



الجامعة الهاشمية  
The Hashemite University



# General Anatomy

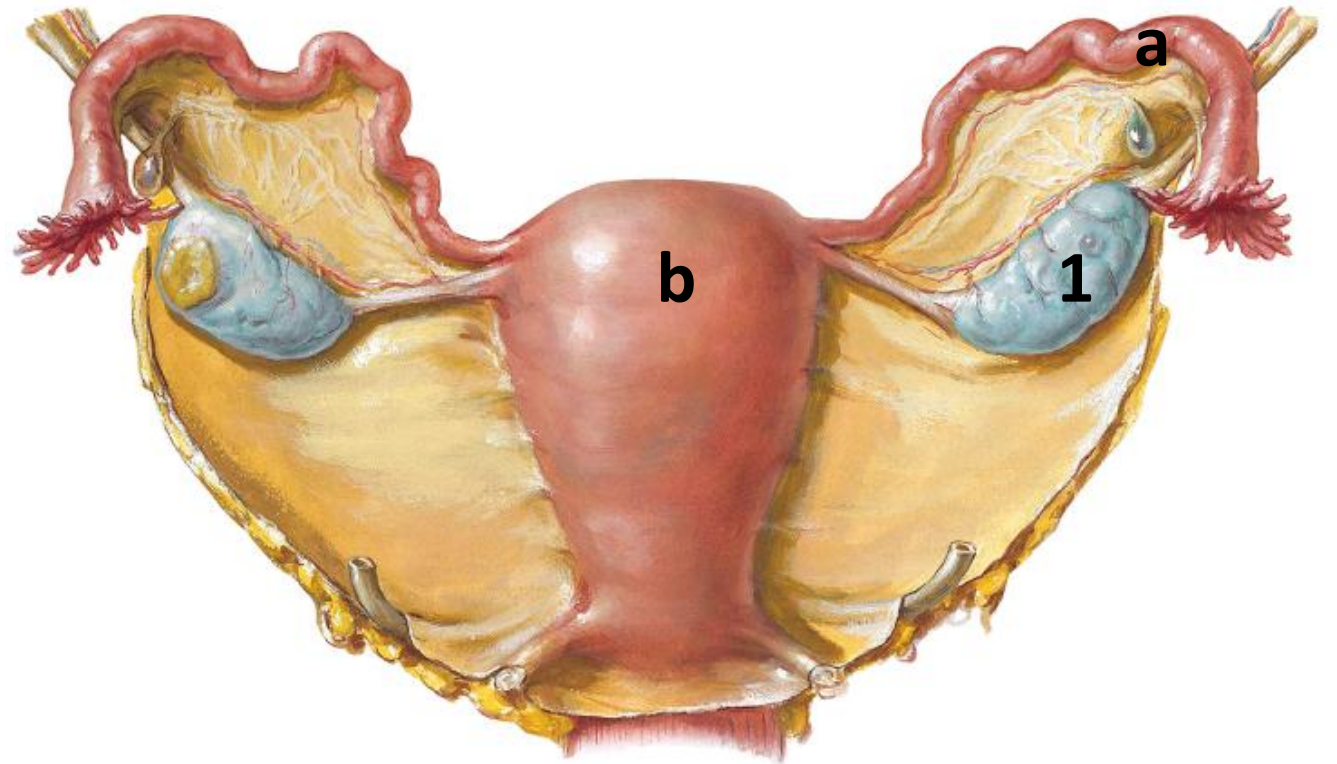
## Lecture 19: Female Genital System

**Dr. Mohamed Fathi  
Elrefai**

**Ass. Professor of Anatomy & Embryology  
mohamed@hu.edu.jo**

# Female Genital System

1. Ovaries.
2. Genital tract:
  - a. Uterine tubes.
  - b. Uterus.
  - c. Vagina.
3. External genitalia.
4. Breast.



# Ovary

\* The ovaries are equivalent to the testes in males.

\* They are responsible for:

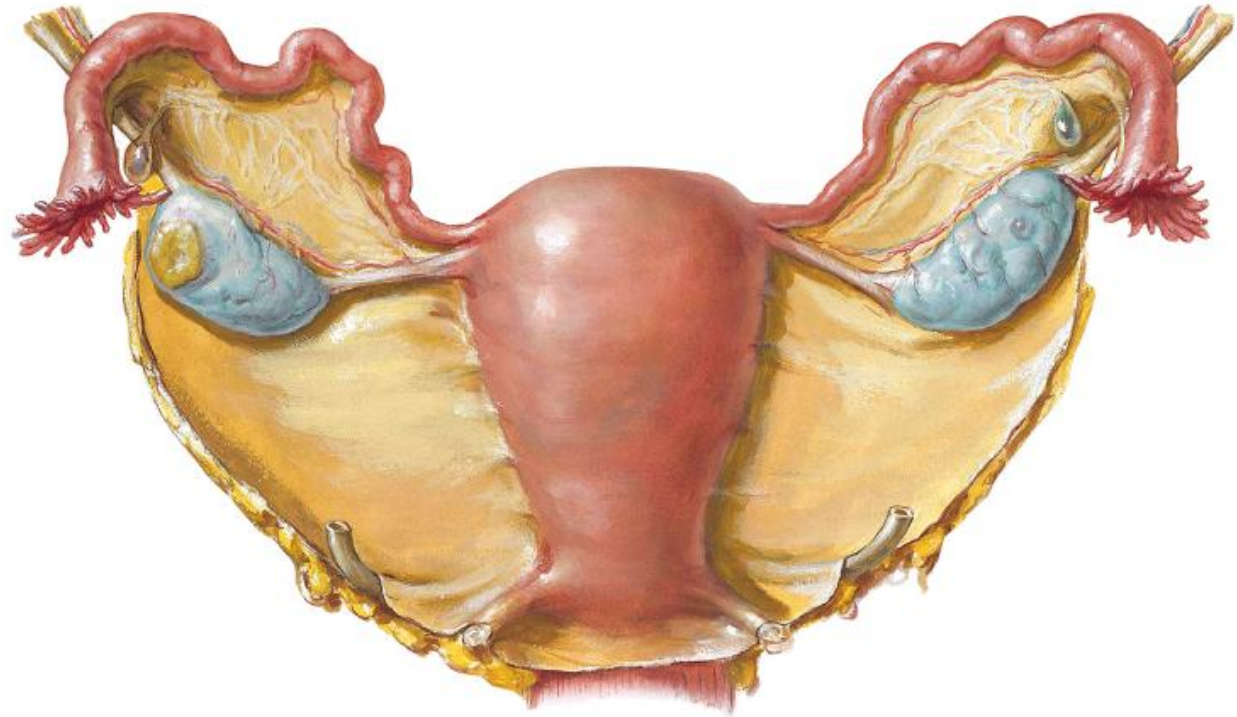
1. Production of female ova.

2. Production of female sex hormones (estrogen and progesterone).

\* They vary in size and shape according to age and stage of menstrual cycle.

\* In young adult → each ovary is a flattened ovoid, pinkish-grey in color.

\* Ovaries are situated one on each side of uterus in a shallow depression, called ovarian fossa on the lateral pelvic wall.



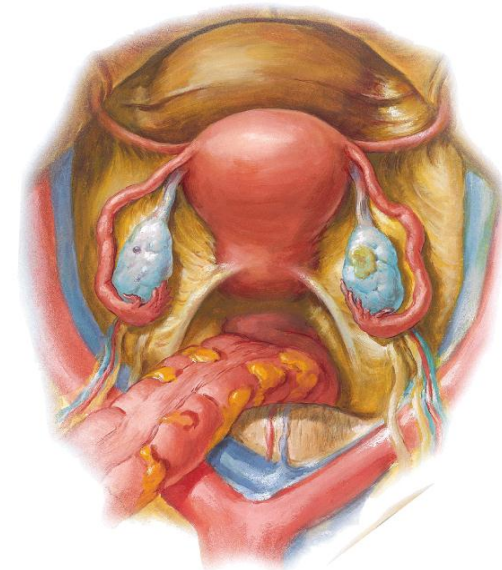
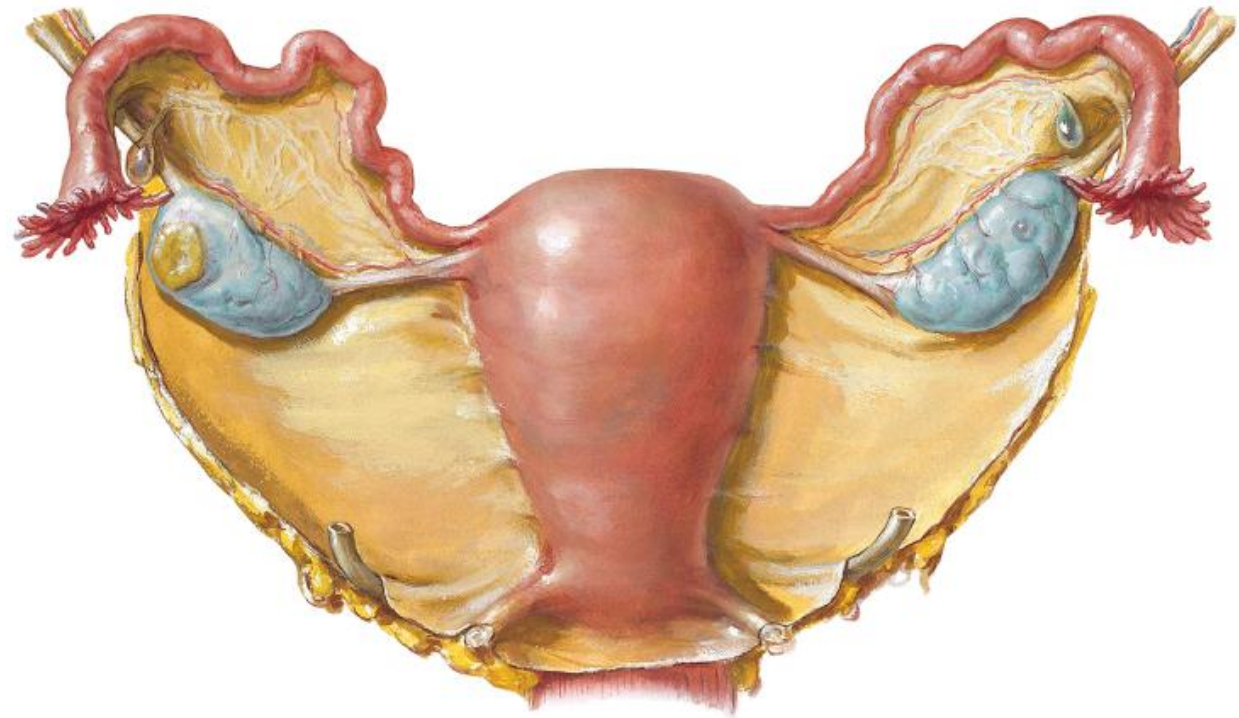
**\* It has:**

1. Medial and lateral surfaces.
2. Anterior and posterior borders.
3. Upper (tubal) and lower (uterine) poles.

**\* The medial surface:** is in contact with coils of intestine and on right side frequently with vermiform appendix.

**\* Its upper (tubal) pole:** is related to the uterine tube.

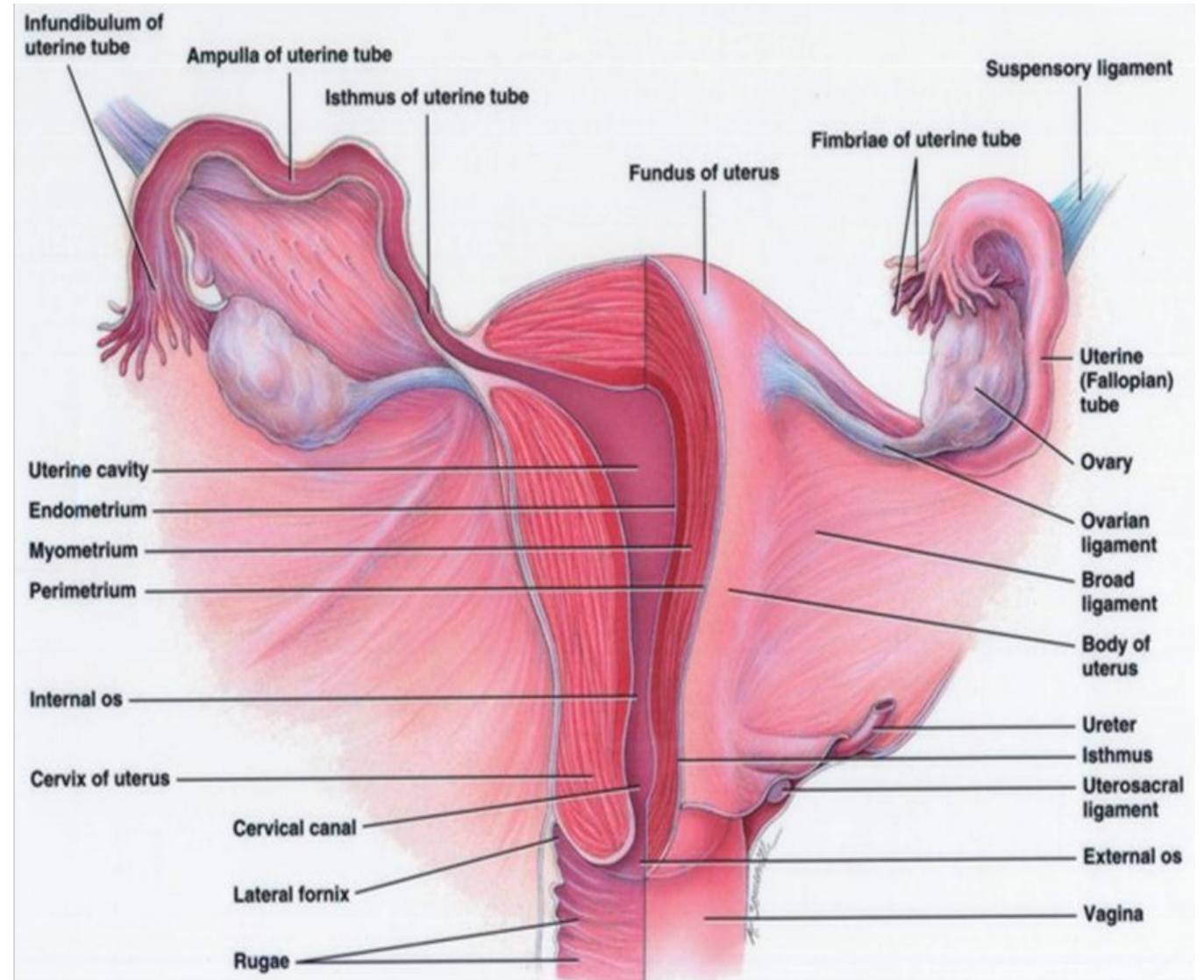
**\* Its lower (uterine) pole** → gives attachment to ovarian ligament (which is also attached to uterus).





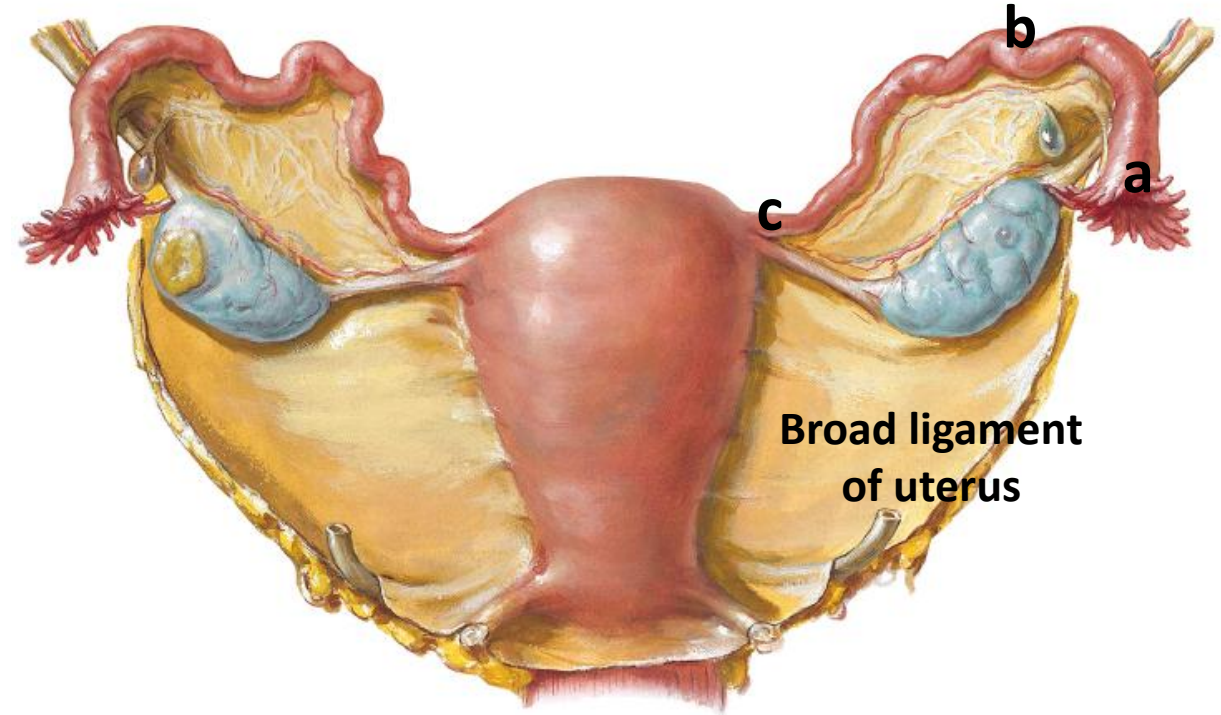
# Uterine (Fallopian) Tubes

- \* One on each side.
- \* Length: 10 cm long.
- \* Situated in free upper border of broad ligament of uterus.
- \* They transmit ova from ovary to cavity of uterus.
- \* The tube is related to tubal pole of ovary.



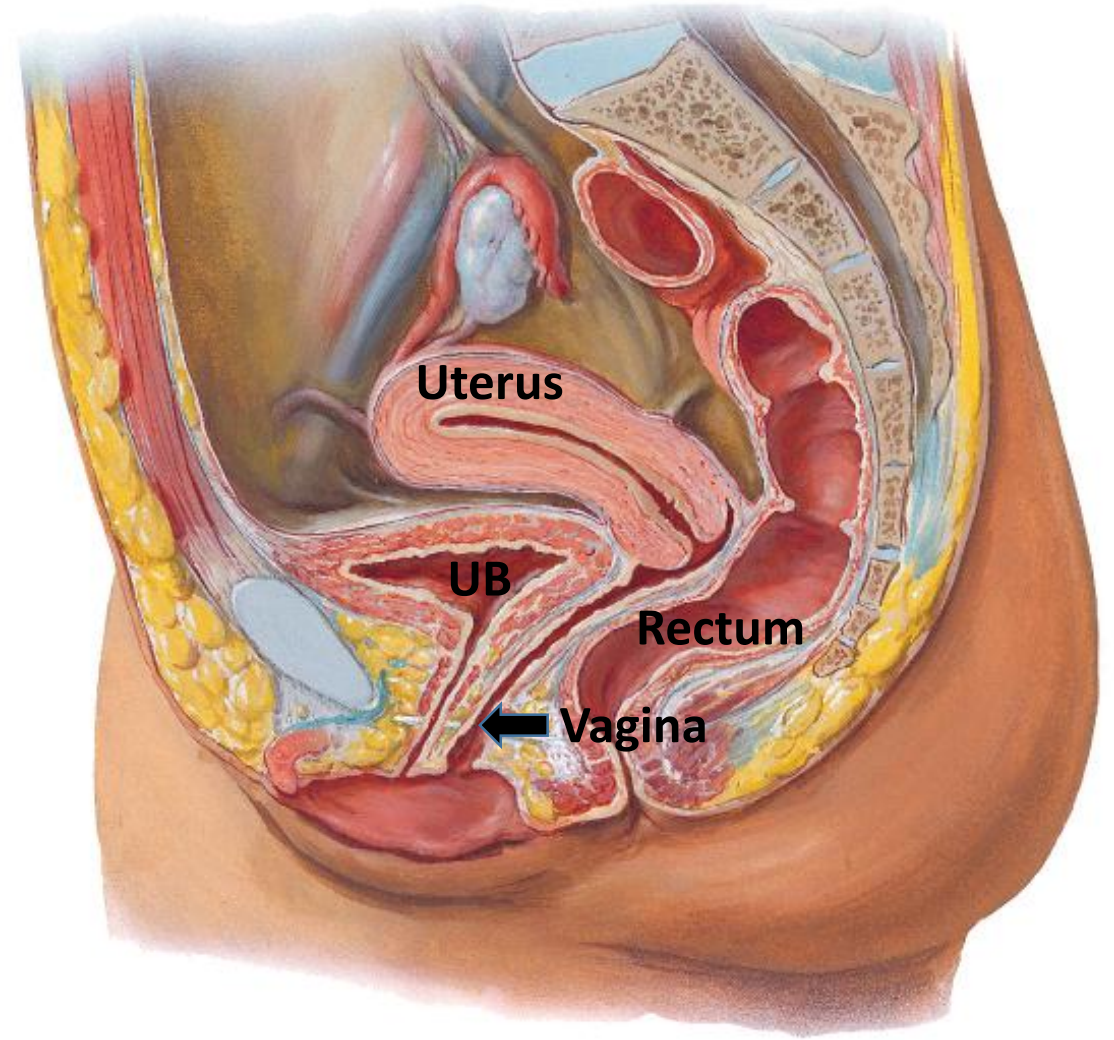
\* It is divided into four parts:

- a. Infundibulum:** Is funnel-shaped lateral end, the circumference of which has several finger-like processes called fimbriae.
- b. Ampula:** Is the widest and longest portion, making about 2/3 of the whole length of the uterine tube. In it → fertilization of ova takes place.
- c. Isthmus:** Is the narrow, thick-walled medial portion that joins uterus.
- d. Uterine Part:** Is the segment of the tube, which runs through uterine wall.



# Uterus

- \* Is a hollow thick-walled muscular organ.
- \* It serves as a site for reception, retention and nutrition of fertilized ovum.
- \* It is situated in pelvic cavity, between urinary bladder (UB) anteriorly, and rectum posteriorly.
- \* Its cavity communicates with that of vagina.





**\* The uterus is formed of two main parts:**

**A. Body:**

**\* It forms the upper 2/3 of the uterus, including the fundus of uterus and the isthmus.**

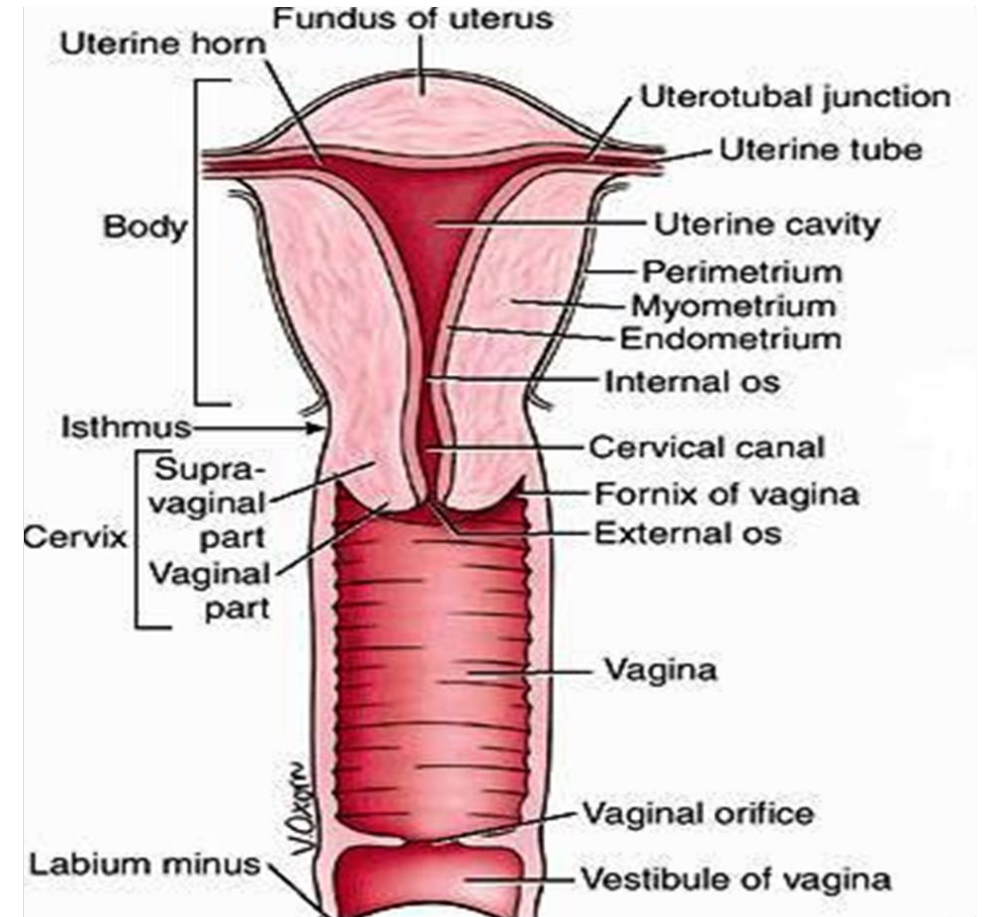
**\* The fundus** is the dome-shaped part of body that lies above the entrance of uterine tubes.

**\* The isthmus** is the lower constricted region of body (about 1 cm) just above the cervix.

**\* The body of the uterus** lies between the two layers of broad ligament and is freely movable.

**\* The cavity of the body** (uterine cavity) is triangular in coronal section.

**\* It is continuous inferiorly with the cervical canal.**



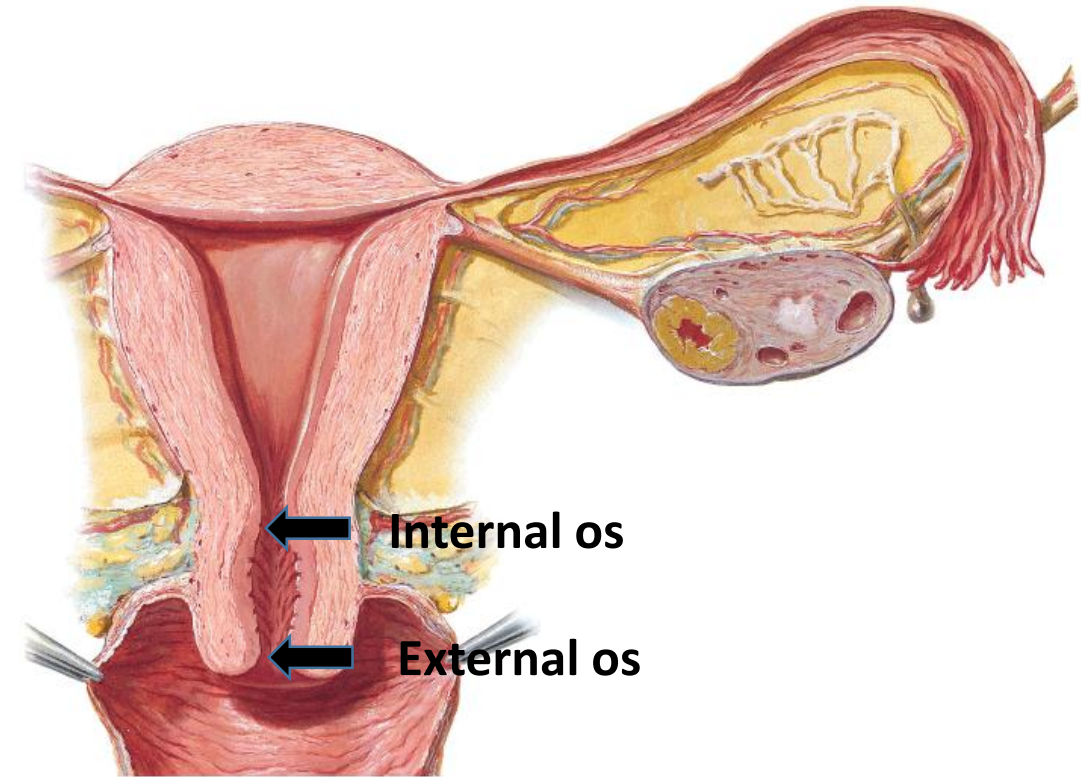


## B. Cervix:

\* It is the cylindrical narrow inferior part of the uterus that extends from the internal os above to the external os below.

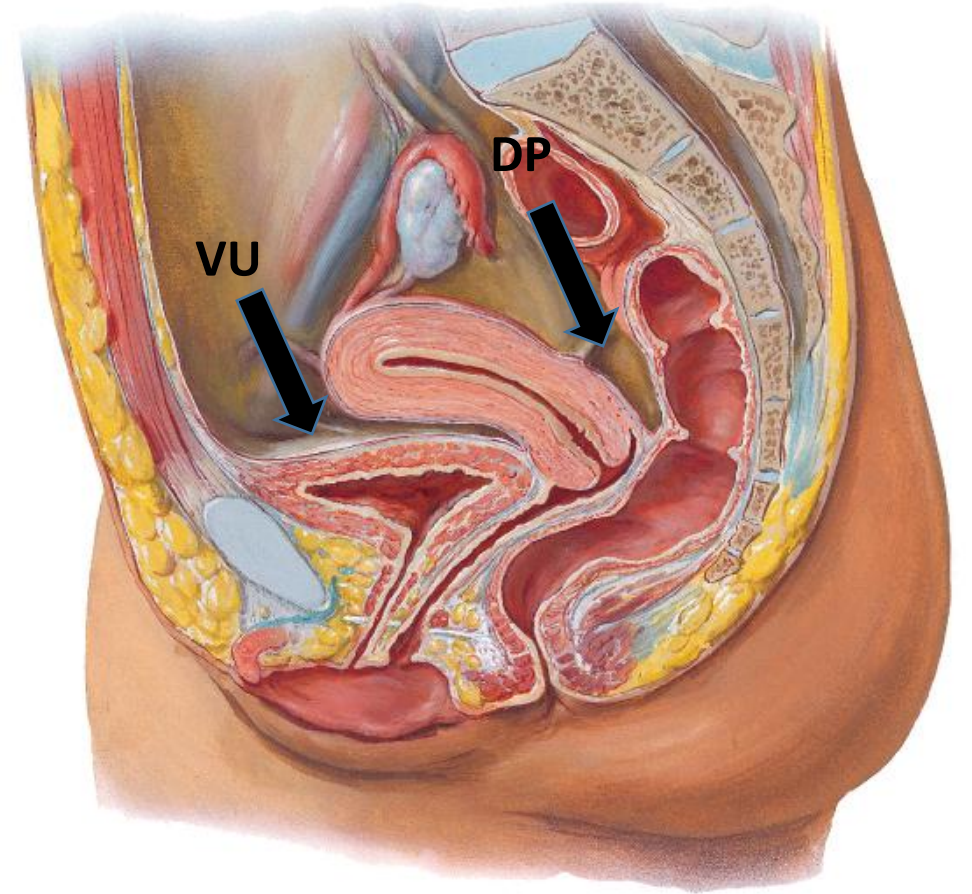
\* It has a supravaginal part that extends from the isthmus to the vagina and a vaginal part that protrudes into the vagina and surrounds the external os.

\* The cavity of the cervix (cervical canal) is continuous through the internal os with the uterine cavity and through the external os with the vaginal cavity.



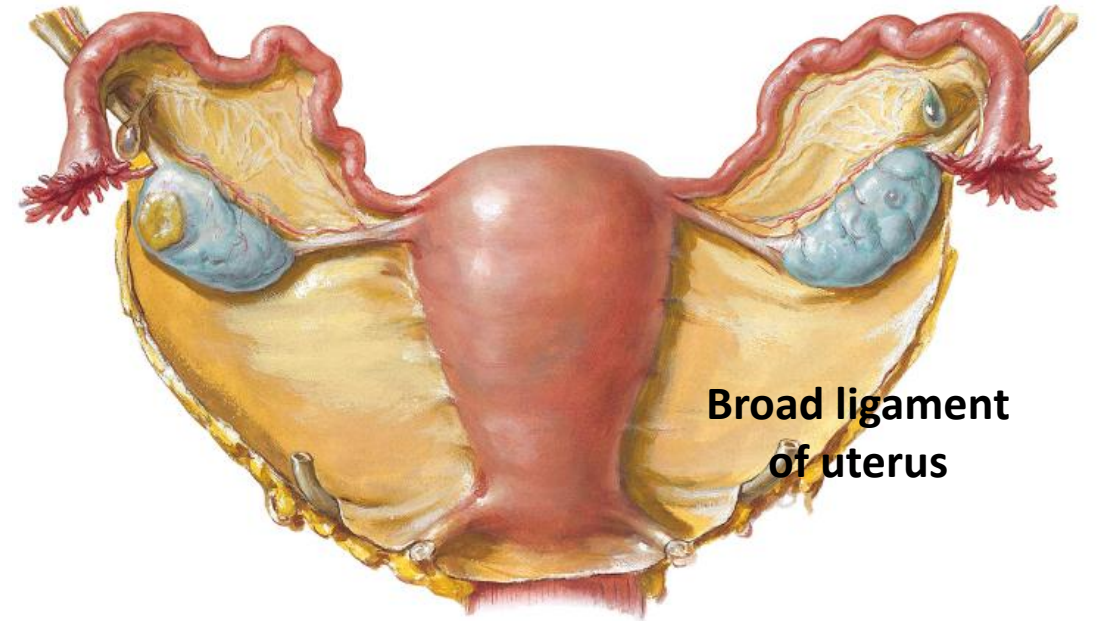
**\* The peritoneum passes from anterior surface of rectum on to posterior surface of uterus, forming Douglas pouch (DP), and then curves over fundus to reach the anterior surface of the uterus.**

**\* The peritoneum is then reflected forwards on to superior surface of urinary bladder, forming a shallow recess, called vesico-uterine (VU) pouch.**



## \* Broad ligament of Uterus:

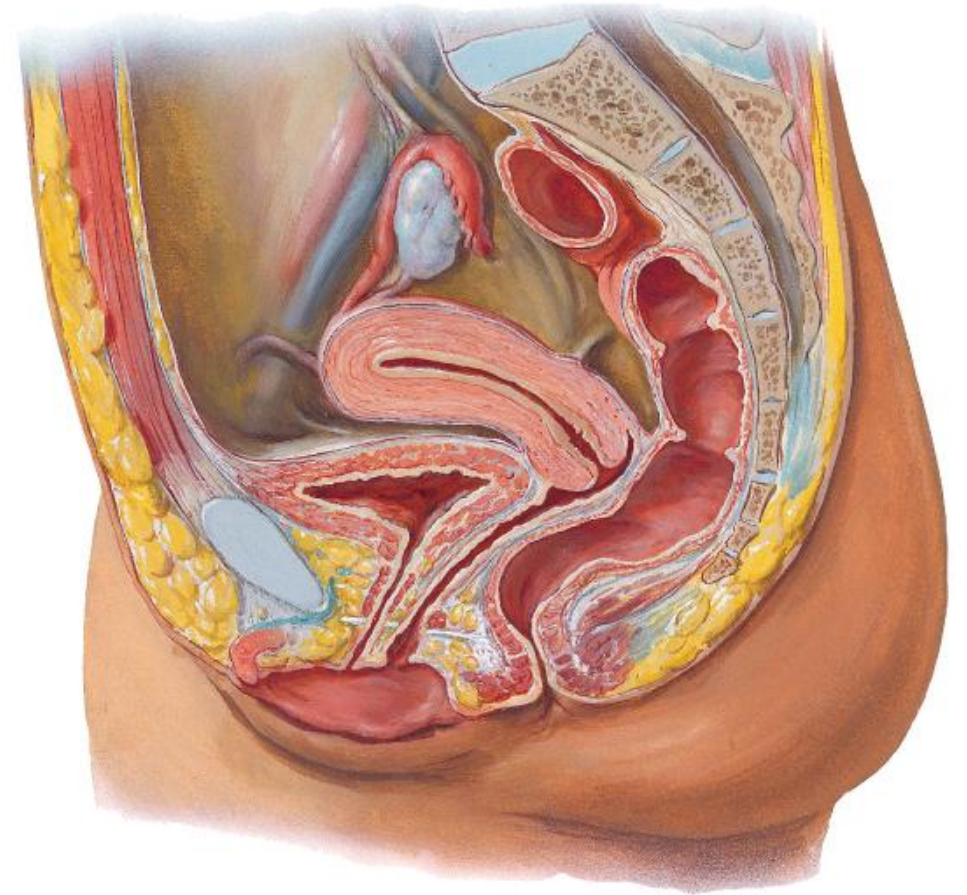
- \* The peritoneum covers the anterior and the posterior surfaces of the uterus.
- \* On each side → the two peritoneal layers are expanded laterally from the lateral borders of the uterus to the lateral pelvic walls to form the broad ligament.
- \* Superiorly → the two layers are continuous and form the upper free border of the broad ligament. This border contains the uterine tubes.





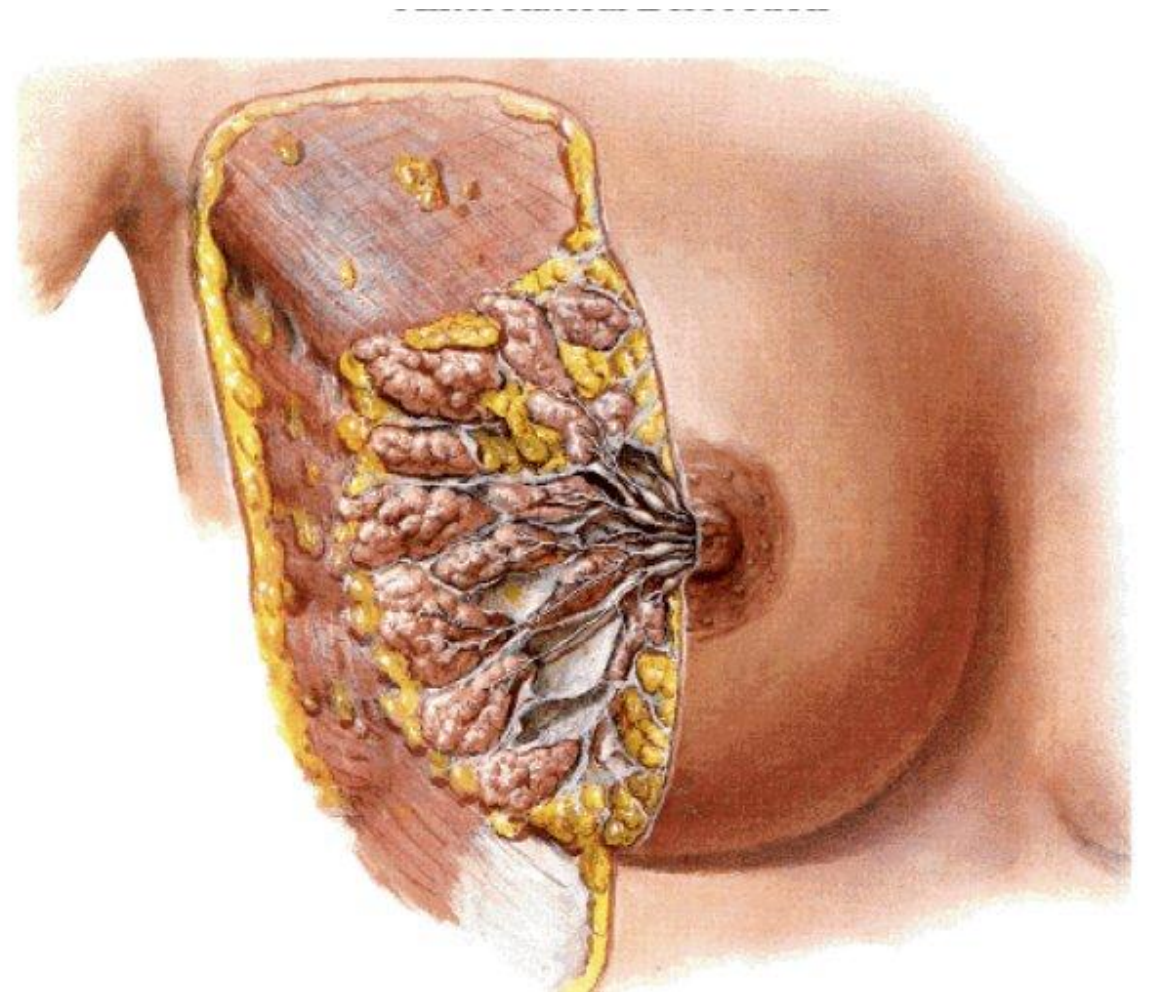
# Vagina

- \* Length: about 8 cm long.
- \* Situated between the urinary bladder and the urethra anteriorly and the rectum posteriorly.
- \* It extends downwards and forwards from the cervix to the vulva, where it opens into the vestibule.
- \* Its anterior wall is short, pierced superiorly by cervix, which projects downwards and backwards into the vagina. Its posterior wall is longer.



# Breast or Mammary Gland

- \* The breasts are two modified sweat glands that produce milk instead of sweat.
- \* Each breast has one pigmented projection called nipple, which is surrounded by a colored area of skin termed areola.
- \* The breast tissue consists of a system of ducts embedded in connective tissue.



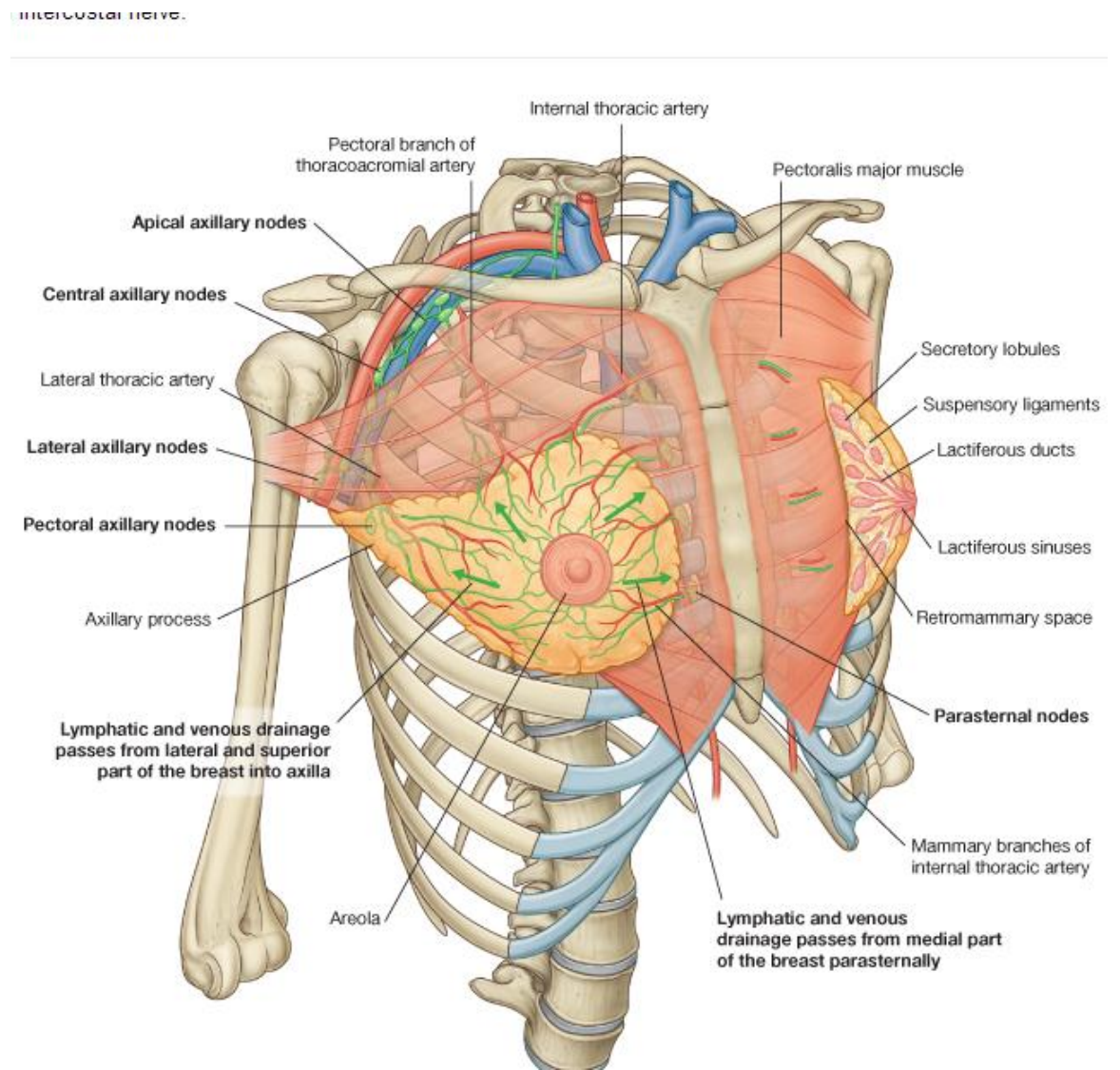


**\* At puberty in female, mammary glands gradually enlarge and assume their hemispherical shape under the influence of pituitary, ovarian, and other hormones.**

**\* The ducts elongate, but the increase in the size of the gland is mainly due to deposition of fat.**

**\* The deep surface (base) overlies pectoralis major, and to a less degree, serratus anterior and external oblique muscles.**

**\* The base extends vertically from 2<sup>nd</sup> - 6<sup>th</sup> rib, and horizontally from sternal border to mid-axillary line.**





**\* Each breast consists of 15 – 20 independent units called breast lobes separated by fibrous septa.**

**\* A lobe consists of several ducts that empty into one terminal distal duct, the lactiferous duct, which opens onto the nipple.**

**\* Immediately before emerging at the nipple, the lactiferous duct forms a dilatation called lactiferous sinus.**

