Urinary system& Endocrine system

lab

Urinary system

Kidney

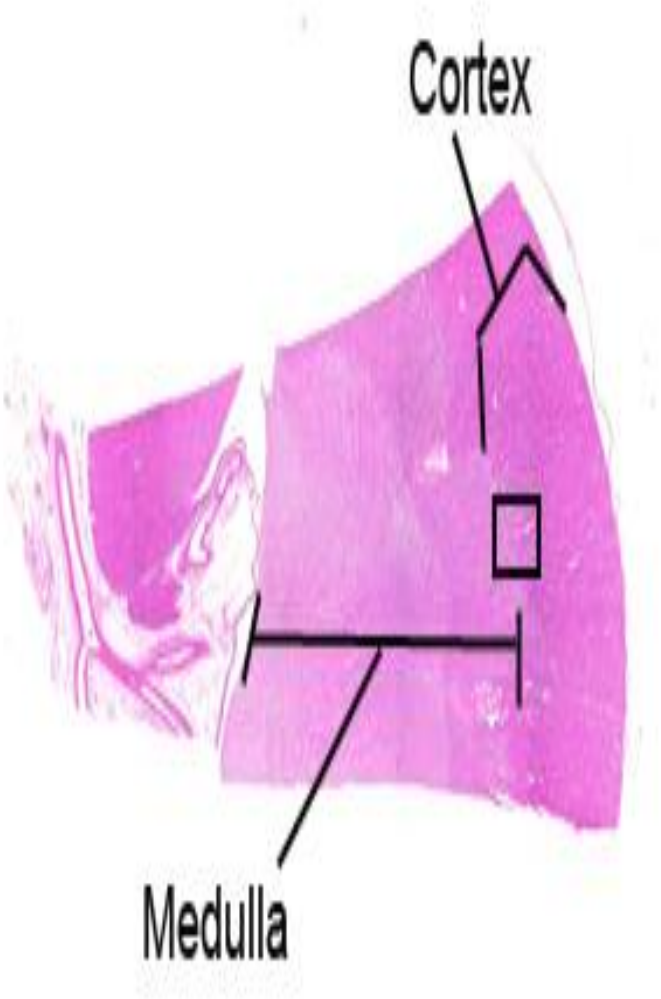
The Cortex:

It is the outer, dark-stained part.

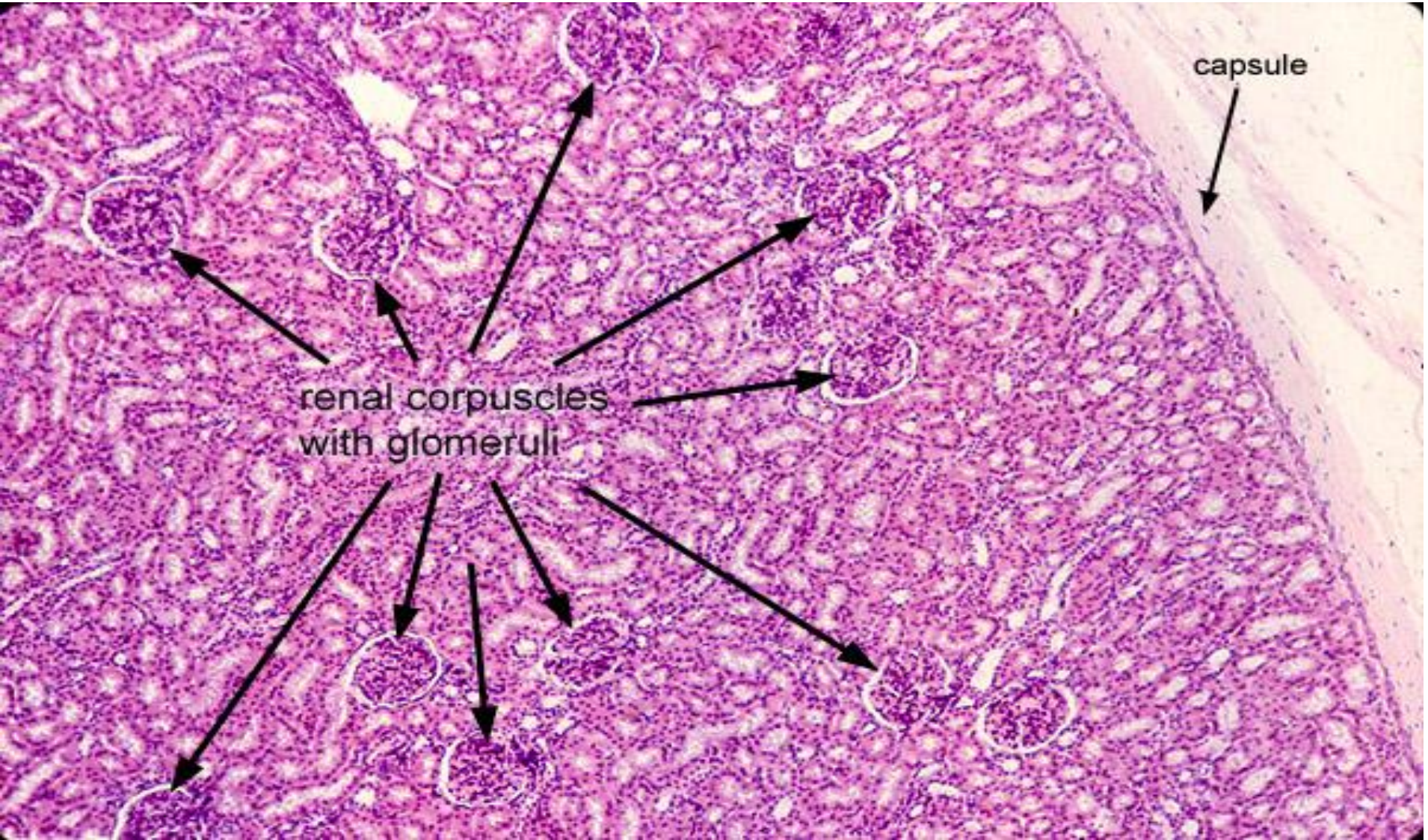
Cortex is granular due to RC,PCT & DCT.

The Medulla:

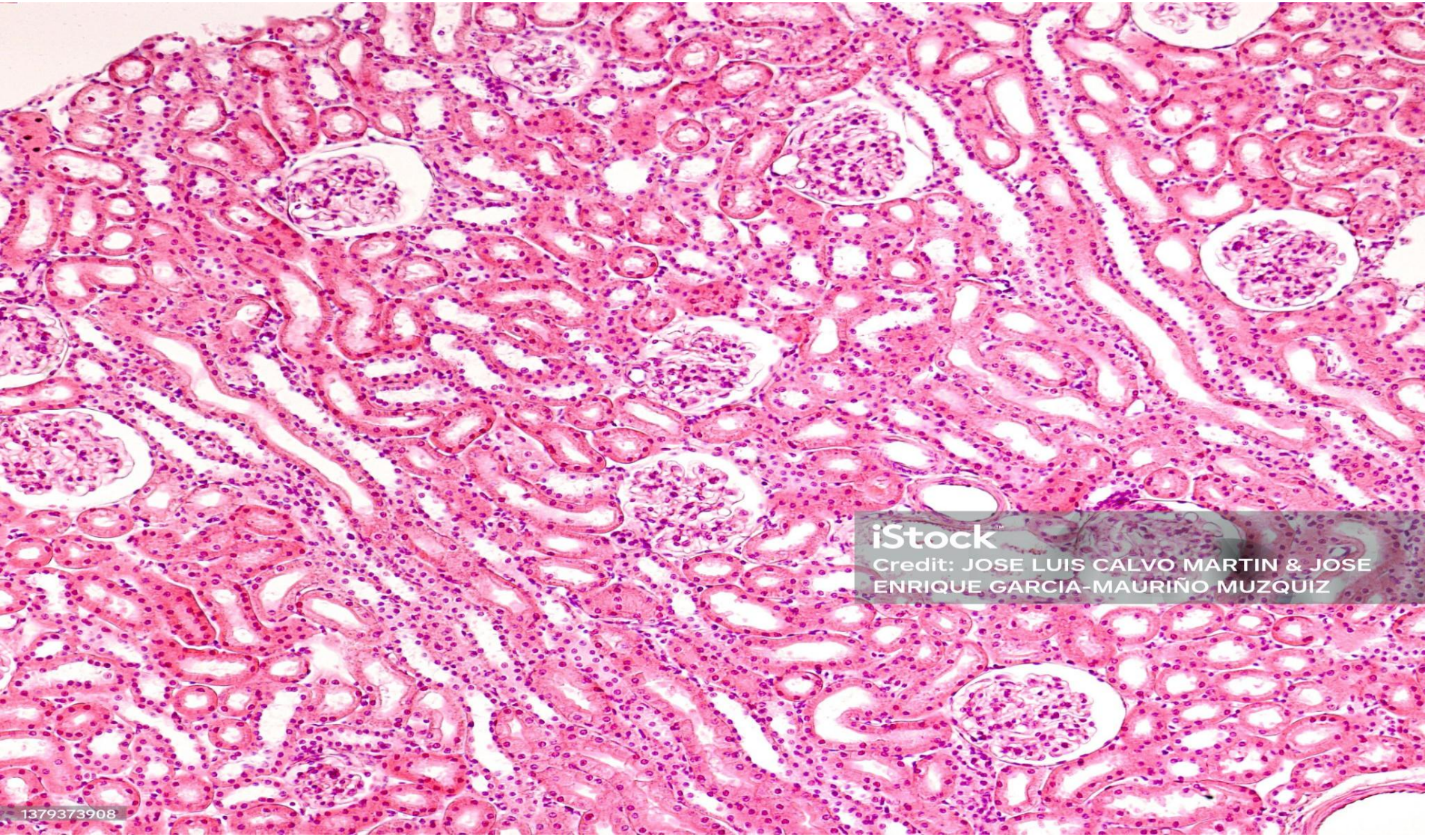
striated due to LOH, CT & CD.



Kidney



Kidney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Credit: JOSE LUIS CALVO MARTIN & JOSE ENRIQUE GARCIA-MAURIÑO MUZQUIZ
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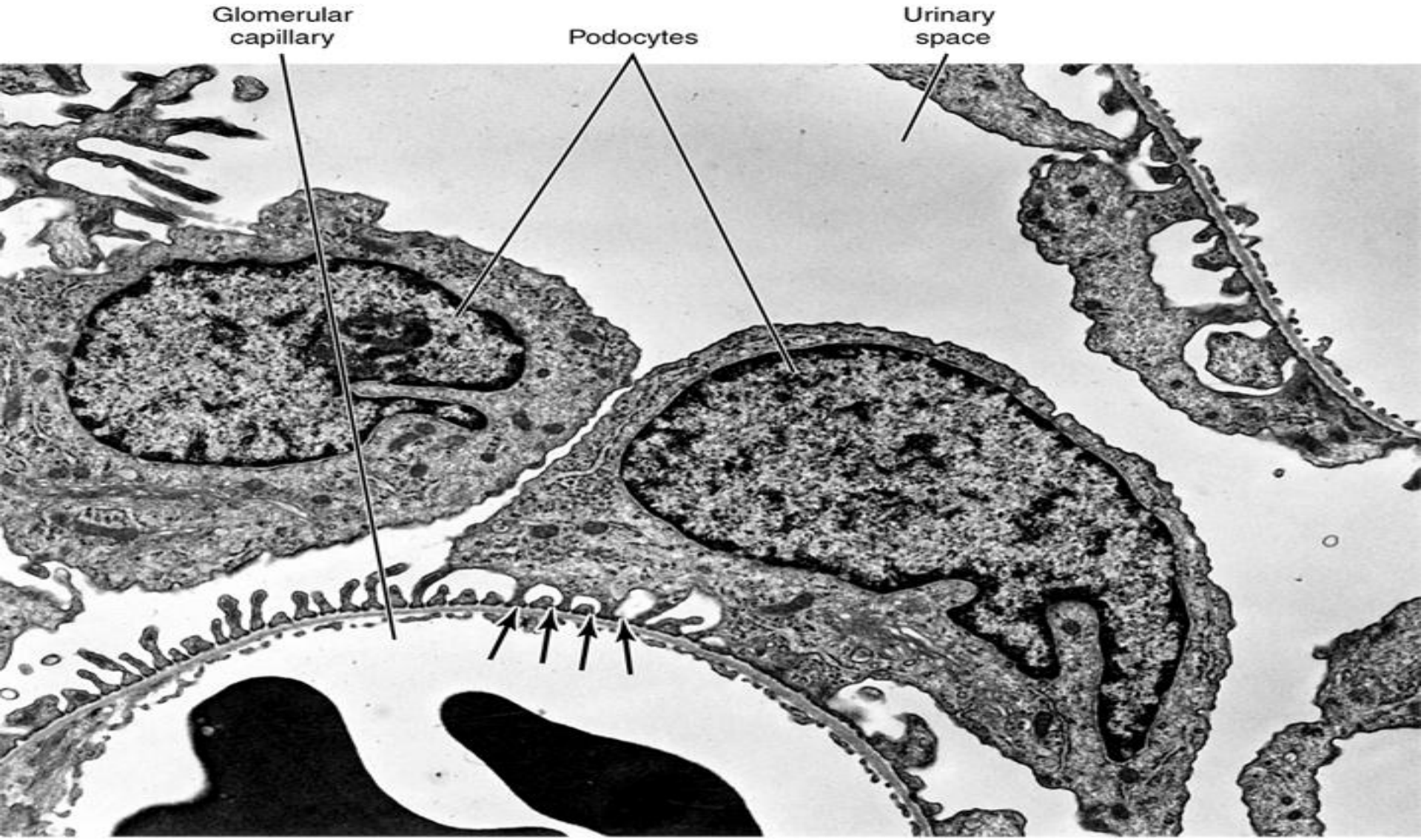
Podocytes



Ureter

Its wall consists of:

Mucosa:

Epith: Transitional epithelium

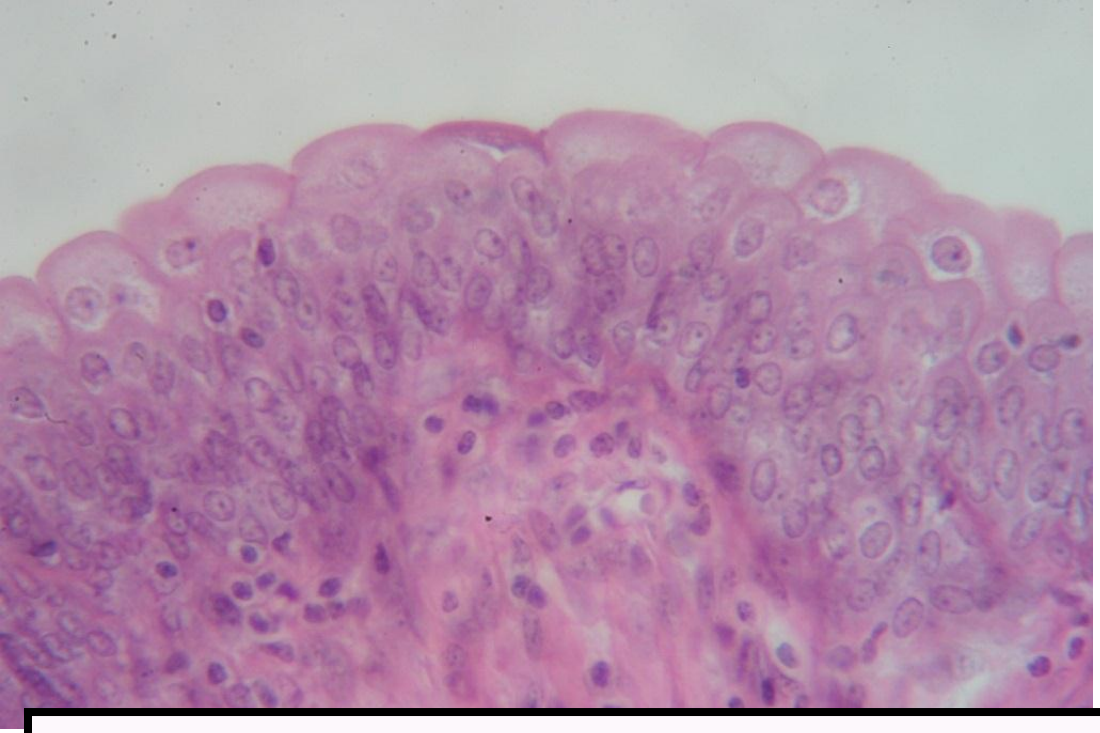
L.P: C.T.

- **Musculosa**: smooth muscle
- Inner longitudinal
- Outer circular.

- **Adventitia**: dense C.T.

Ureter

Ureter



Urinary Bladder

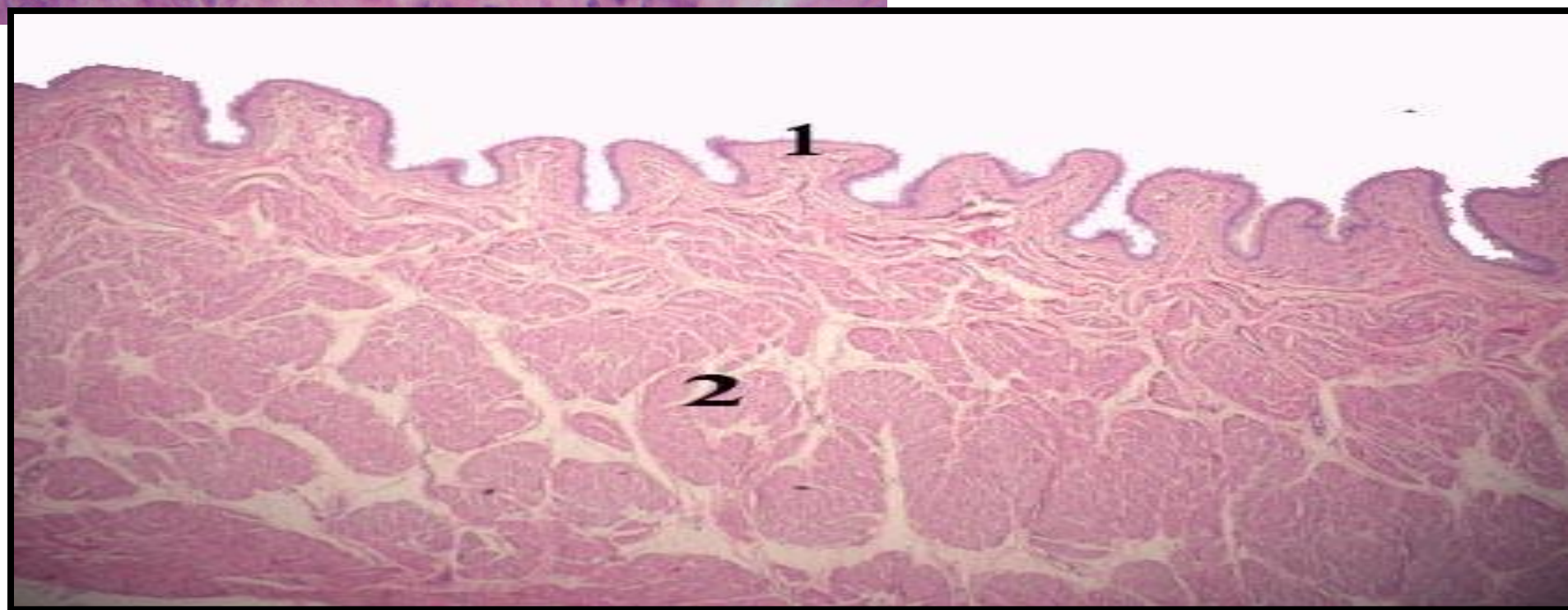
Its wall consists of:

Mucosa:

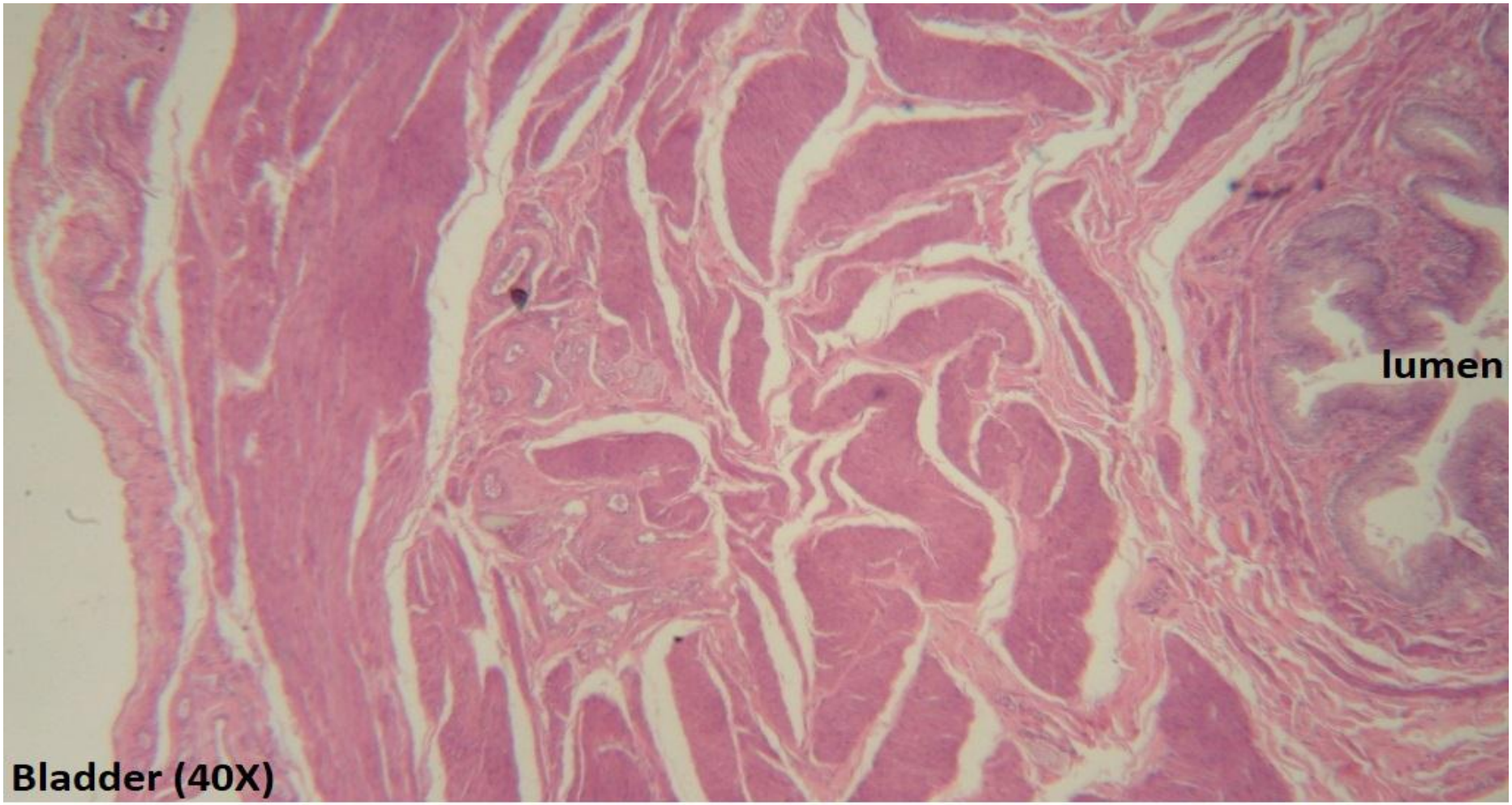
Epith: Transitional epithelium

L.P: C.T.

- **Musculosa**: smooth muscle
- Inner longitudinal
- Middle circular
- Outer longitudinal
- **Adventitia**: dense C.T.



Urinary Bladder



The urinary bladder is an expandable muscular organ in the lower abdominopelvic cavity that receives urine from the ureters and temporarily stores it until urination.

Endocrine system

Pituitary gland

It is divided anatomically into two parts:

Anterior Pituitary (adenohypophysis)

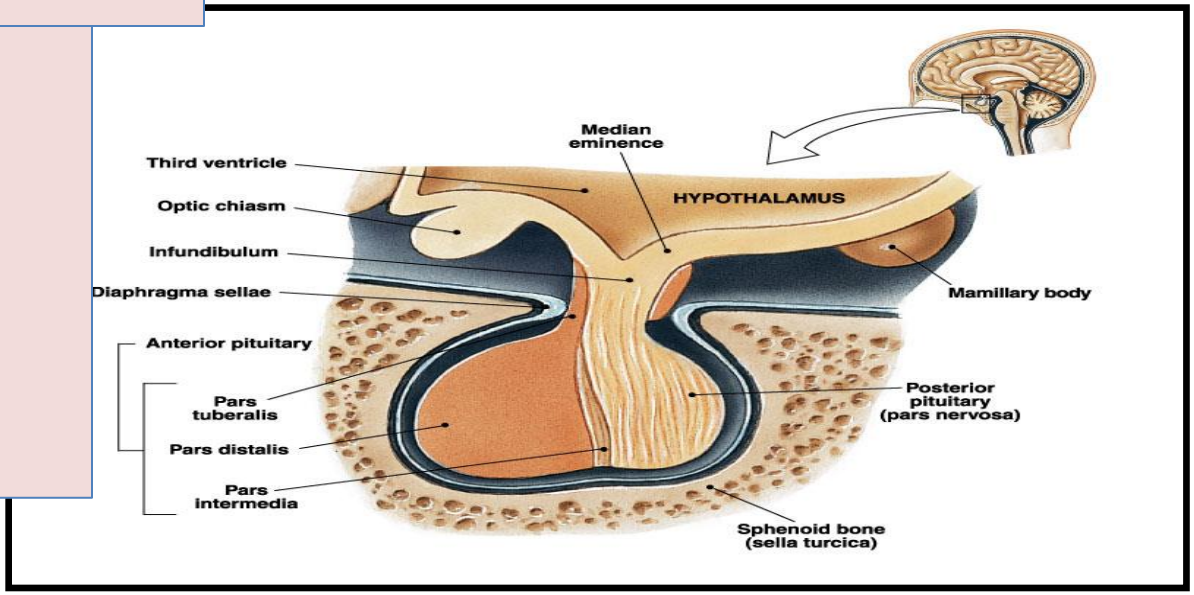
It includes:

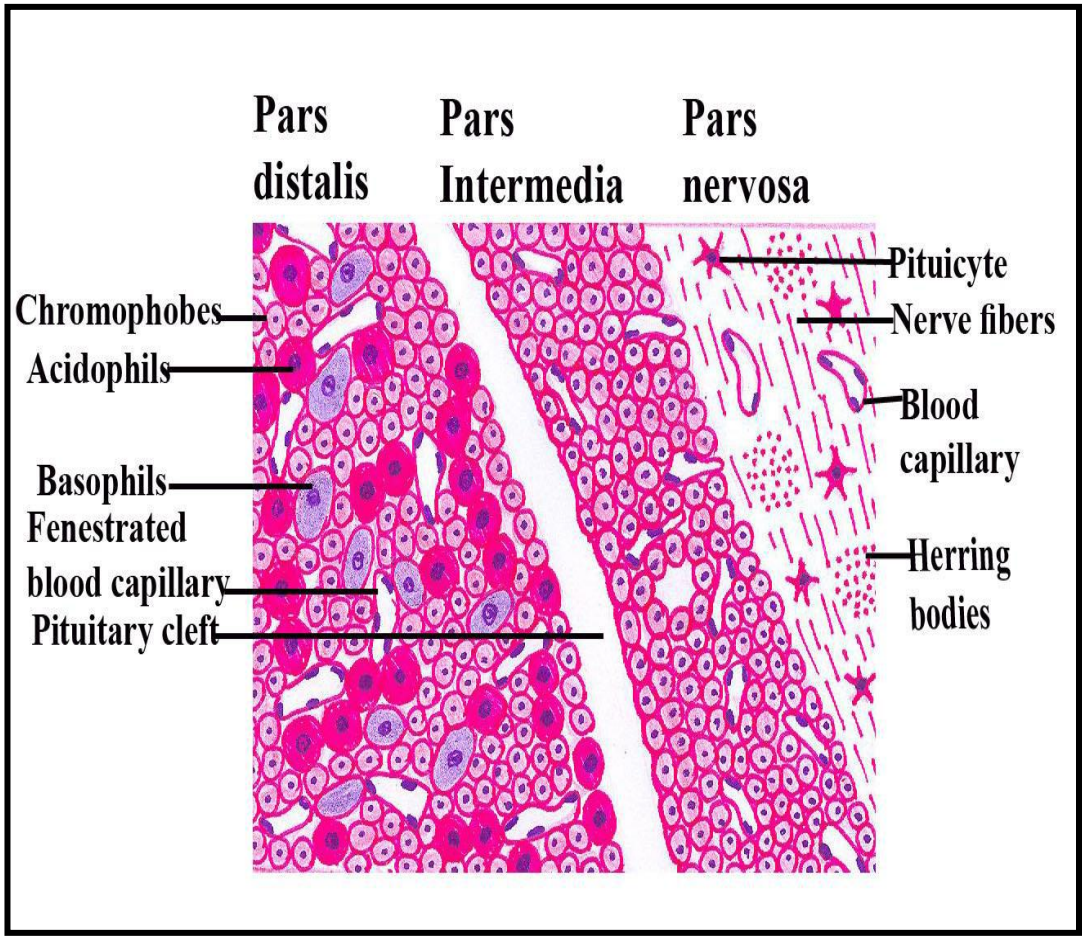
a) Pars Distalis
b) Pars Tuberalis
c) Pars intermedia

Posterior Pituitary (neurohypophysis)

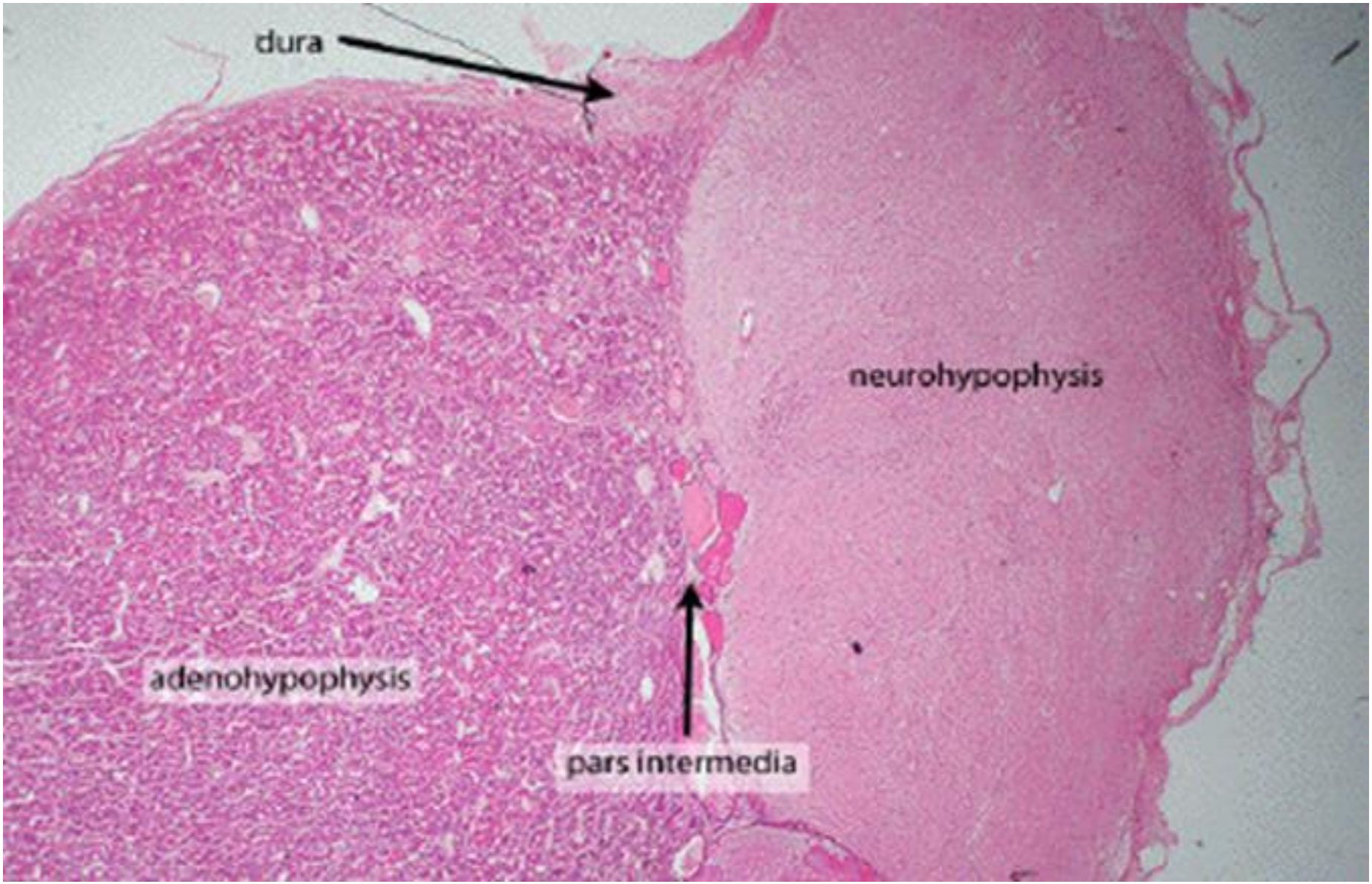
It includes:

a) Pars nervosa.
b) Infundibulum



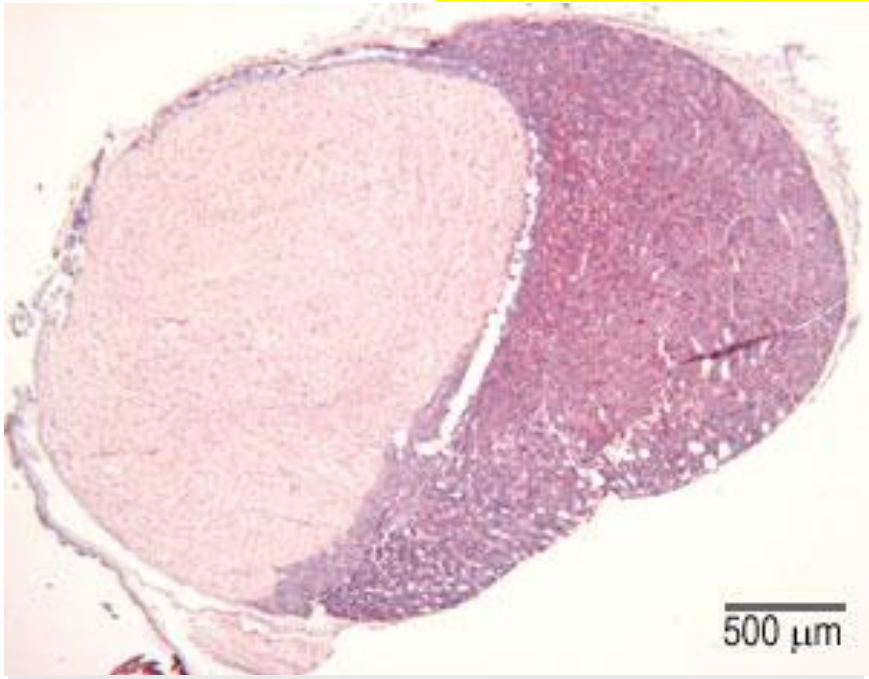


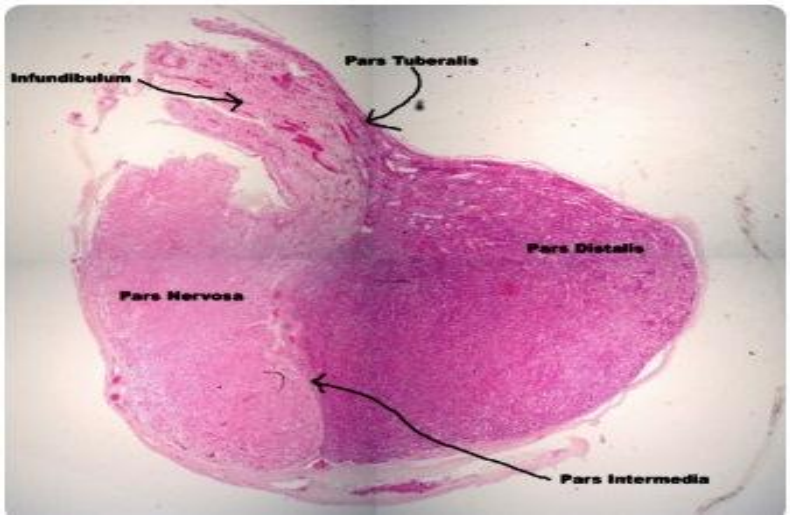
Pituitary gland

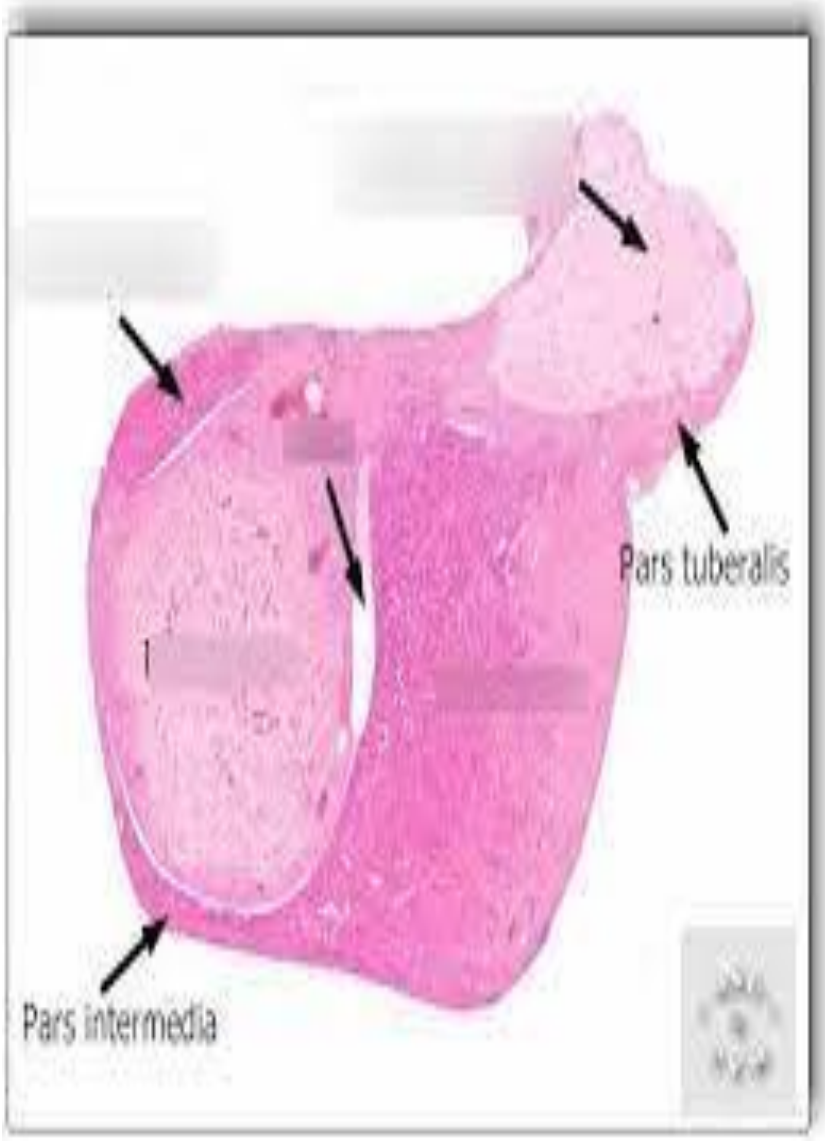


Pituitary gland

Pituitary gland

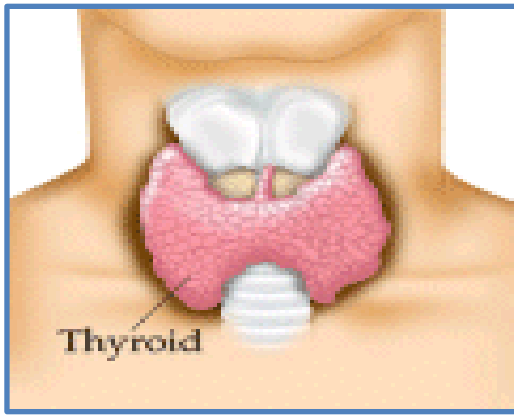






Thyroid Gland

Structure:



A- Stroma

1- Capsule: thin.

2- Septa: fine, incomplete

B- Parenchyma (cells) *is in the form of follicles and fenestrated blood capillaries in between.*

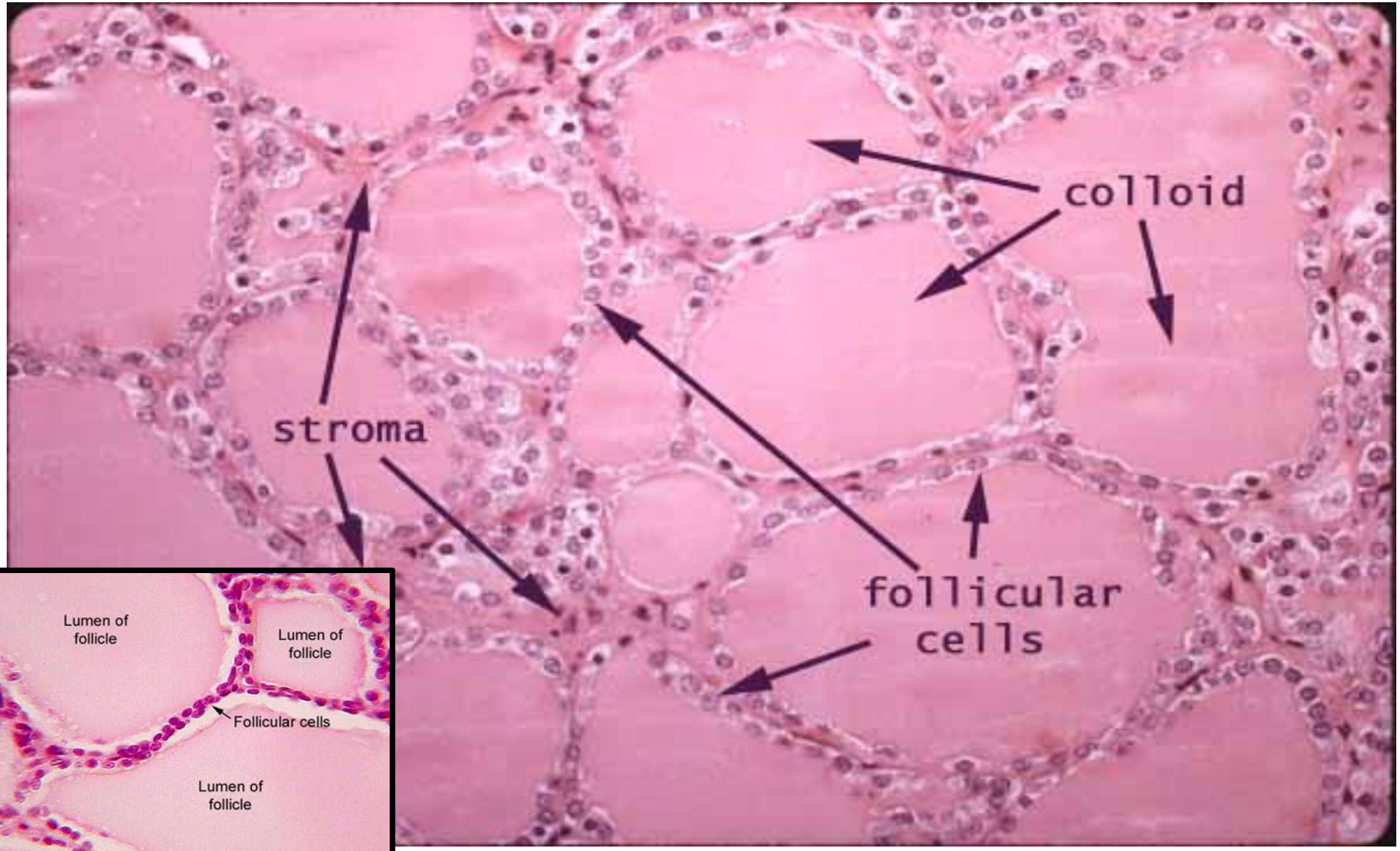
The follicles consists of 2 types of cells:

1- Follicular cells (98%).

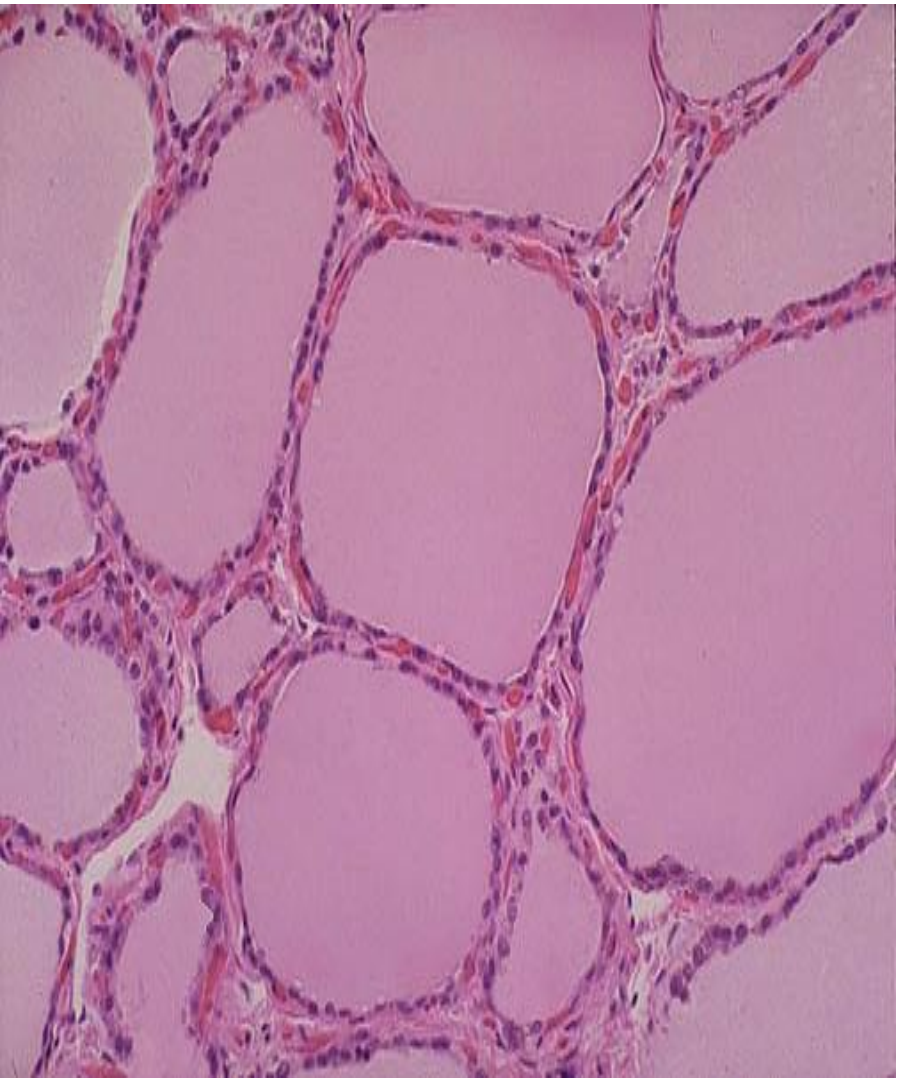
2- Parafollicular or (C) cells(2%).

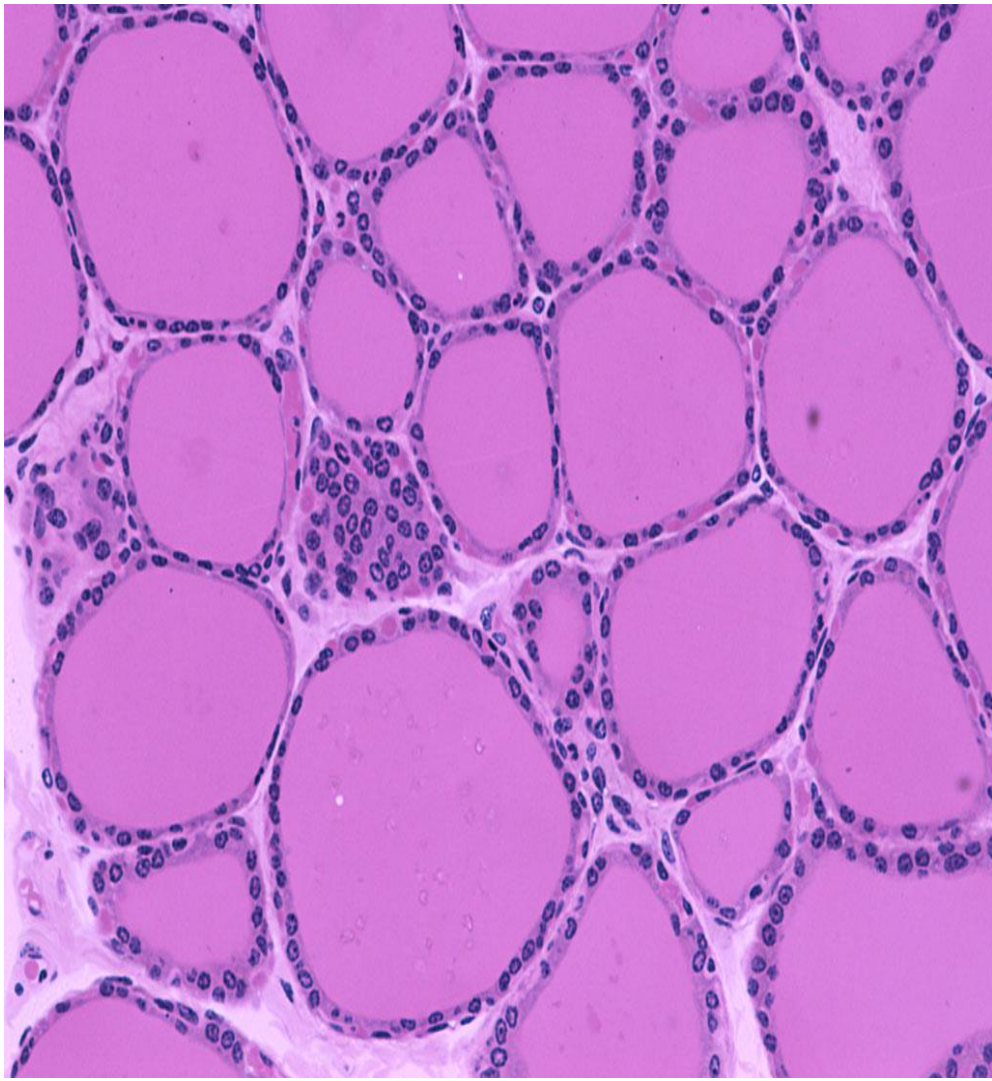
- The follicles contain in their lumen the stored secretion called **colloid.**

Thyroid Gland



Thyroid Gland





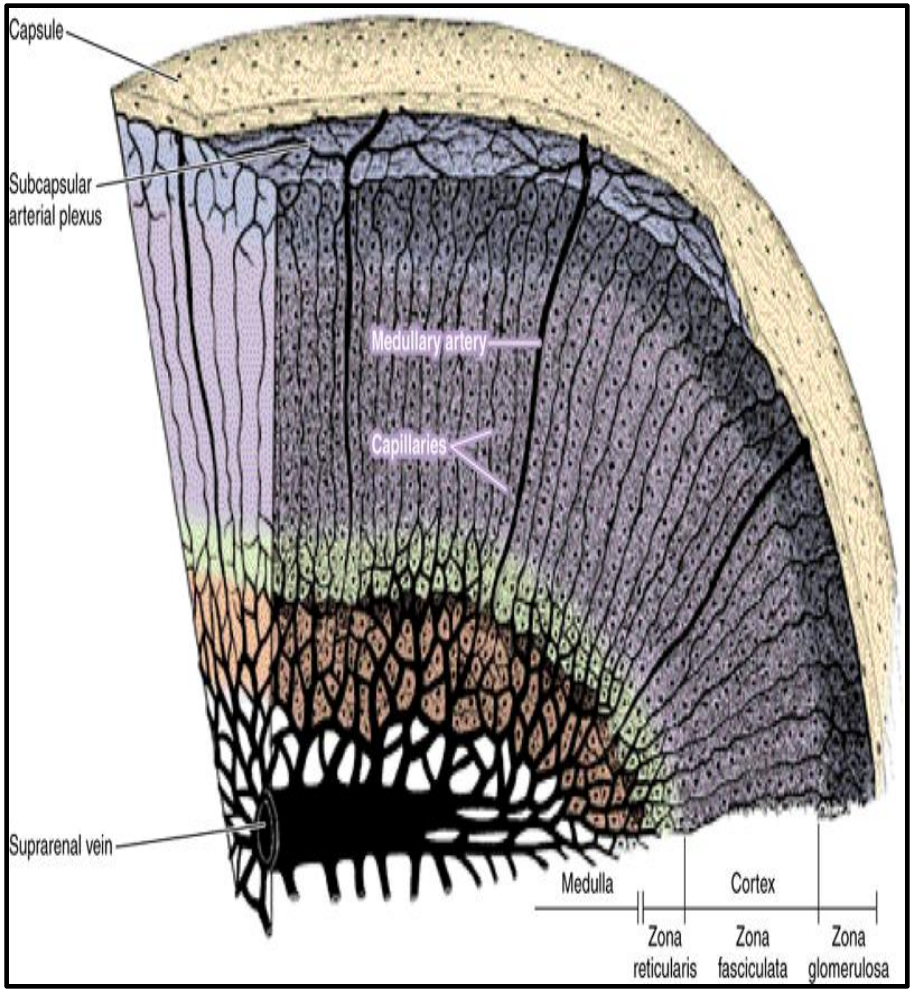
Adrenal gland

A) Stroma

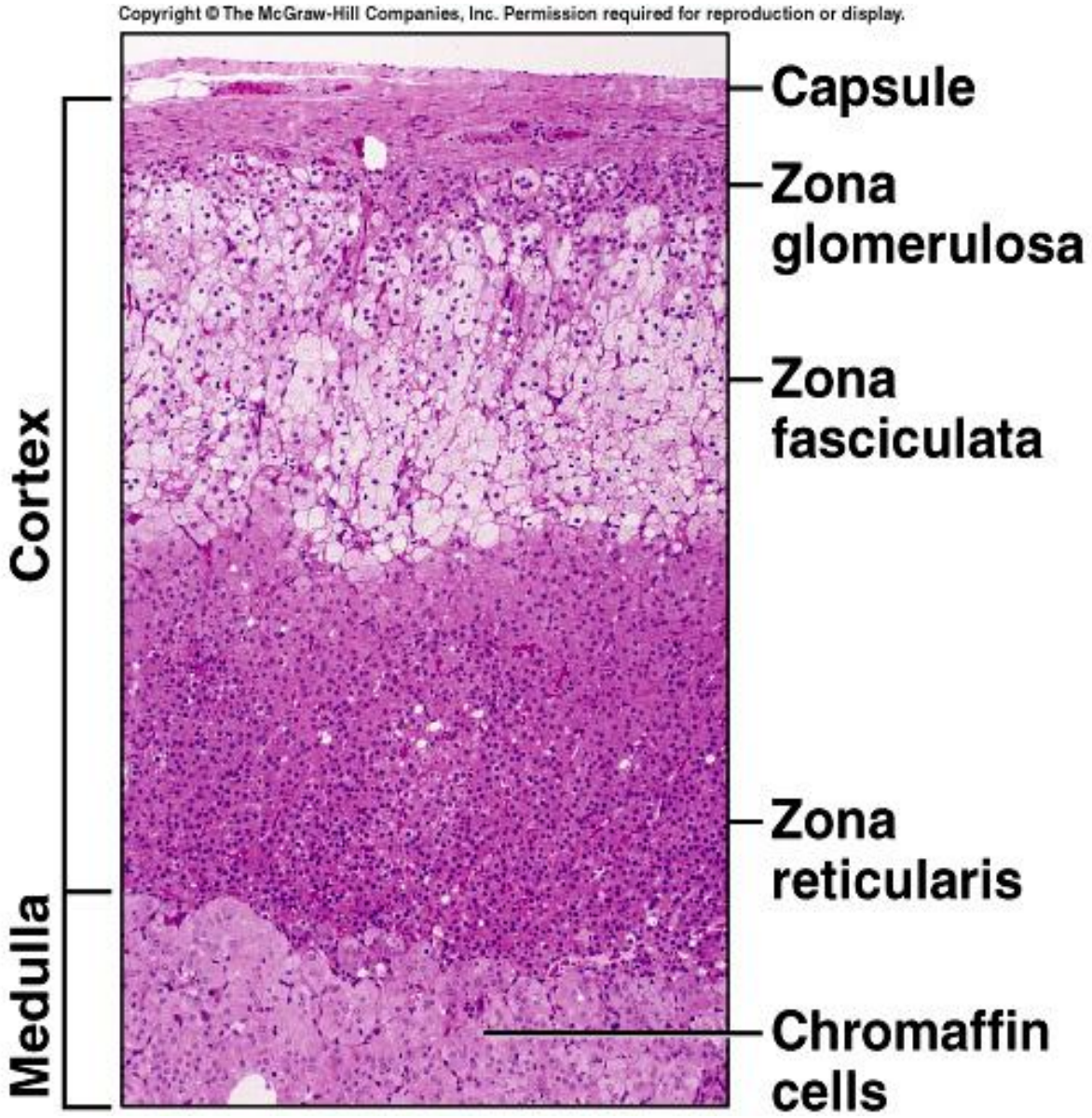
- ***Capsule***.
- ***Trabeculae***.
- ***Fine reticular fibers***.

B) Parenchyma

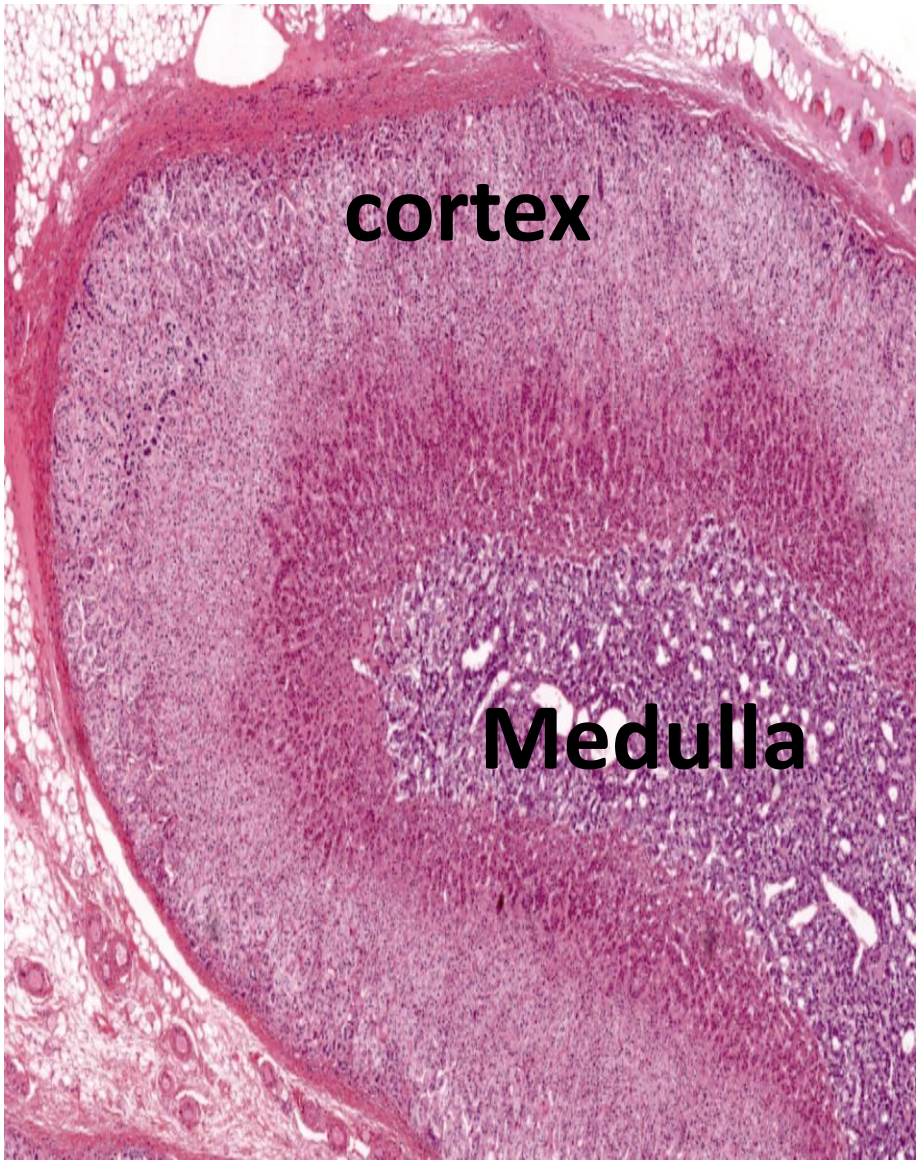
- **Adrenal cortex.**
  - **Zona glomerulosa**
  - **Zona fasciculata**
  - **Zona reticularis**
- **Adrenal medulla.**
  - **Chromaffin cells:**
  - **Ganglion nerve cells**

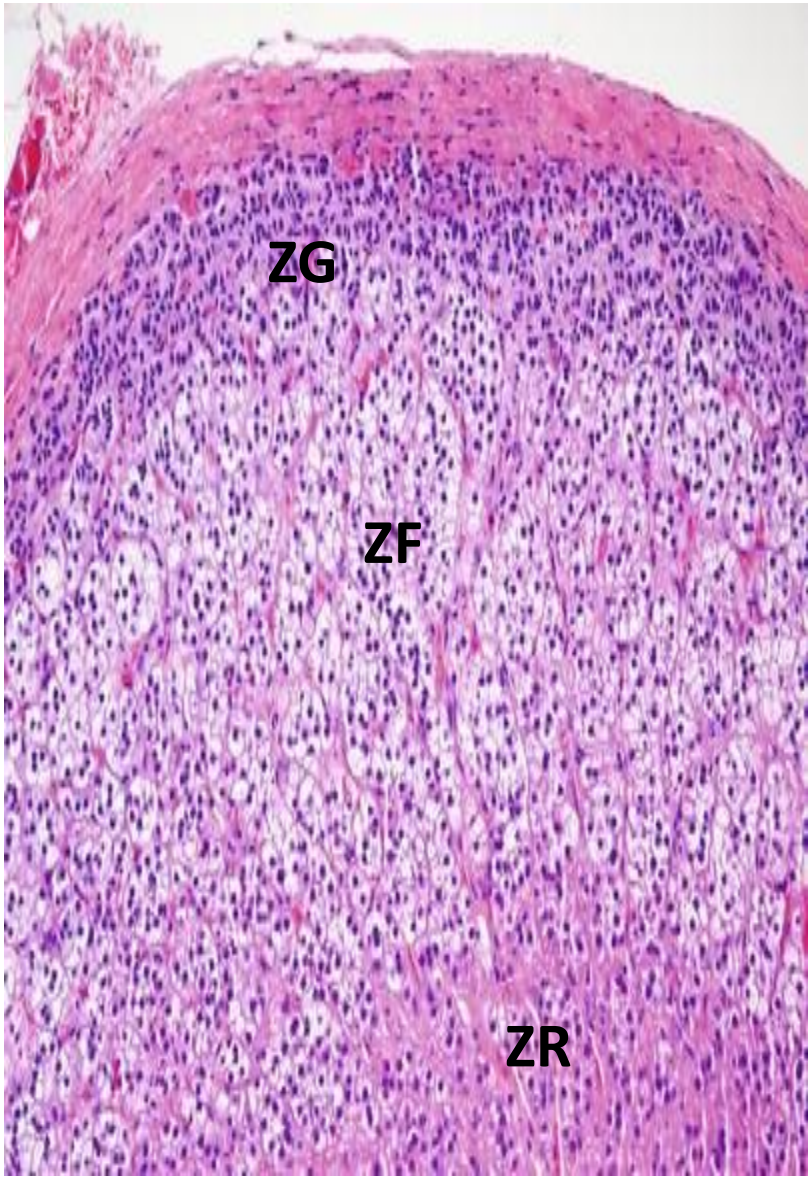


Adrenal gland



Adrenal gland





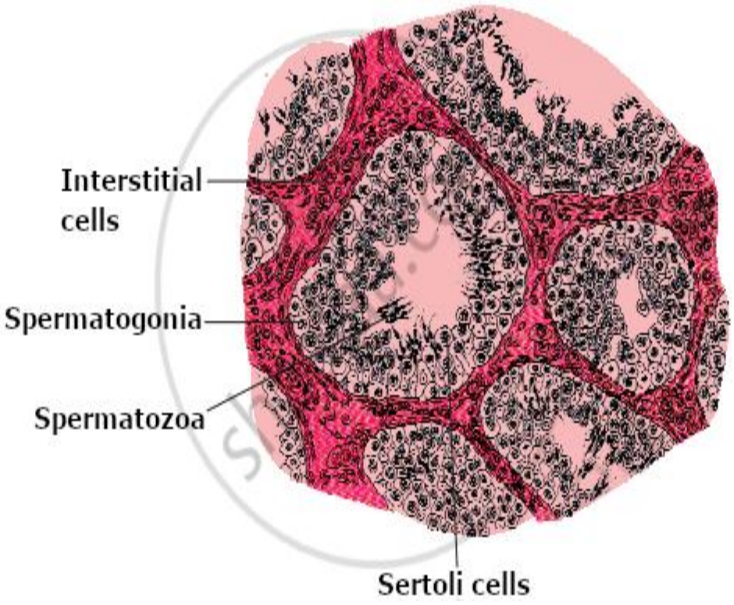
Testes

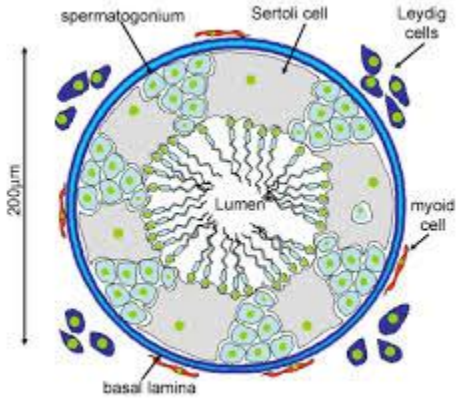
- Each testis is a compact ovoid organ.

- composed of:

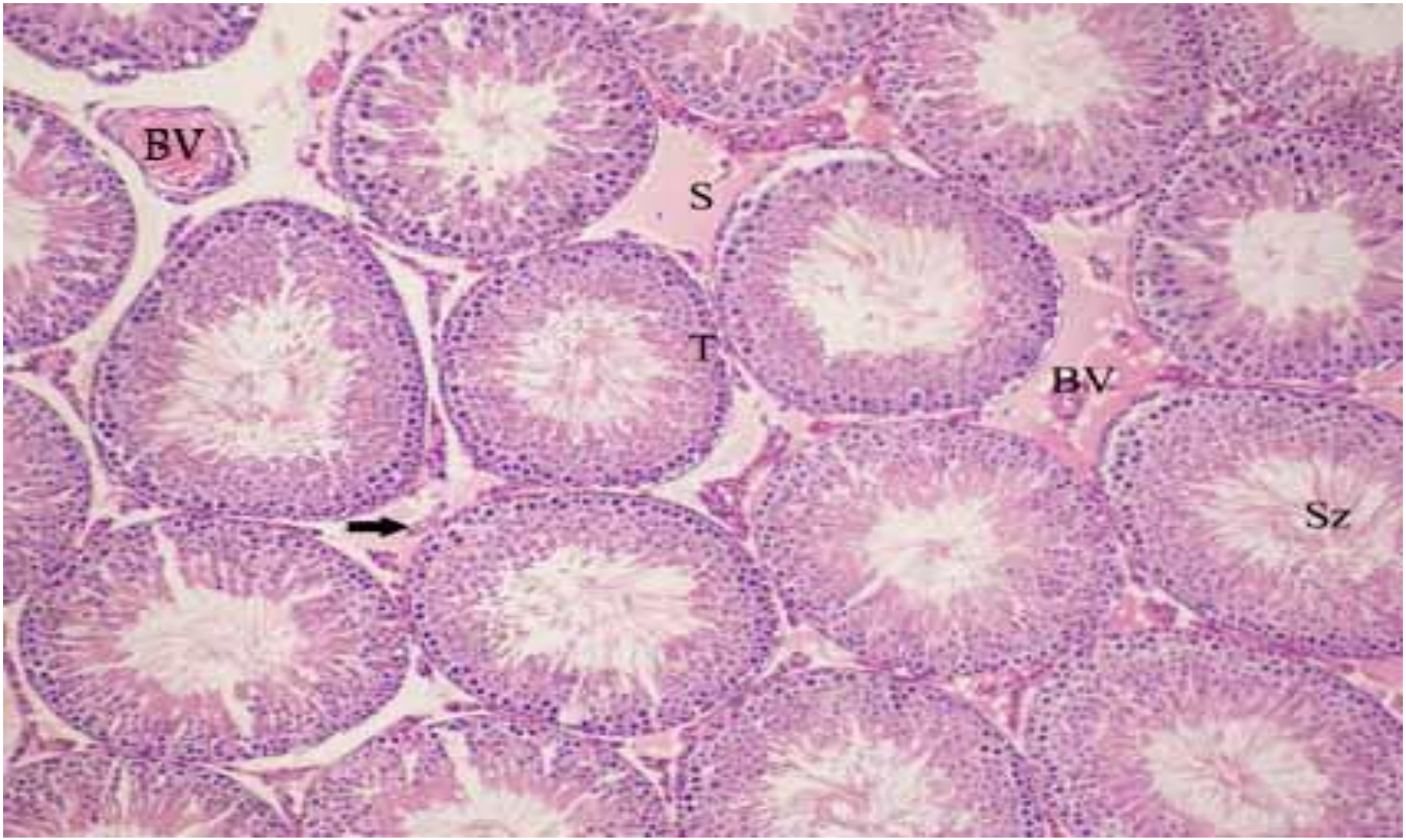
1. **Seminiferous tubules** ***(ST)*** **(**many small convoluted tubules).
2. **Interstitial tissue**

(abundant intertubular tissue)





Testis



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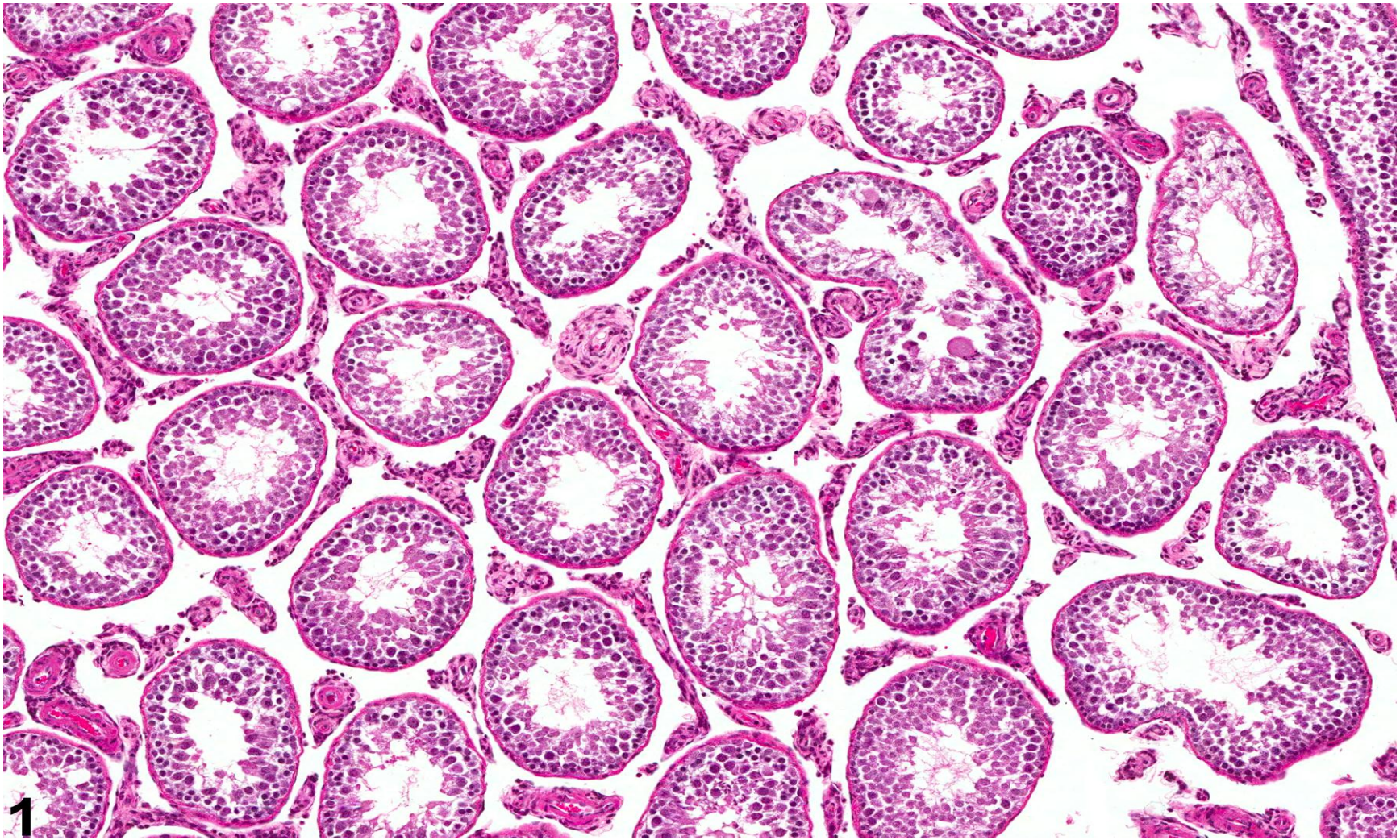

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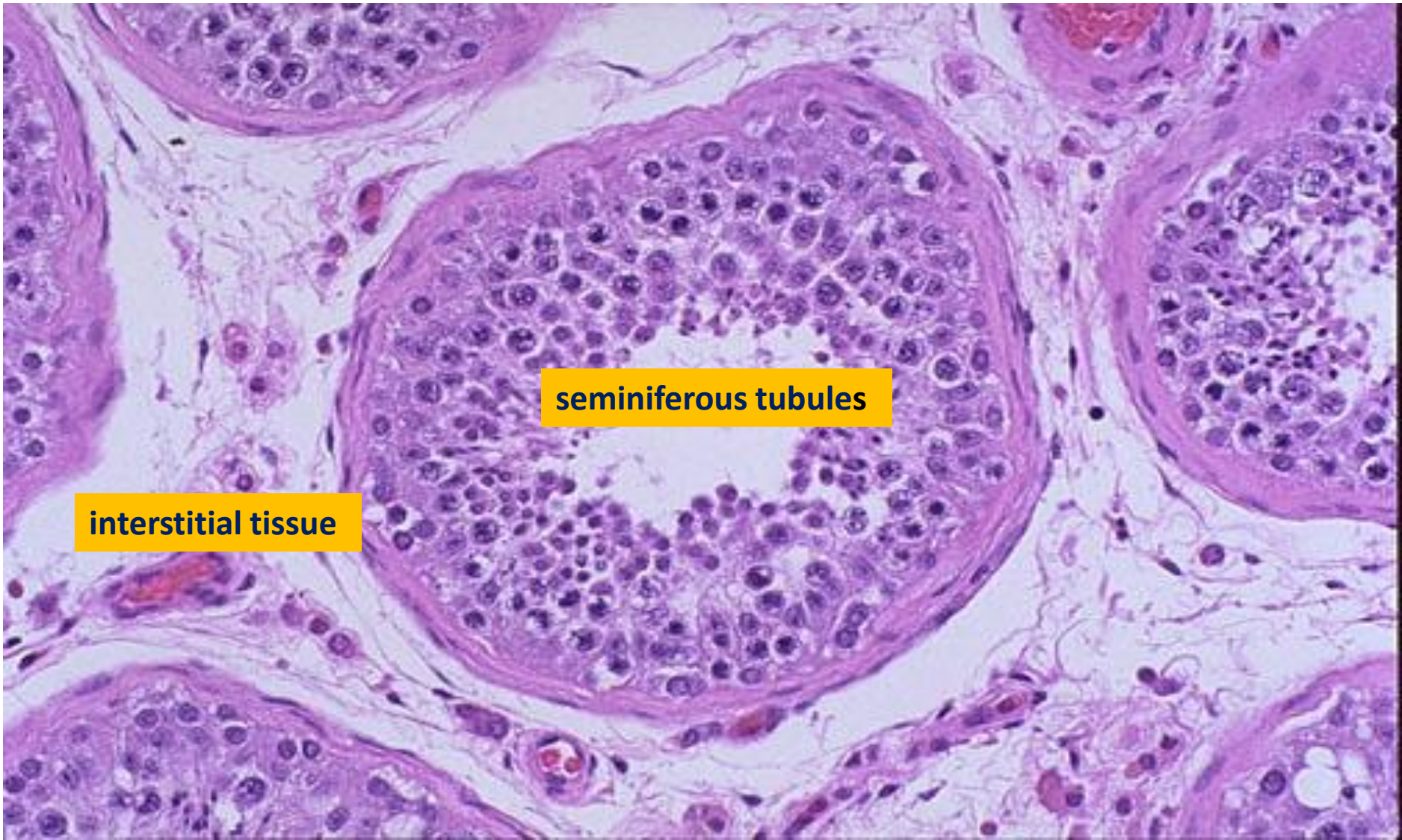


Vas deferens

It has a narrow lumen (L) and a thick wall that consists of:

1 - Mucosa:

a) Epithelium (→)*:* It is pesudostratified columnar epithelium with stereocilia.

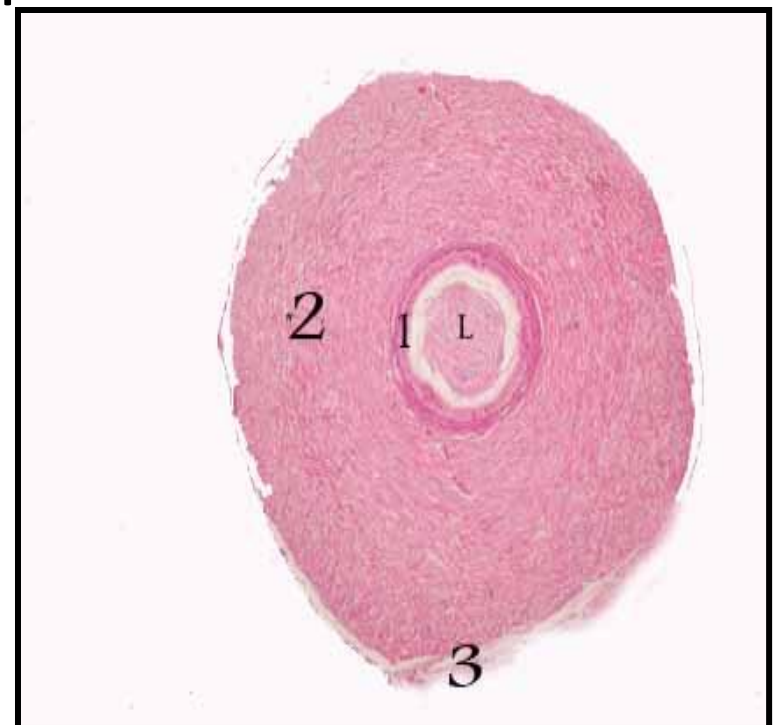
b) Lamina propria: a layer of C.T

2- Muscle Layer:SM

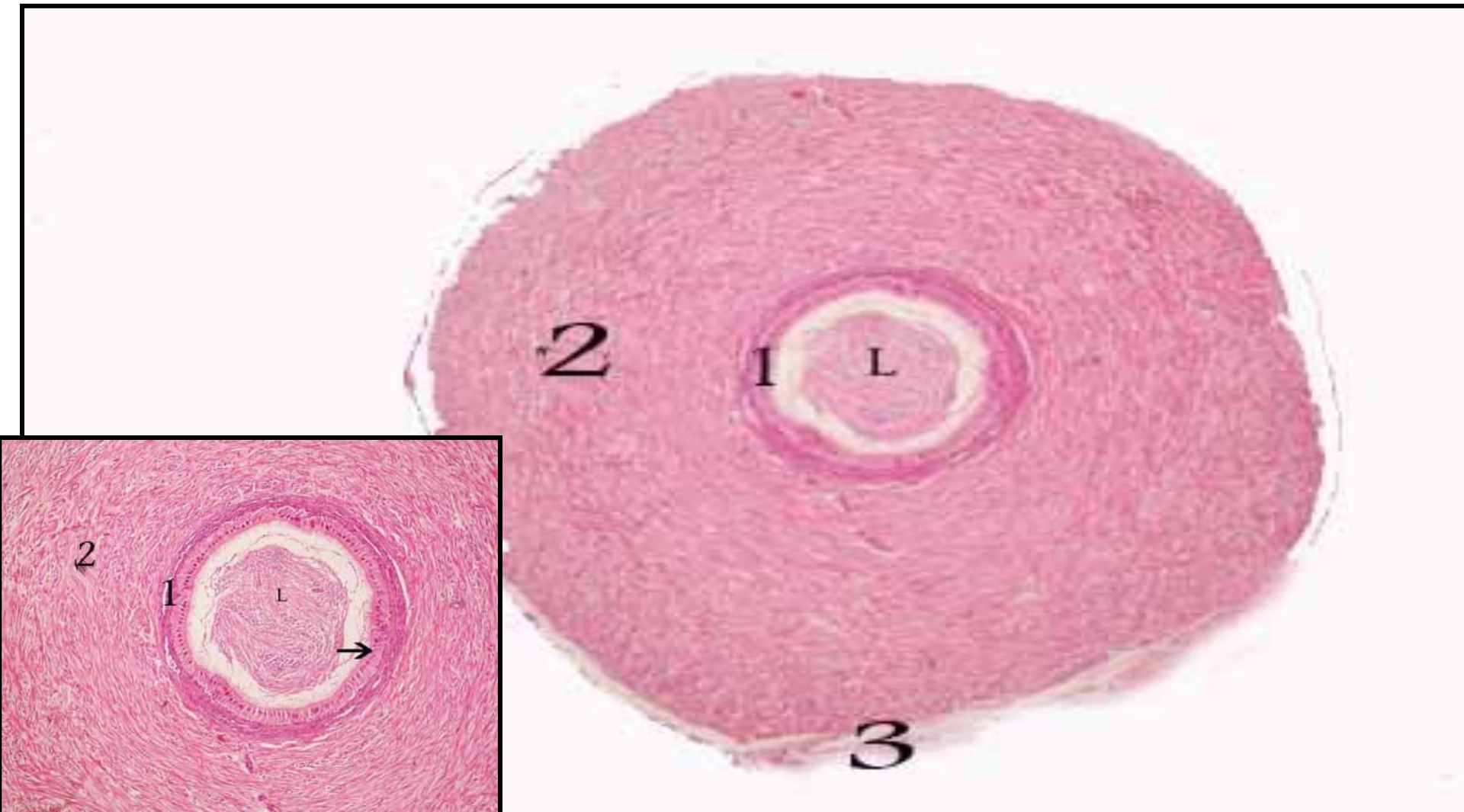
The thick muscular layer inner, outer longitudinal and a middle circular

3- Adventitia:

It is formed of loose C.T.



Vas deferens



The Prostate

The prostate consists:

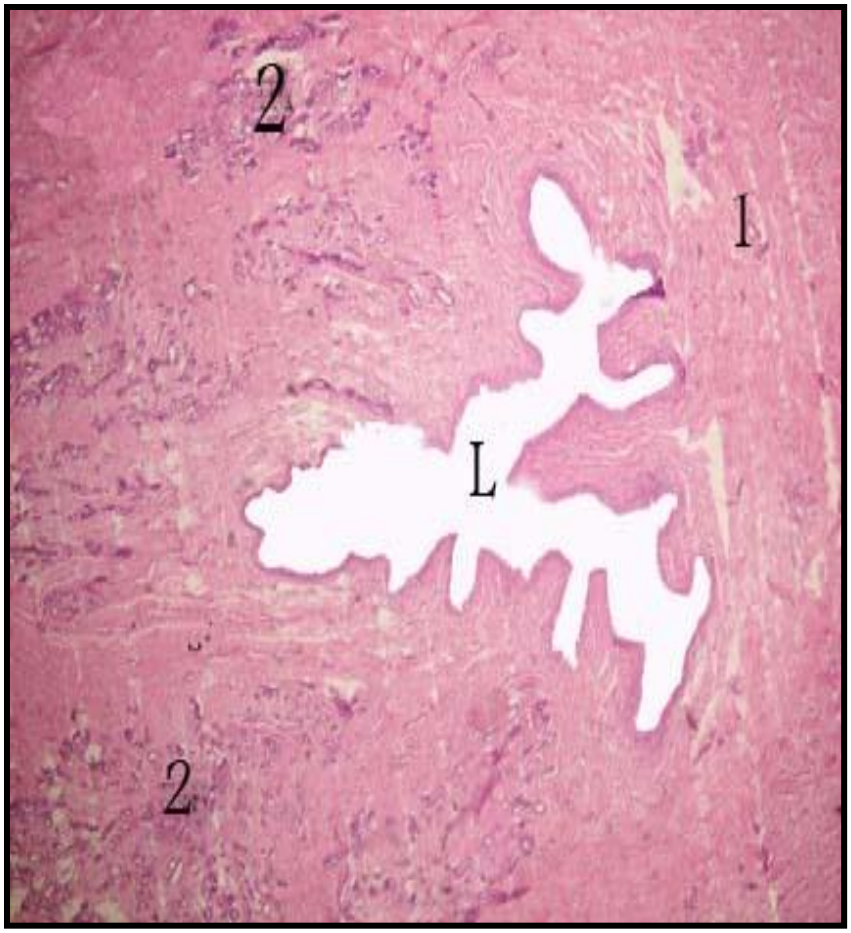
1- Stroma of distinctive fibromuscular tissue.

2- Parencyma is formed of glands (prostatic acini)

which are small irregularly branching glands of variable size.

The secretory epithelium lining the gland varies depending on the functional activity from simple to pesudostratified columnar.

The Prostate is characterized by its V-shaped urethra which is lined with transitional epithelium (L).



Ovary

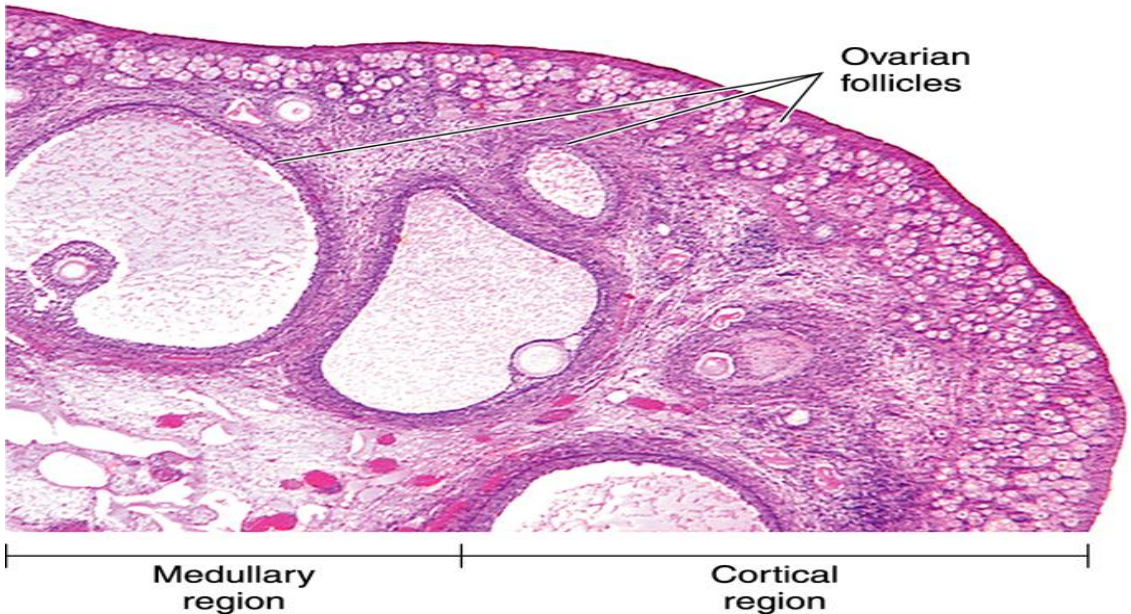
- **Parenchyma**

1-Cortex:

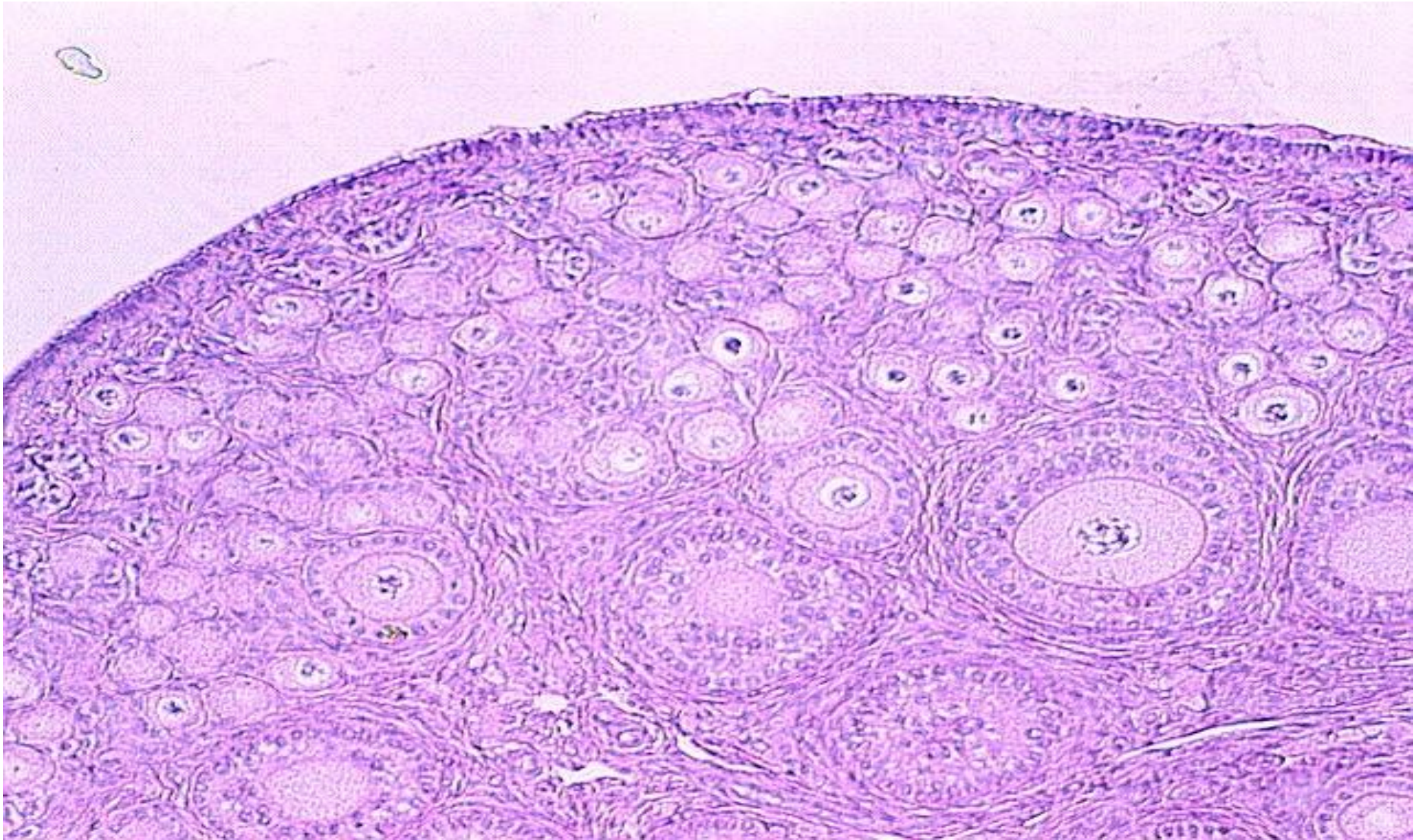
- wide outer region
- contain ovarian follicles at various stages of development & degeneration and separated by CT.

2-Medulla:

vascular C.T.



Ovary



Fallopian tube

1-**Mucosa:**

It is highly folded (→).

a- Epithelium: simple columnar partially ciliated and partially secretory.

b- Lamina propria: loose C.T which is rich in blood capillaries.

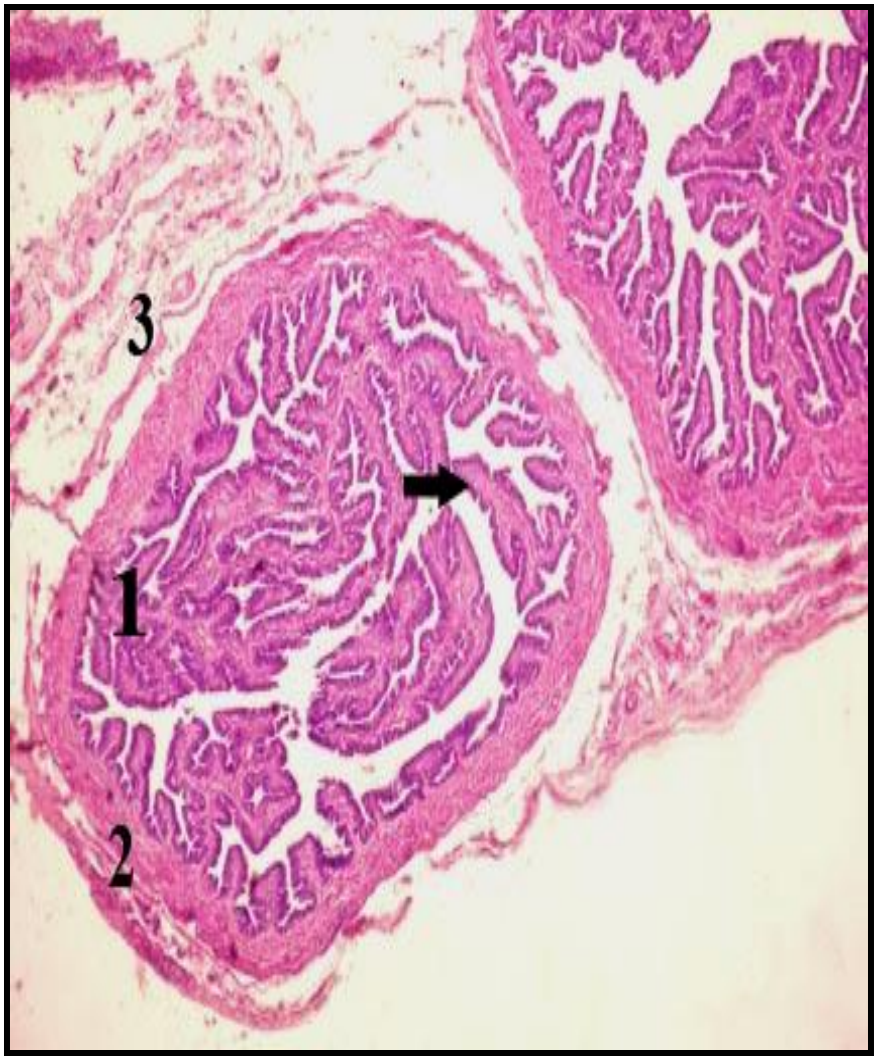
2-Musculosa: of smooth muscle fibers.

inner circular

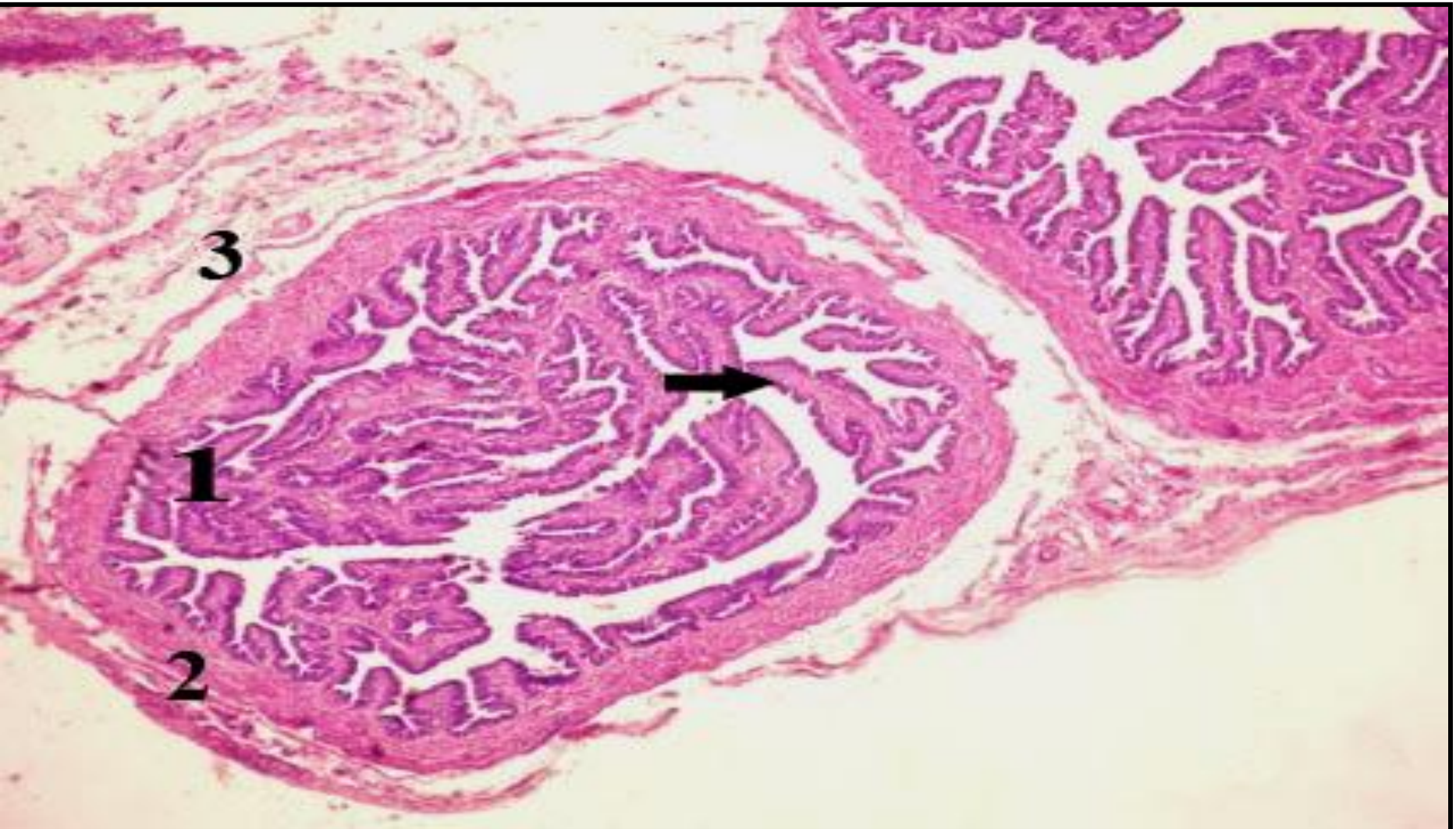
outer longitudinal layers

3-Serosa:

areolar C.T.



Fallopian tube



Uterus

1-Endometrium

a- Epithelium: simple columnar partially ciliated and partially secretory.

b- L.P: composed of loose CT rich in blood vessels, fibroblasts, reticoular fibers, amourphous ground substance and blood vessels.

It contains simple tubular glands (→) (uterine glands).

2-Myometrium:

thickest layer

formed of bundles of smooth muscle separated by C.T and enclosing between them large blood vessels.

3-Perimetrium:

It is formed of C.T covered

Uterus

Thank you