

Female Reproductive System

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Competency & SLOs–



OVARY



Ovary is covered by germinal epithelium/ surface epithelium

- Simple low cuboidal / squamous.
- It is continuous with mesothelium that covers mesovarium.

Tunica albuginea;-

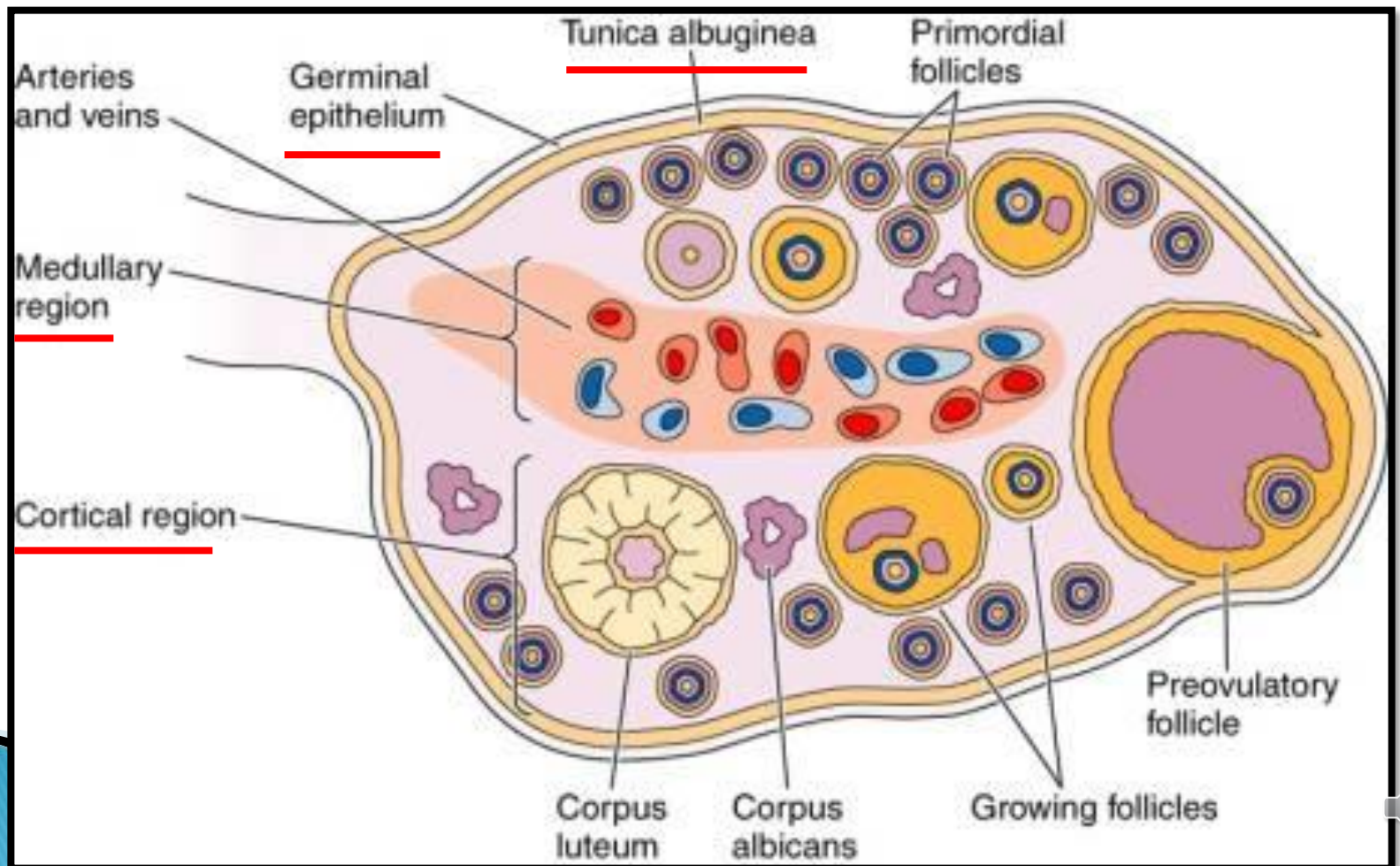
Dense connective tissue layer, deep to surface epithelium and thinner than that in testis.



Structure of Ovary-

It shows two distinct region-

- ▶ Cortex & Medulla



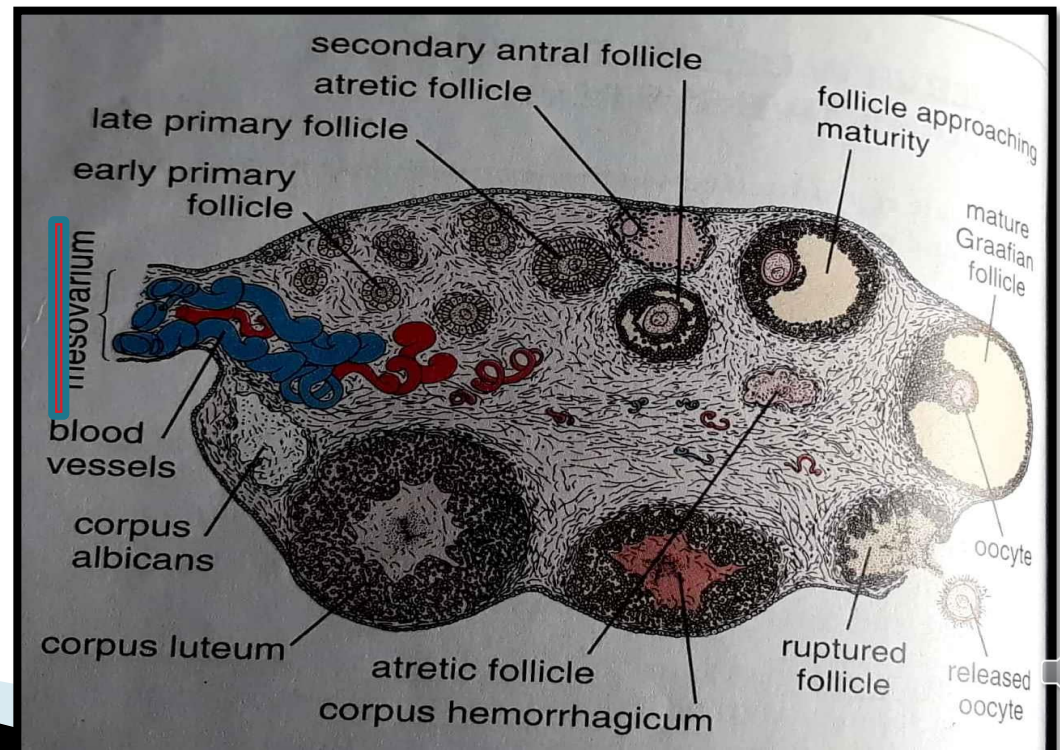
Cortex/cortical region:-

- ❑ **Functional part of ovary**
- ❑ Occupies greater, peripheral part of ovary beneath tunica albuginea.
- ❑ Contains ovarian follicles mainly and connective tissue.
- ❑ The follicles are in various stages of development with the smallest being most peripheral.
- ❑ Atretic follicles and corpus luteum are also seen.
- ❑ Scattered smooth muscles fibres are seen stroma around follicles



Medulla/medullary region-

- ❑ Central part of ovary with loose irregular connective tissue and blood vessels, lymphatics & nerves.
- ❑ Medullary connective tissue is continuous with that of mesovarium.

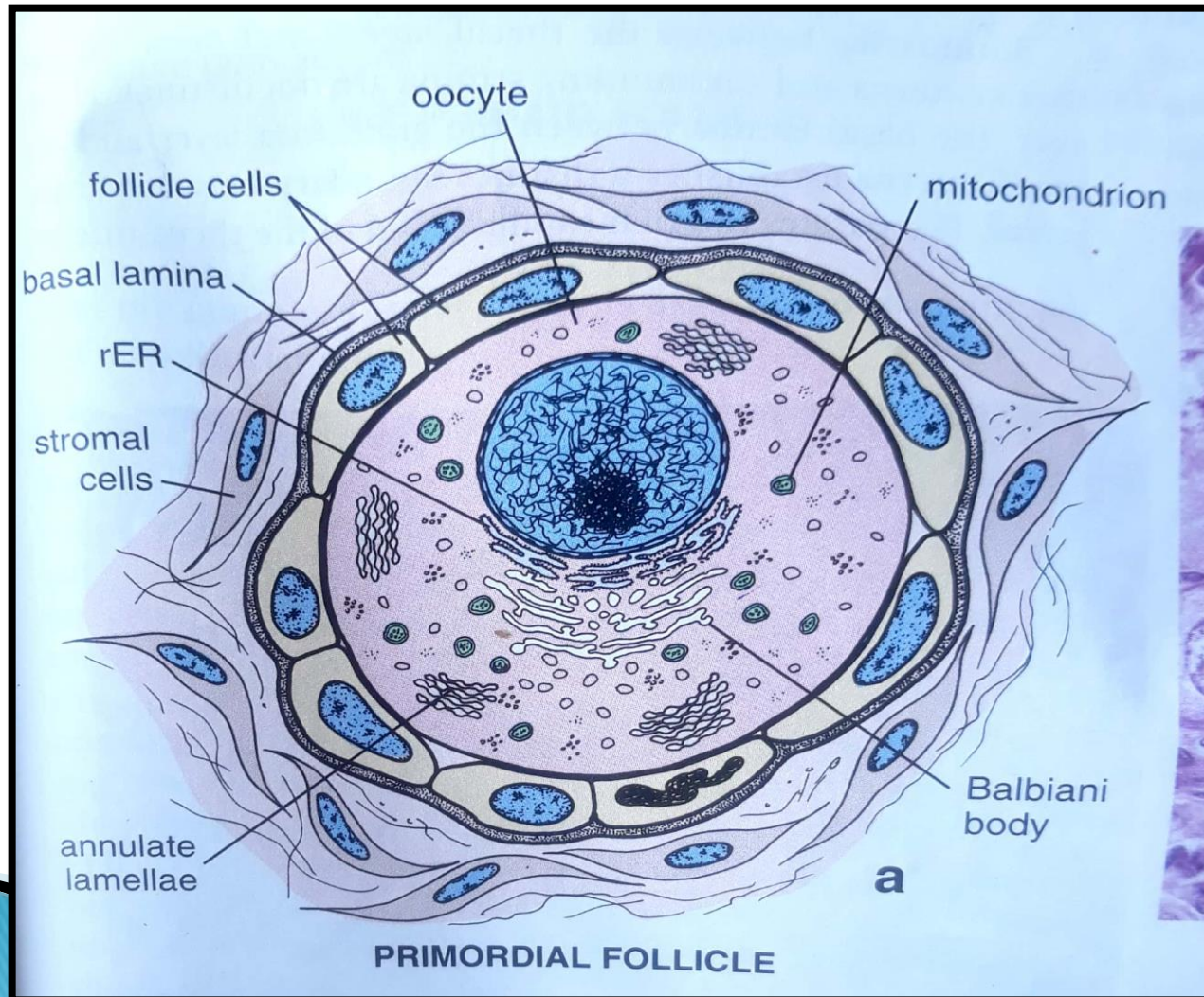


Ovary (HP)-

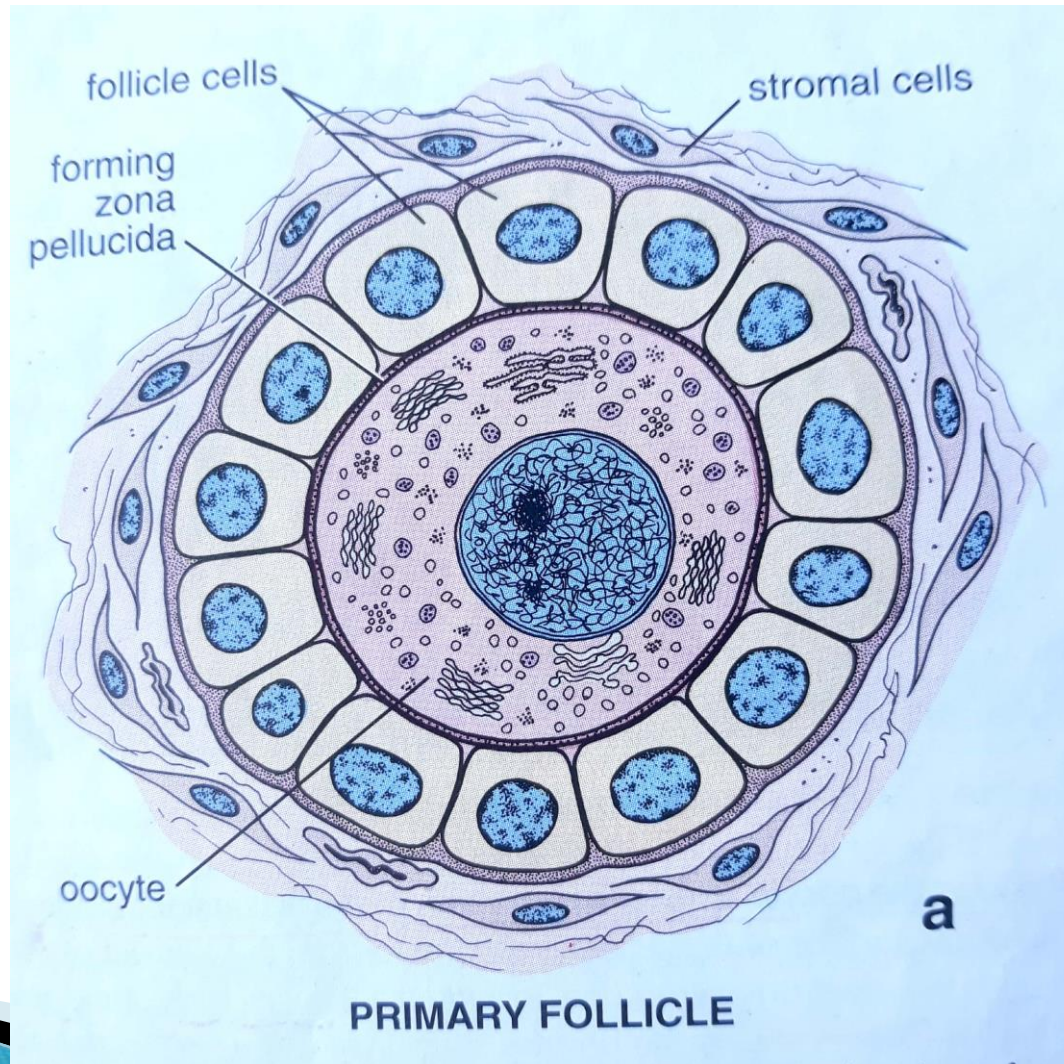
Shows different stages of developing follicles-



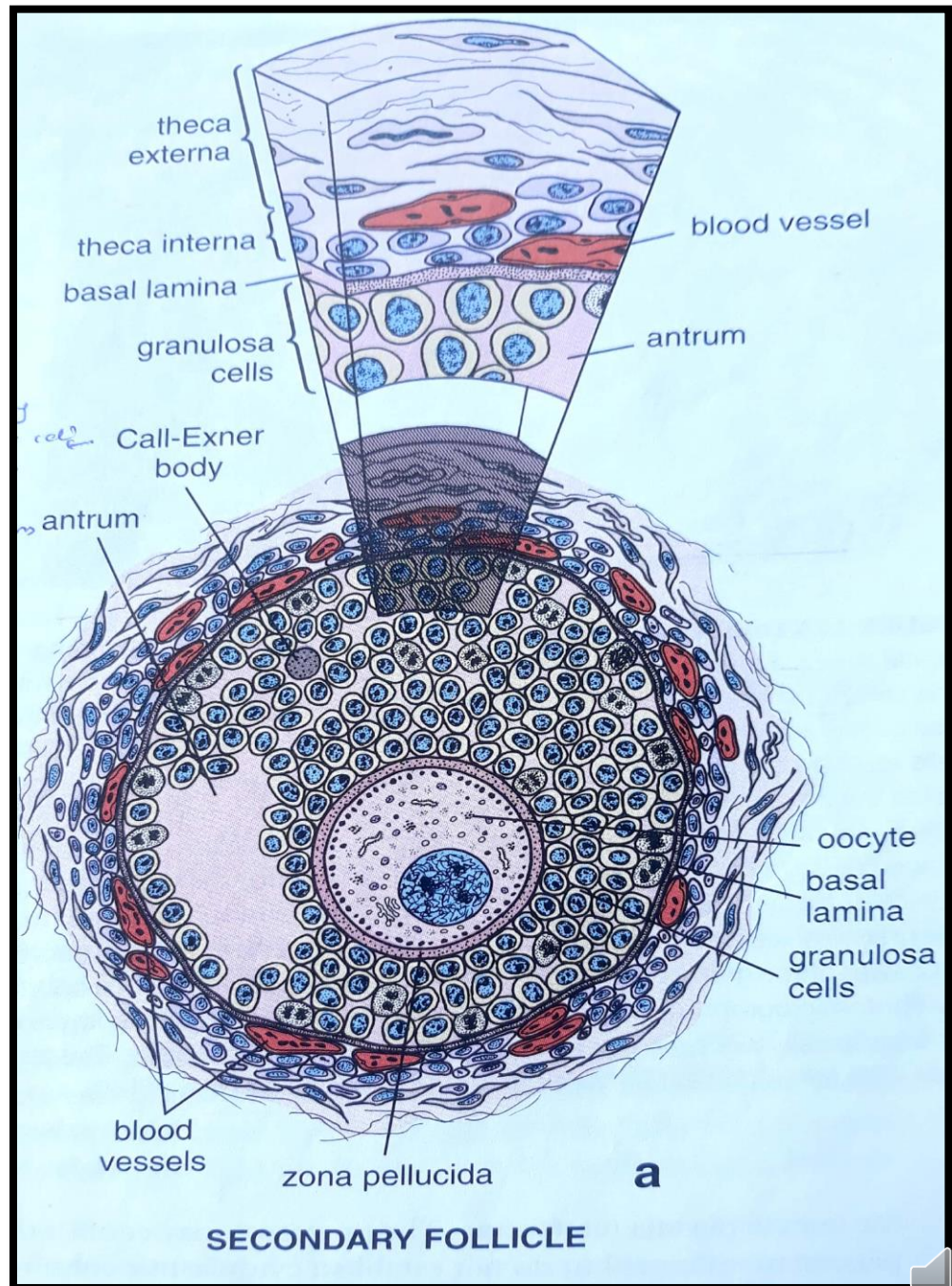
Primordial Follicle-



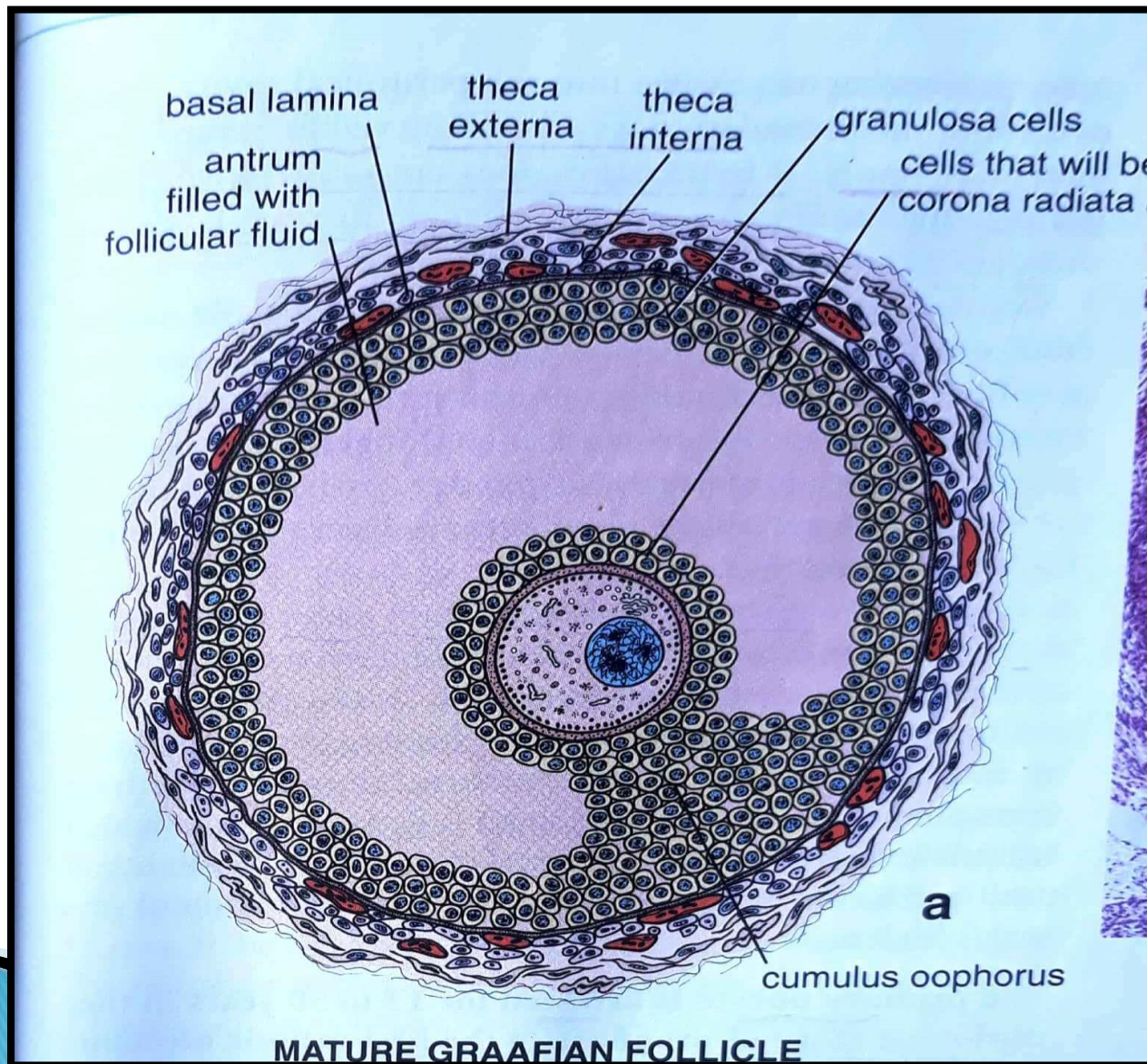
Primary Follicle-



Secondary (or Antral) Follicle



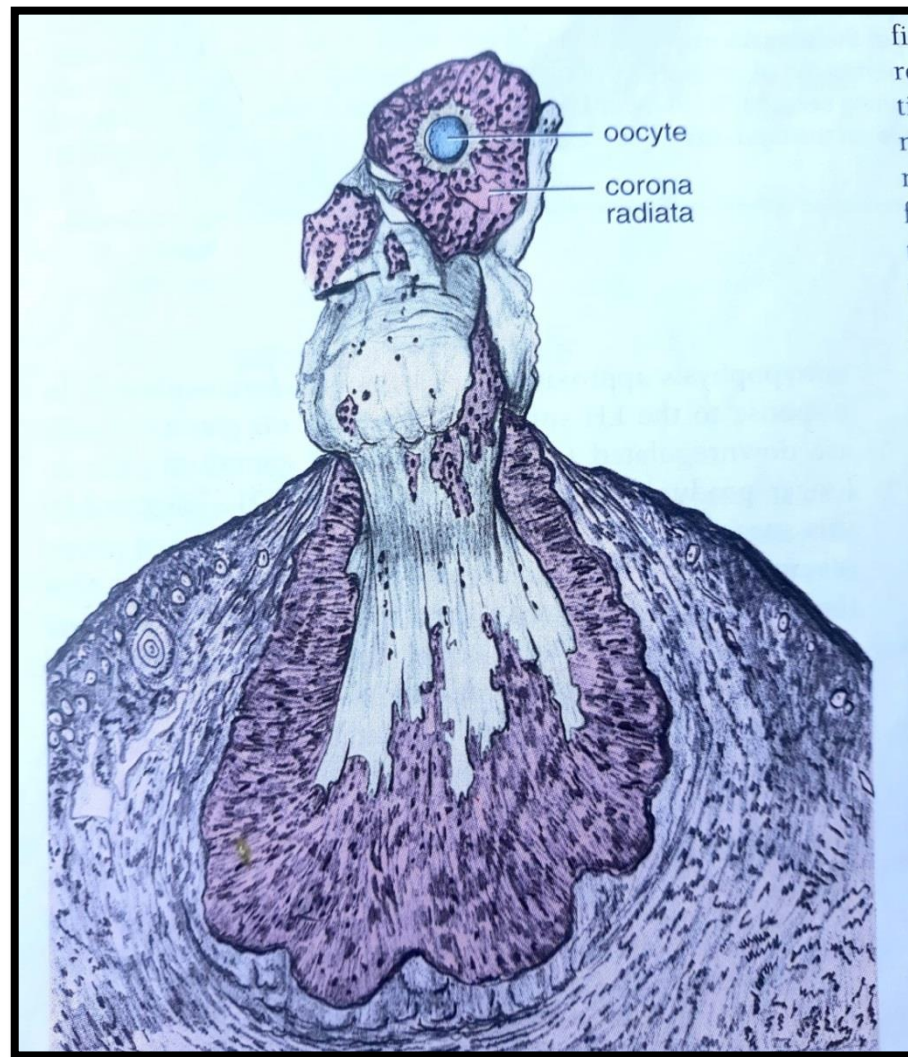
Graafian Follicle:-



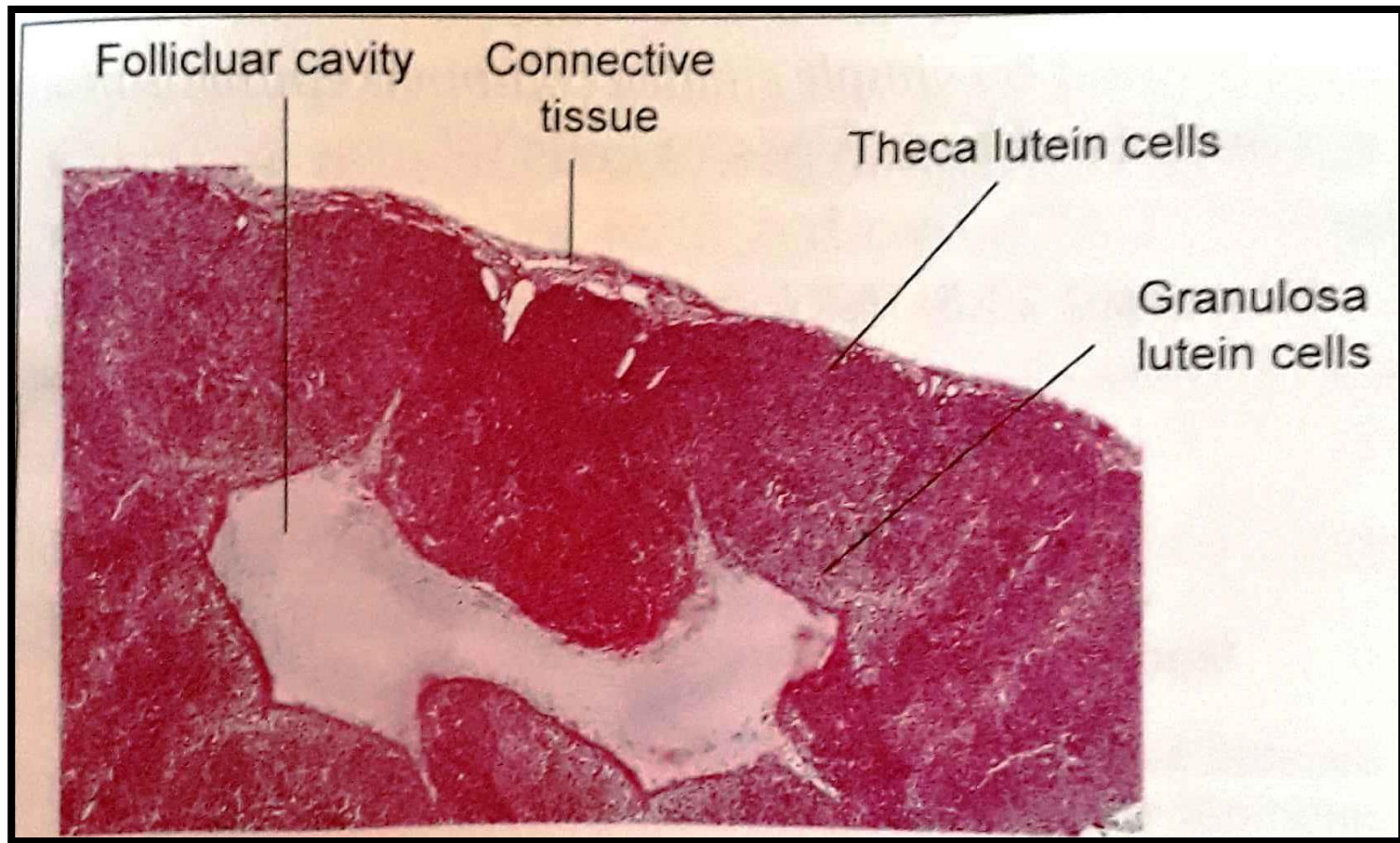
Atretic Follicles



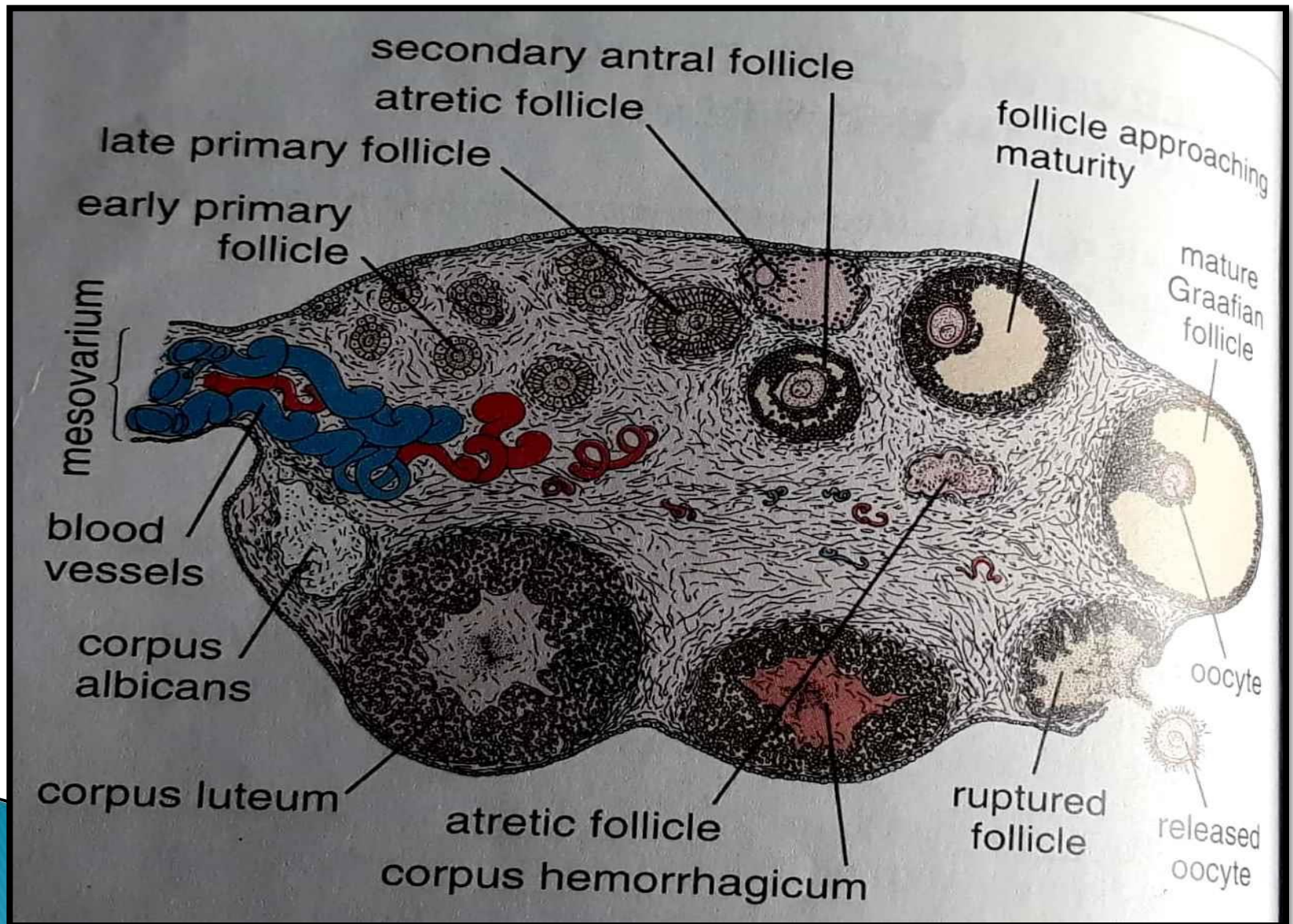
During Ovulation-



Corpus luteum



Ovary



Fallopian Tube:

Parts-

- 1.
- 2.
- 3.
- 4.

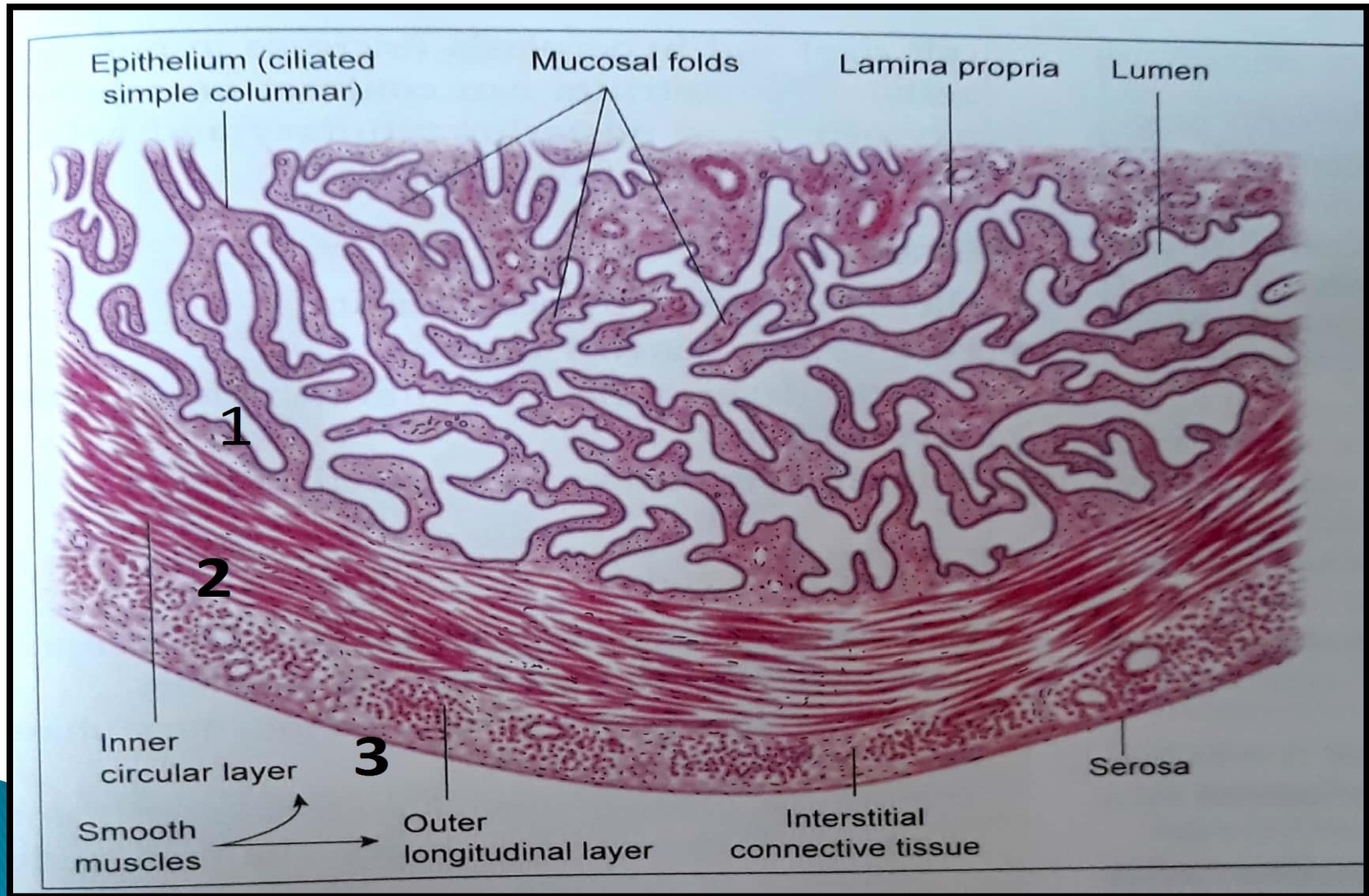
Layers-

The wall of fallopian tube is composed of three layers-

1. Internal mucosal layer-
2. Intermediate muscular layer
3. External serosa layer



Three layers–



Fallopian Tube:

1. **Mucosa**- inner lining of fallopian tube exhibits relatively **thin longitudinal folds that project into the lumen** of fallopian tube throughout its length.

- ▶ The folds are most numerous and complex in the ampulla and become smaller in isthmus.
- ▶ Lining epithelium of mucosa is simple columnar epithelium composed of ciliated & non ciliated cells.



Fallopian Tube:

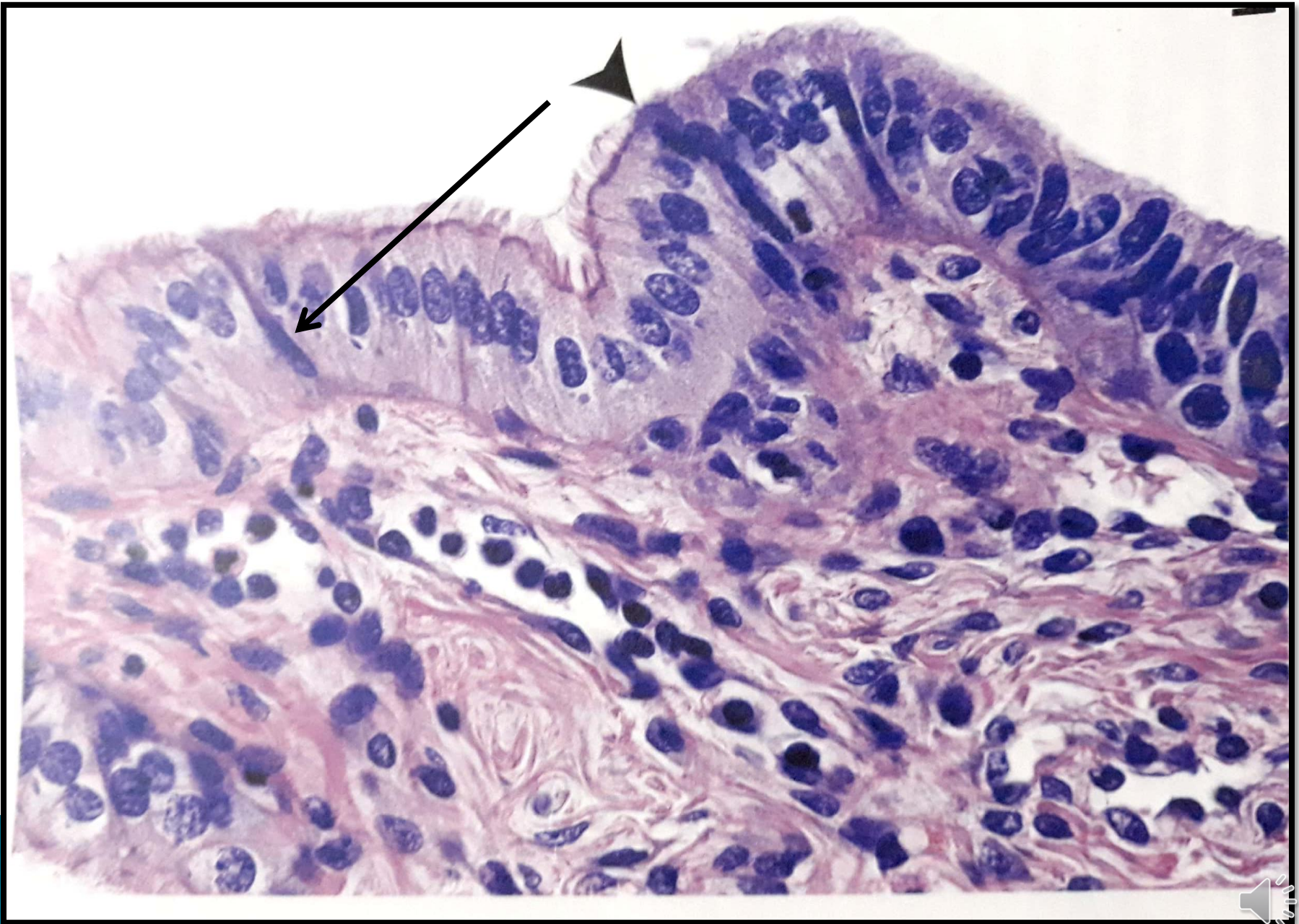
Ciliated cells- most numerous in infundibulum and ampulla.

- ▶ Wave of cilia is directed towards the uterus.

Non ciliated, peg cells- are secretory cells that produce the fluid that provides the nutritive material to the ovum/zygote.

These are slender cells with elongated nuclei





Fallopian Tube:

- ▶ Epithelial cells undergo cyclic hypertrophy during the follicular phase and atrophy during the luteal phase.
- ▶ The ratio of ciliated cells and non ciliated cells changes during the hormonal cycle.
- ▶ Oestrogen stimulate ciliogenesis , while progesterone increases the number of secretory cells
- ▶ Ovum/zygote is transported along the uterine tube by peristaltic contractionsof muscular layer, .

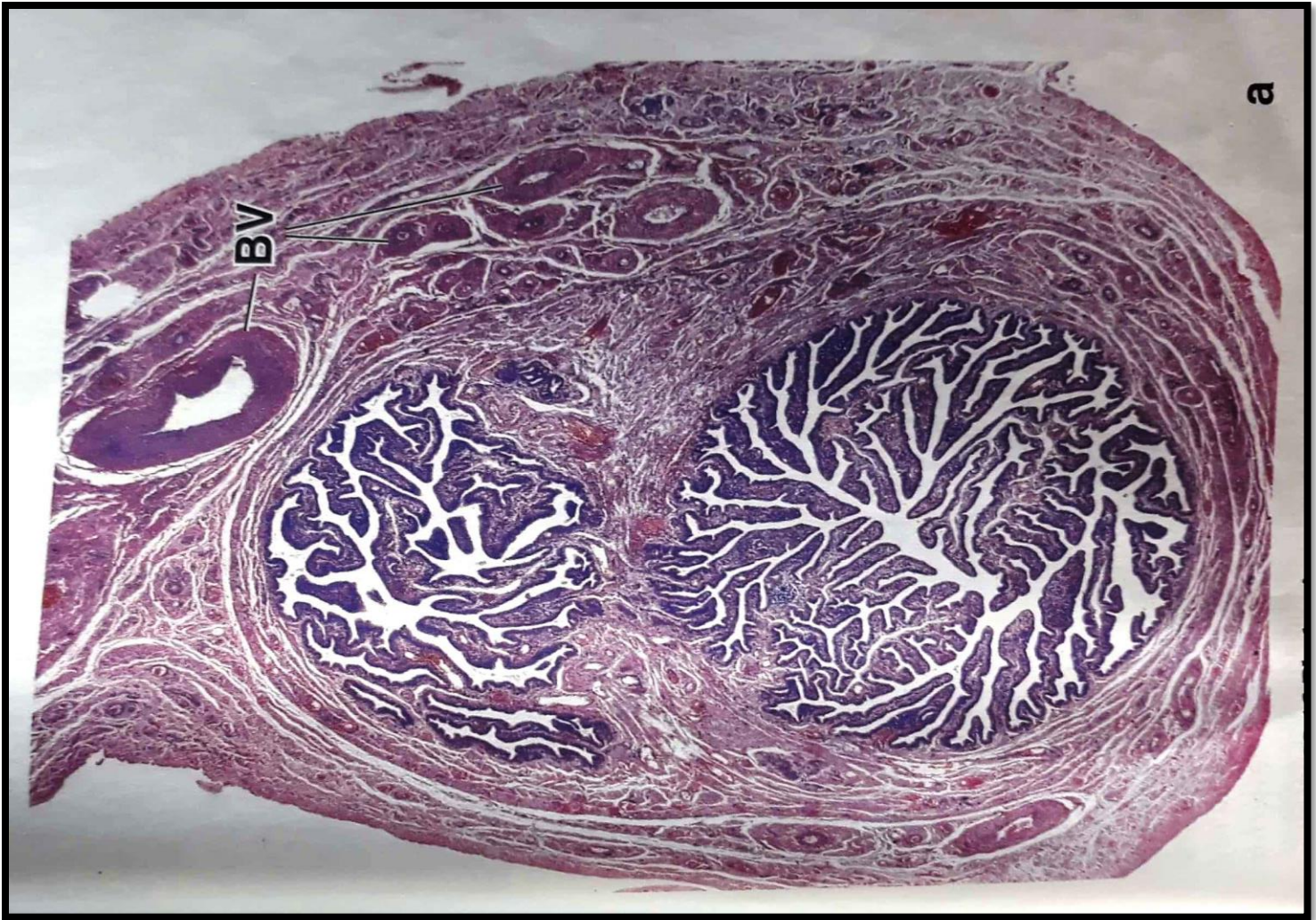


2. Muscularis layer- throughout most of its length

- ▶ **Inner** - relatively **thick circular layer**,
- ▶ **outer** **thinner longitudinal** layer.
- ▶ Boundary between this layer is often indistinct.

3.serosa layer- composed of mesothelium and thin layer of connective tissue





Assignment–

- ▶ Draw & describe microscopic structure of ovary & fallopian tube



THANK
YOU

