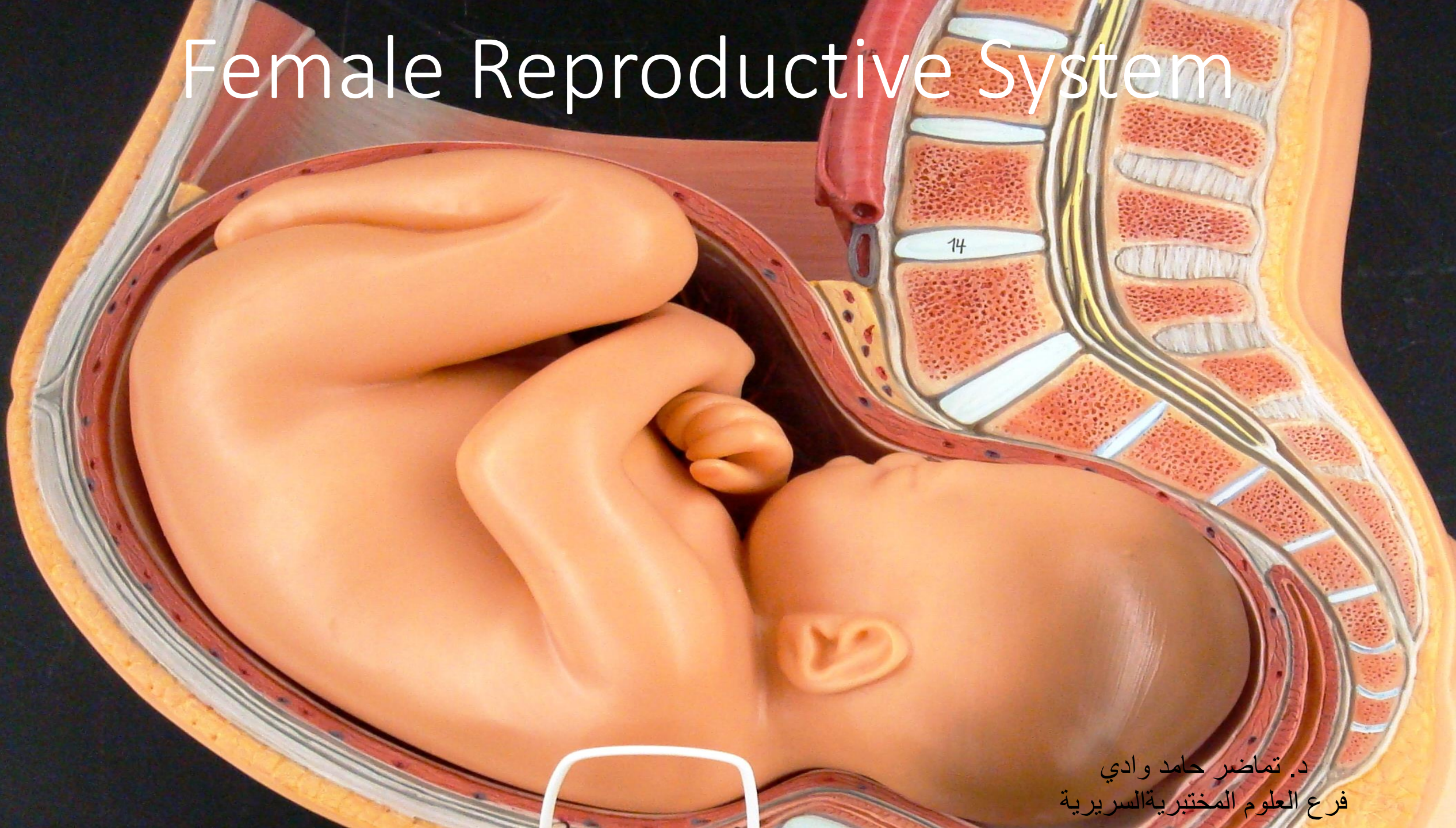


# Female Reproductive System

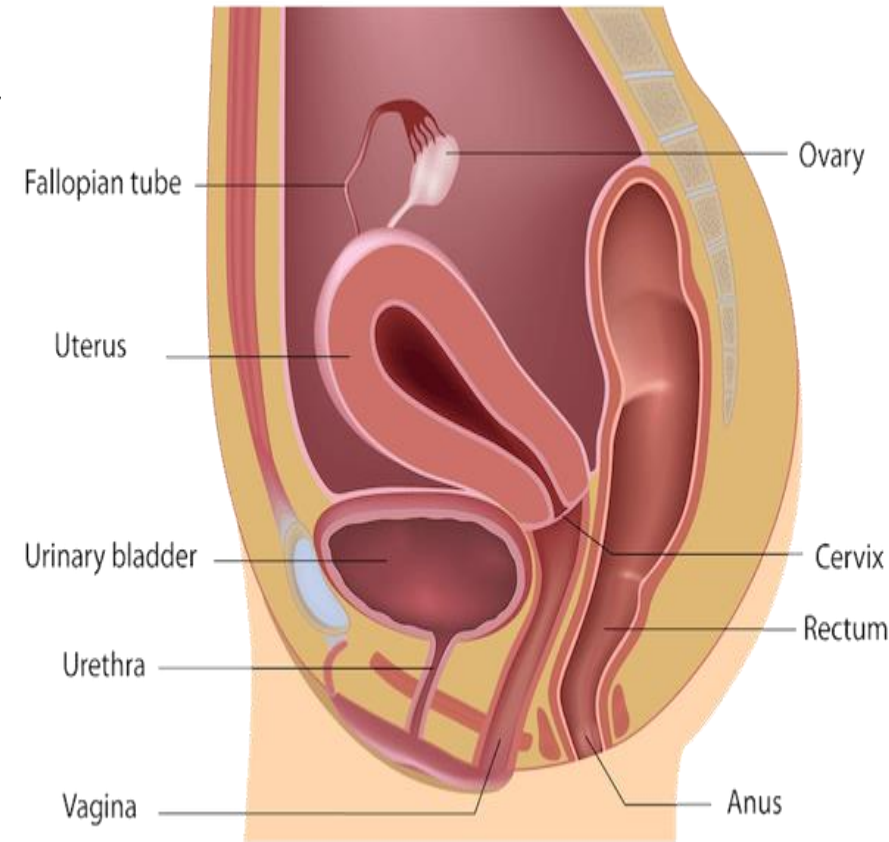


# Anatomy of Female Reproductive System

- In women, the pelvic cavity contains most of the reproductive tract.
- In both sexes, the reproductive system consists of primary and secondary sex organs, or genitalia. The primary sex organs or gonads are the organs that produce gametes. The secondary sex organs are organs other than gonads that are necessary for reproduction.

- External sexual organs: Vulva  
Mammary glands

- Internal structures and organs: Ovaries  
Oviducts  
Uterus  
Vagina



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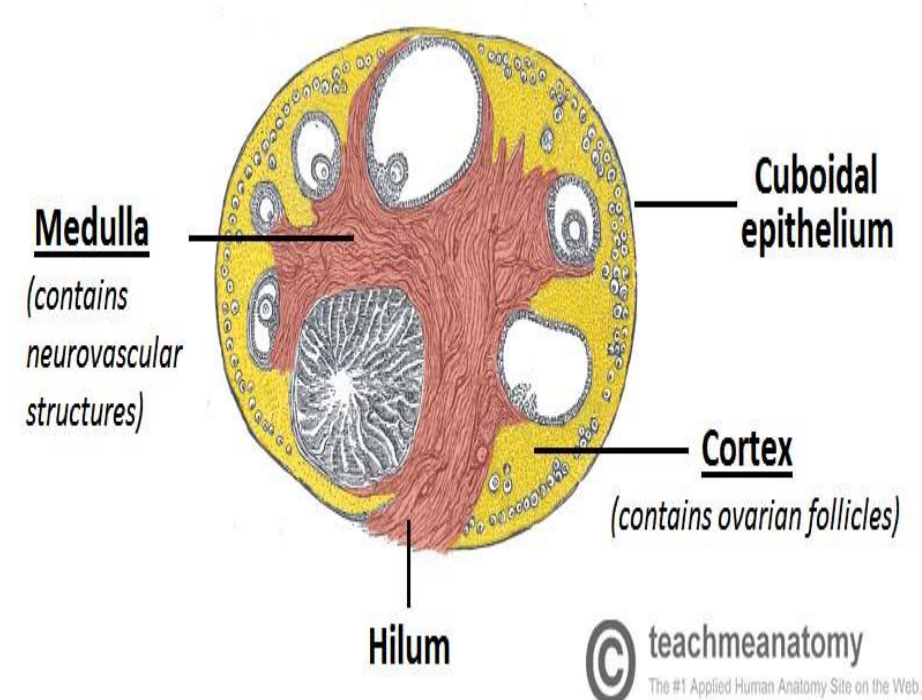
# Anatomy of ovary

- The ovaries are paired, oval bodies about 3 to 4 cm in length.
- The ovary has 3 components:

**Surface:** The surface layer of the ovary is formed by simple cuboidal epithelium, known as germinal epithelium.

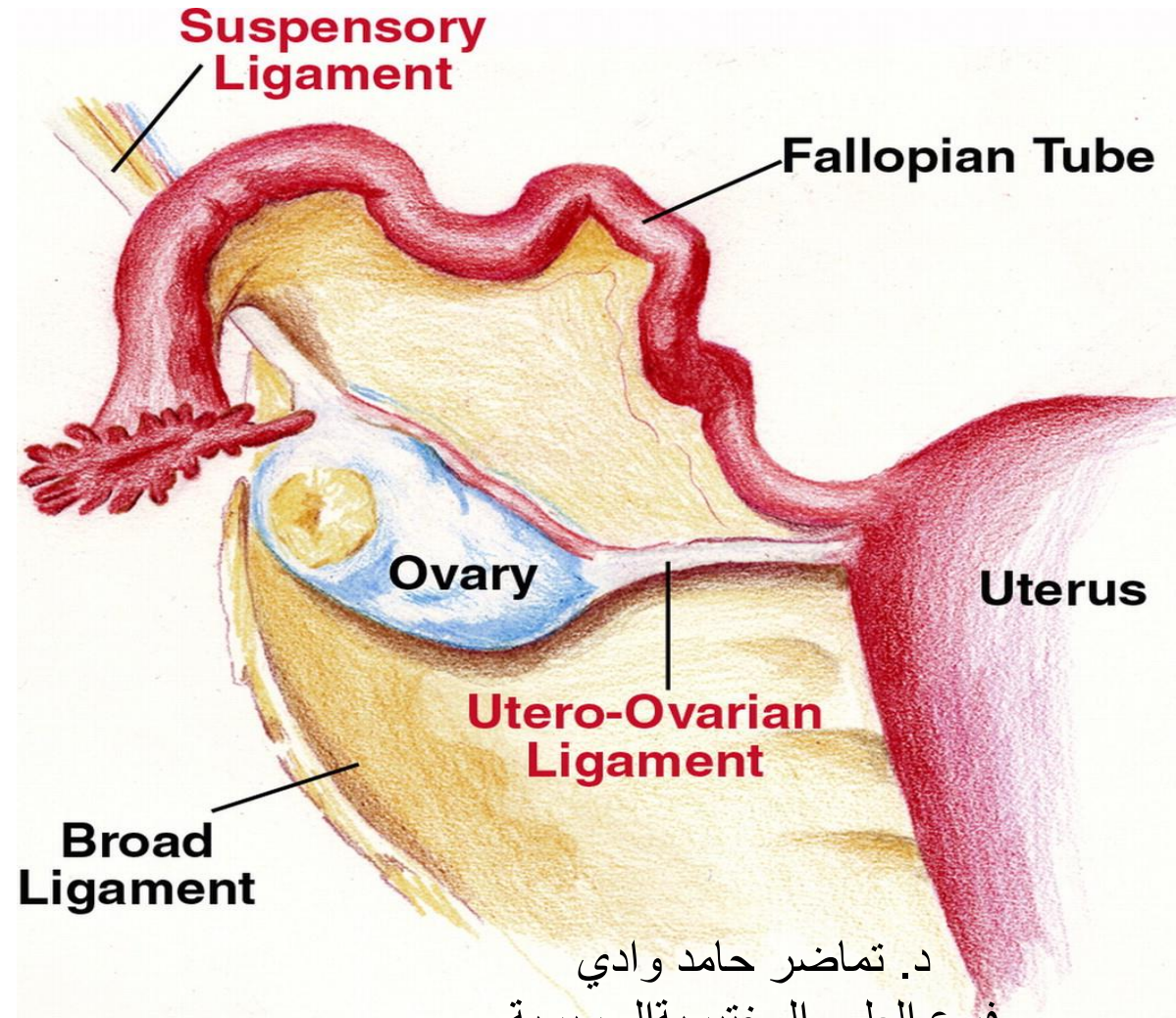
**Cortex:** The cortex (outer part) of the ovary is largely comprised of a connective tissue stroma. It supports thousands of follicles. Each primordial follicle contains an oocyte surrounded by a single layer of follicular cells.

**Medulla:** The medulla (inner part) is composed of supporting stroma and contains a rich neurovascular network which enters the hilum of ovary from the mesovarium.



# Anatomy of ovary

- Several ligaments hold the ovaries in place:
- **The broad ligament** is the largest of the ligaments. It is also attached to the uterine tubes and the uterus.
- **The suspensory ligament** holds the upper end of the ovary to the pelvic wall.
- **The ovarian ligament** attaches the lower end of the ovary to the uterus.



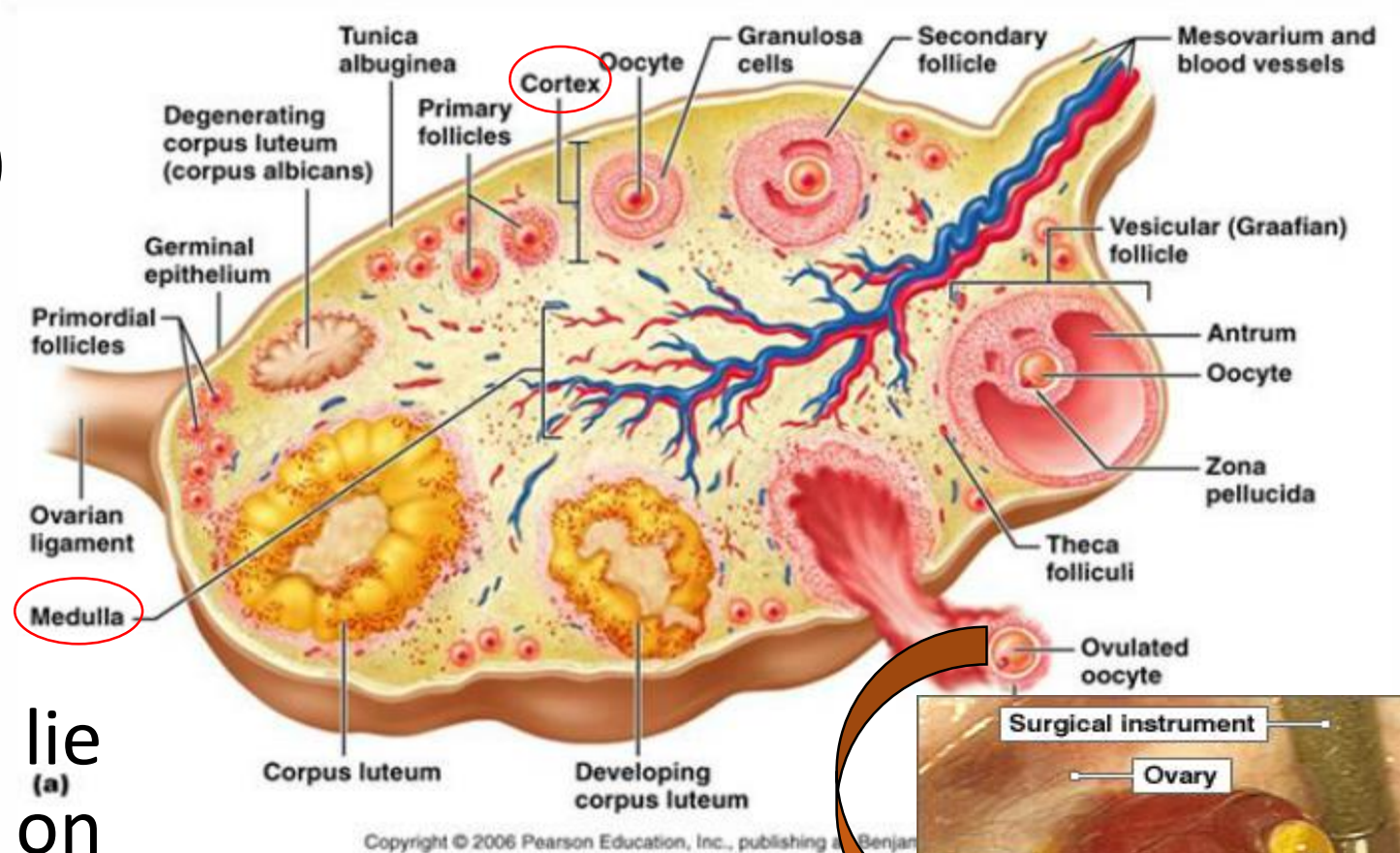
# The function of ovaries

- There are two major functions:

1- Oogenesis (eggs formation)

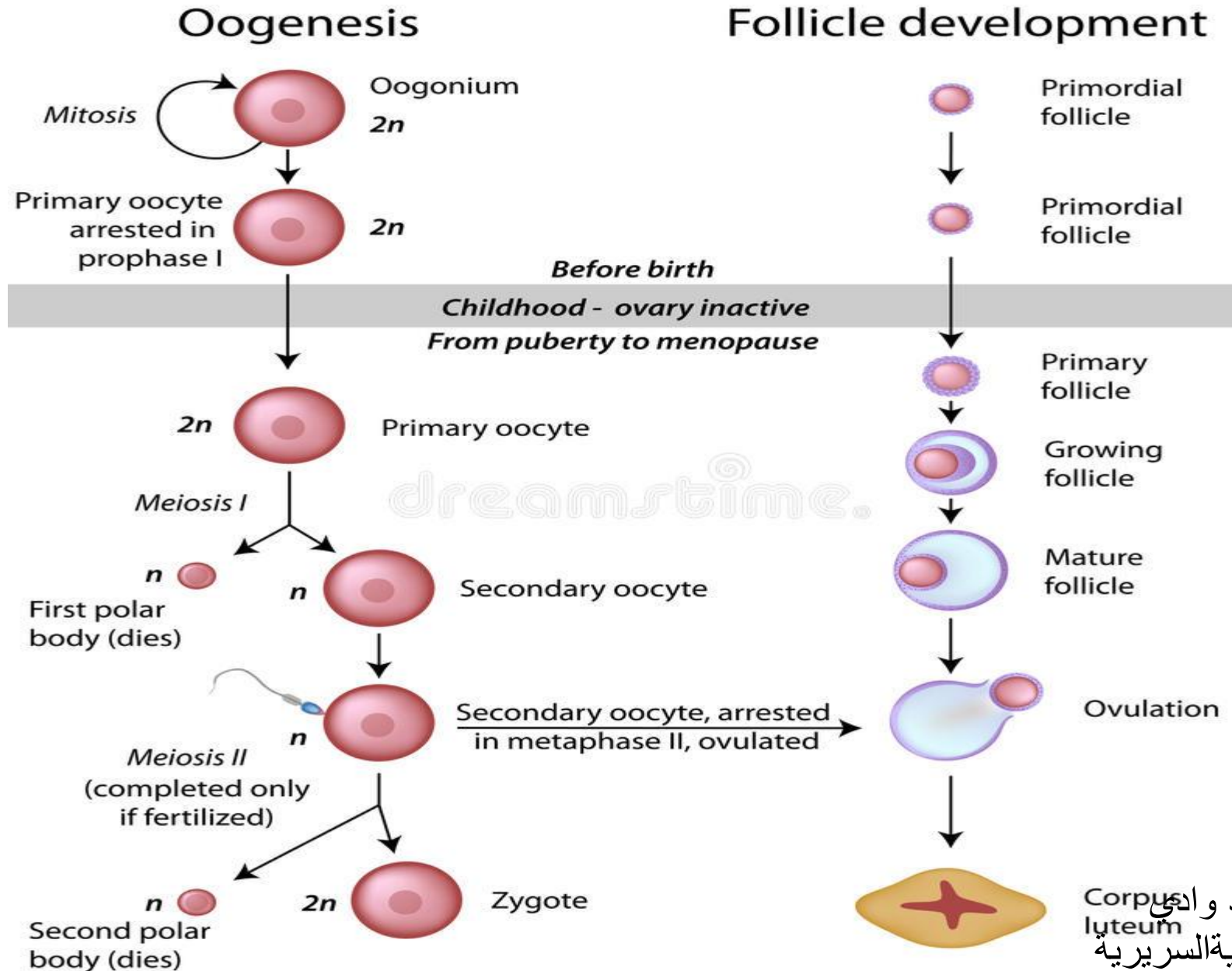
2- Hormones secretion  
(estrogen and progesterone)

- **Their location:** The ovaries lie in shallow depressions, one on each side of the upper pelvic cavity.



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Jacques Donnez

# Oogenesis synchronizes with folliculogenesis



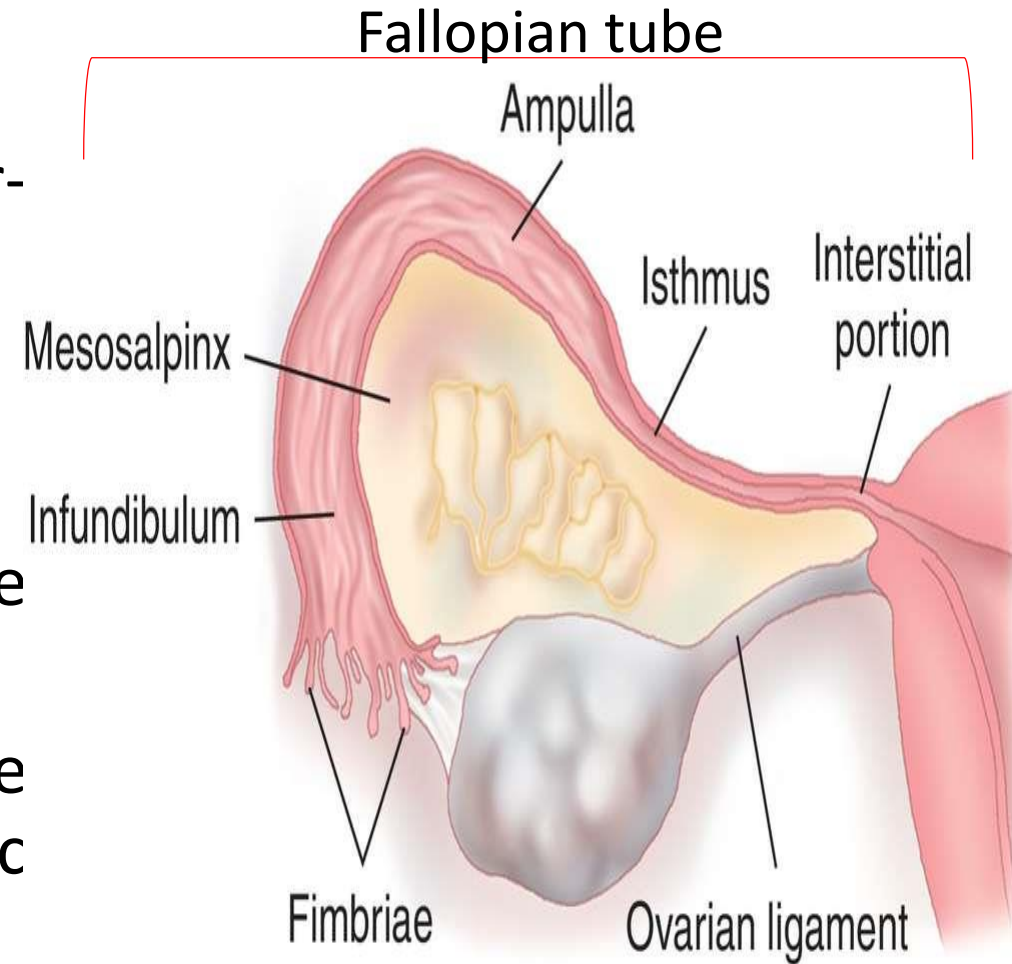
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# Anatomy of uterine tubes

- The uterine tube, also called fallopian tube or oviduct. It is a ciliated canal about 10 cm long.
- The tube has 4 segments:
  - 1- **Infundibulum** is a trumpet-shaped with finger-like projections called fimbriae.
  - 2- **Ampulla** is the middle and longest part.
  - 3- **Isthmus** is a narrow segment.
  - 4- **Interstitial portion** is the narrower near the uterus.

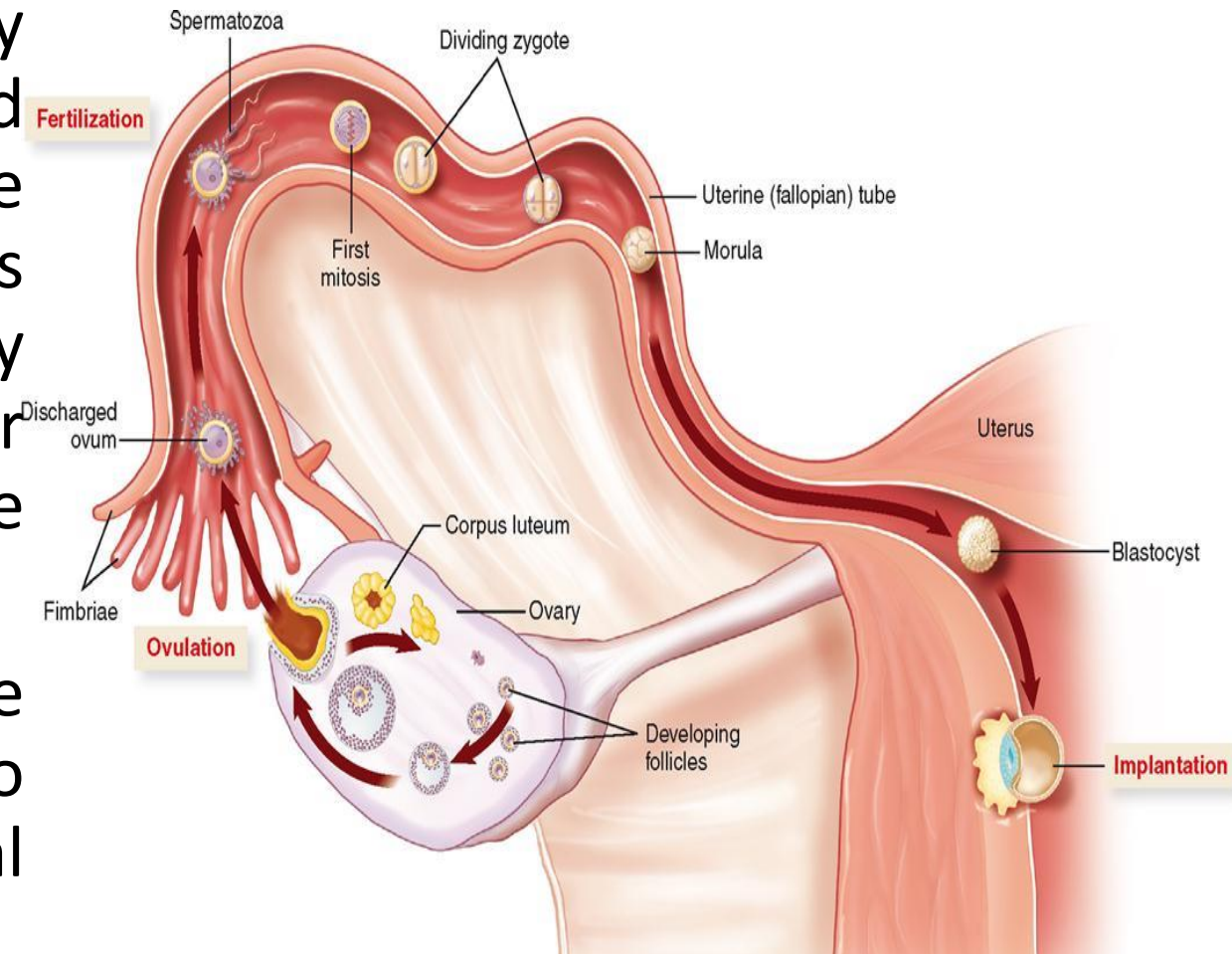
**Their location:** They extend from the uterus to the ovaries laterally on each side toward the pelvic wall to open near the ovary.

They are enclosed in the mesosalpinx, which is the superior margin of the broad ligament.



# The function of fallopian tube

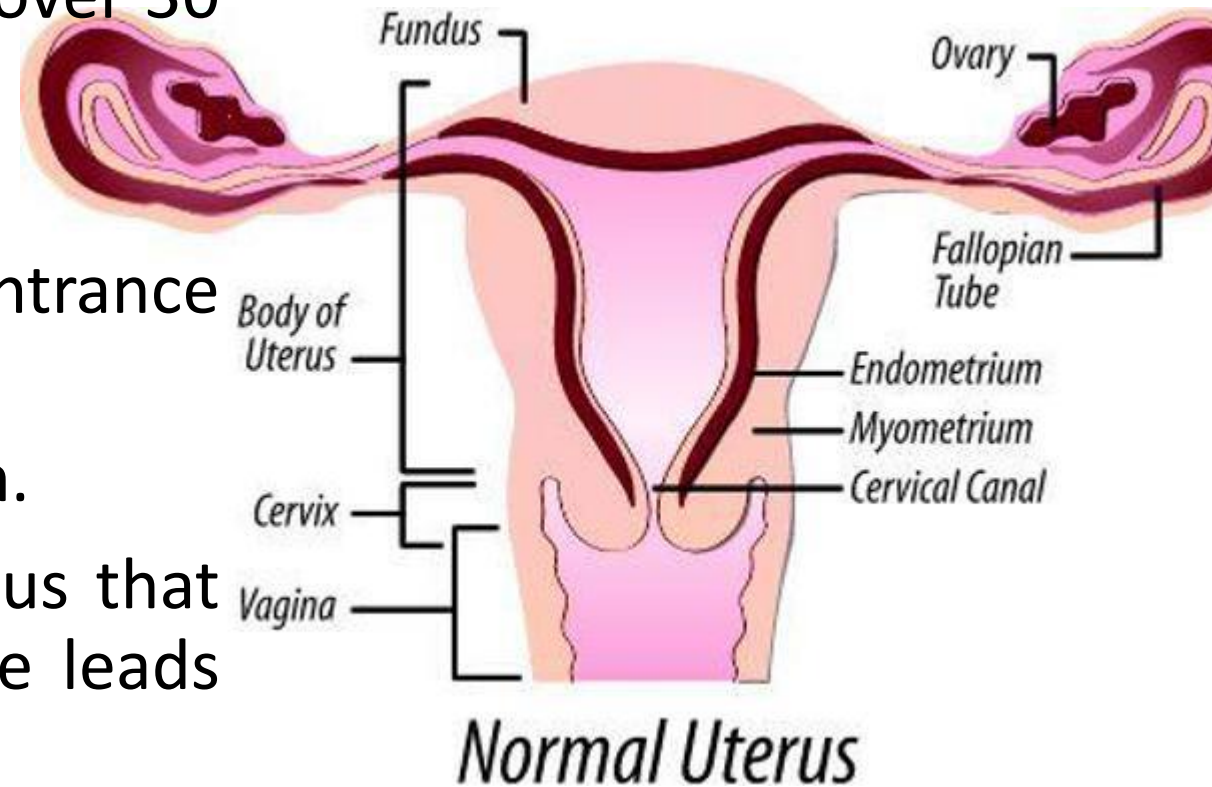
- When an egg leaves an ovary, it is usually swept into a uterine (fallopian) tube by the combined action of the fimbriae and the beating of cilia that line the uterine tube. Once in the uterine tube, the egg is propelled slowly toward the uterus by action of the cilia and by muscular contractions in the wall of the uterine tubes.
- **Fertilization** usually takes place in the uterine tube. The developing embryo normally arrives at the uterus several days later, and then ....
- **implantation** occurs as the embryo embeds in the lining of the uterus.





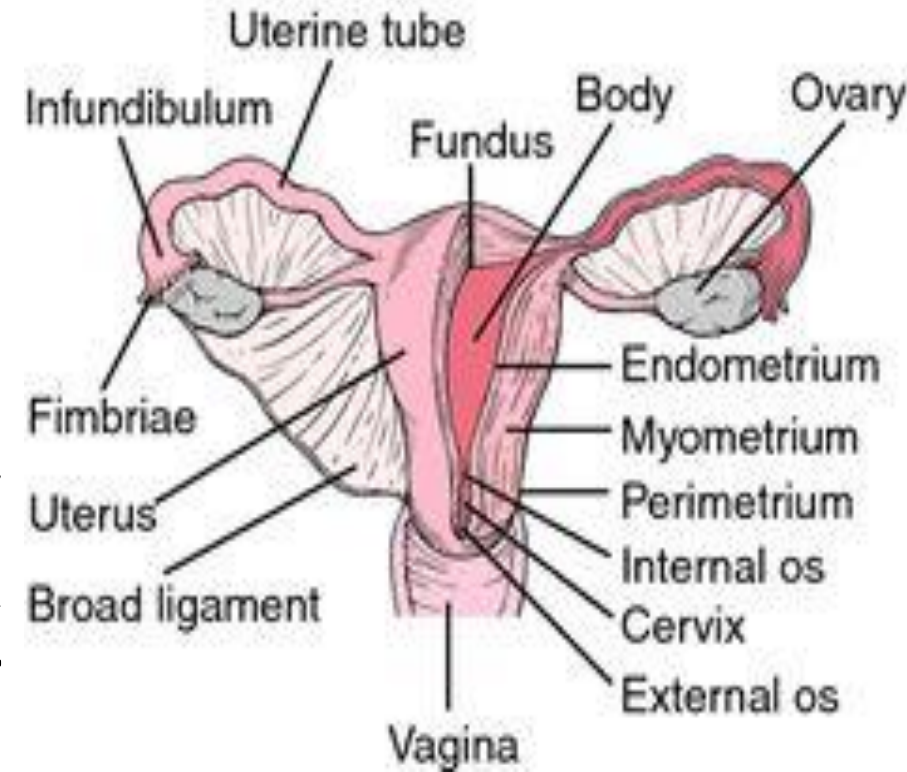
# Anatomy of uterus

- The uterus is a hollow, thick-walled muscular organ about the size and shape of an inverted pear, and opens into the roof of the vagina.
- The uterus is approximately 5 cm wide in its usual state but is capable of stretching to over 30 cm to accommodate the growing baby.
- The uterus has three sections:
- **The fundus** is the region superior to the entrance of the uterine tubes.
- **The body of the uterus** is the major region.
- **The cervix** is the narrow end of the uterus that projects into the vagina. A cervical orifice leads to the lumen of the vagina.



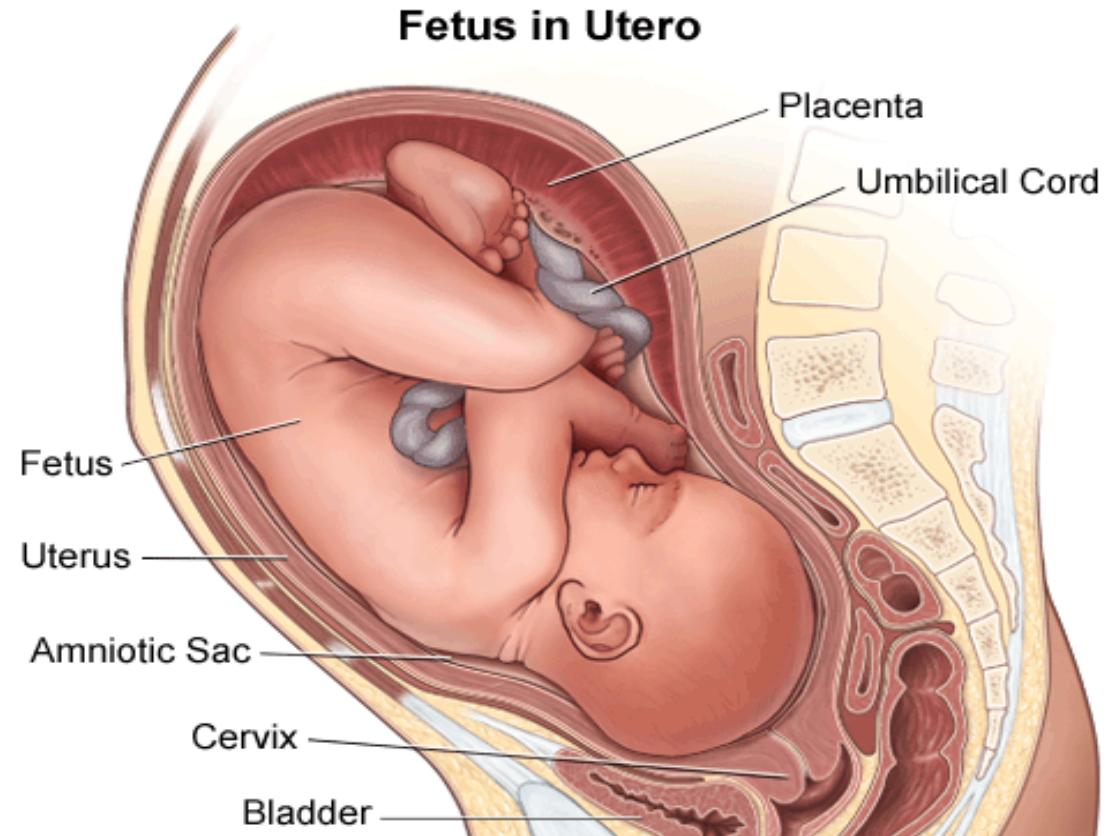
# Anatomy of uterus

- The uterus is composed of 3 layers:
  - Perimetrium** = Visceral peritoneum
  - Myometrium** = Muscle layers
  - Endometrium** = Inner mucous lining
- The lumen of the uterus is roughly triangular, with its two upper corners opening into the uterine tubes.
- The lumen communicates with the vagina by way of a narrow passage through the cervix called the cervical canal. The superior opening of this canal into the body of the uterus is the **internal os**, and its opening into the vagina is the **external os**.



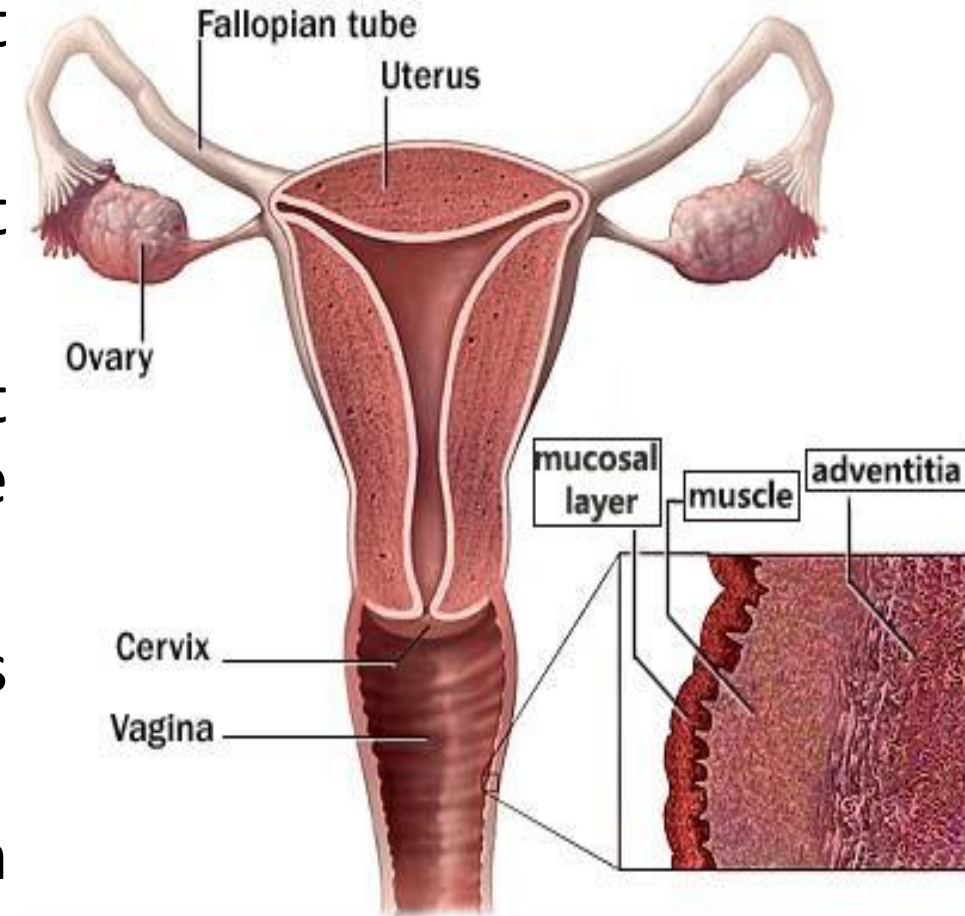
# The function of uterus

- It receives egg from oviduct.
- It holds embryo and fetus during development, if the fertilization is occurred.
- **The position of uterus:** It is positioned between the rectum and the bladder. Normally, it lies above and is tipped over the urinary bladder.



# Anatomy of vagina

- The vagina is a tube about 8 to 10 cm long.
- The vagina extends slightly beyond the cervix and forms blind spaces called fornices surrounding it. The cervix enters the vagina nearly at a right angle.
- The mucosal lining of the vagina lies in folds that extend when the fibromuscular wall stretches.
- The vaginal wall is thin but very distensible. It consists of an outer adventitia, a middle muscularis, and an inner mucosa.
- The vagina opens in the external genital organs which are known collectively as the vulva.
- **Its location:** The vagina tilts posteriorly between the urethra and rectum; the urethra is bound to its anterior wall.



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