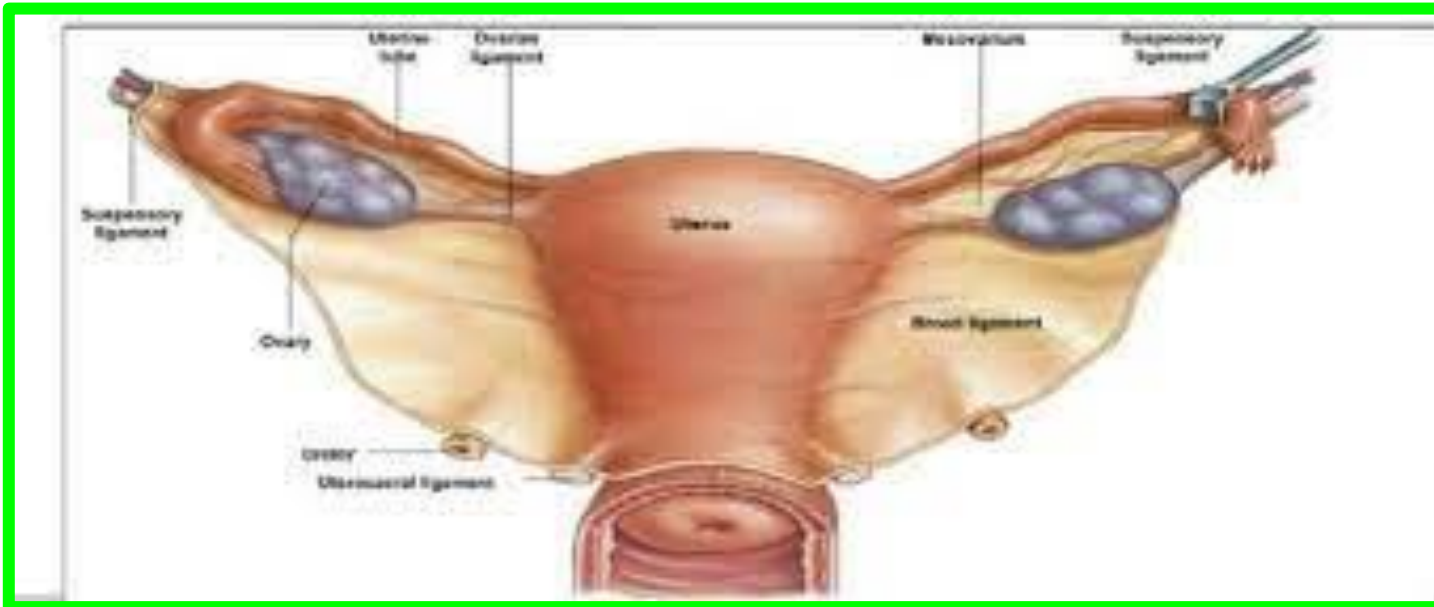
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**\*\* General features and Relations, The ovary has:**

**A- 2 surfaces:**

- 1- Lateral surface:** lies in the floor of the ovarian fossa.
- 2- Medial surface:** is covered by the uterine tube.



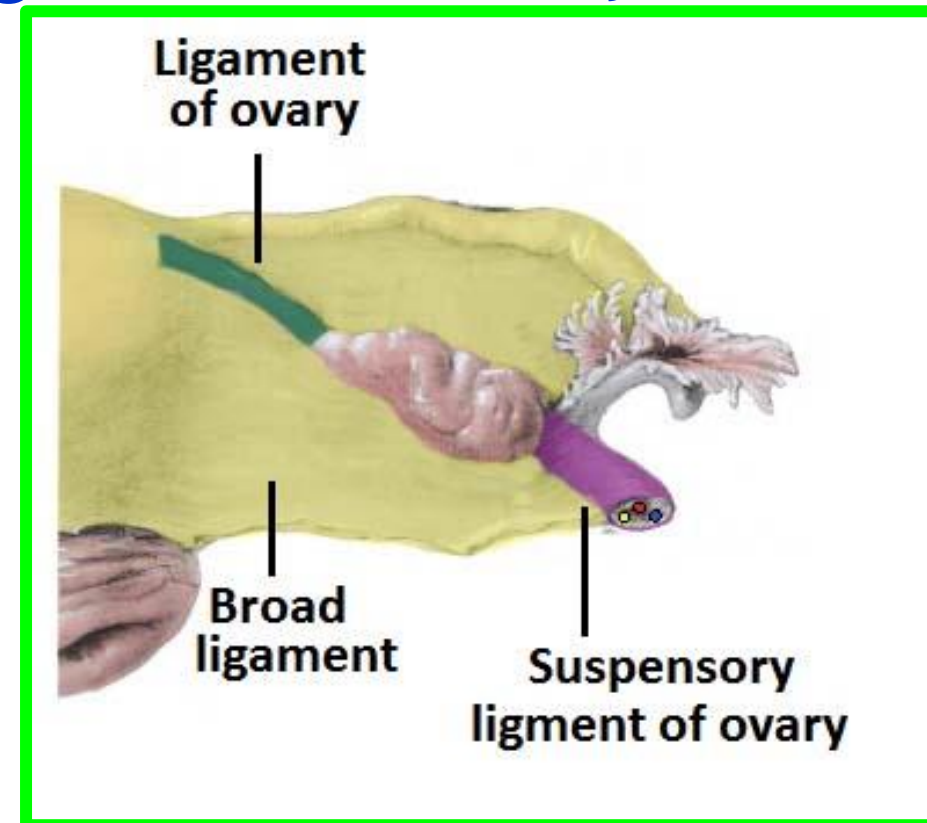
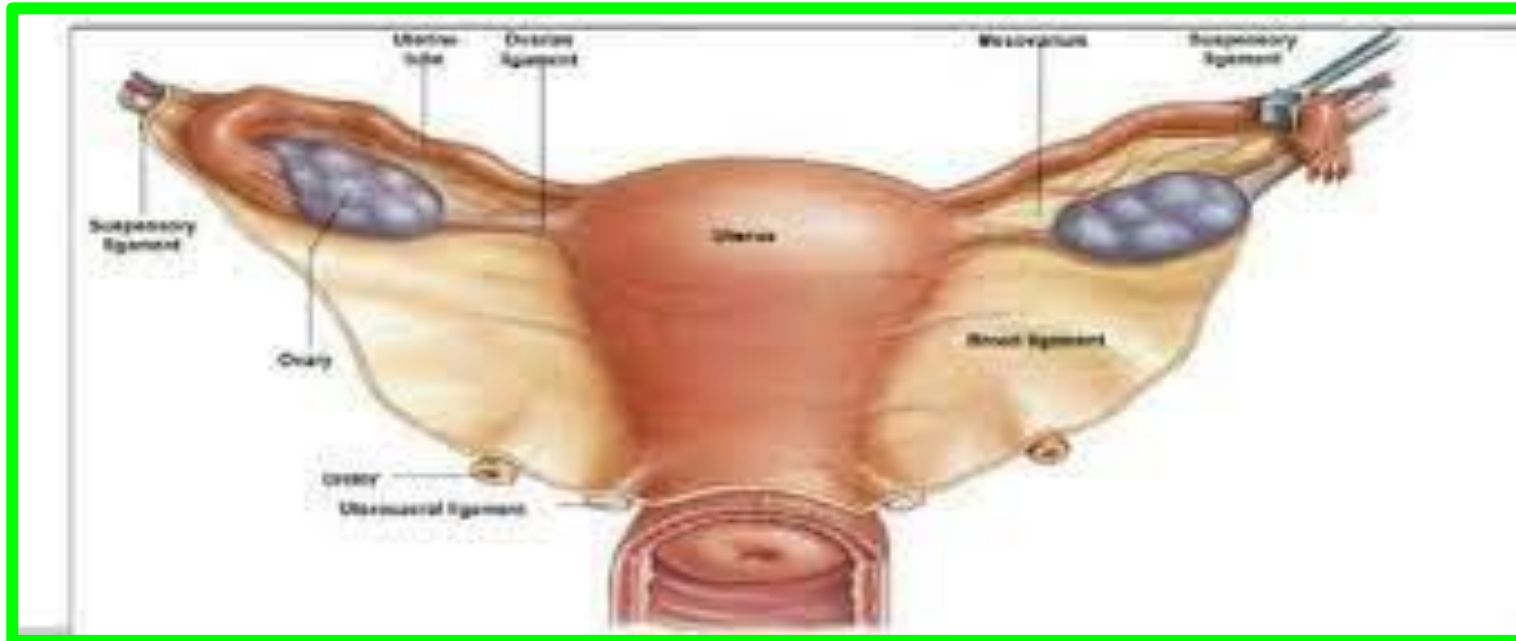
# Ovaries

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.





# Ovaries

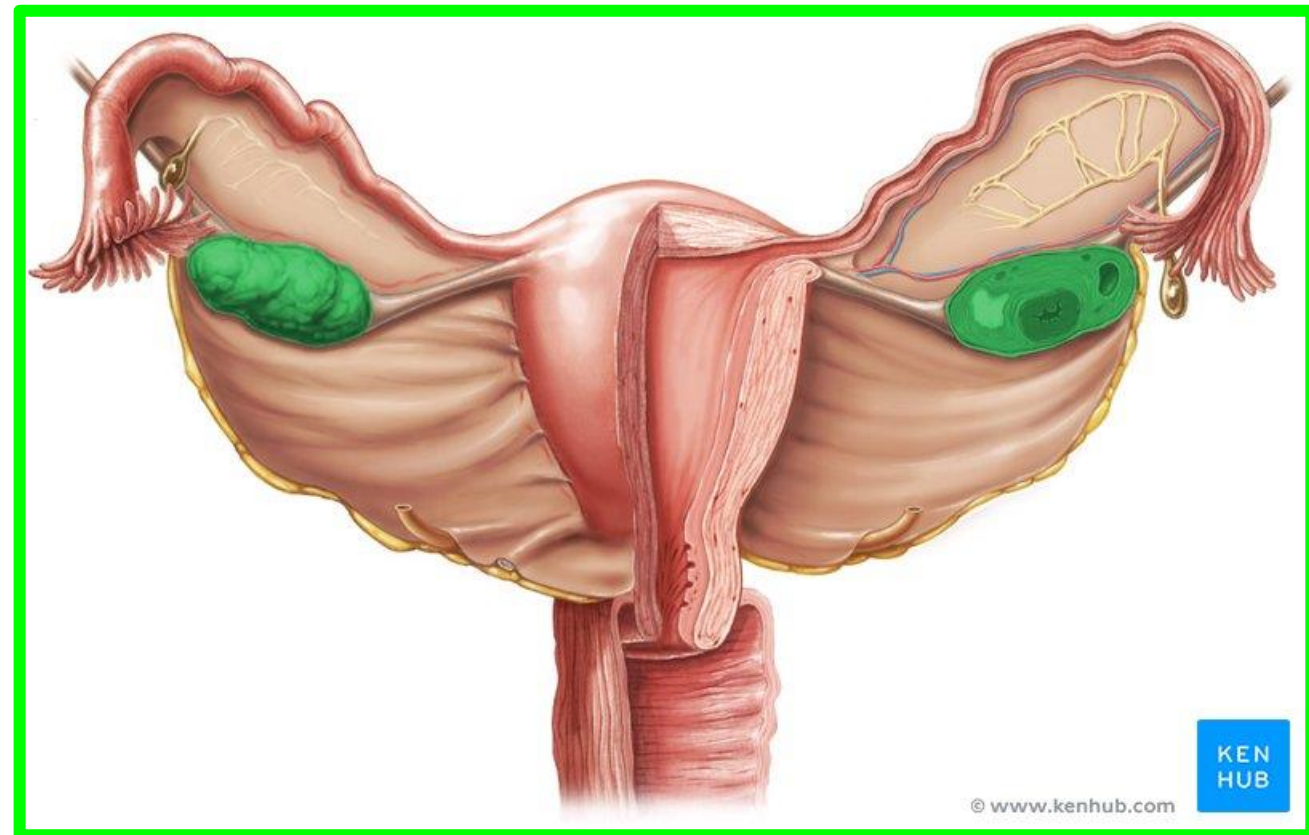
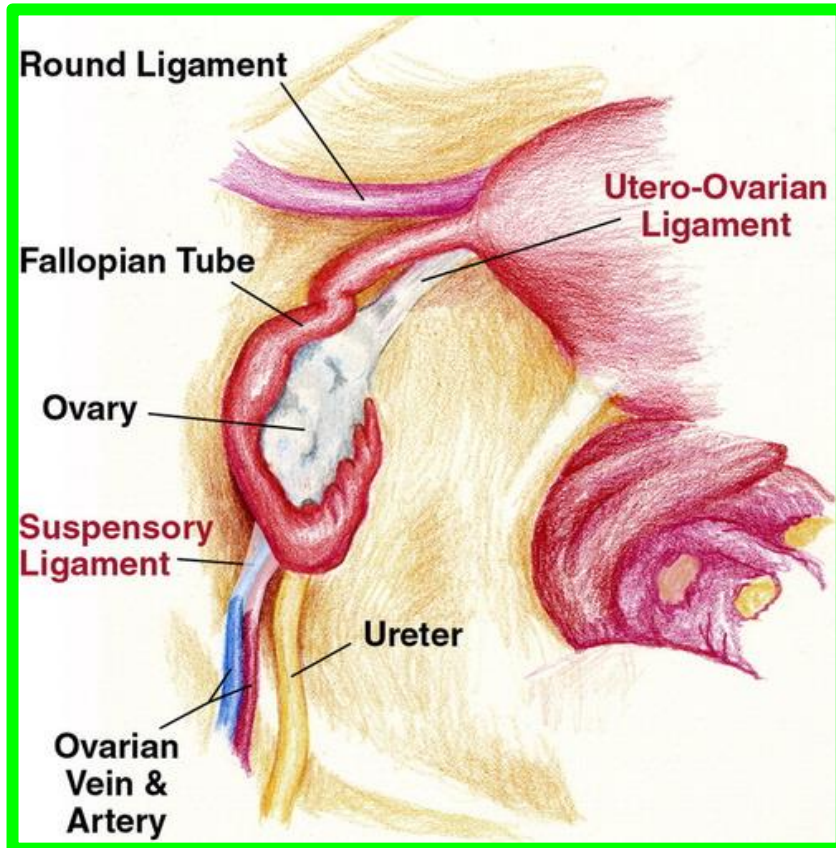
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C- 2 borders:

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

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

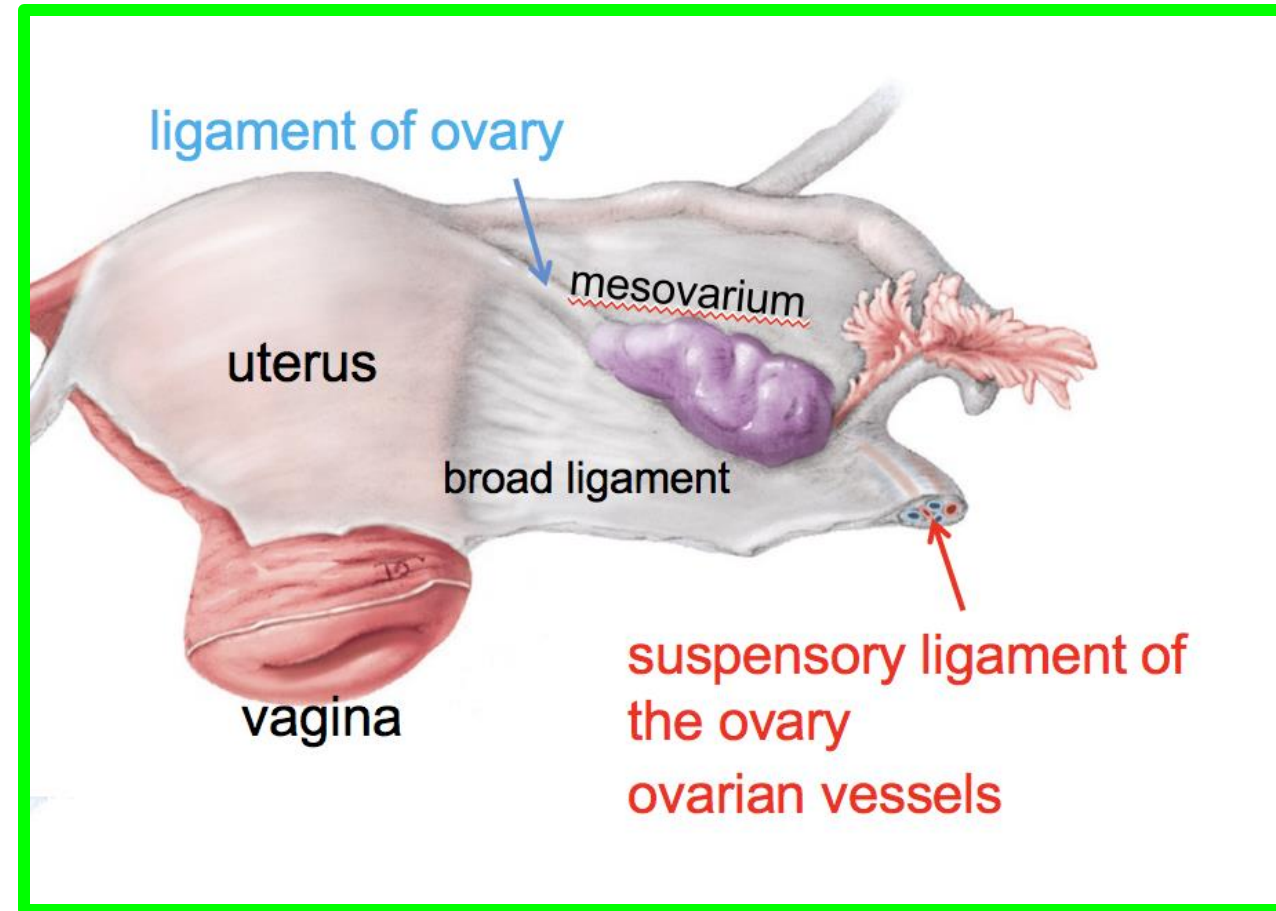


## \*\* Ligaments of the ovary

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.

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



**\*\* Arterial supply:** the **ovarian artery** from abdominal aorta.

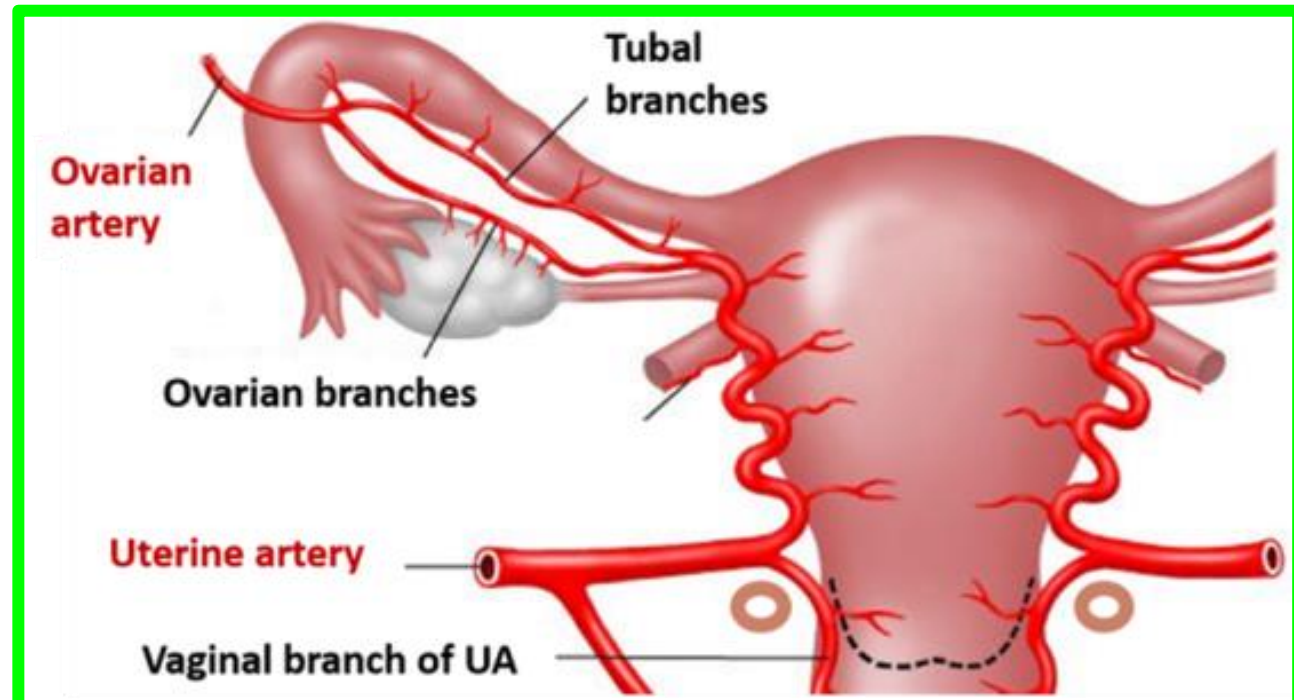
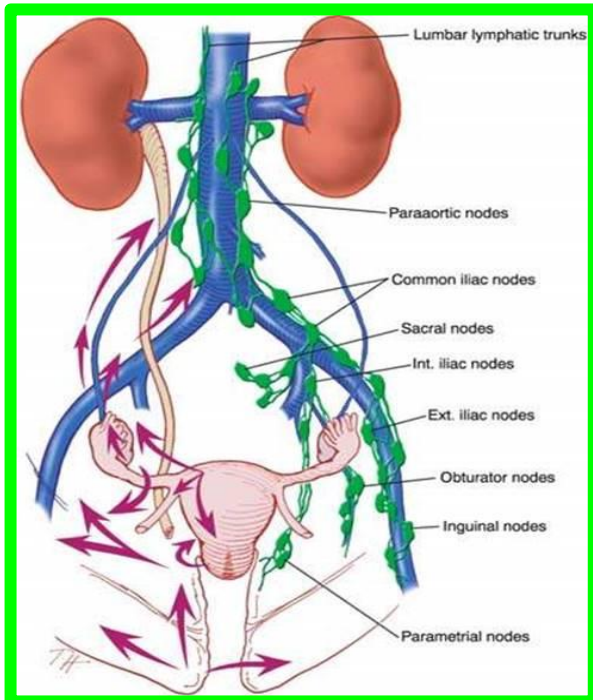
**\*\* Venous drainage:** The ovarian veins.

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 **T10, 11** while parasympathetic from **S2, 3, 4**.



# Vagina

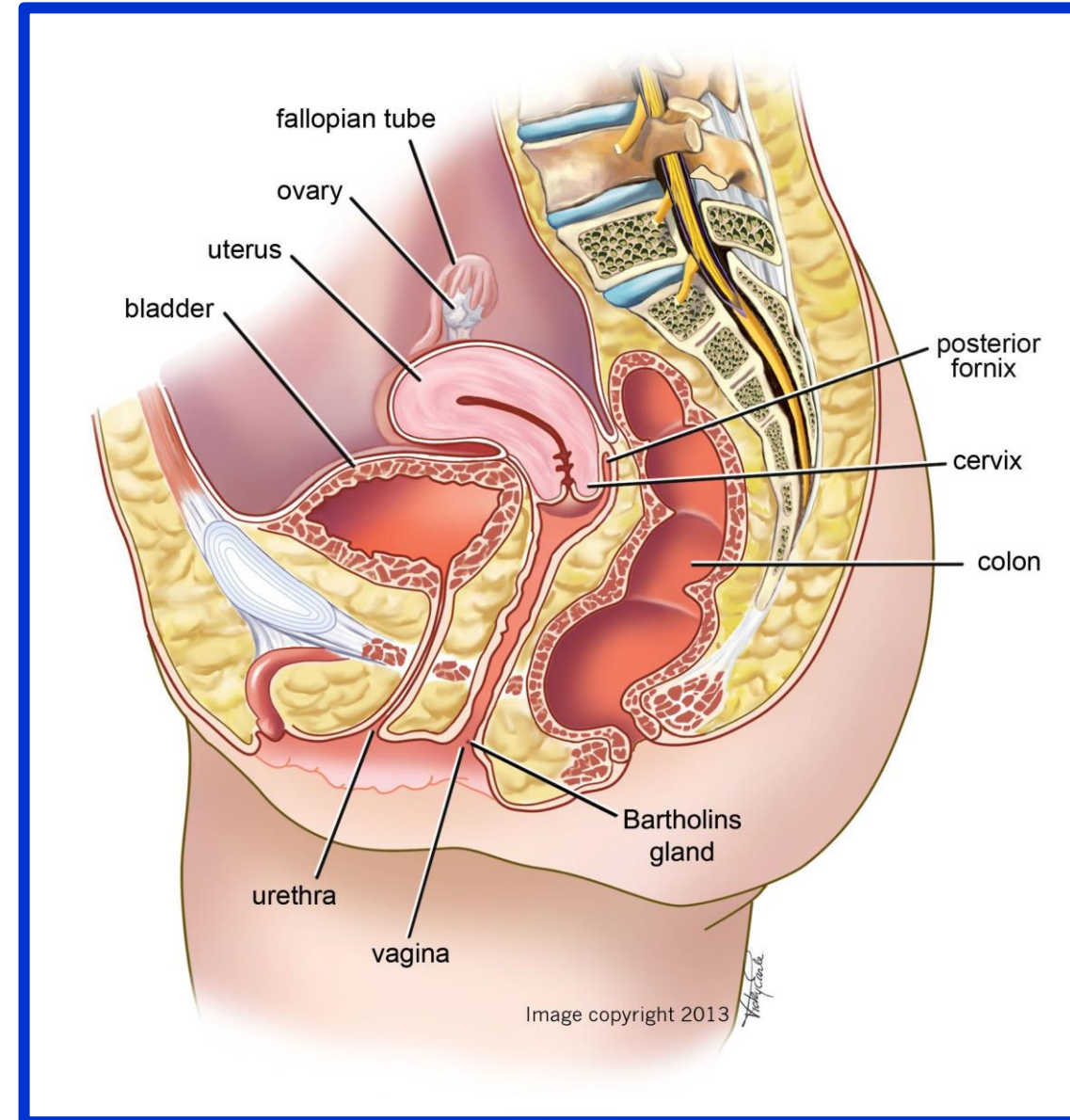
□ This is the canal connecting the uterus with the vestibule,

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

**\*\* Walls;** 2 walls (anterior and posterior) which are contact with each other.

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

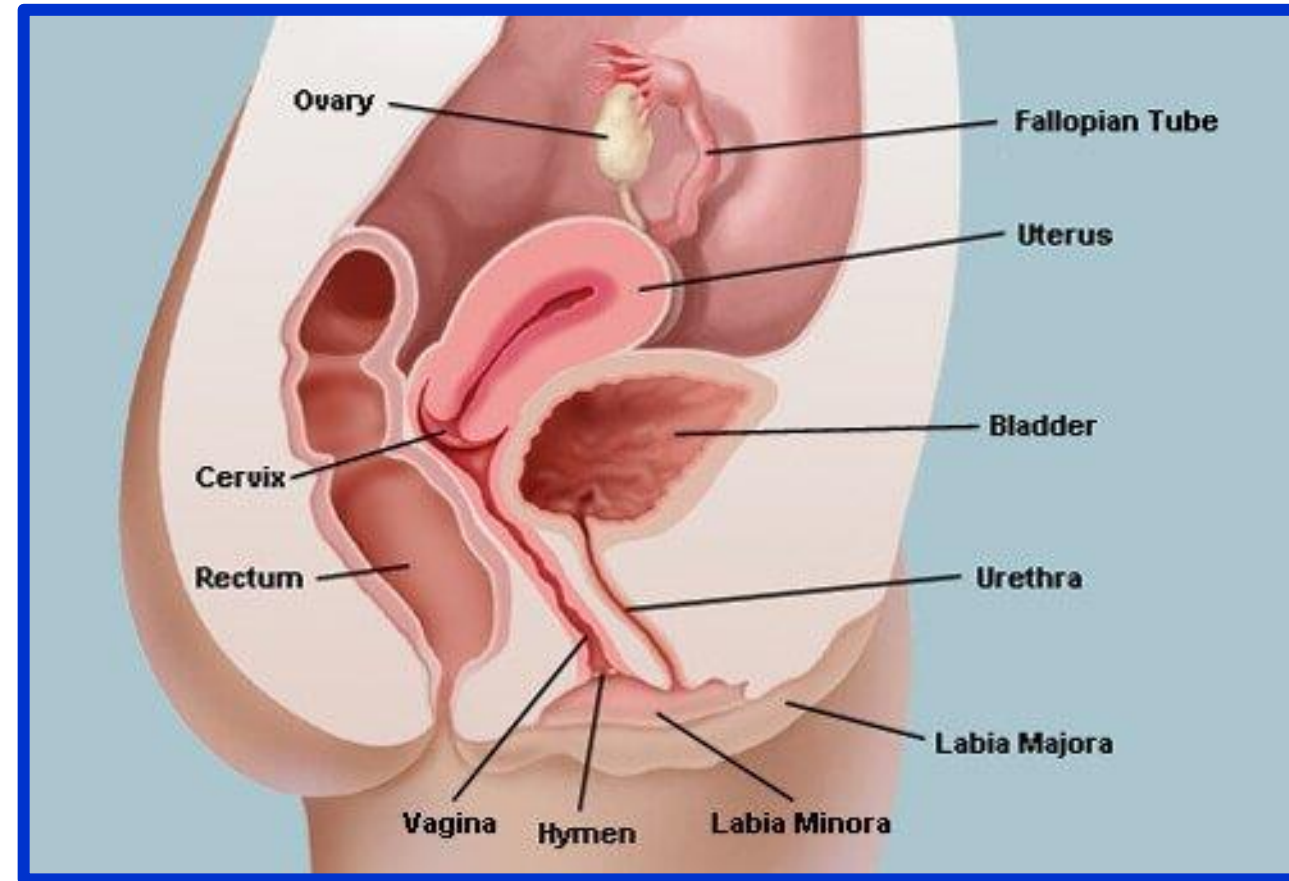
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## \*\* Relations:

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.

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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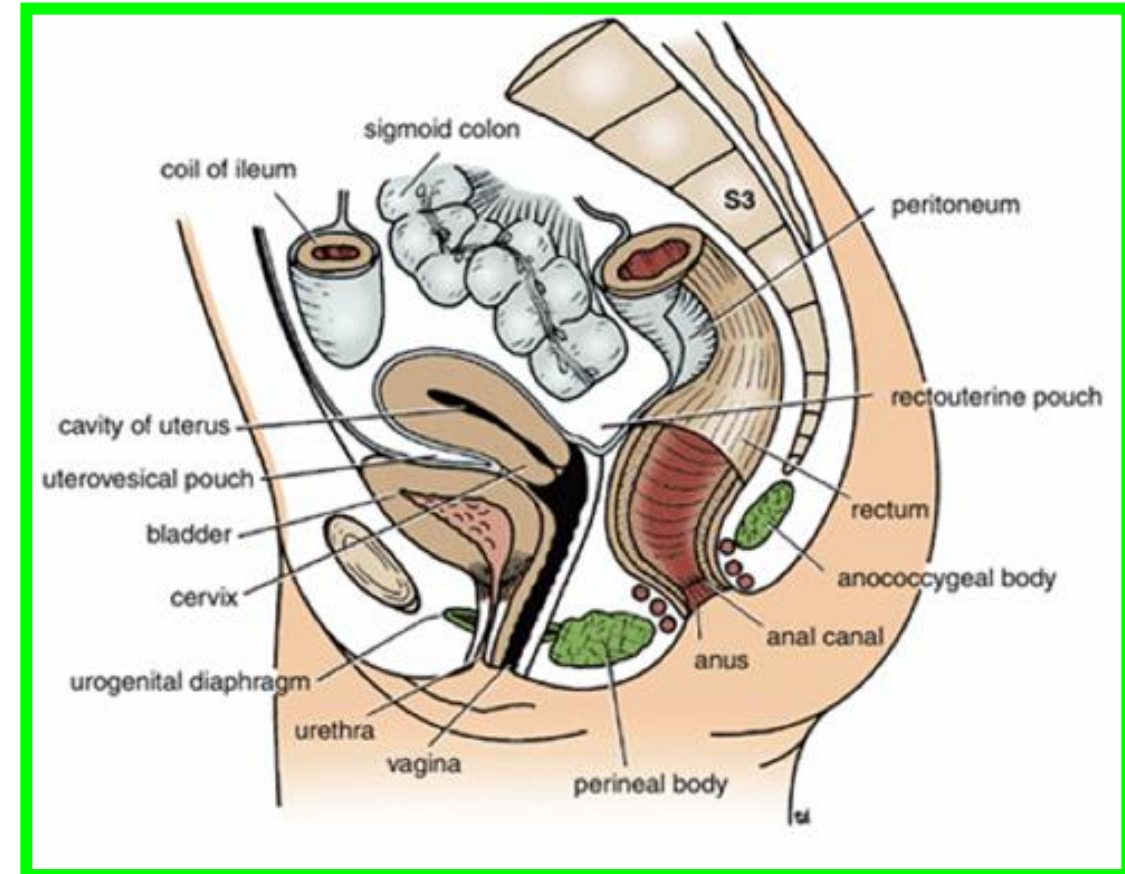
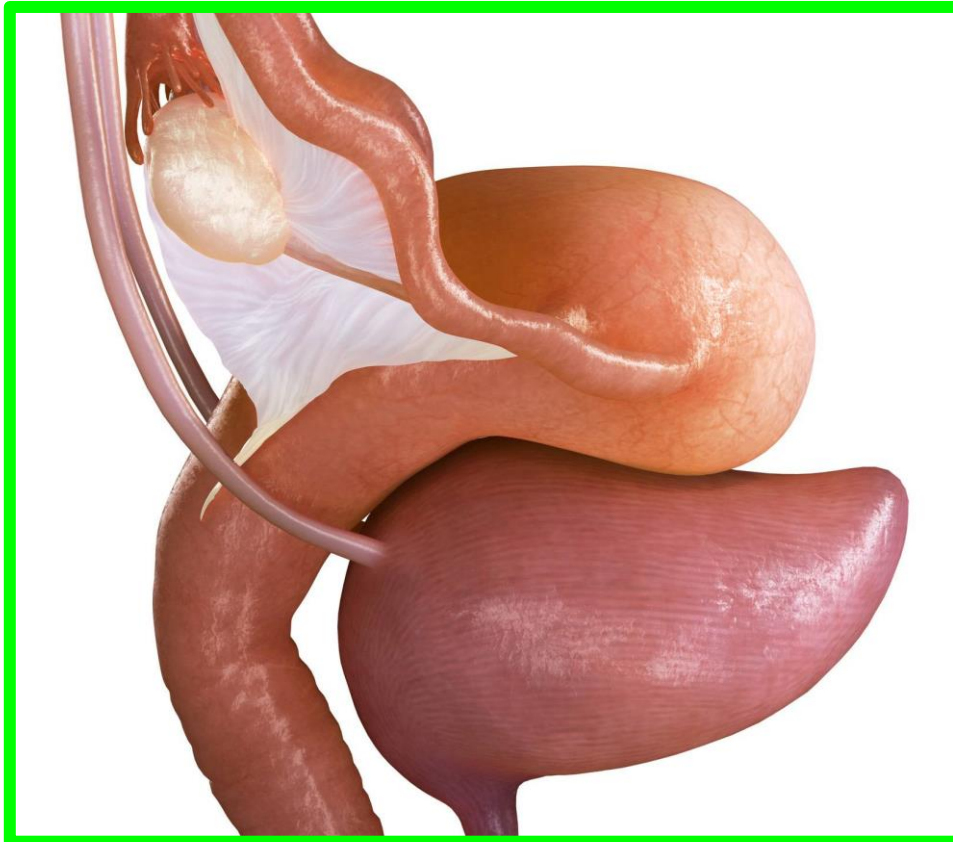
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## 3- Laterally:

a- Upper part is related to the ureter.

b- Middle part is to the levator ani.

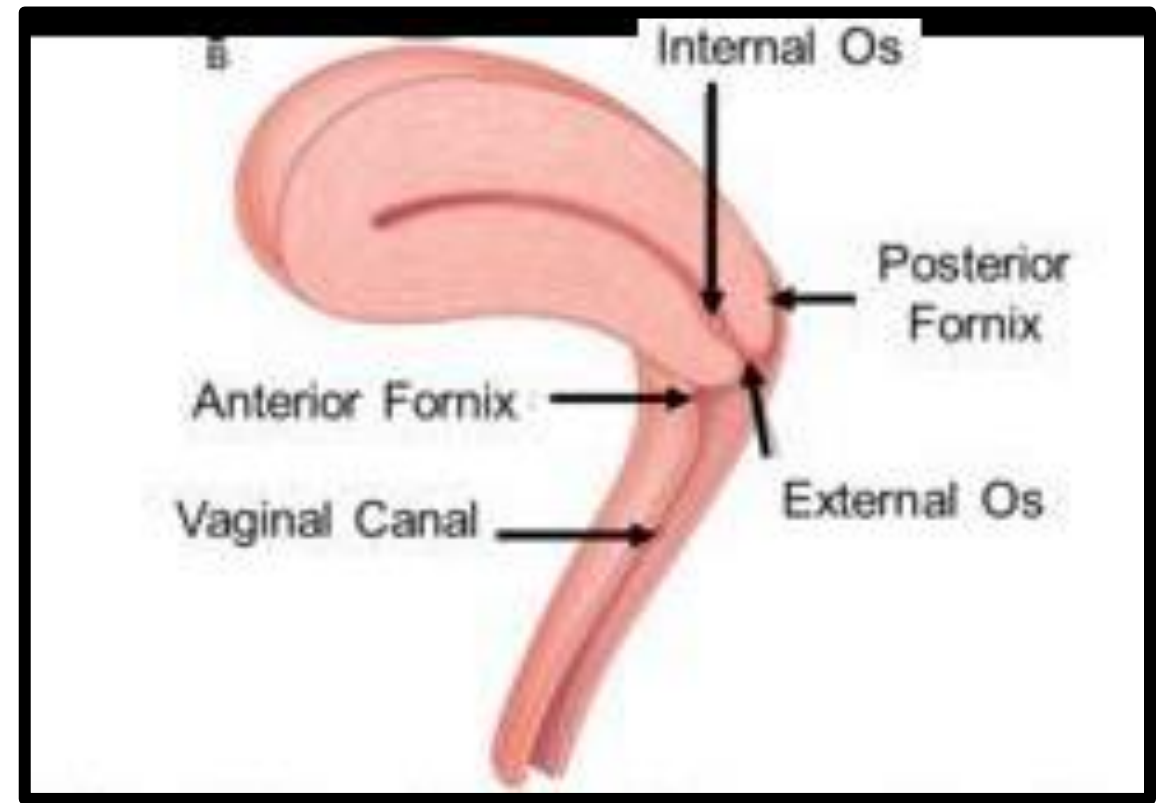
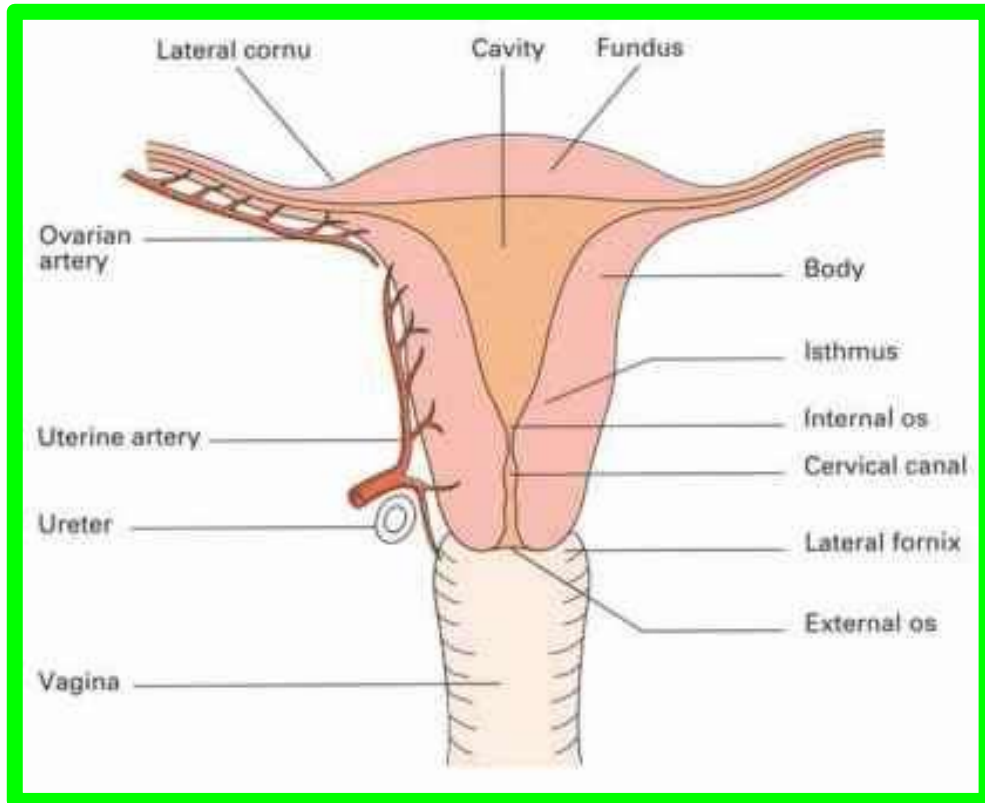
c- Lower part transverses the deep and superficial perineal pouches.



# Vagina

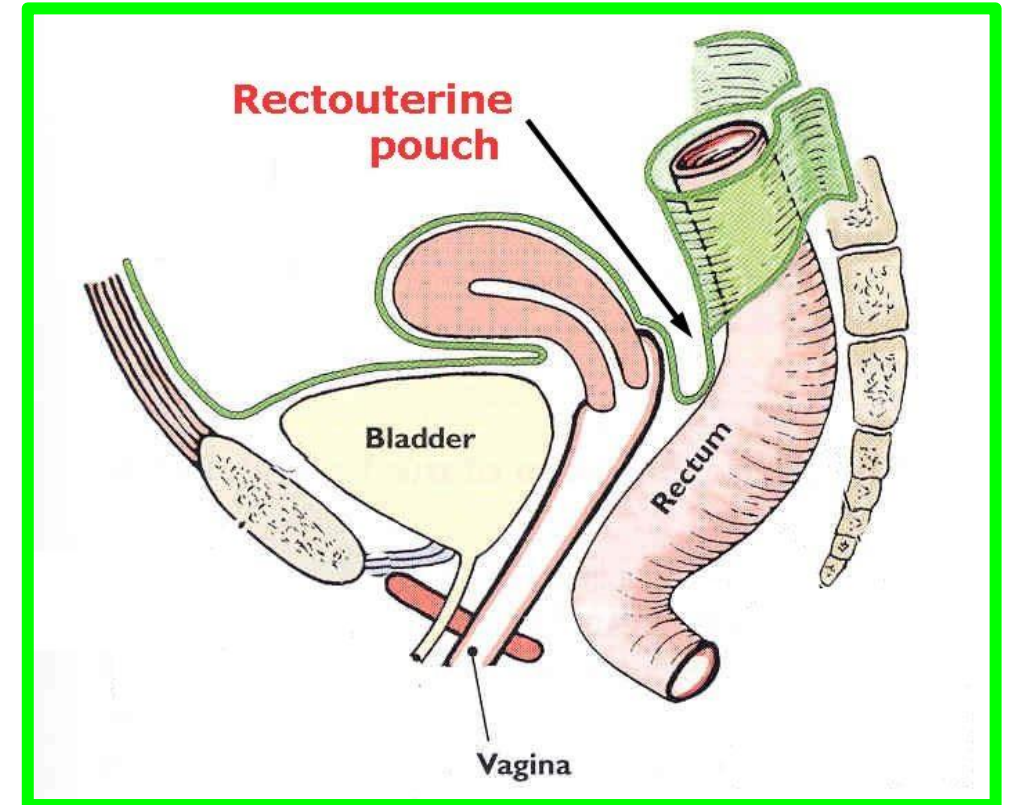
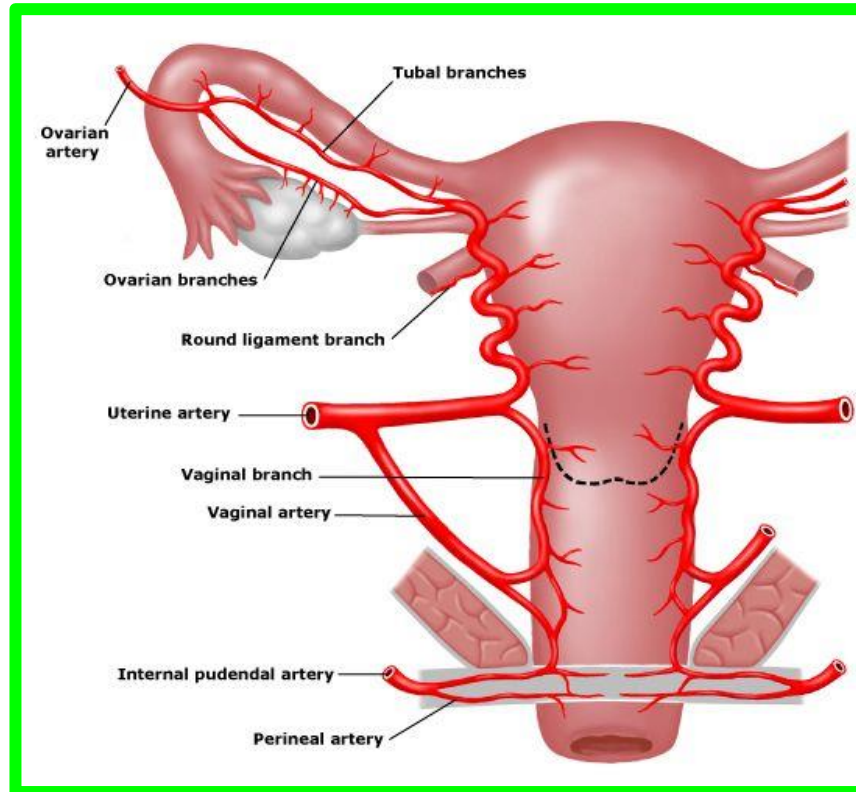
## \*\* Fornices of the vagina:

- 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.

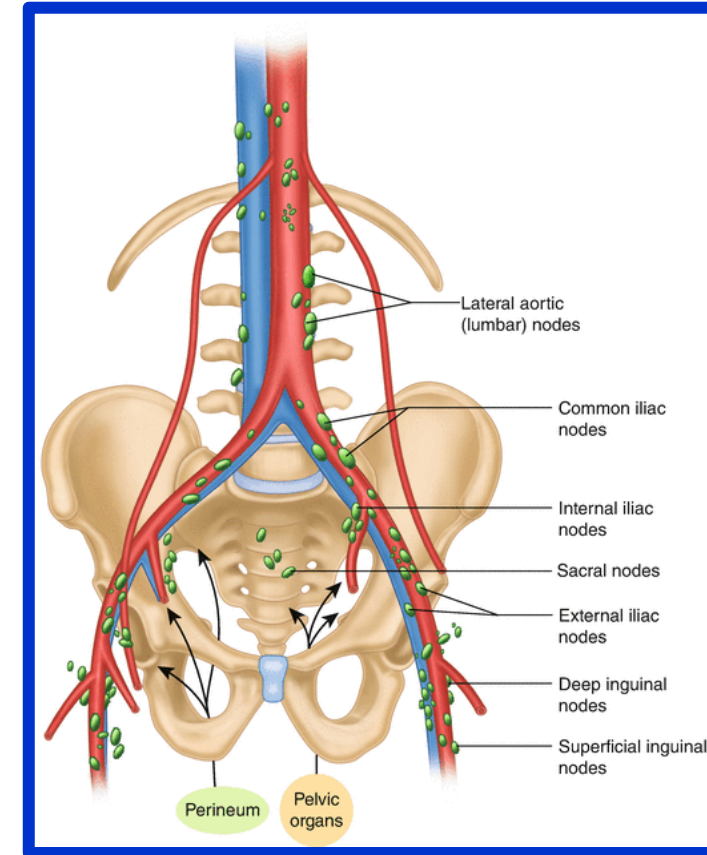
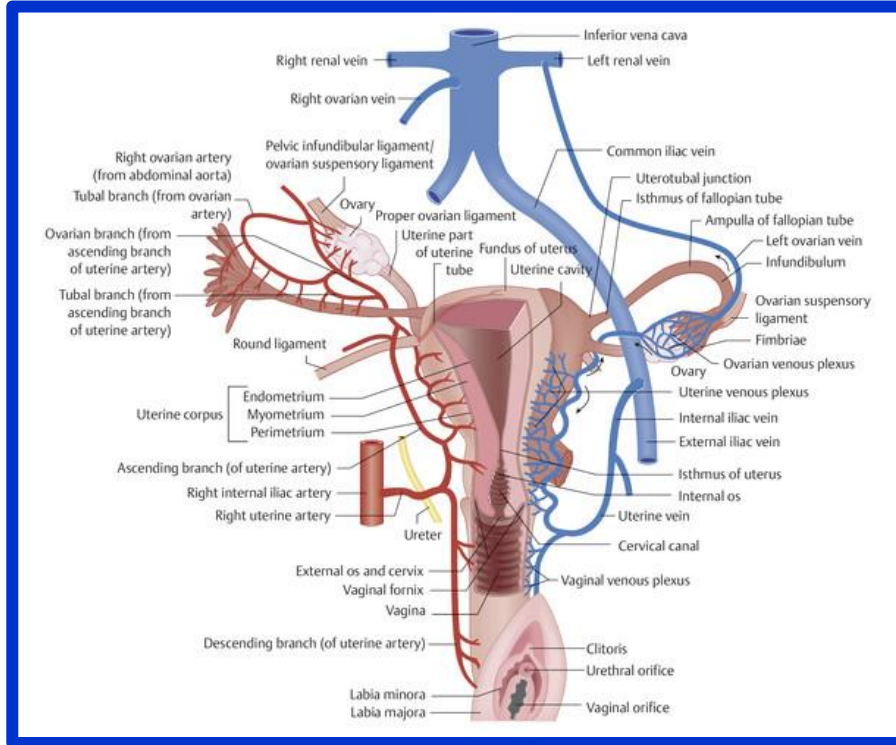
3) Internal pudendal artery.

4) Middle rectal artery.



# Vagina

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



**\*\* Lymphatic drainage:**

**a- The upper part drains into the external iliac lymph nodes.**

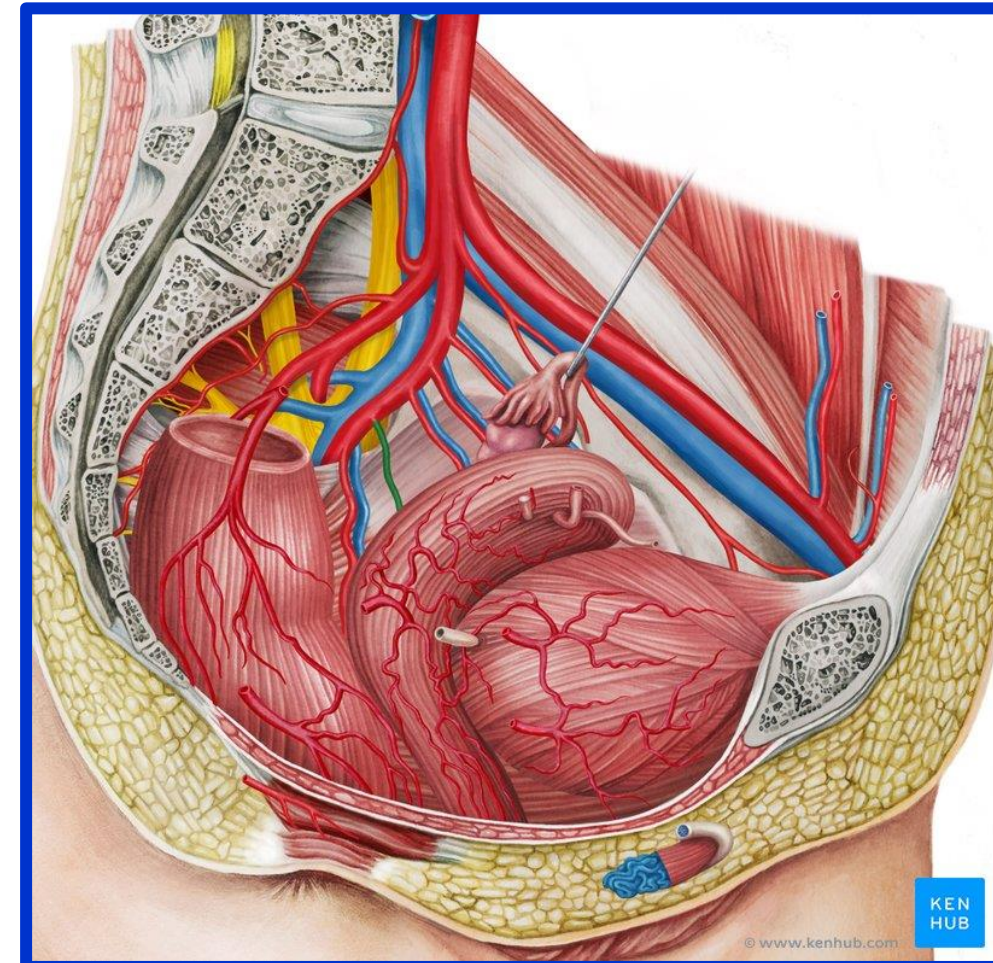
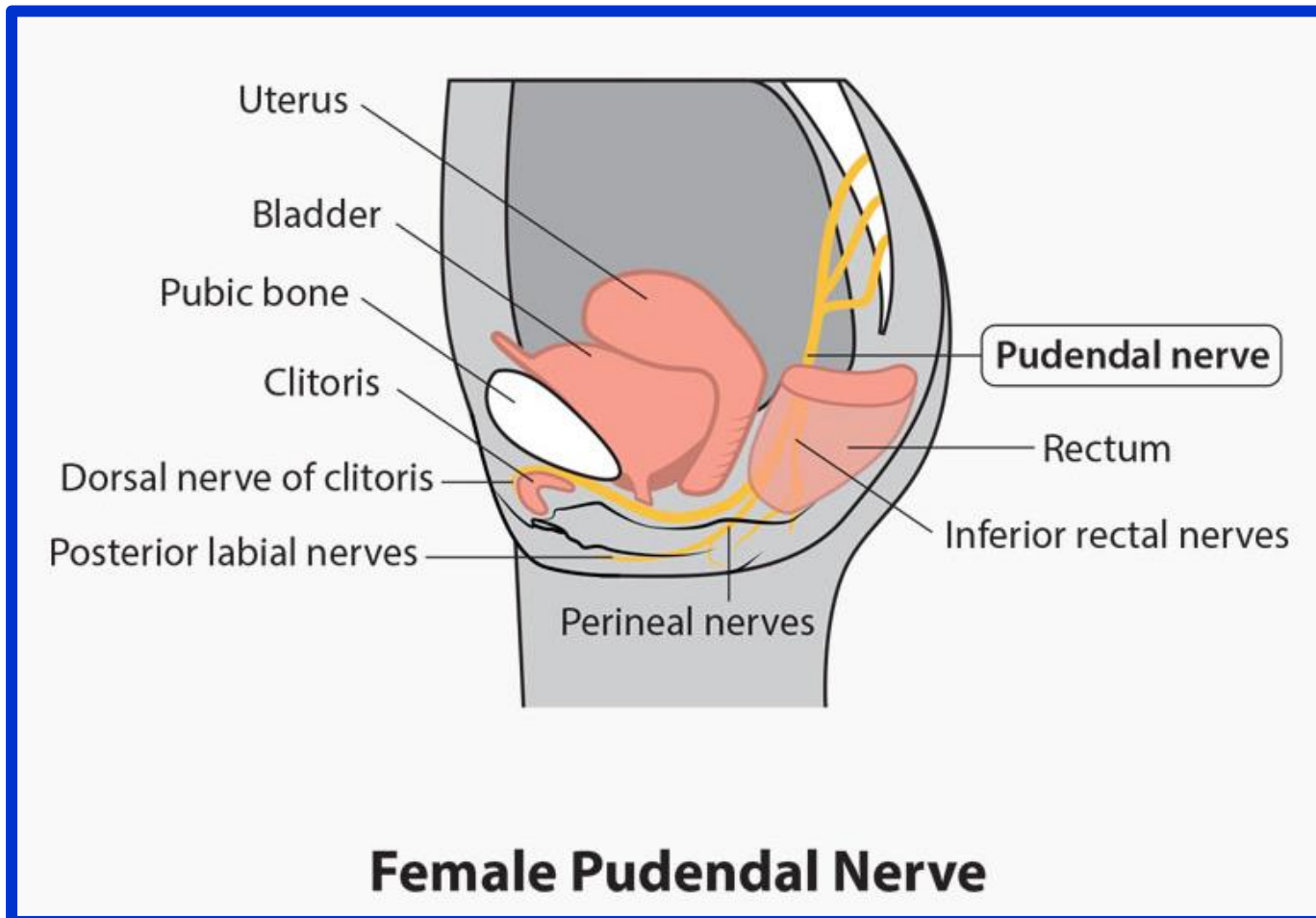
**b- The middle part drains into the internal iliac lymph nodes.**

**c- The lower part drains into the superficial inguinal lymph nodes.**

# Vagina

## \*\* Nerve supply:

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

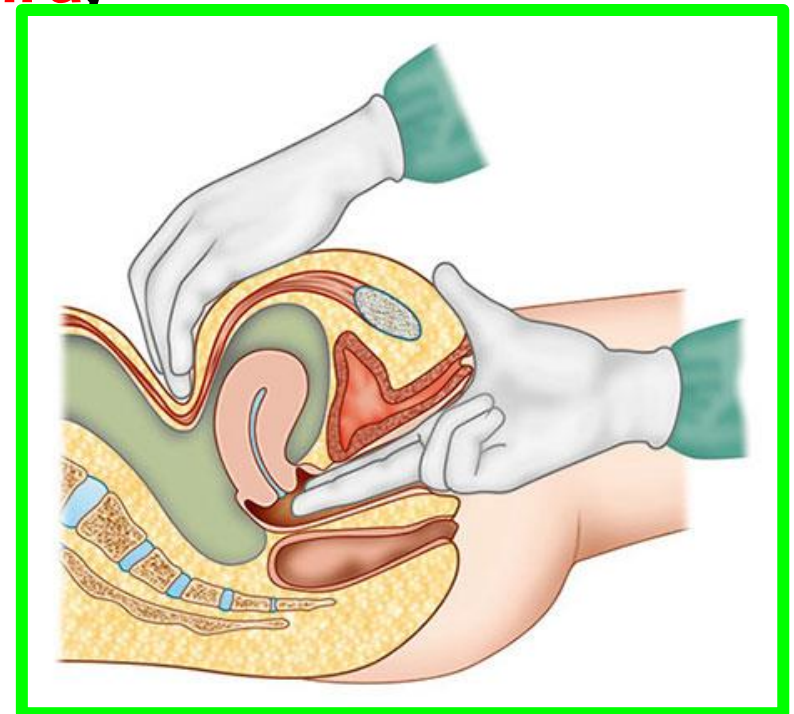


# Vagina

## \*\* Applied anatomy:

### 1- Vaginal examination:

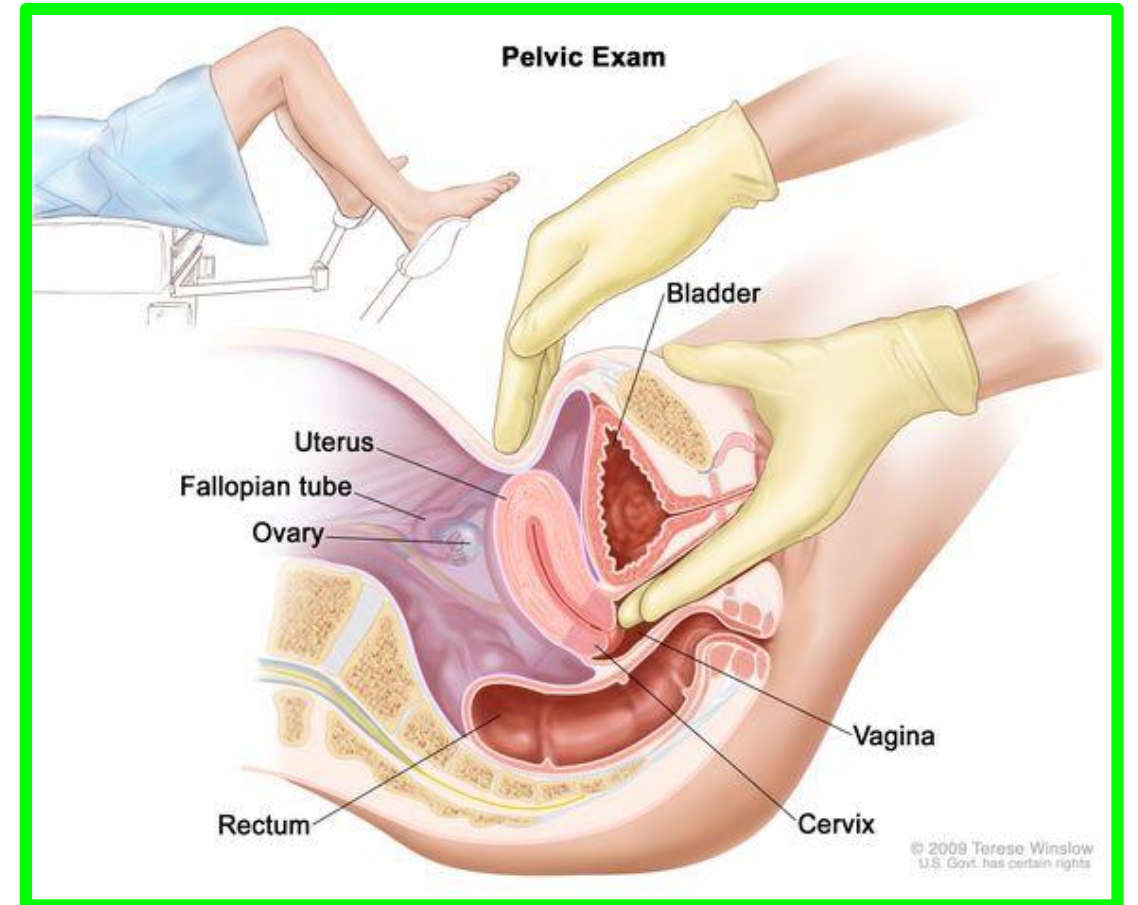
- This is done by inserting both index and middle fingers through the vagina.
- The structures felt are:
  - ✓ Cervix of the uterus and Fornices of the vagina
  - ✓ Anteriorly: The base of **urinary bladder** and **urethra**.
  - ✓ Posteriorly: Rectovaginal (**Douglas**) **pouch**.



# Vagina

**2- 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.

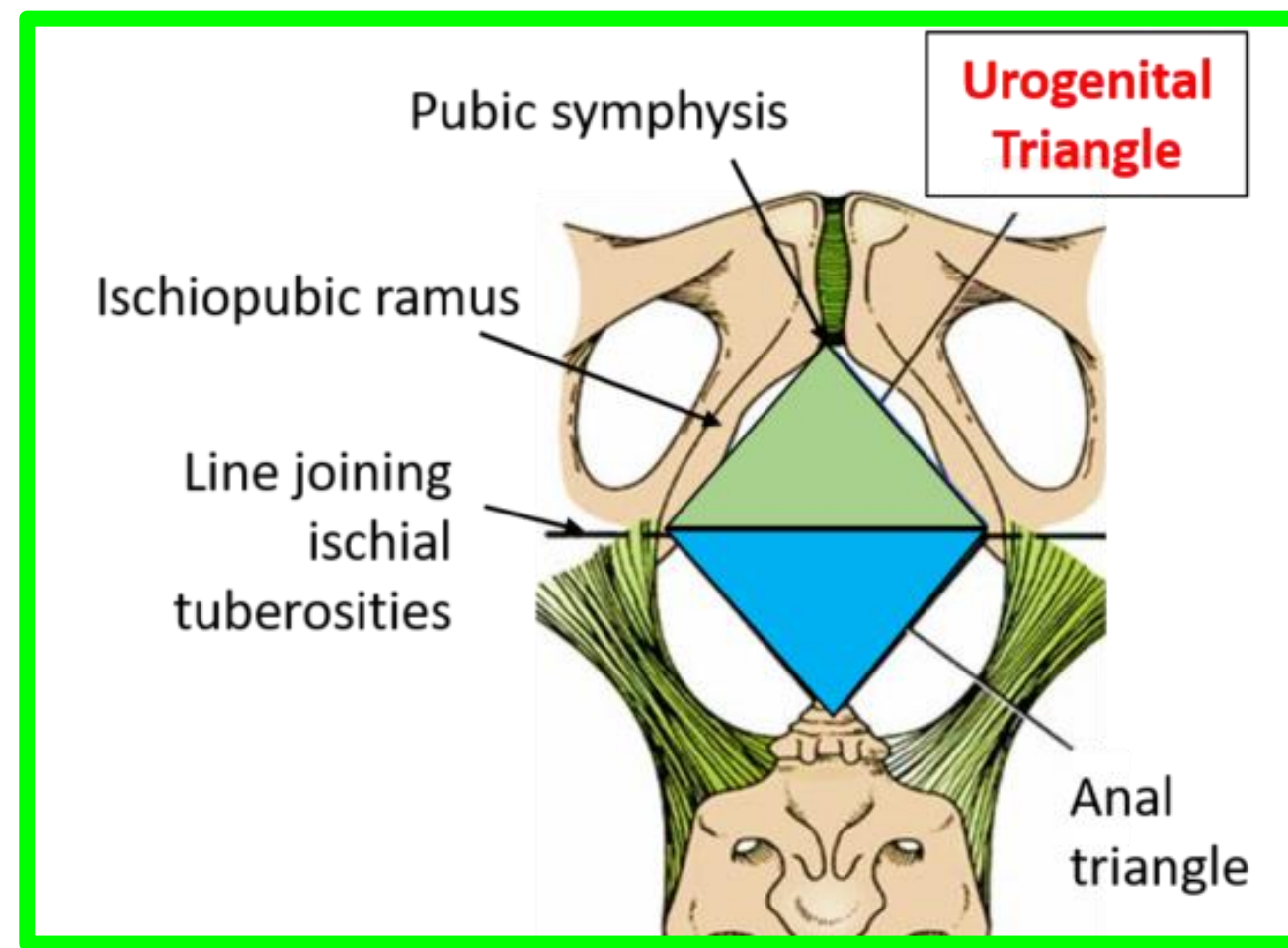


# Ischiorectal Fossa

## 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

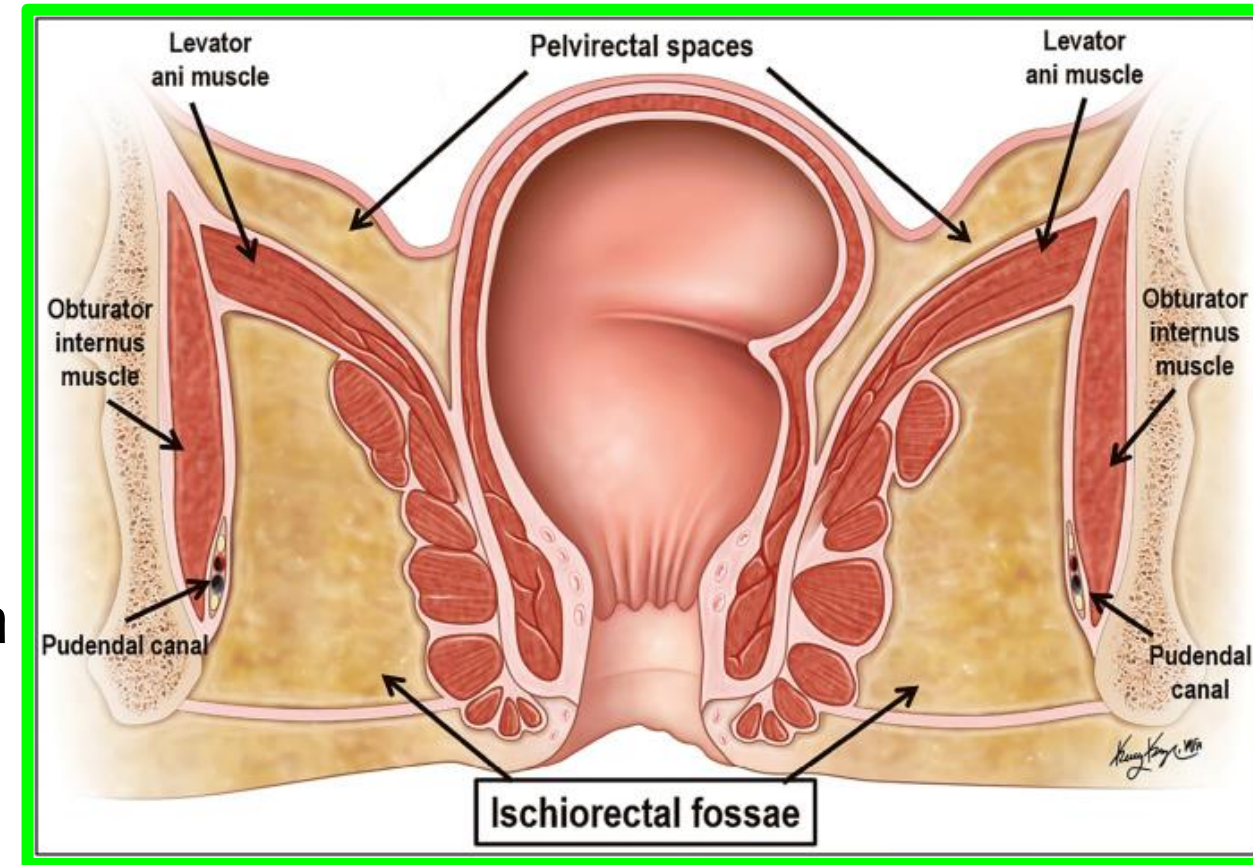
\*\* **Position:** space on each side of the anal canal.

\*\* **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).



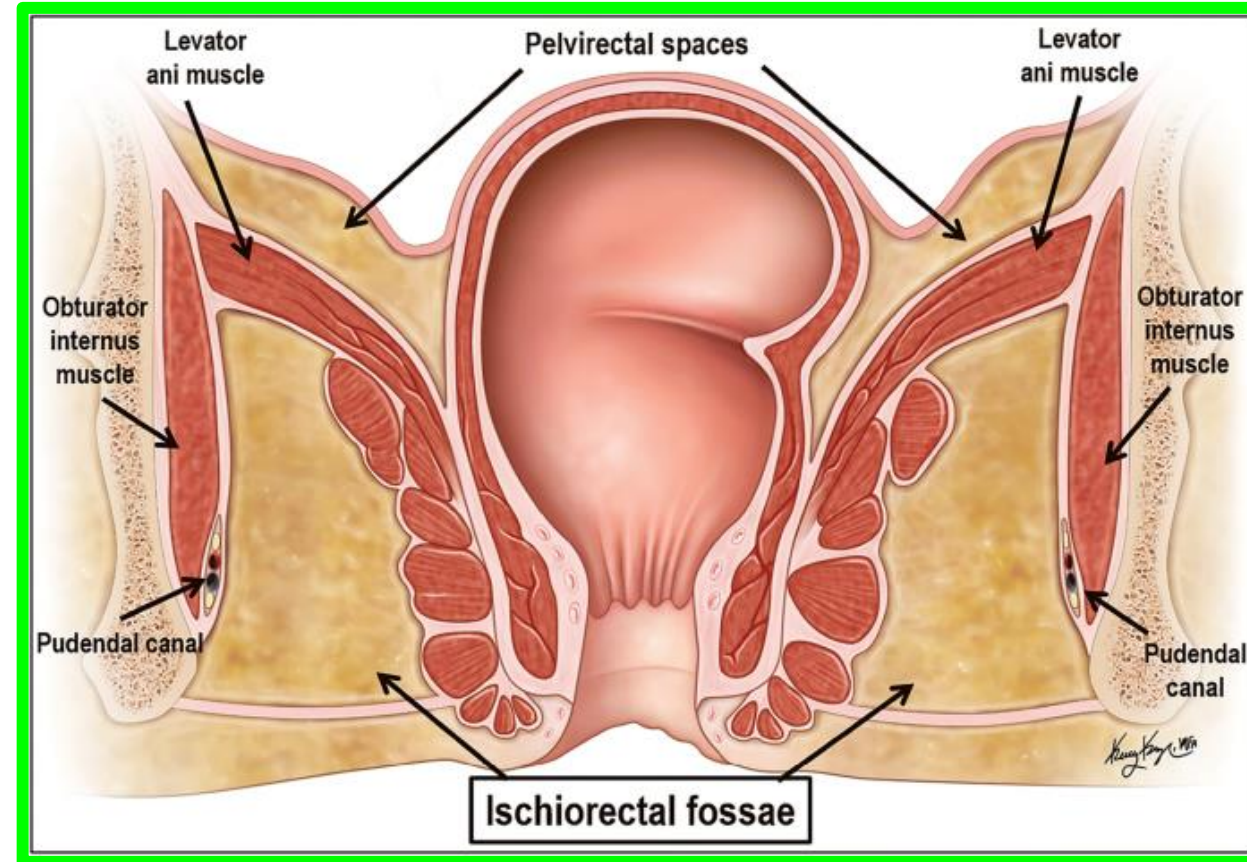
# Ischiorectal Fossa

## 2- Medial wall: sloping

- Upper part: the levator ani muscle.
- Lower part: the external anal sphincter.

3- **The base:** is directed downward and is formed by the peri-anal skin and fascia.

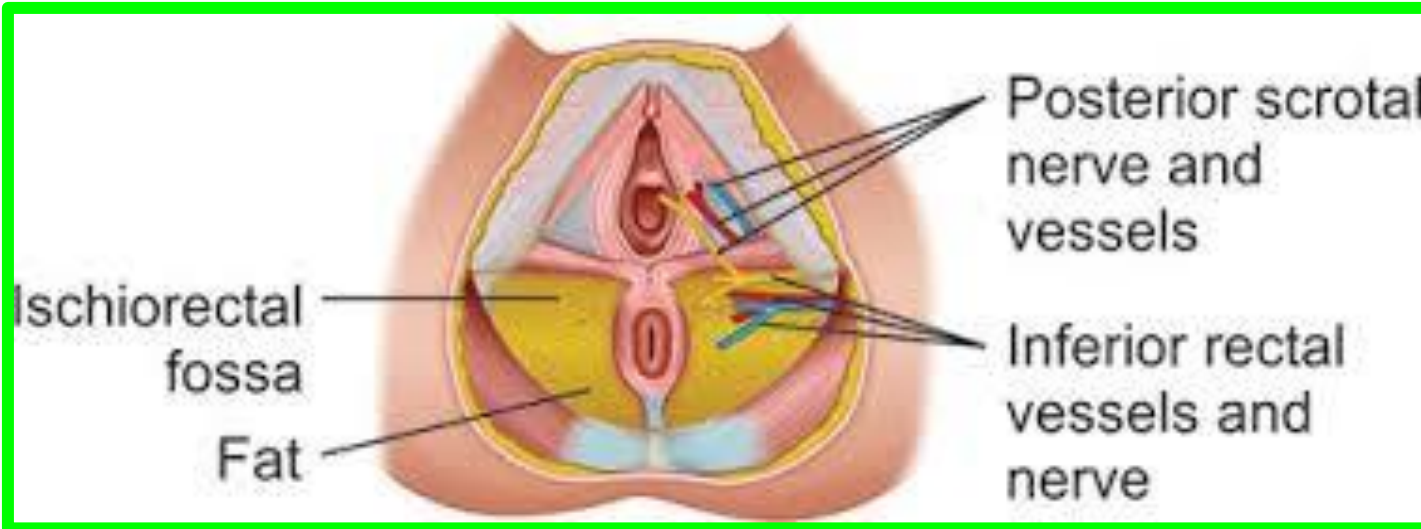
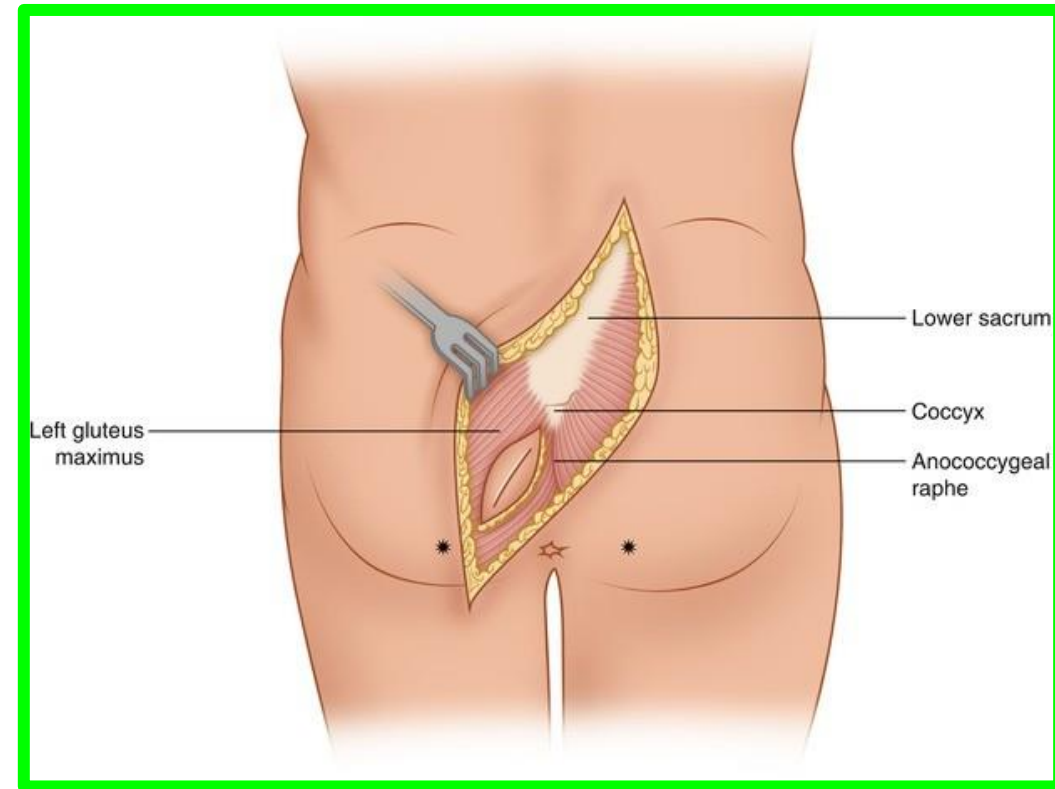
4- **The apex:** is directed upward and is formed by the meeting obturator internus and levator ani muscles.



# Ischiorectal Fossa

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

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

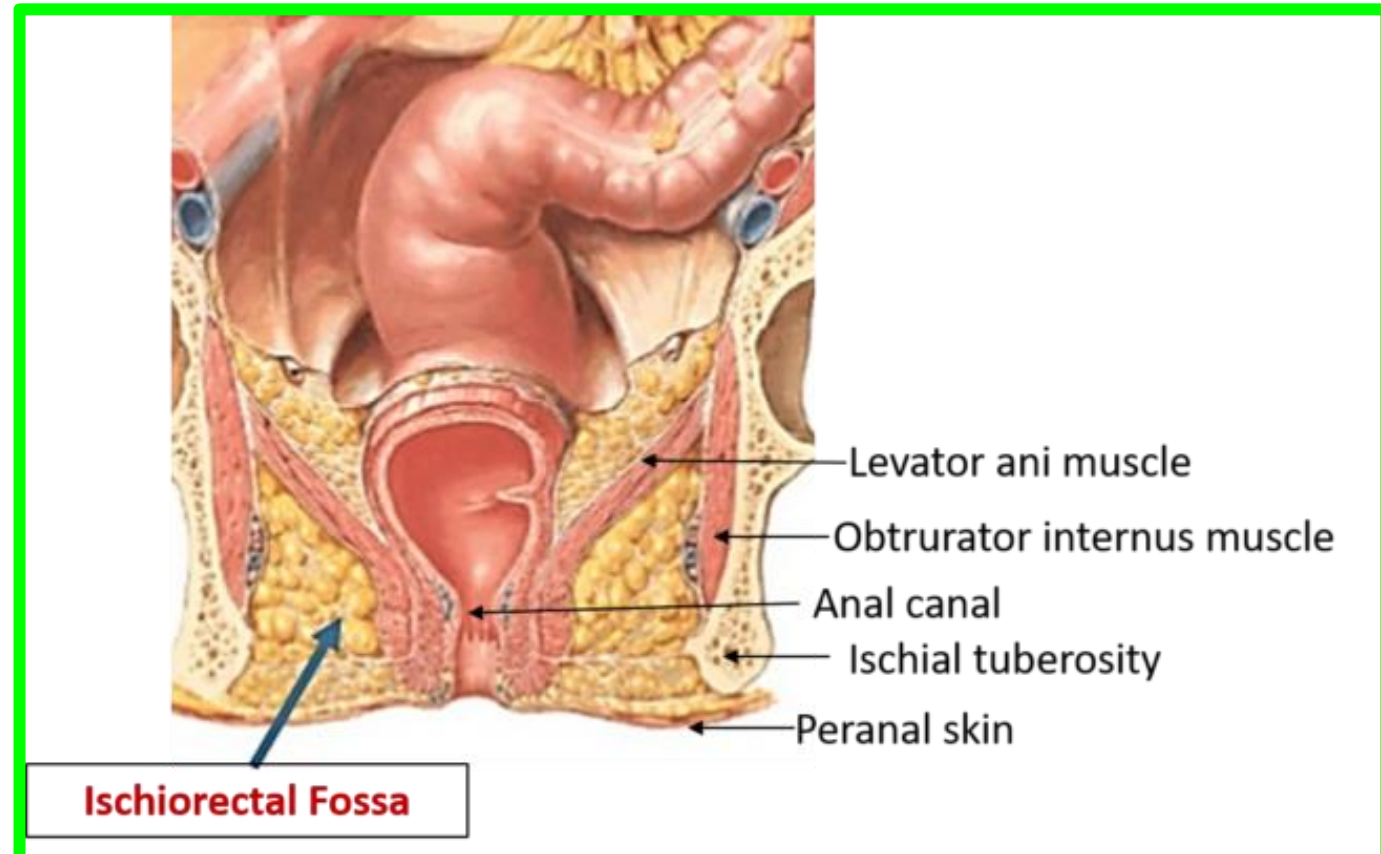
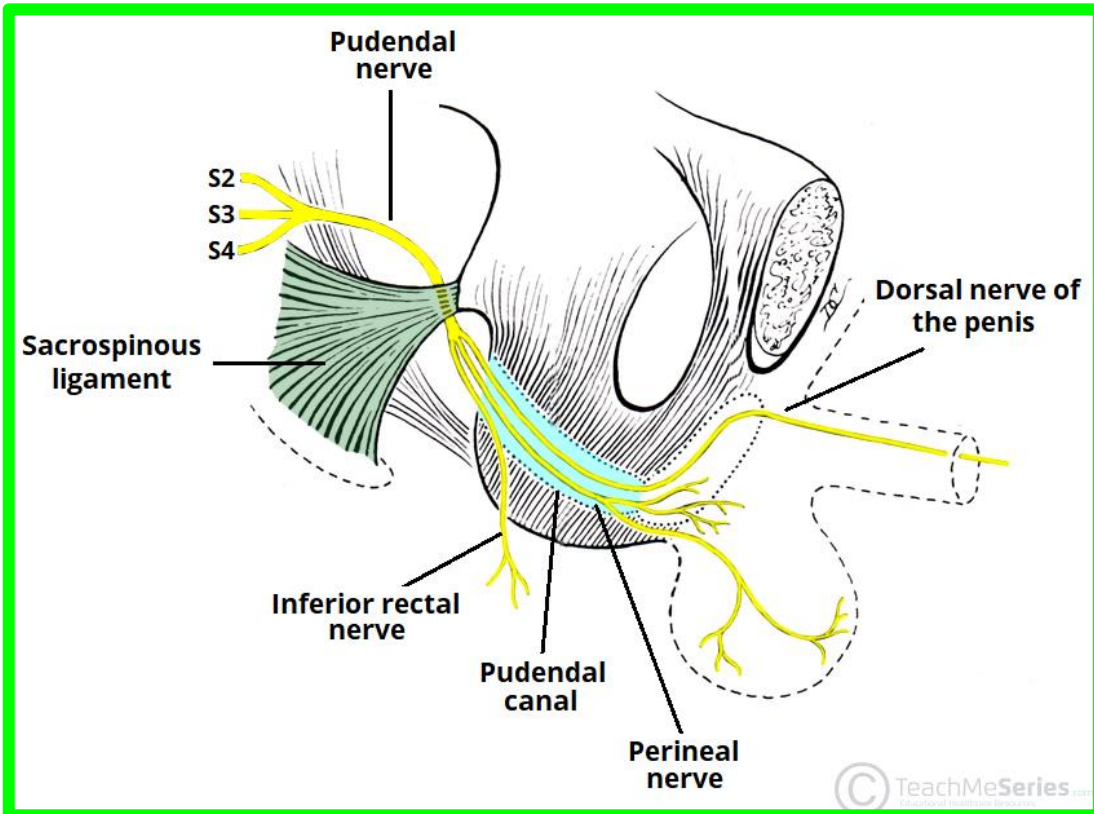




# Ischiorectal Fossa

## \*\* 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).

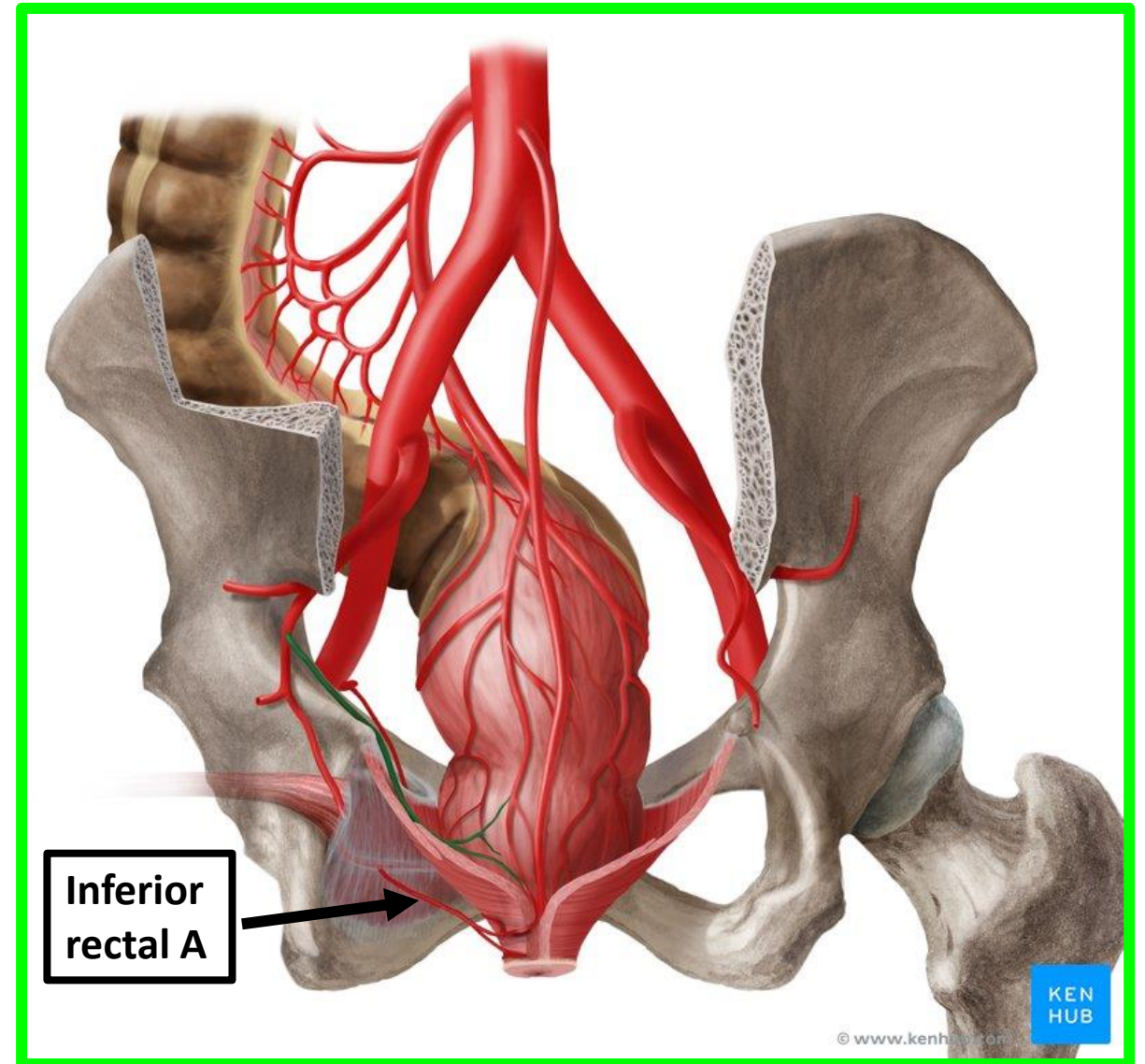


# Ischiorectal Fossa

**\*\* Contents:**

## **3- Inferior rectal vessels:**

- ❖ The artery arises from the **internal pudendal artery** in the **pudendal canal**.
- ❖ It crosses the fossa to reach the anal canal.



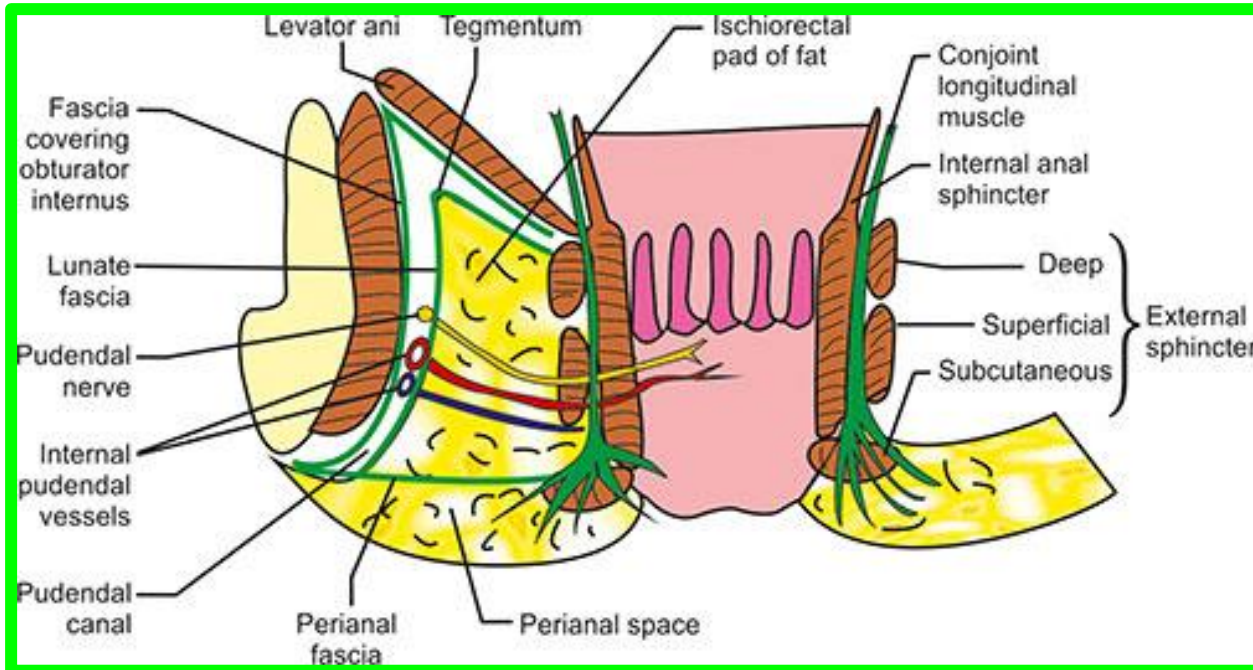
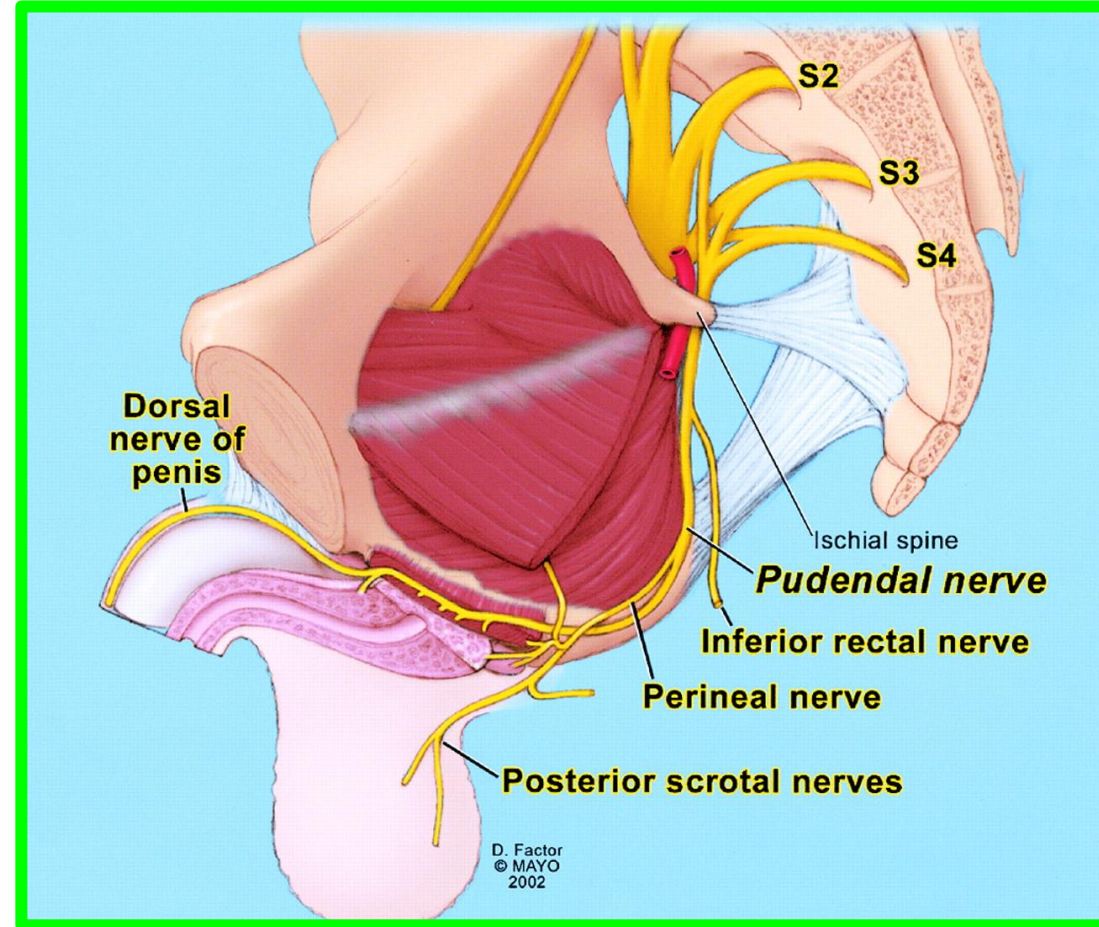
# Ischiorectal Fossa

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## \*\* Contents:

### 4- Inferior rectal nerve:

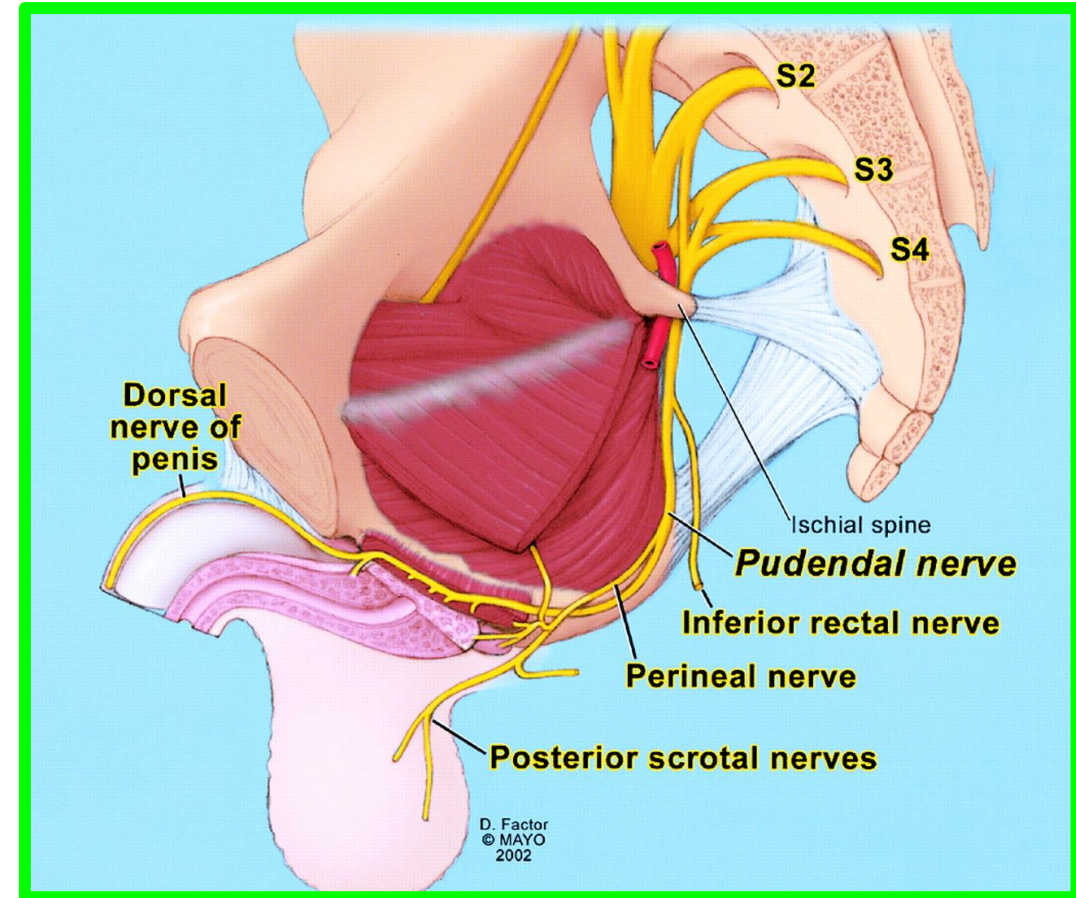
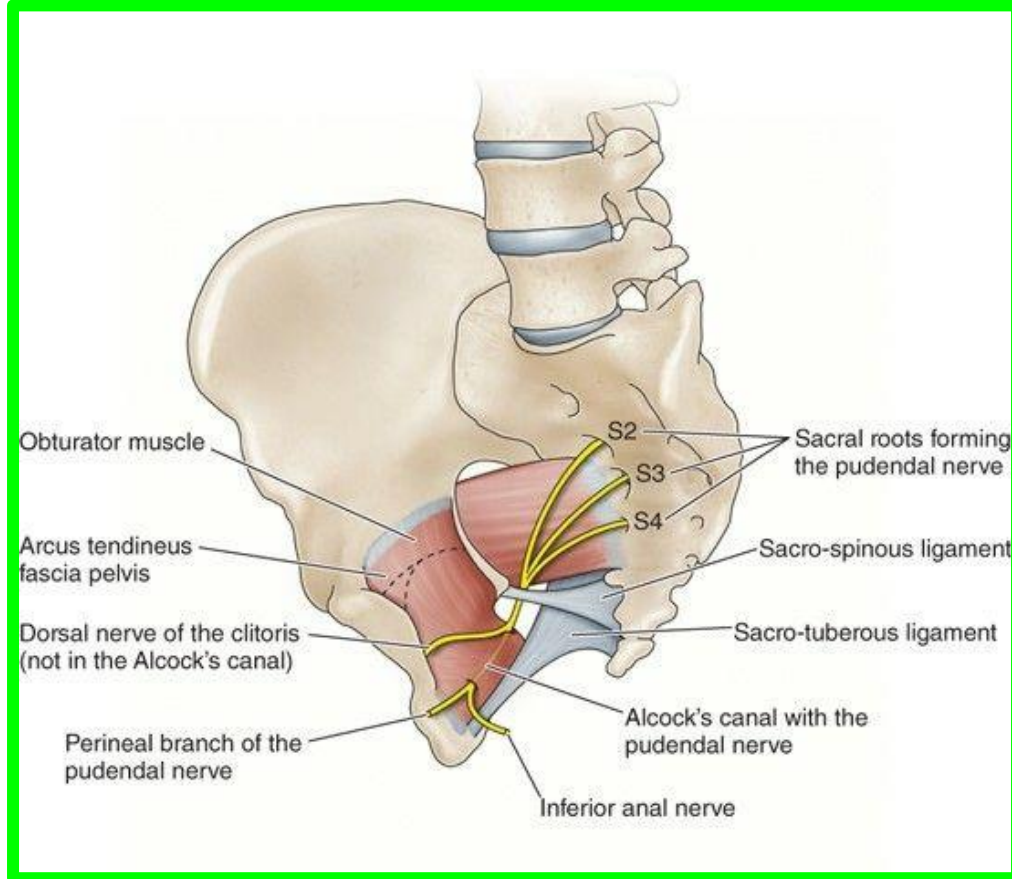
- ❖ It is a branch of the pudendal nerve in the pudendal canal.
- ❖ It crosses the fossa to supply the levator ani, and external anal sphincter.



# Ischiorectal Fossa

## \*\* 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).



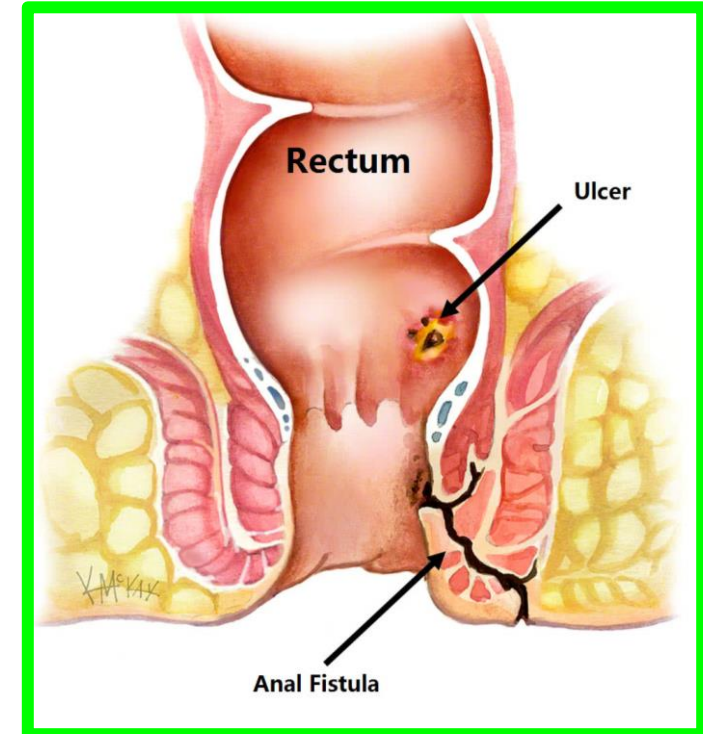
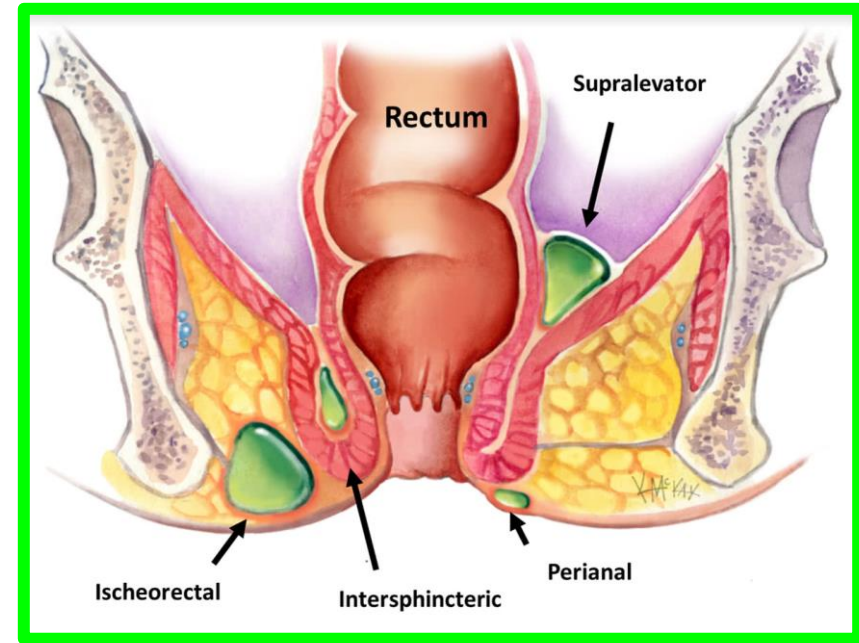
# Ischiorectal Fossa

## \*\* Applied anatomy:

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

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**.



# Ischiorectal Fossa

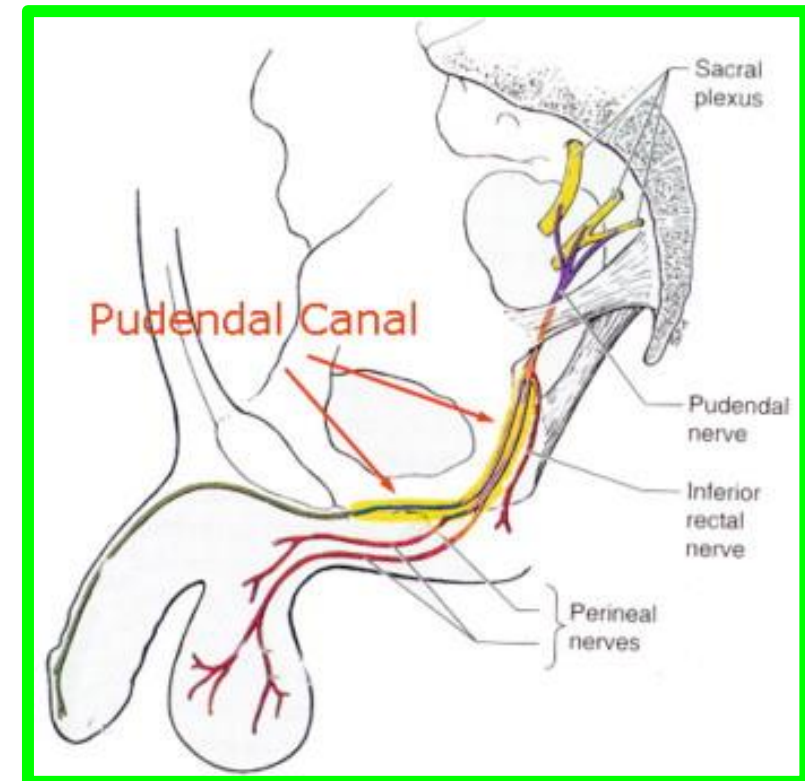
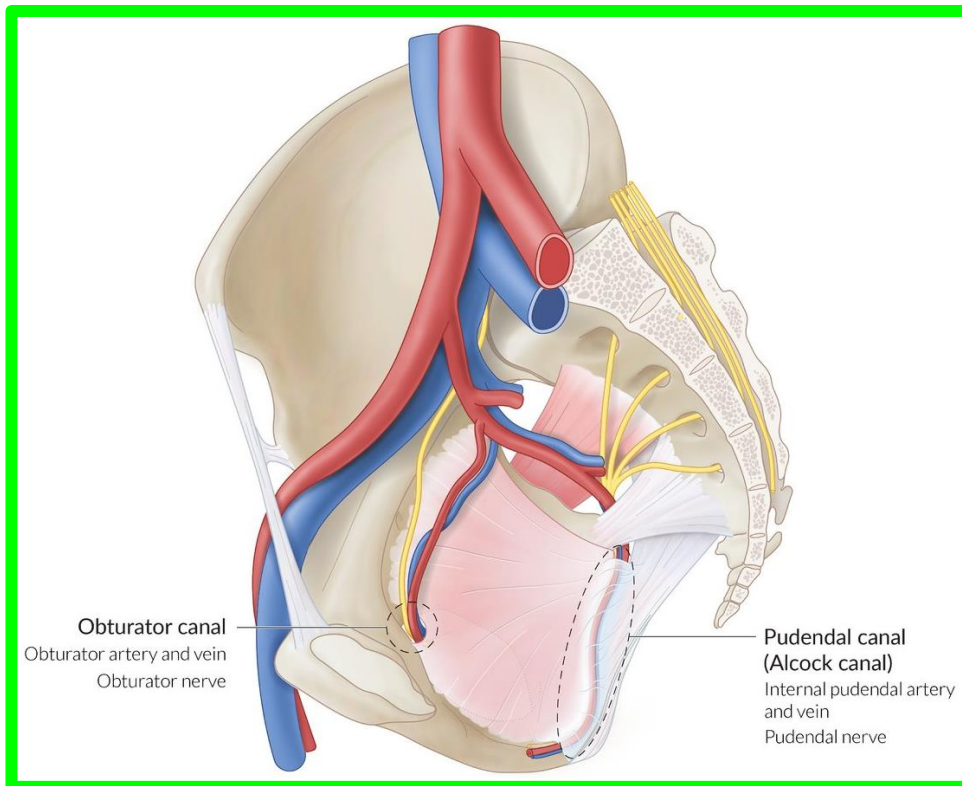
# Pudendal canal

Dr. Aiman Qais Al Maathidy

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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.



A photograph of a well-maintained green lawn with a hedge in the foreground, trees, and a building in the background. The scene is bright and sunny, with shadows cast across the grass. In the background, there are several white cars parked near a building with large glass windows. A blue bus is visible on the right side of the image. The text is overlaid in the center of the image.

**Dr. Aiman Al Maathidy**  
**Monday 13 May 2024**