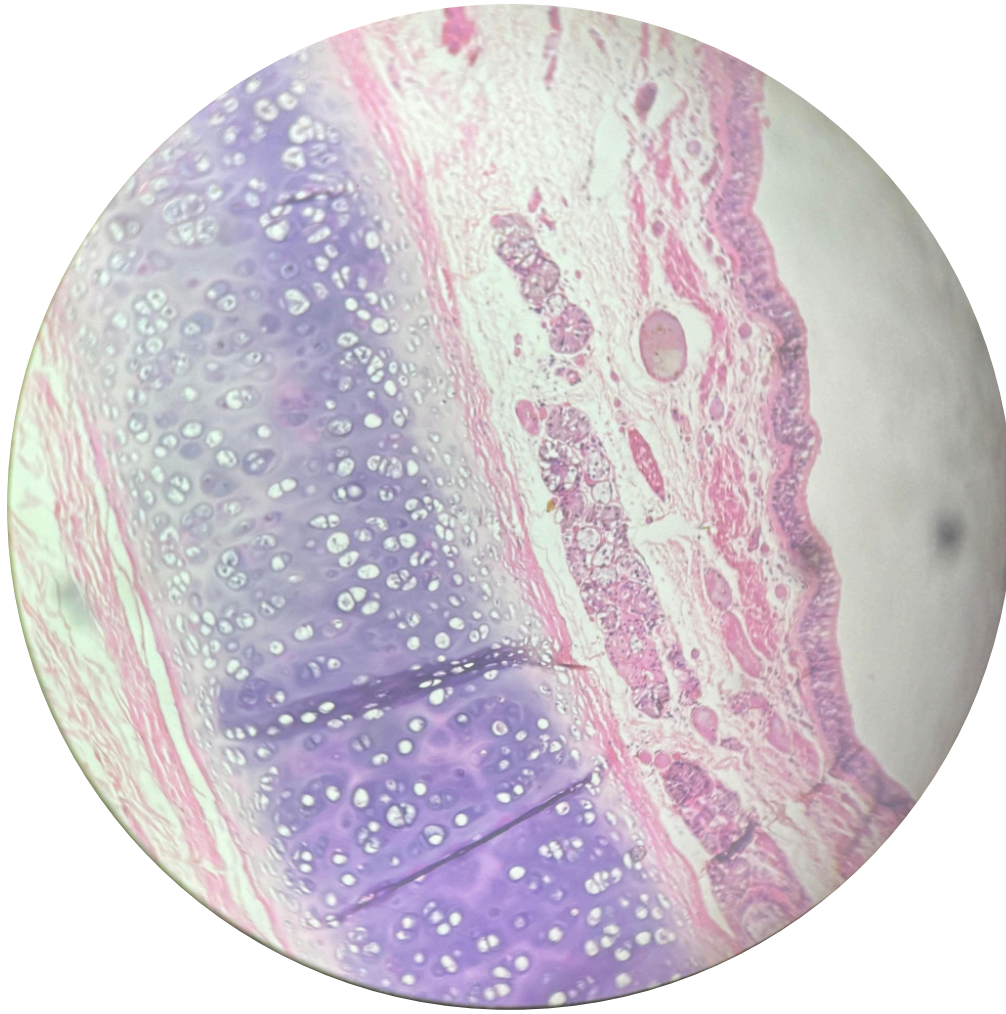
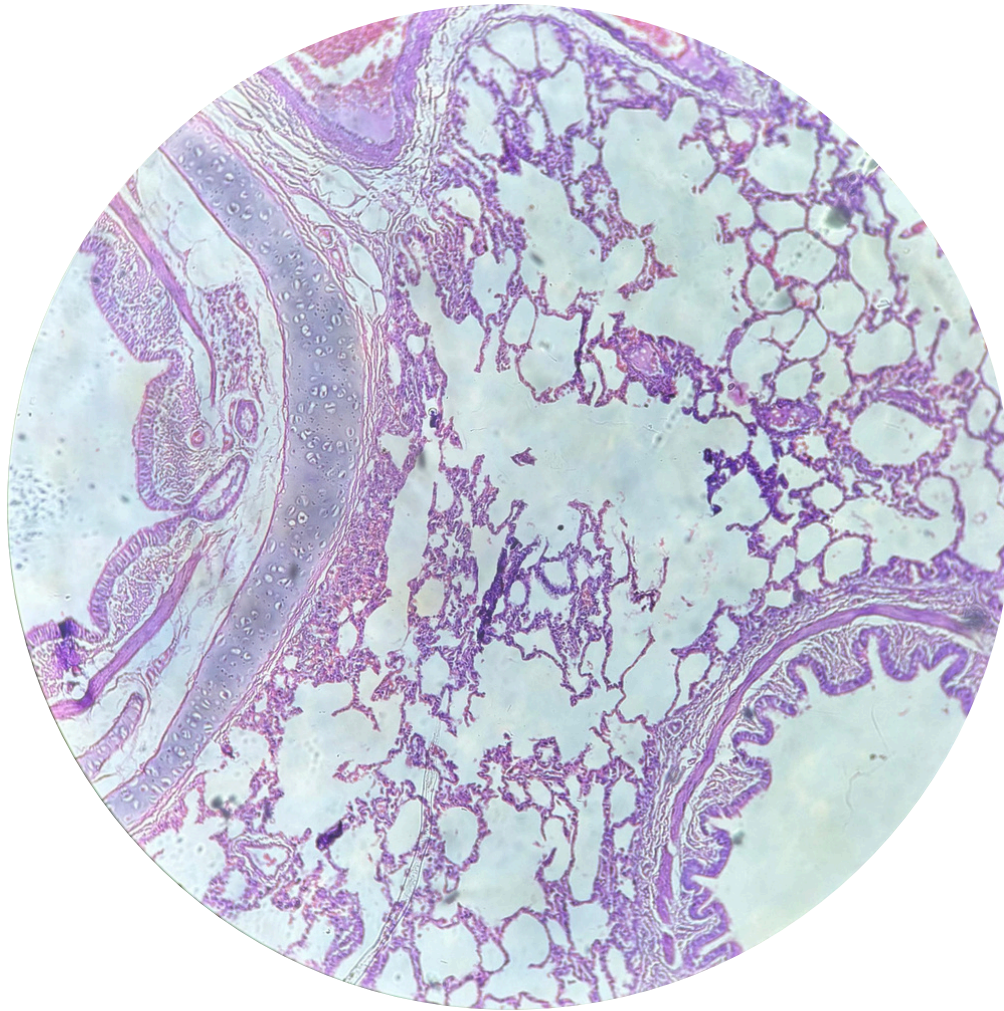




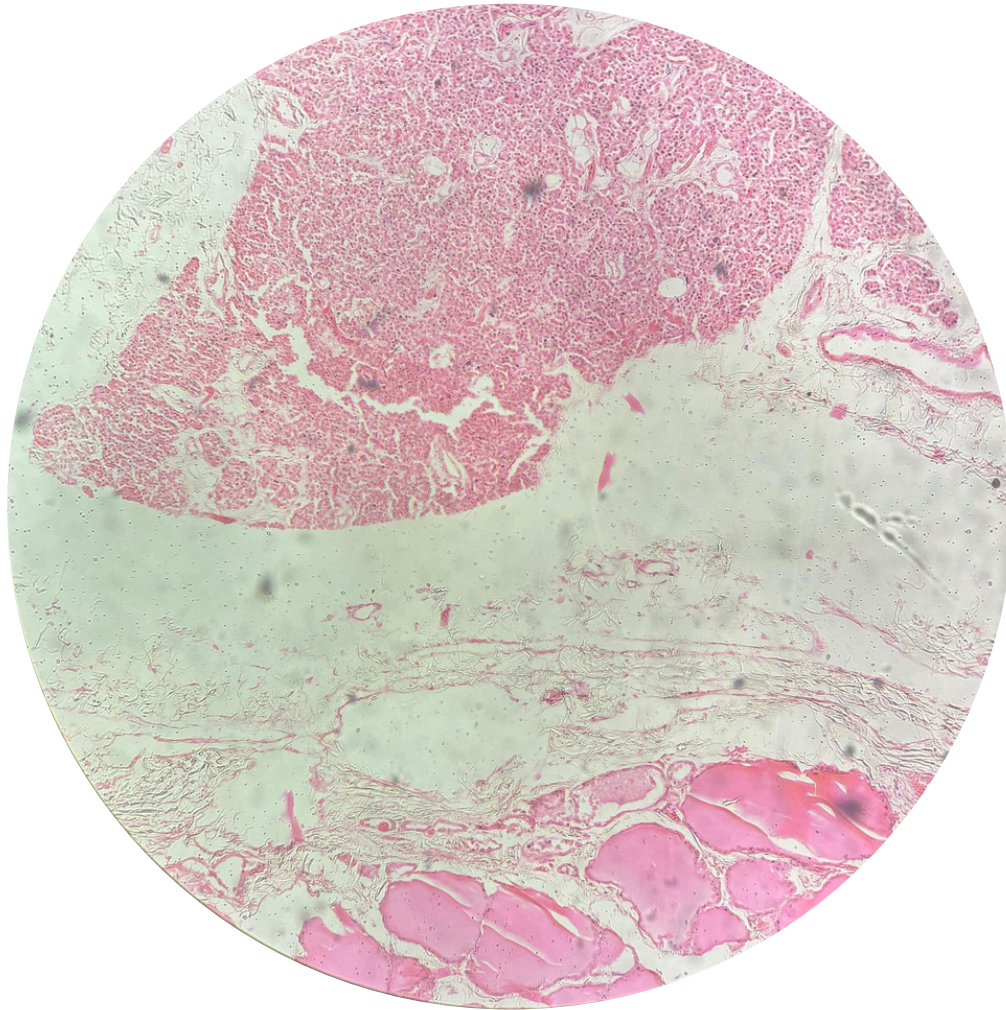
TRACHEA

- Pseudostratified ciliated columnar epithelium with a few goblet cells
- Submucosa of loose connective tissue with mucous and serous gland
- C shaped piece of hyaline cartilage reinforces the wall anteriorly



LUNGS

- Alveolar sac lined by simple squamous epithelium
- Presence of intrapulmonary bronchus with varying amount of hyaline cartilage and smooth muscles
- Presence of alveolar ducts
- Respiratory bronchioles with simple cuboidal epithelium lining lacking cilia and goblet cells



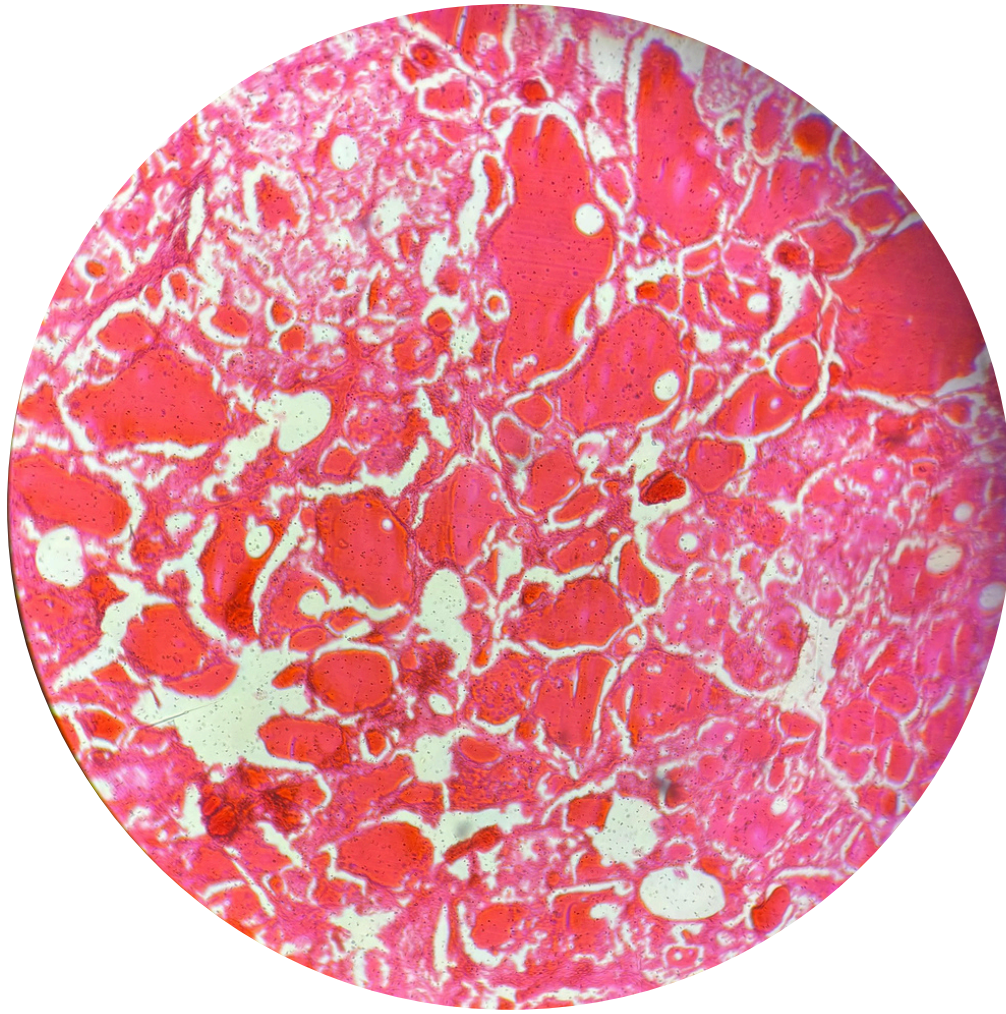
THYROID WITH PARATHYROID

Thyroid:

- Stroma made of dense irregular connective tissue
- Groups of tightly packed cell follicles present
- Follicles are mainly lined by cuboidal cells
- Parafoallicular cells (C cells) present
- Follicles are filled with colloid containing thyroglobulin

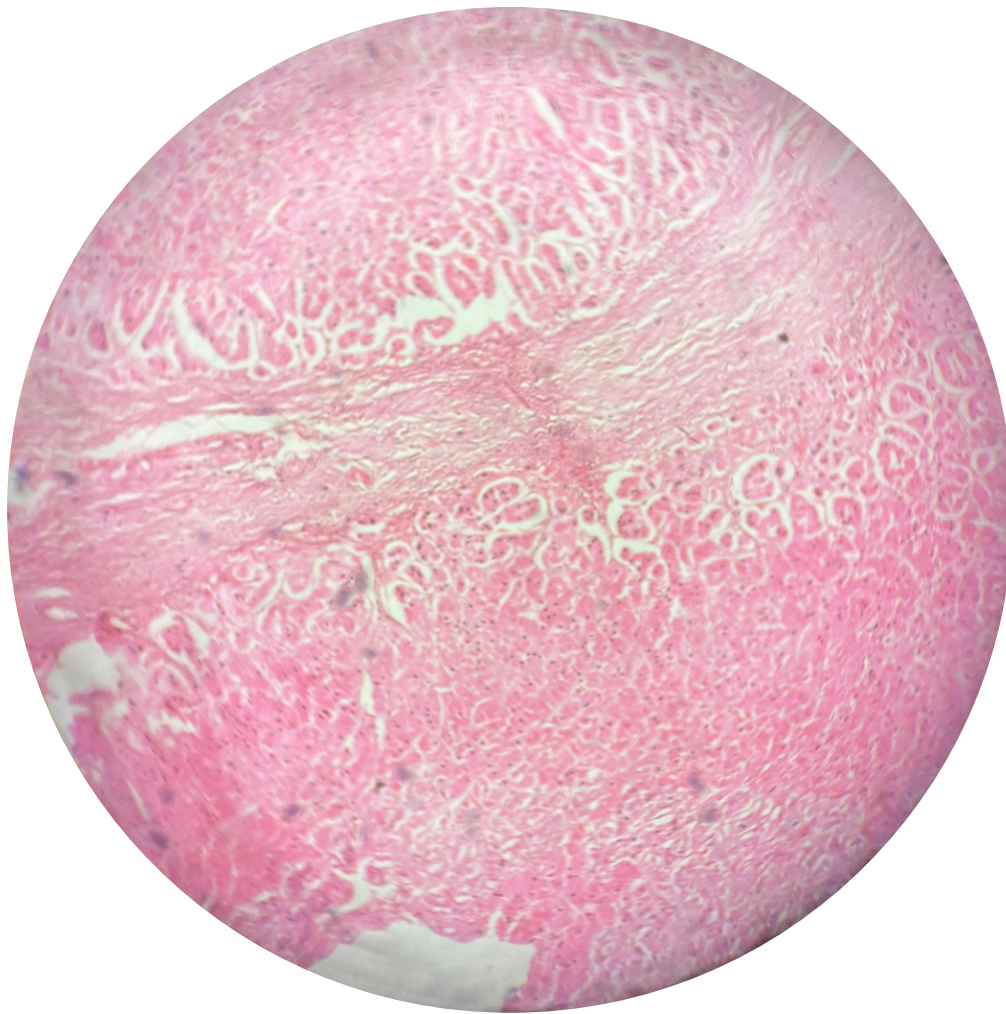
Parathyroid:

- Closely packed cells arranged as clumps or cords
- Two types of cells - Chief cells and Oxyphil cells
- Chief cells appear vacuolated and pale
- Oxyphil cells are larger than chief cells and have eosinophilic cytoplasm



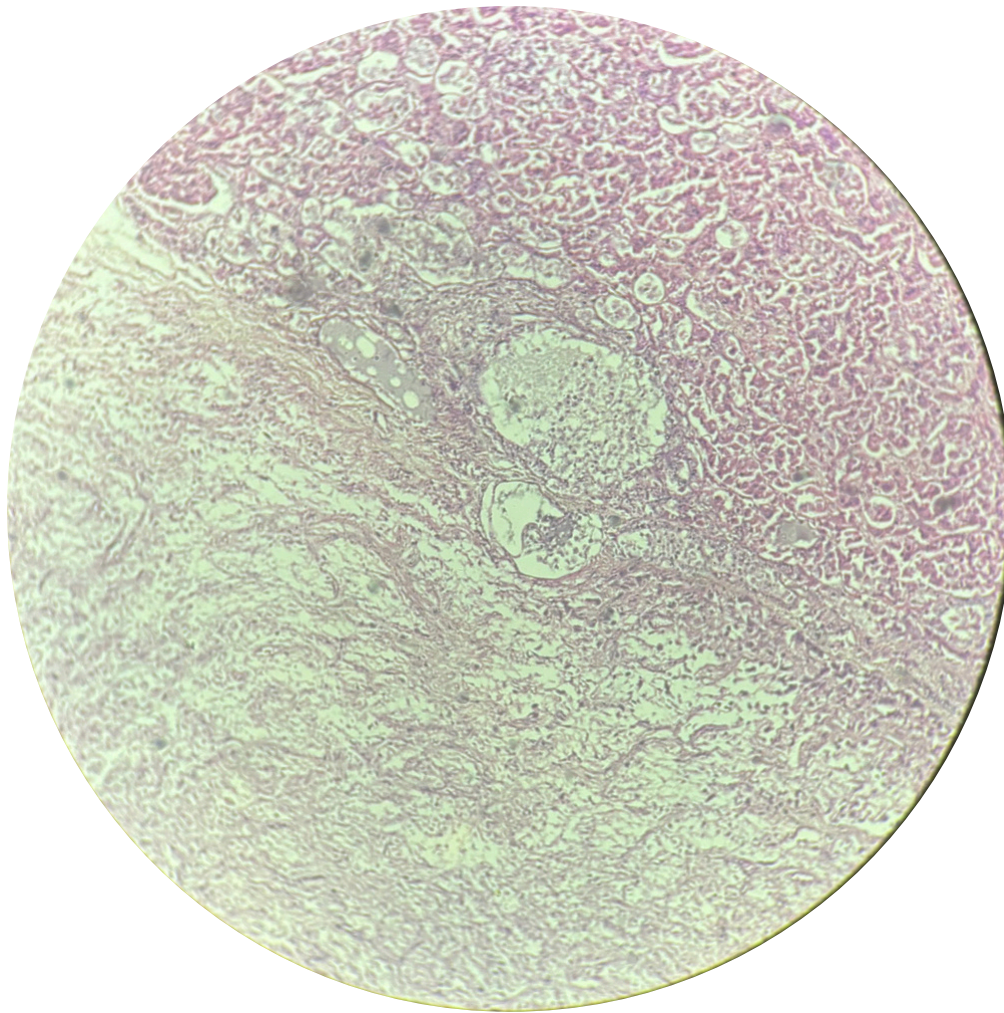
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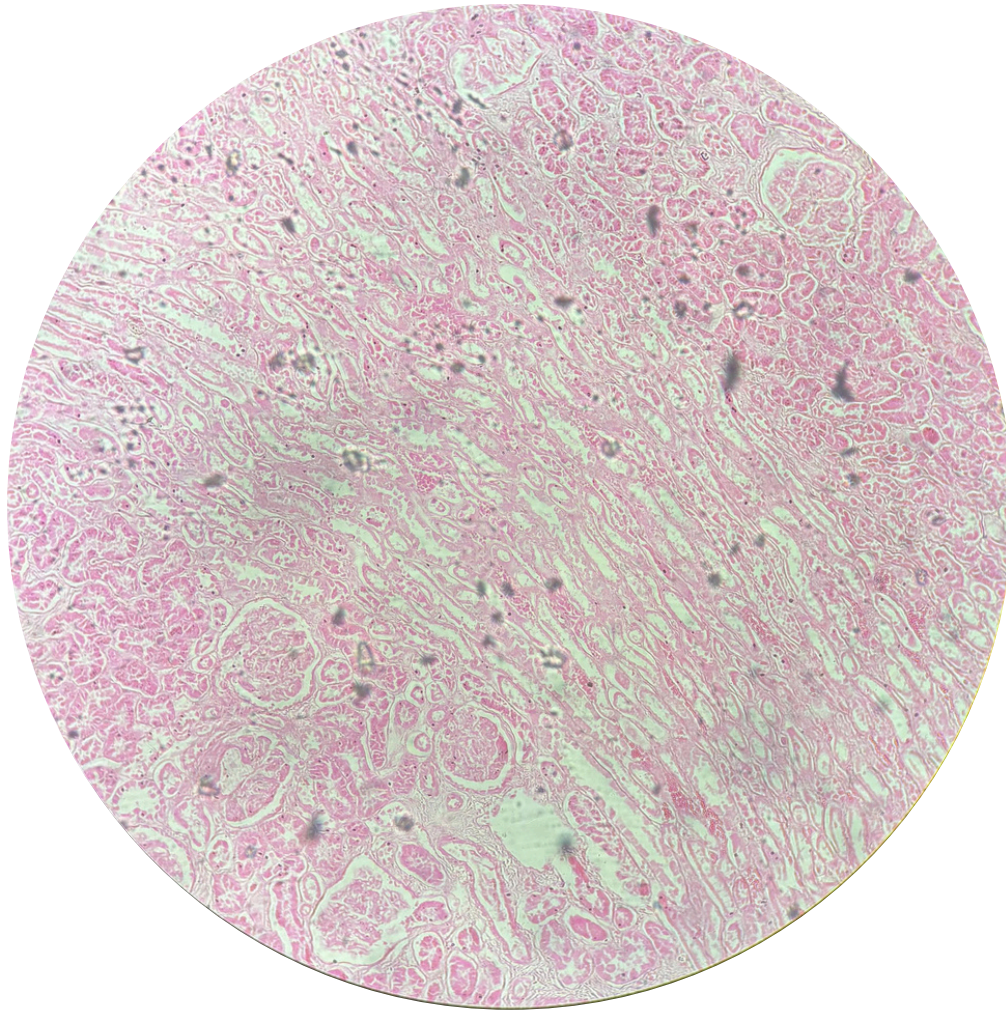
SUPRARENAL

- Differentiated into cortex and medulla.
- Cortex is divided into Zona Glomerulosa, Zona Fasciculata, and Zona Reticularis.
- Cells arranged in clusters and curved columns in Zona Glomerulosa.
- Cells arranged as long parallel cords in Zona Fasciculata.
- Polyhedral cells in Zona Fasciculata are separated by fenestrated capillaries.
- Network of anastomosing cell cords surrounded by fenestrated capillaries in Zona Reticularis.



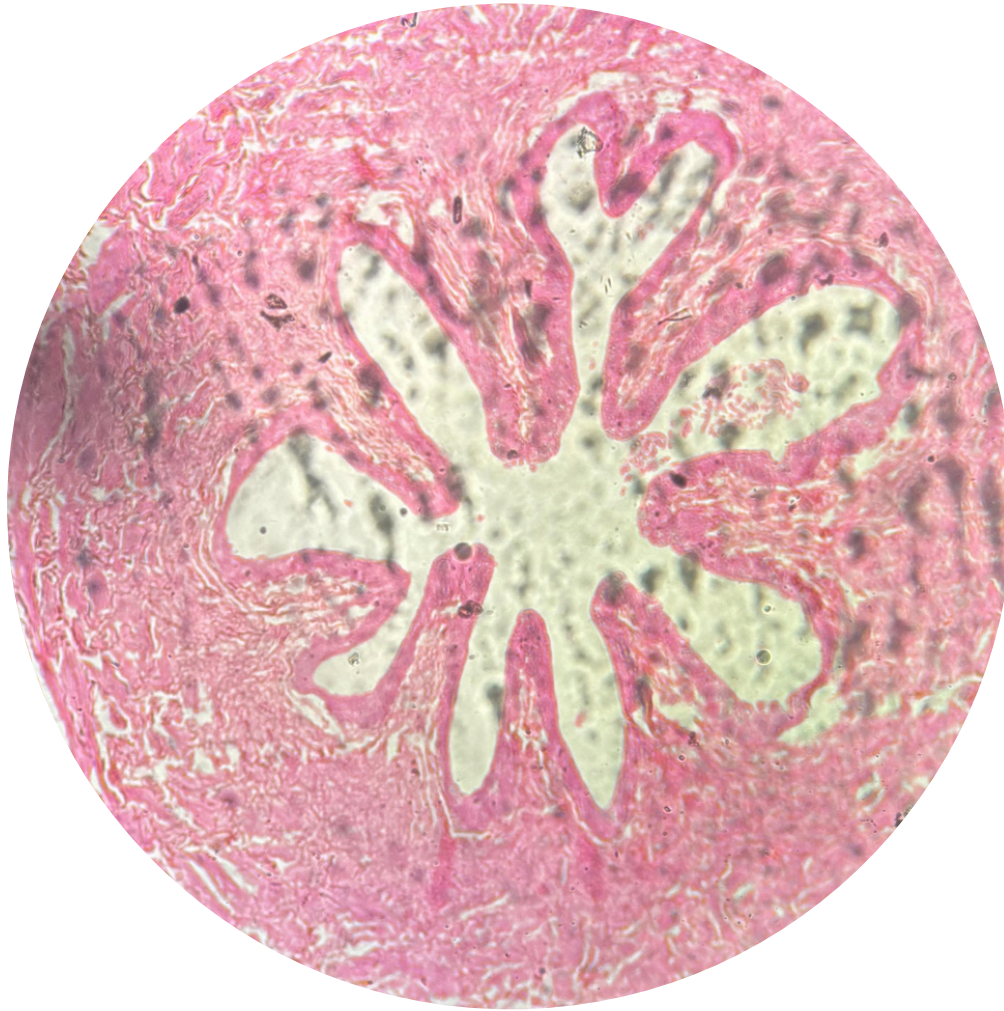
PITUITARY

- It is divided into the adenohypophysis (anterior pituitary) and the neurohypophysis (posterior pituitary).
- The pars distalis (a part of the adenohypophysis) contains chromophobes, acidophilus, and basophils (different types of cells based on their staining properties).
- Herring's bodies are observed in the pars nervosa (a part of the neurohypophysis).
- Pituicytes, which are special glial-like cells, are found in the pars nervosa.
- The pars nervosa contains axons and axon endings of hypothalamic neurons



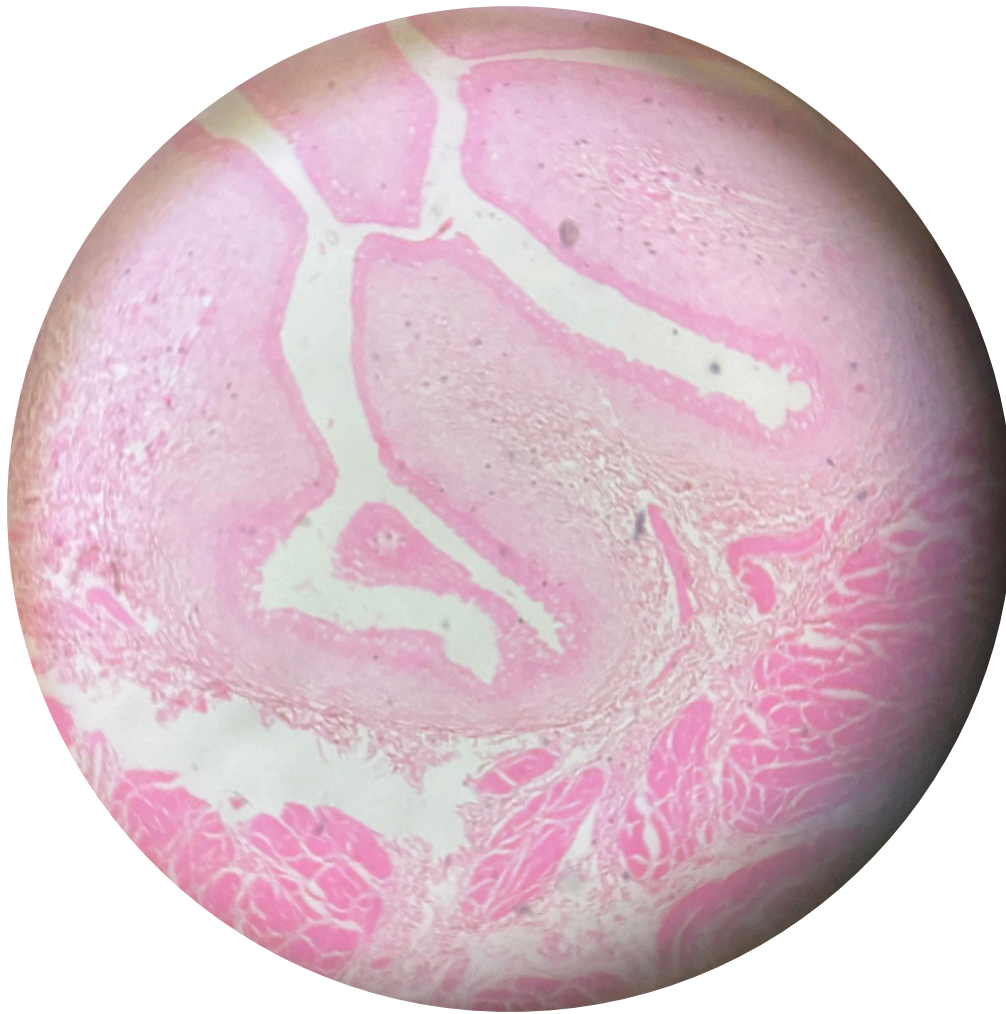
KIDNEY

- Presence of cortex and medulla
- Number of glomeruli, cut sections of pct, dct, loop of Henle and collecting ducts seen.
- Medullary rays seen in cortex
- Pct lined by columnar epithelium



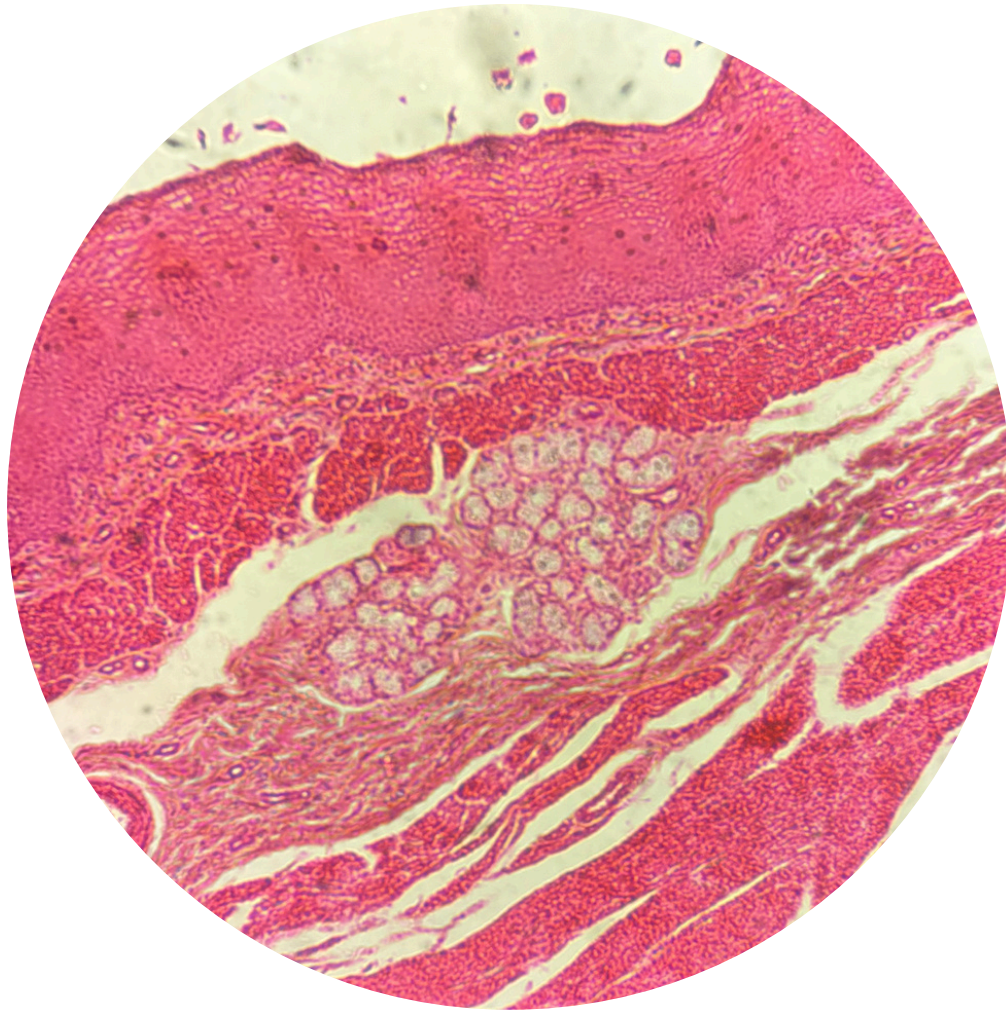
URETER

- The wall of the ureter has three layers:
 - * An outer fibrous coat.
 - * A middle layer of smooth muscle.
 - * An inner lining of mucous membrane.
- The mucous membrane has a lining of transitional epithelium.
- The mucosa shows a number of longitudinal folds that give the lumen a star-shaped appearance.
- The outer fibrous coat consists of loose connective tissue containing blood vessels, nerves, lymphatics, etc.



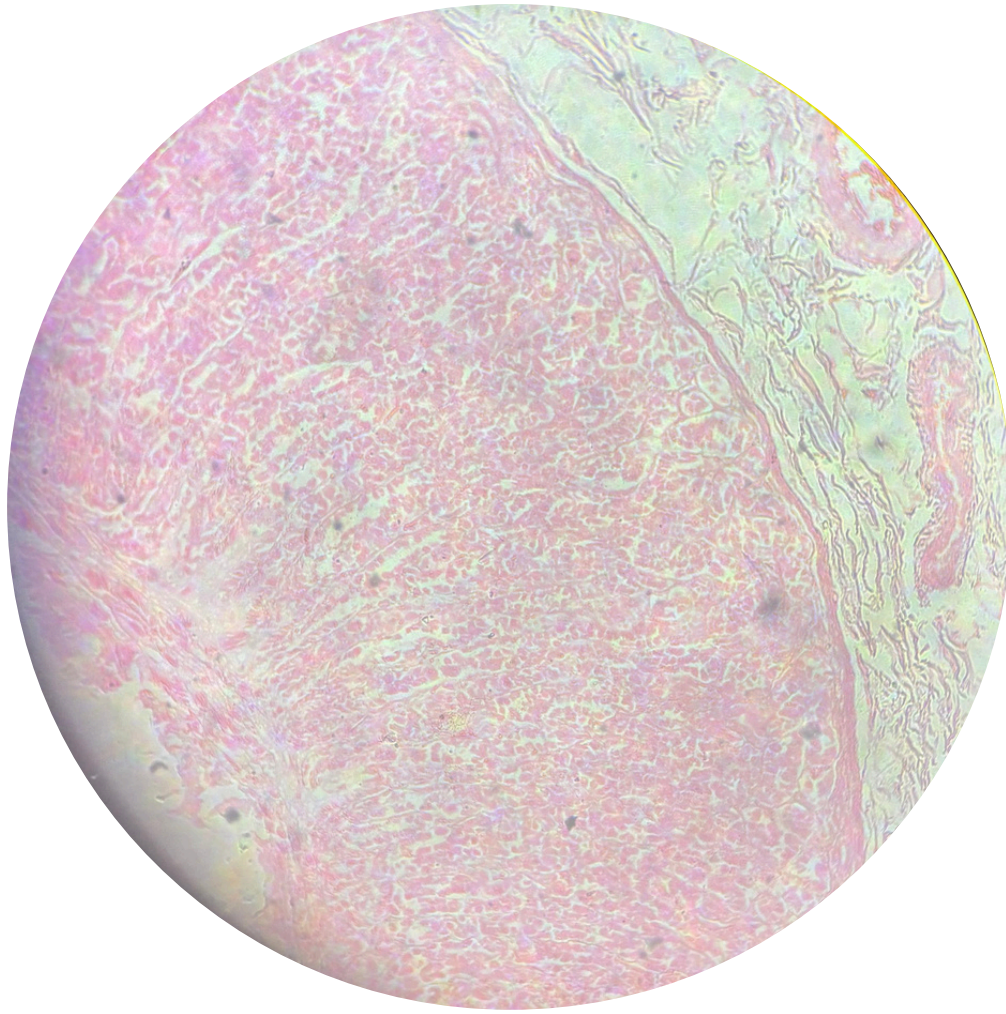
URINARY BLADDER

- The wall of the urinary bladder consists of an outer serous layer and a thick coat of smooth muscle.
- The muscularis mucosa is absent.
- Mucous membrane lined by transitional epithelium
- The epithelium rests on a layer of loose fibrous tissue



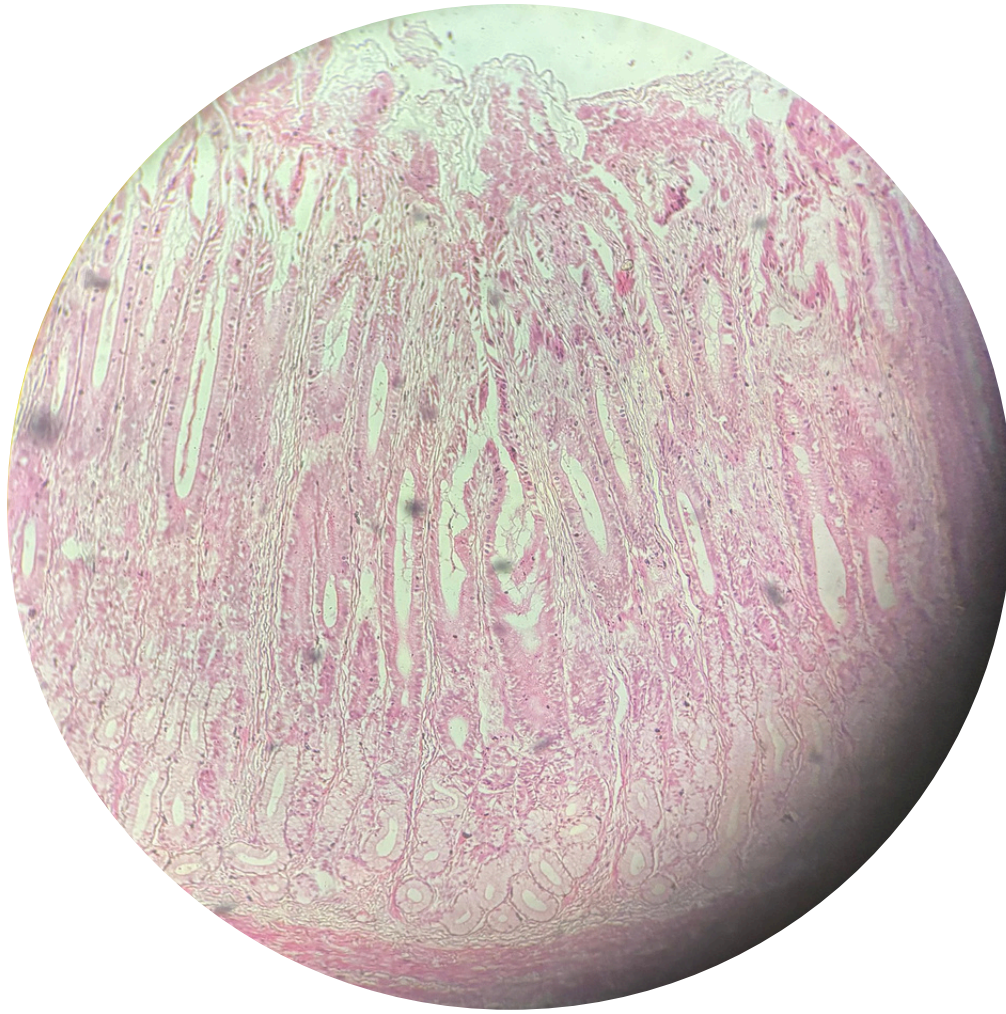
ESOPHAGUS

- The lining epithelium, which is stratified squamous non-keratinized epithelium.
- The submucosa containing mucus-secreting esophageal glands.
- These submucosal glands are described as basophilic and tubuloalveolar mucus glands.
- All four layers of the gastrointestinal tract (GIT) mucosa, submucosa, muscularis externa, and serosa are visible



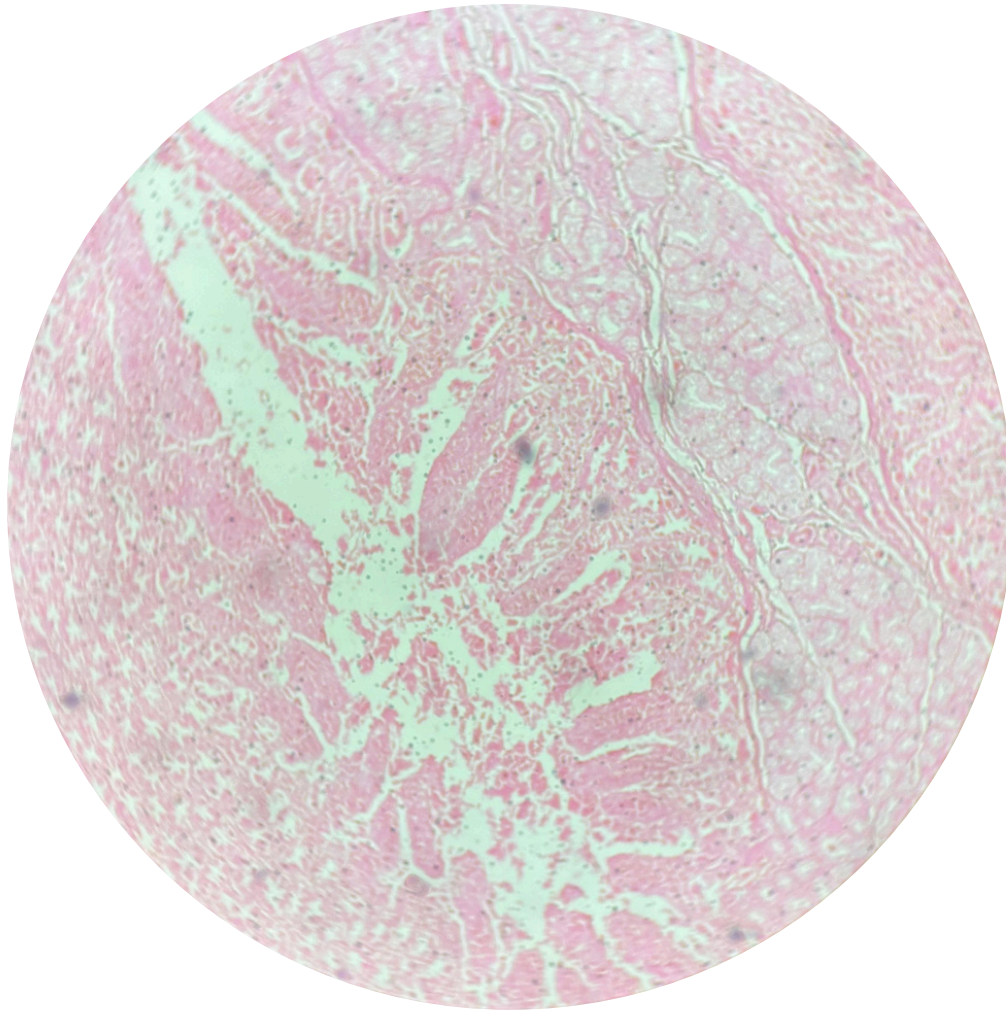
STOMACH-FUNDUS

- Shallow gastric pits occupying the superficial one-fourth of the mucosa.
- Presence of gastric glands in the mucosa.
- Gastric glands with numerous oxyntic cells, giving a beaded appearance.
- Observation of the four layers of the GIT: mucosa, submucosa, muscularis externa, and serosa



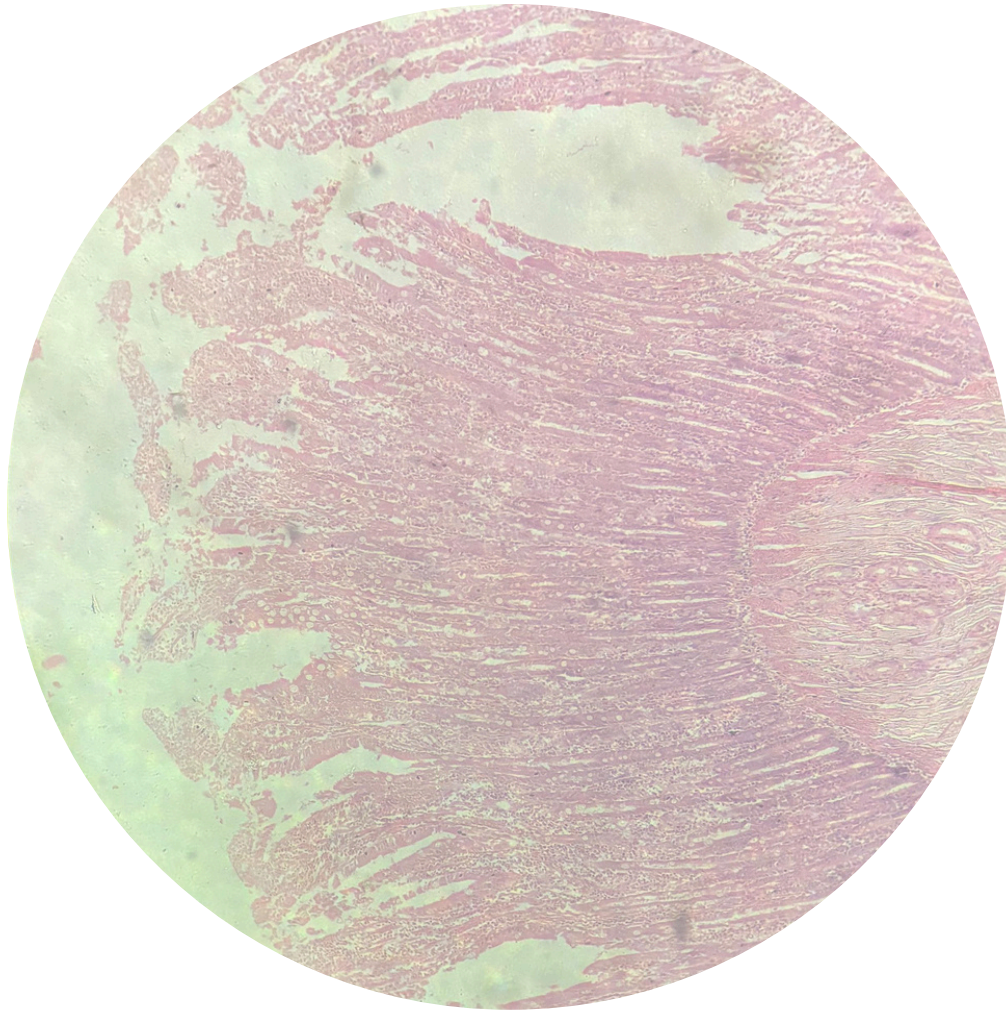
STOMACH- PYLORUS

- Deep gastric pits occupying around two-thirds of the depth of the mucosa.
- The presence of pyloric glands in the mucosa, which are described as branched tubular glands that are coiled.
- The presence of the four layers of the GIT



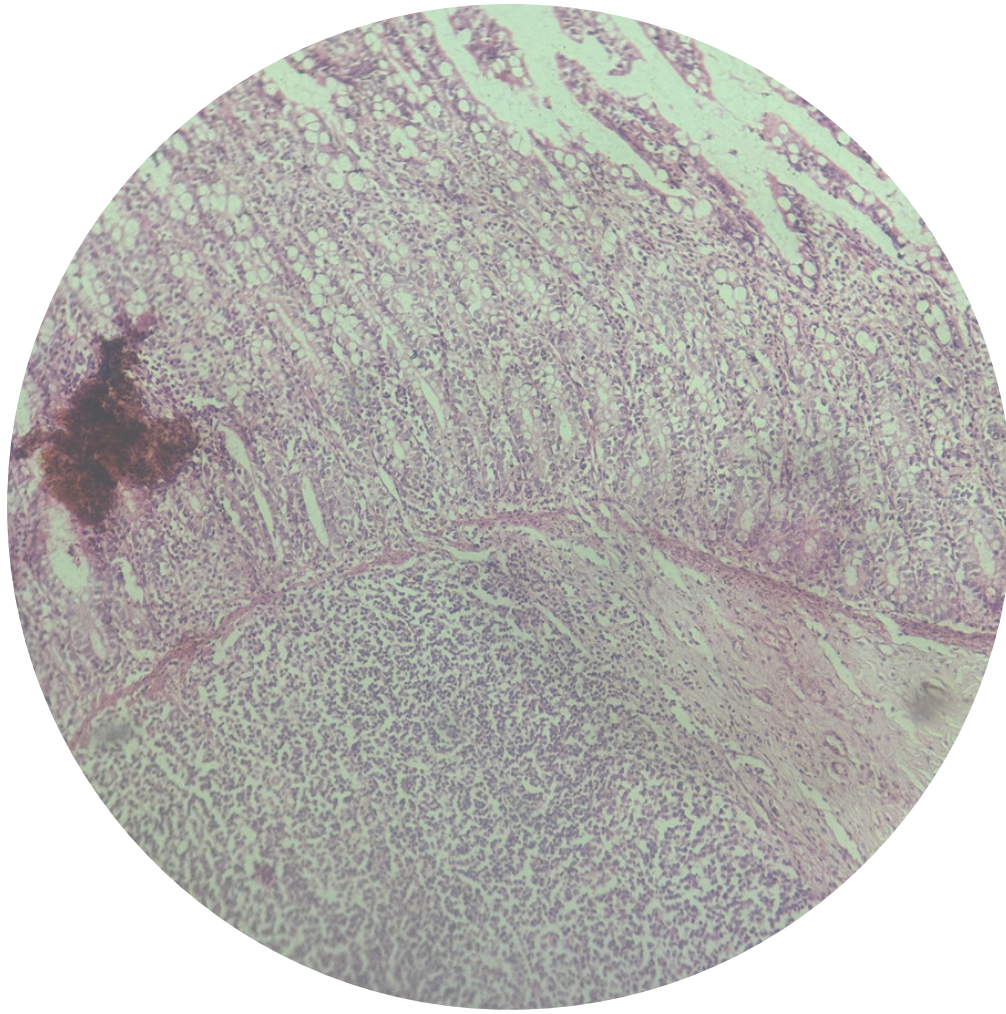
DUODENUM

- The lining epithelium is simple columnar with microvilli and goblet cells.
- The submucosa contains Brunner's glands.
- The mucosa has broad, tongue-like villi.
- Between the bases of the villi are tubular glands called Crypts of Lieberkuhn



JEJUNUM

- Lining epithelium is simple columnar with microvilli and goblet cells.
- Mucosa shows the presence of tall slender villi shaped like a leaf.
- No Brunner's glands are present in the submucosa.
- Very few Peyer's patches extend into the submucosa.



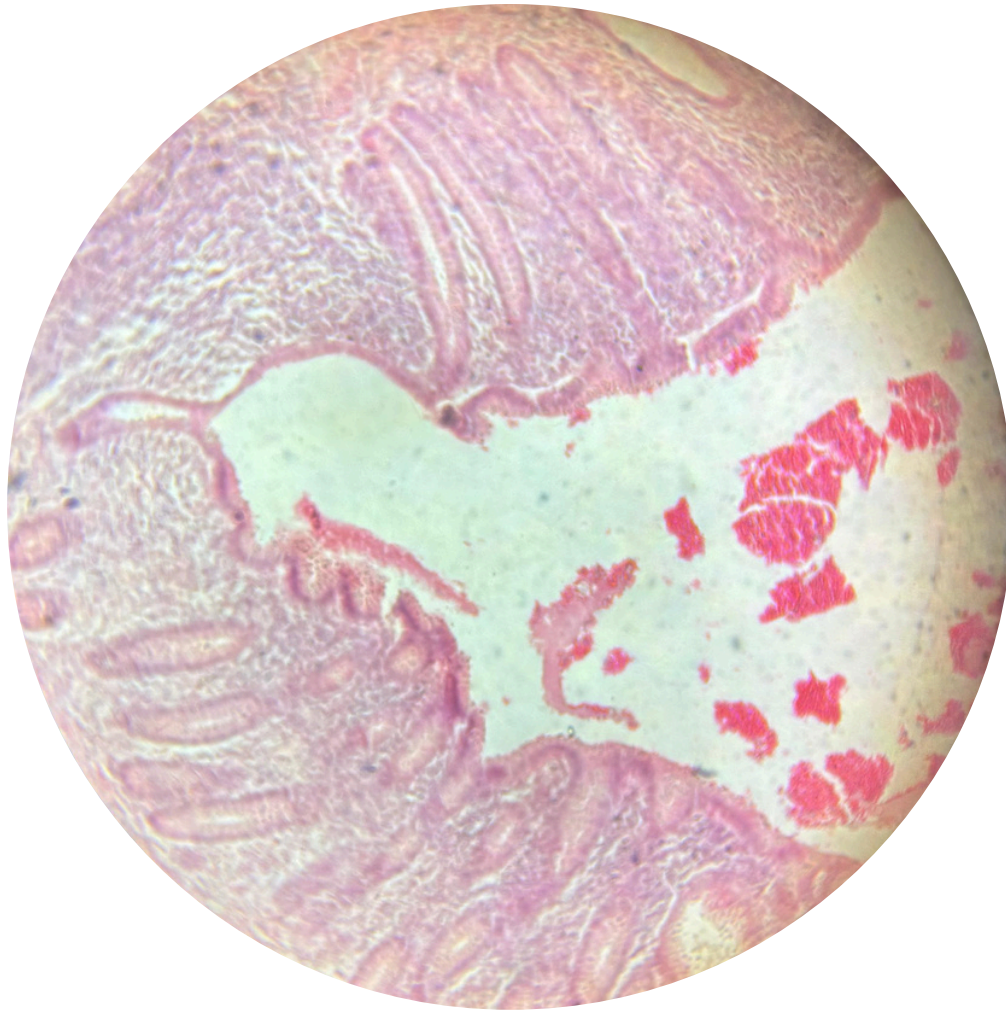
ILEUM

- Lining epithelium: Simple columnar with numerous goblet cells.
- Peyer's patches: Prominent in the lamina propria.
- Villi: Presence of short, finger-like villi, fewer in number compared to the jejunum.
- Wall layers: Composed of four layers: mucosa, submucosa, muscularis externa, and serosa



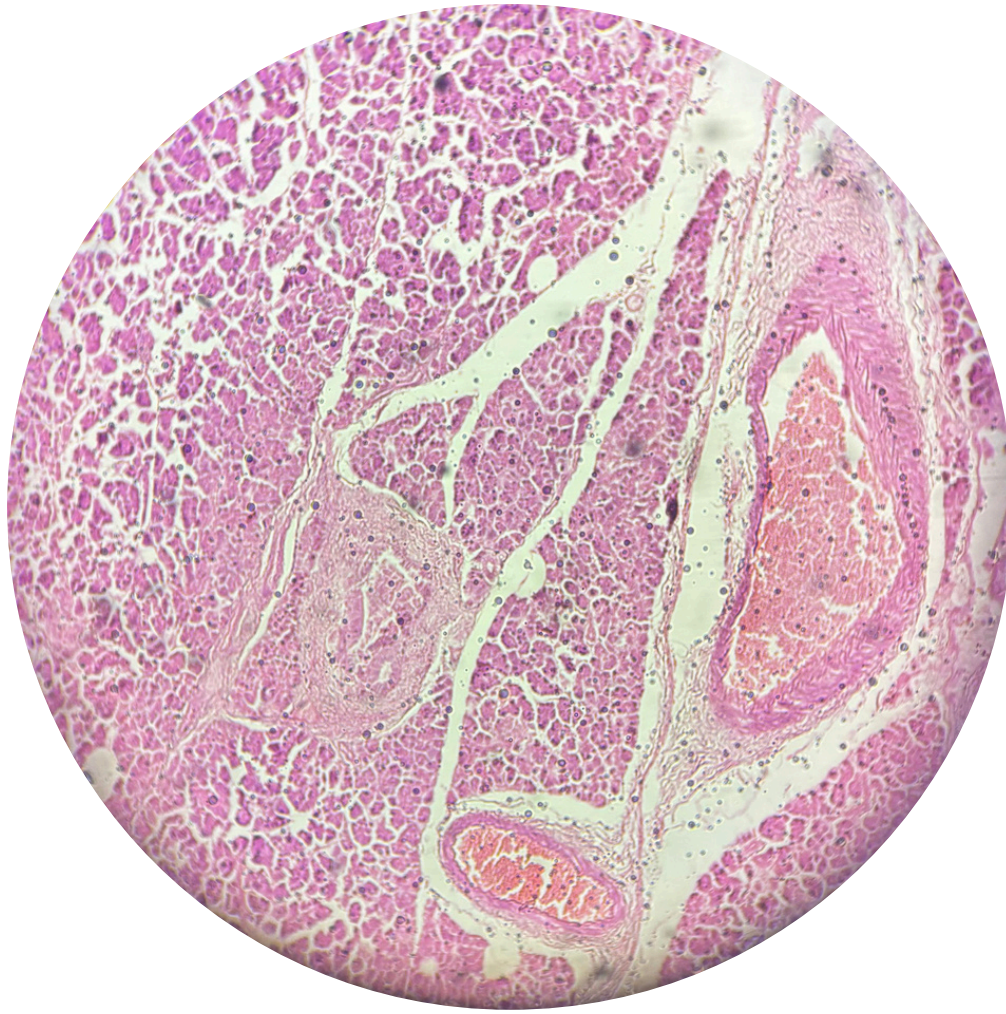
LARGE INTESTINE

- Absence of villi in mucosa
- Presence of abundant goblet cells
- Lymphatic follicles dispersed in lamina propria
- Taenia coli and appendices epiploicae present



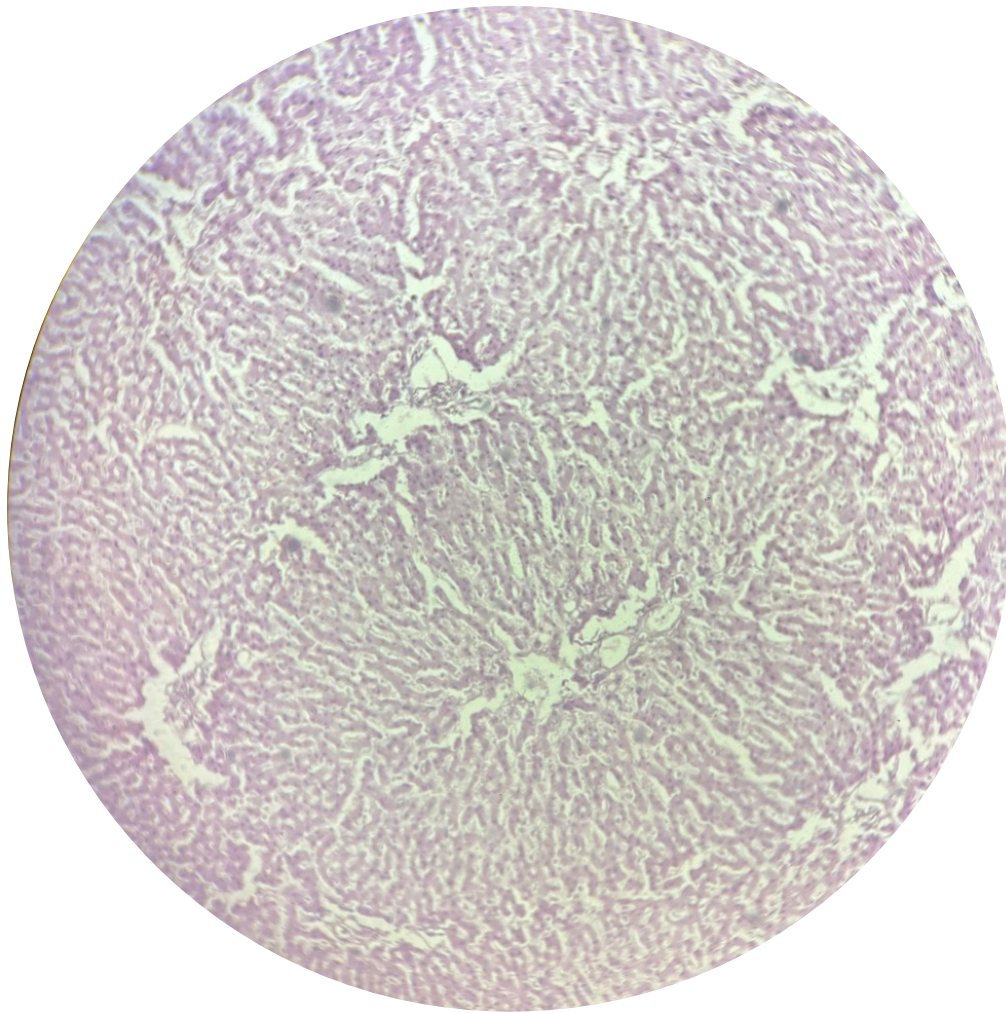
VERMIFORM APPENDIX

- Presence of circular lumen
- Absence of villi in mucosa
- Absence of taenia coli and appendices epiploicae
- Submucosa packed with numerous lymphatic follicles that extend into lamina propria



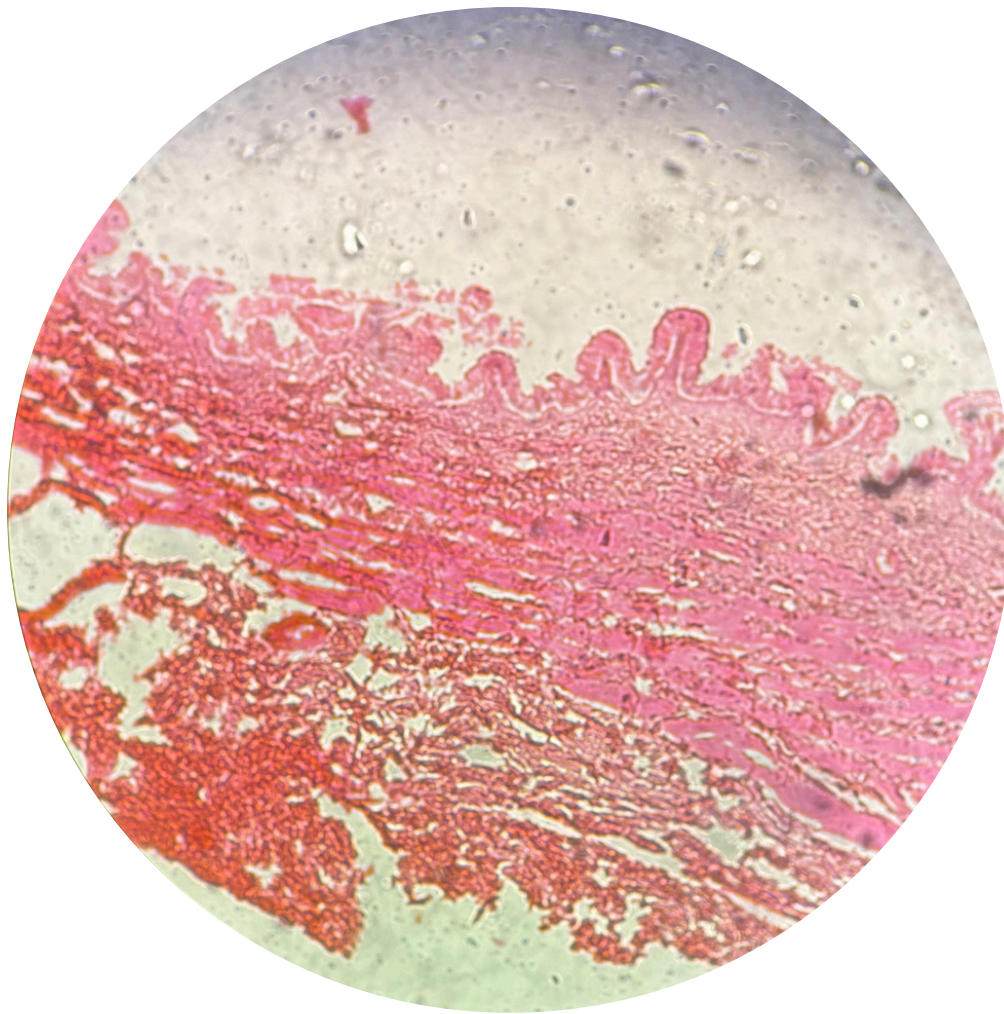
PANCREASE

- Presence of numerous serous acini
- Islets of langerhans present
- Interlobar ducts are seen
- Covered by thin capsule
- Serous acini of exocrine pancreas secretes pancreatic juice



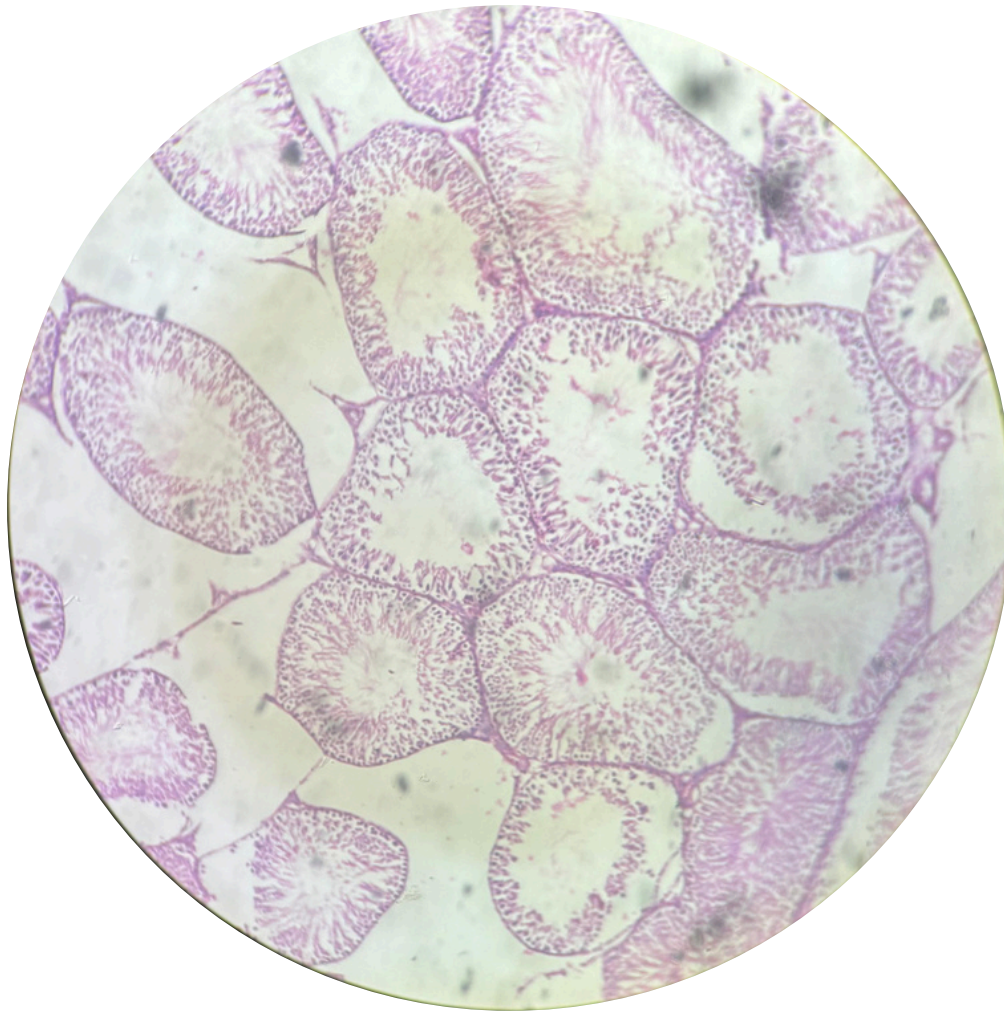
LIVER

- Presence of many hexagonal areas called hepatic lobules which are partially separated by connective tissue
- Each lobule has a central vein in center
- Presence of portal triad at corner of each lobule
- Content of portal triad include-Branch of Portal vein, Branch of Hepatic Artery and interlobular bile duct.
- Presence of hepatocytes which are arranged as broad irregular cords of cells
- Presence of hepatic sinusoid in between the cords of hepatocytes



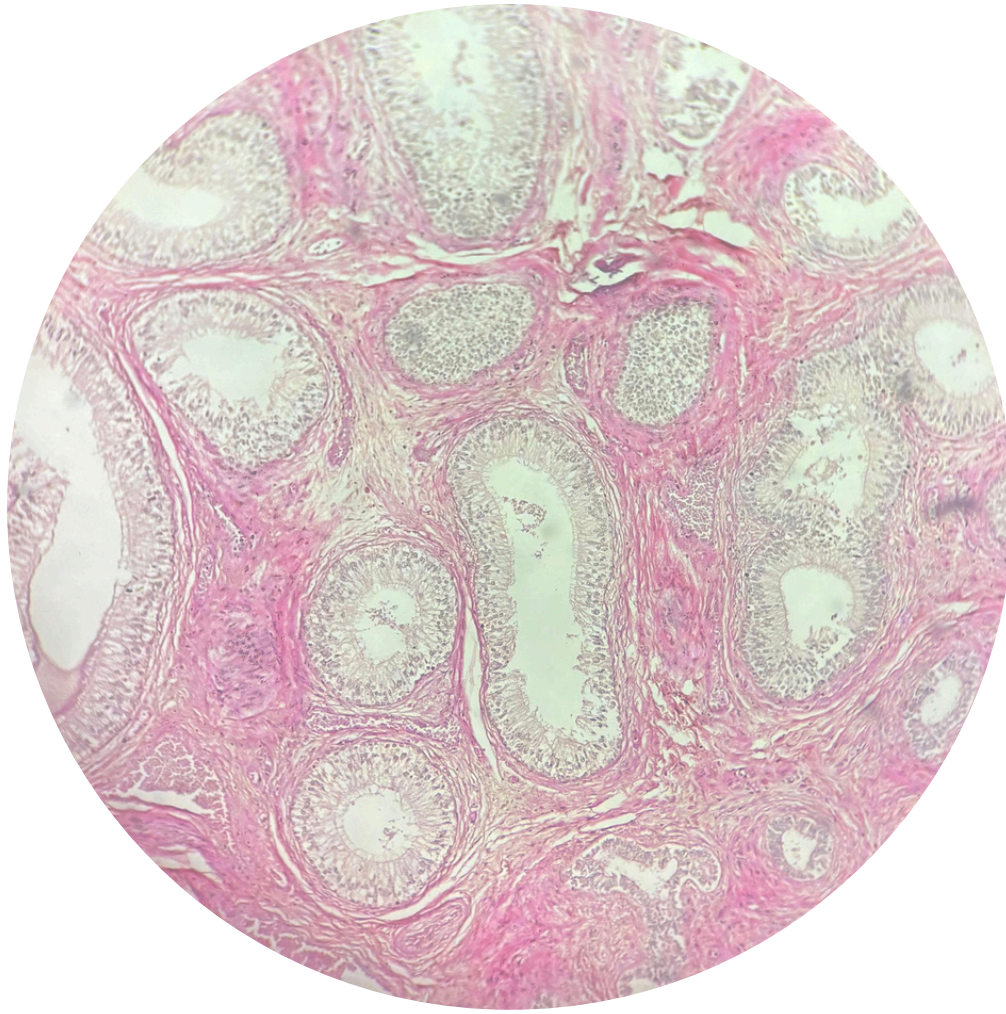
GALL BLADDER

- Has inner mucous, middle fibromuscular and outer serous.
- Mucus membrane lined by columnar cells with microvilli
- Mucus membrane thrown into numerous folds, which give the surface a honey comb like appearance
- Absence of submucous layer
- Absence of villi and goblet cells
- Smooth muscle of fibromuscular layer are arranged in random direction



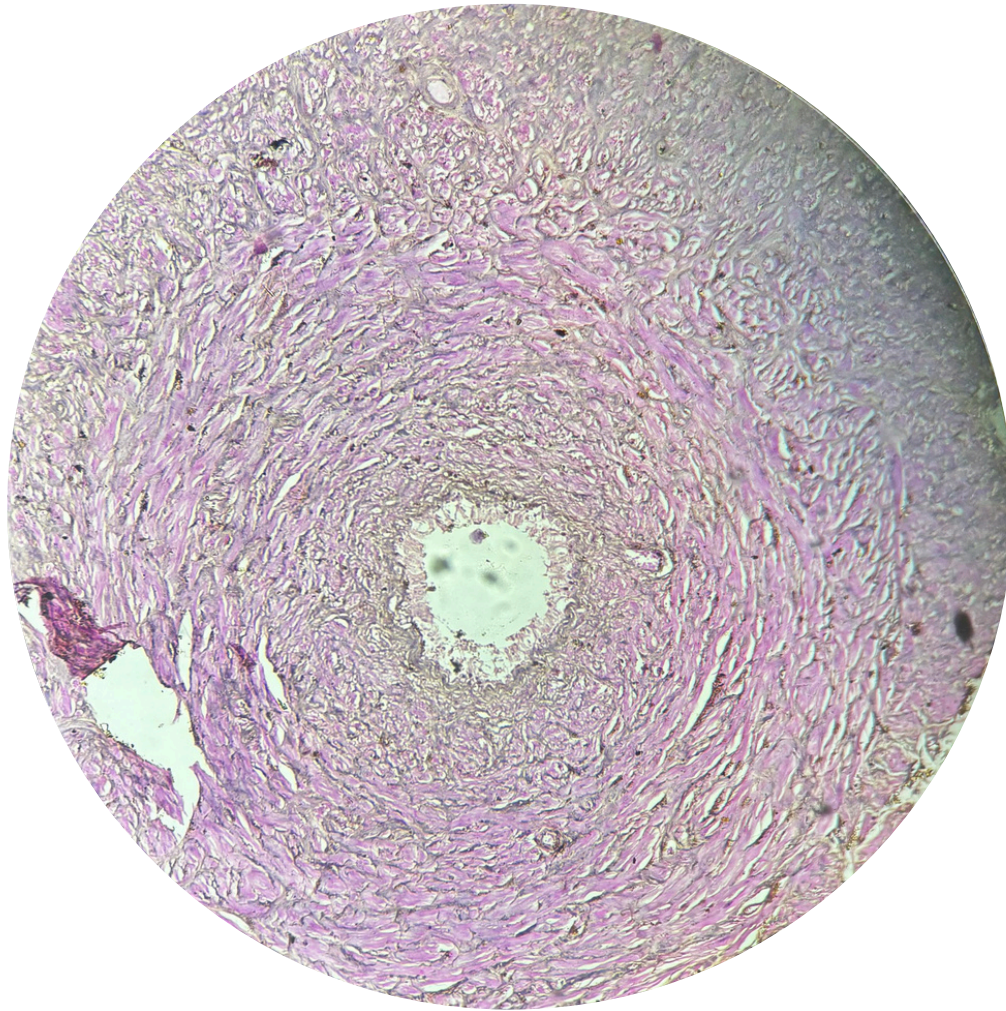
TESTIS

- Presence of numerous seminiferous tubules
- Presence of Sertoli cells and spermatogenic cells within the seminiferous tubule.
- Sperms in various stages of development can be identified within seminiferous tubule.
- Tubules separated by connective tissue with Leydig cells in between
- Individual lobules of testis lined by areolar and highly vascular-Tunica vasculosa



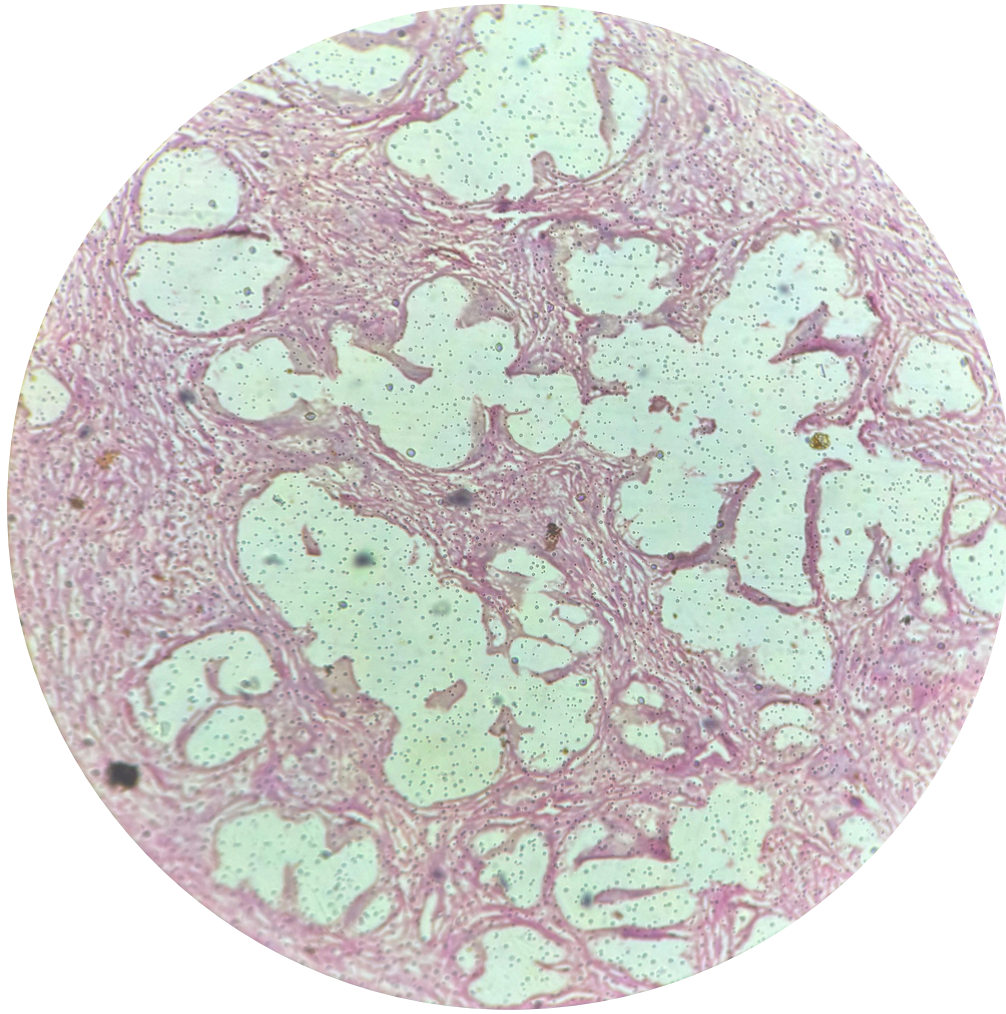
EPIDIDYMIS

- Consists of an epithelial lining, resting on a basement membrane and a thin layer of smooth muscle fibres disposed circularly, which helps the sperm to move along the ducts
- Pseudostratified columnar variety of epithelium
- On their free surface, the columnar cells carry a tuft of long non motile stereocilia



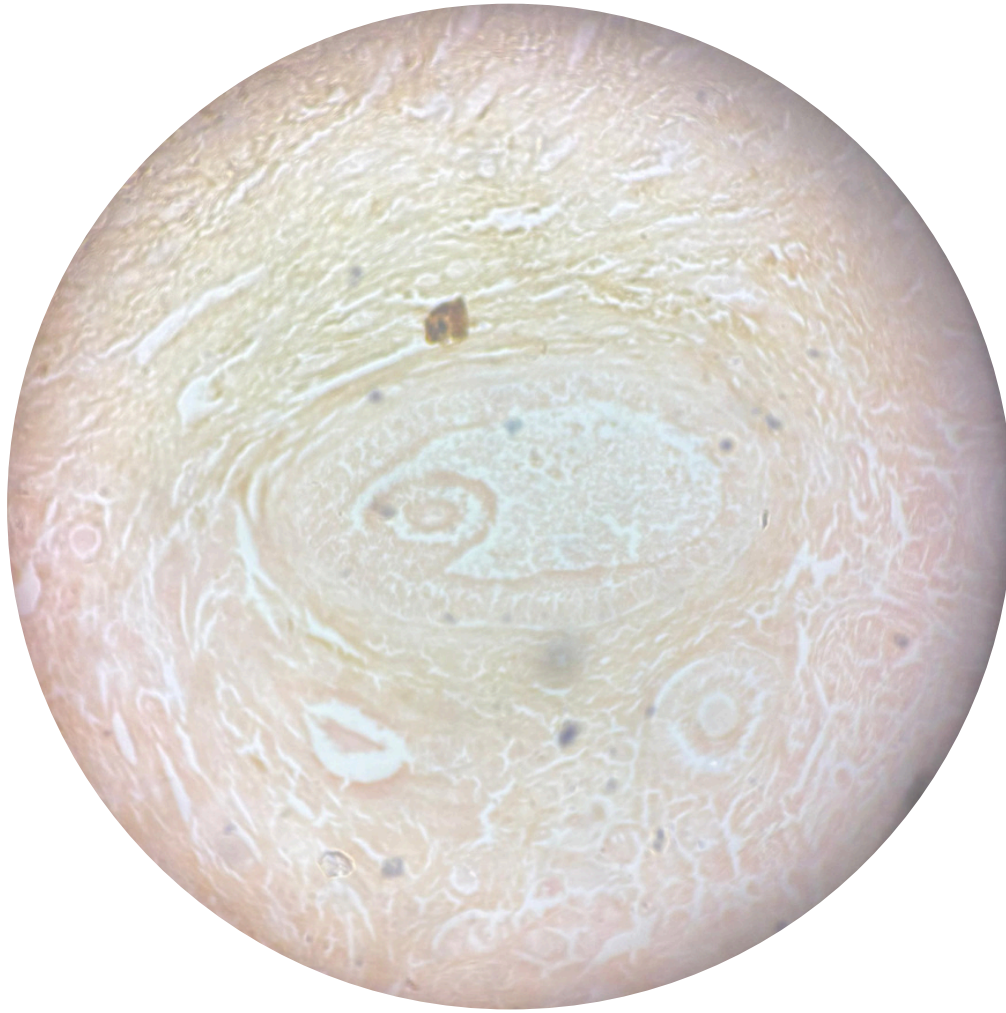
VAS DEFERENS

- Comprised of inner mucous membrane, middle muscular coat and outer fibrous coat
- Depending upon the region of the duct, the epithelium varies from ciliated columnar to pseudostratified epithelium.
- The smooth muscle coat is three layered: inner and outer layers consists of longitudinal muscle fibres while middle layer is made of circular muscle fibres
- The adventitia is a thin layer of connective tissue and contains abundant blood vessels and nerves



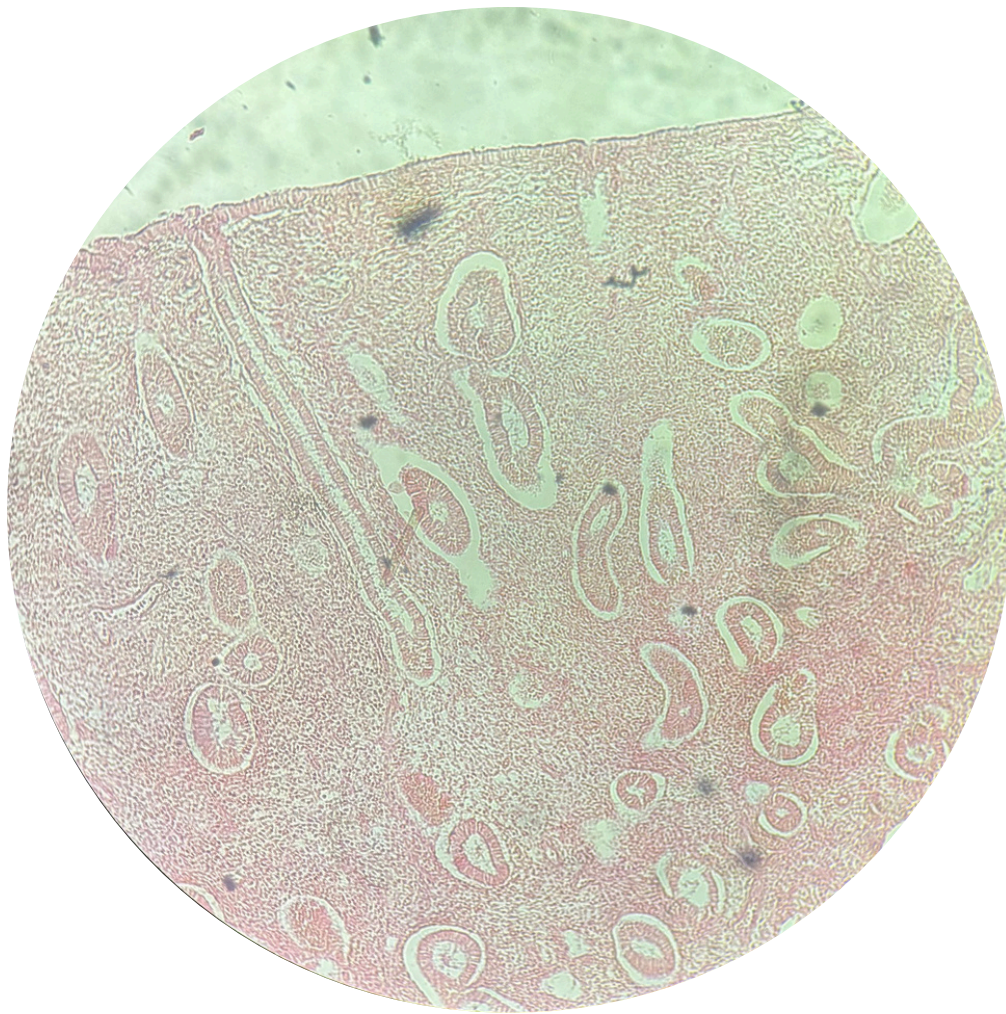
PROSTATE

- Compound Tubuloacinar gland
- Glandular tissue embedded in fibromuscular stroma
- A basal layer of low cuboidal epithelium covered by a layer of columnar secretory cells.
- In many areas there are small papillary infoldings of the epithelium

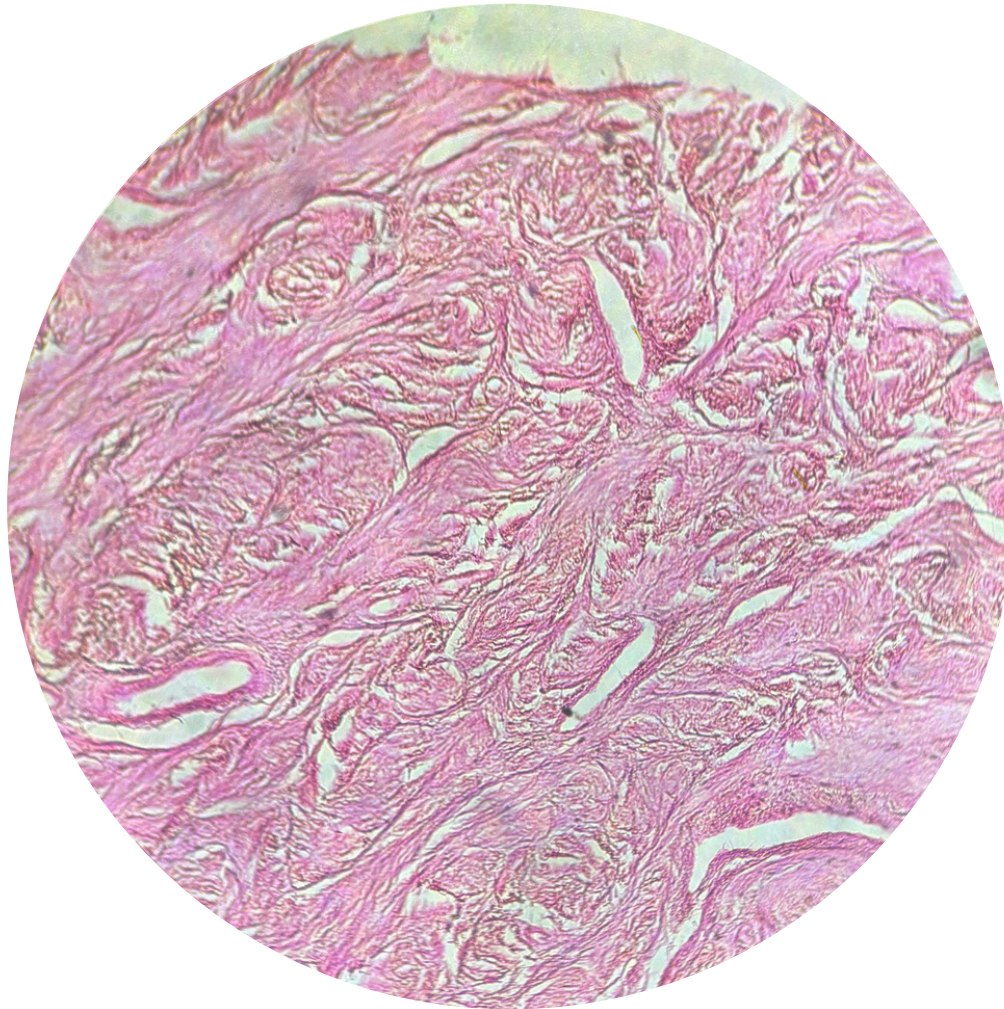


OVARY

- Germinal epithelium made up of cubical cells on surface continuous with mesothelium
- Stroma is dense containing reticular fibres and spindle shaped cells.
- Primary ovarian follicles have a large central cell (oogonium) and surrounding cubical or flattened cells.
- Largest fully mature graafian follicles lie near the surface.
- Medulla shows stroma of loose connective tissue without reticular and elastic fibres, and blood vessels.
- Glandular structures containing lutein cells called corpus luteum are seen after ova are shed

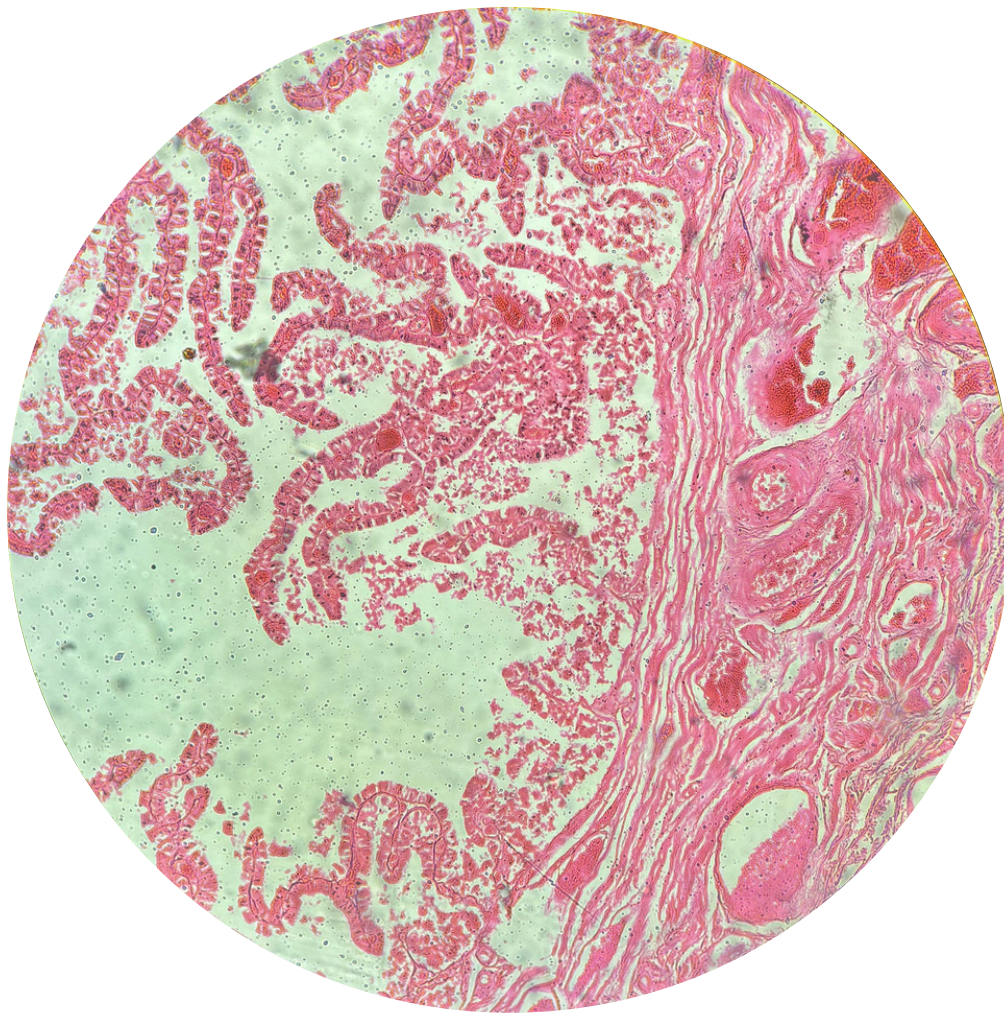


UTERUS (PROLIFERATIVE)



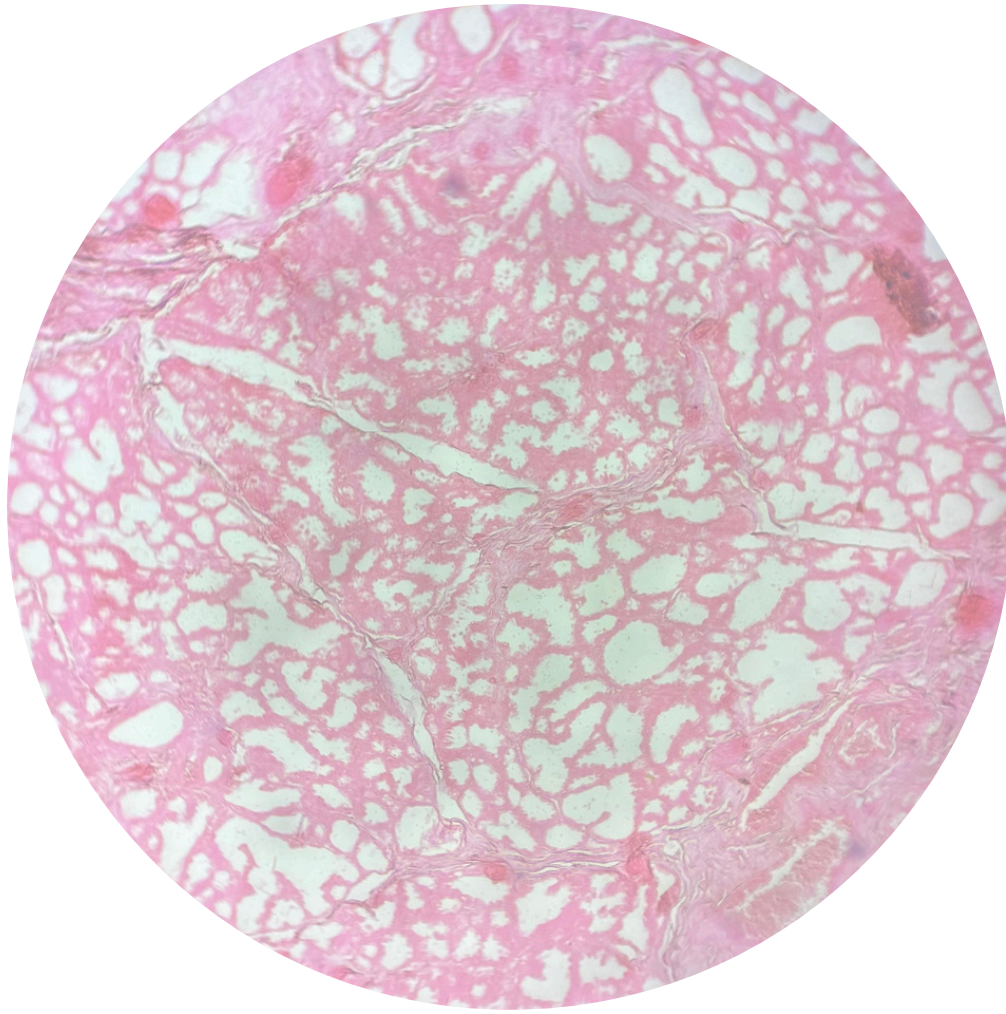
UTERUS (SECRETORY)

- Myometrium- thick with bundles of unstriated muscle fibres intermixed with areolar tissue.
- Fibres arranged in three layers - inner longitudinal, middle circular and spiral, outer longitudinal.
- Secretory phase endometrium- thick due to fluid accumulation
- Uterine glands are numerous, tortuous and cork screw type.
- Coiled arteries seen throughout the endometrium.



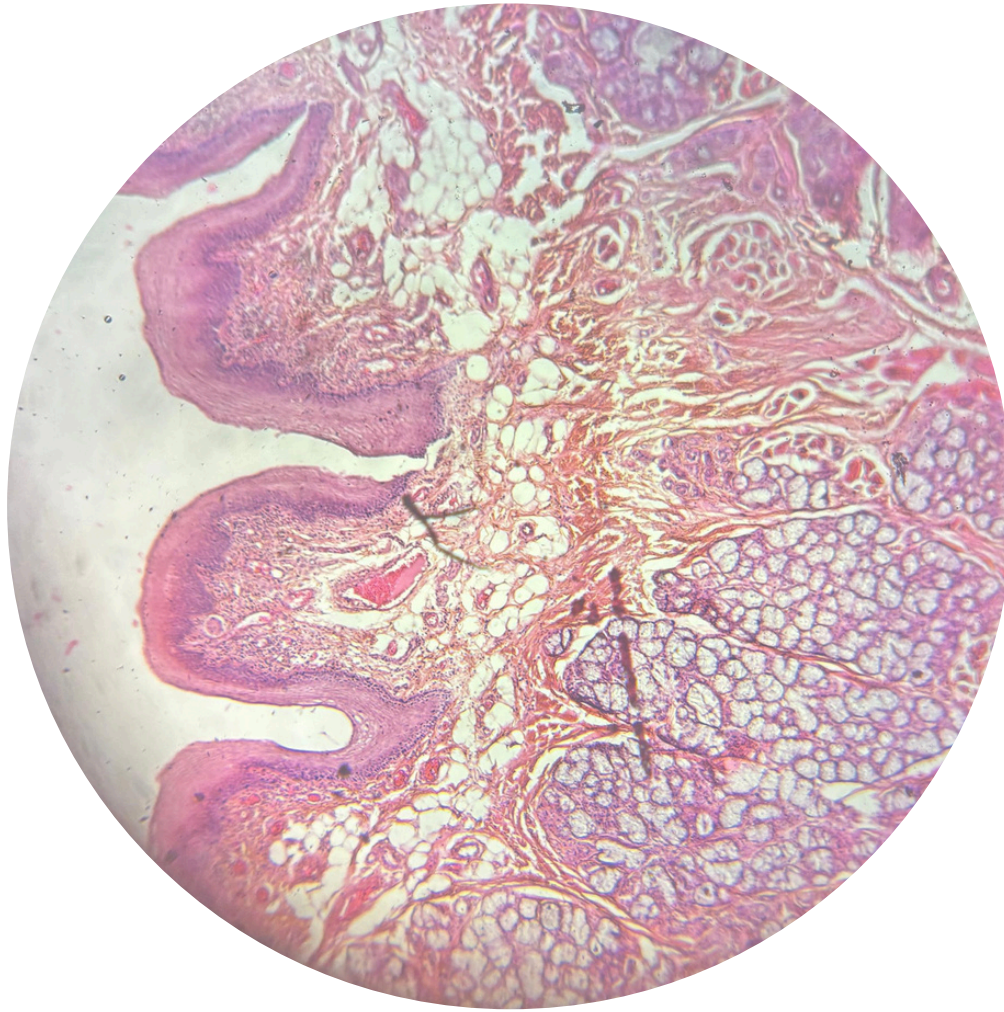
FALLOPIAN TUBE

- External serous coat- connective tissue and peritoneum.
- Middle muscular coat - outer longitudinal and inner circular fibres
- Inner mucous coat- primary, secondary and tertiary longitudinal folds
- Epithelium - simple columnar ciliated with peg shaped non ciliated secretory cells
- Lamina propria with connective tissue, blood vessels, lymphatics and nerves.



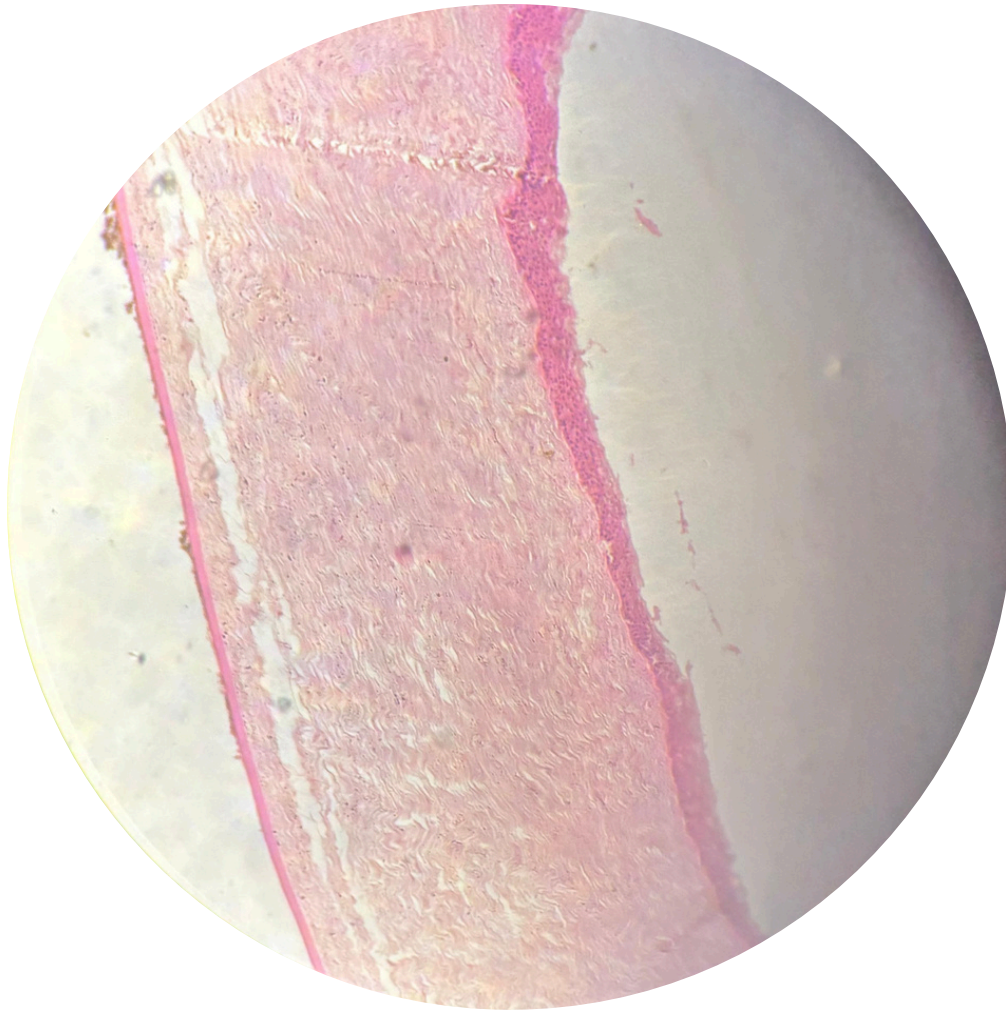
MAMMARY GLAND

- Gland is Full of acini with minimum amount of connective tissue
- Some acini are lined tall columnar cells, others by low cells
- Ducts are also seen but they are fewer in number as compared to the acini
- Interlobular connective tissue becomes scanty in nature
- The epithelium of acini doesn't show infoldings



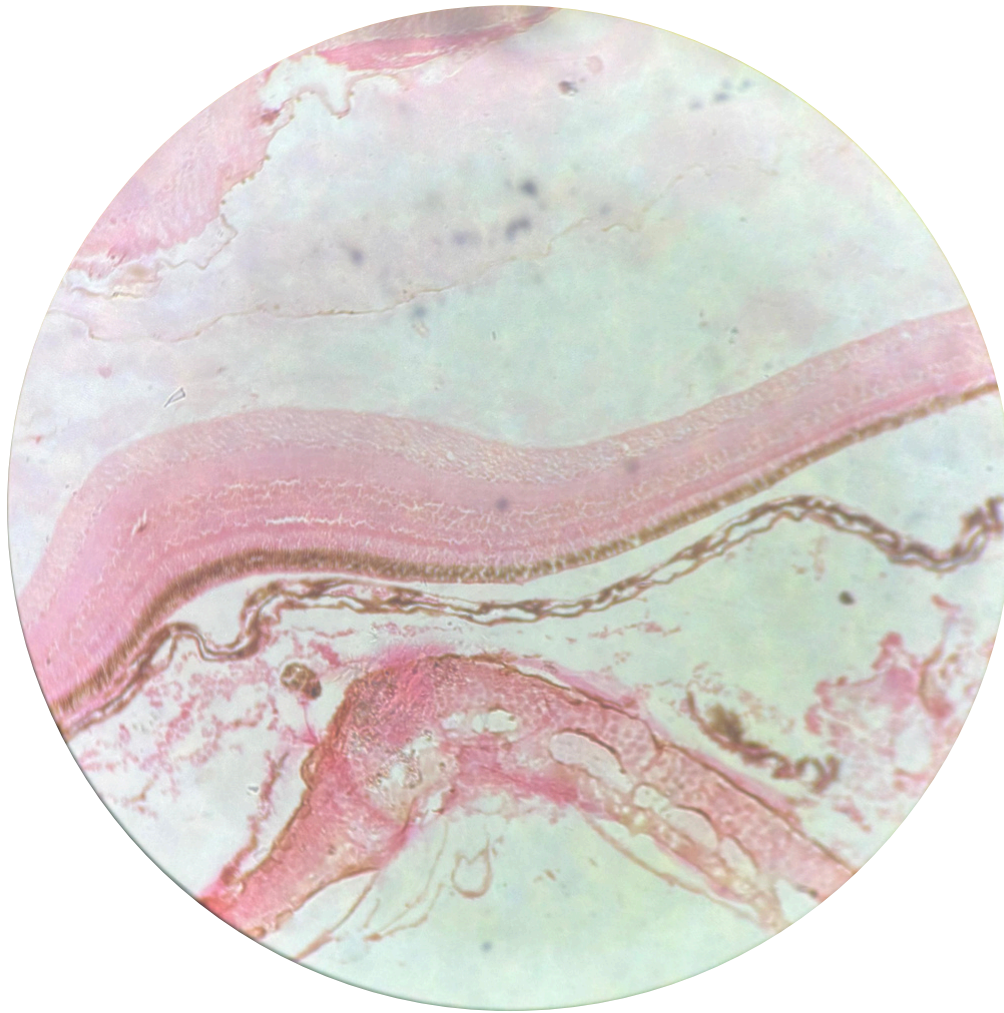
TONGUE

- Consists of interlacing bundles of striated muscles that run in different directions and cross one another
- Musculature of tongue is covered by stratified squamous non keratinised epithelium
- Epithelium of ventral surface is thinner compared to that of dorsal surface
- In the anterior 2/3 rd on the dorsal surface the underlying Corium consists of collagen and elastic fibres which project upwards forming papillae; whereas in the posterior 1/3rd it presents only irregular bulges of lymphoid tissue



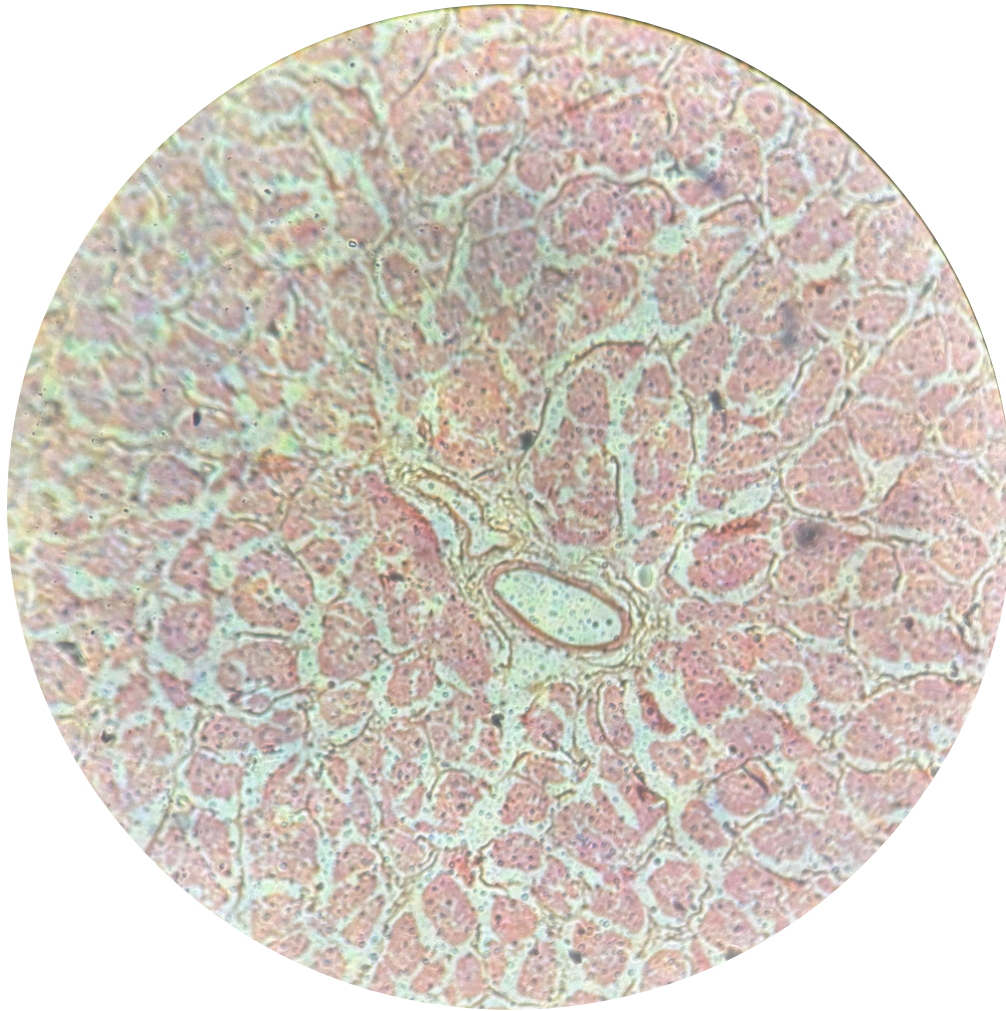
CORNEA

- Has 5 layers - Corneal epithelium, Bowman's membrane, Substantia propria, Descemet's membrane, Endothelium of cornea
- Corneal Epithelium-non keratinized stratified squamous epithelium covers anterior surface of cornea
- Corneal Stroma/substantia- Propria composed of parallel bundles of collagen lamellae. In space among the bundles, nuclei of corneal cells are seen.



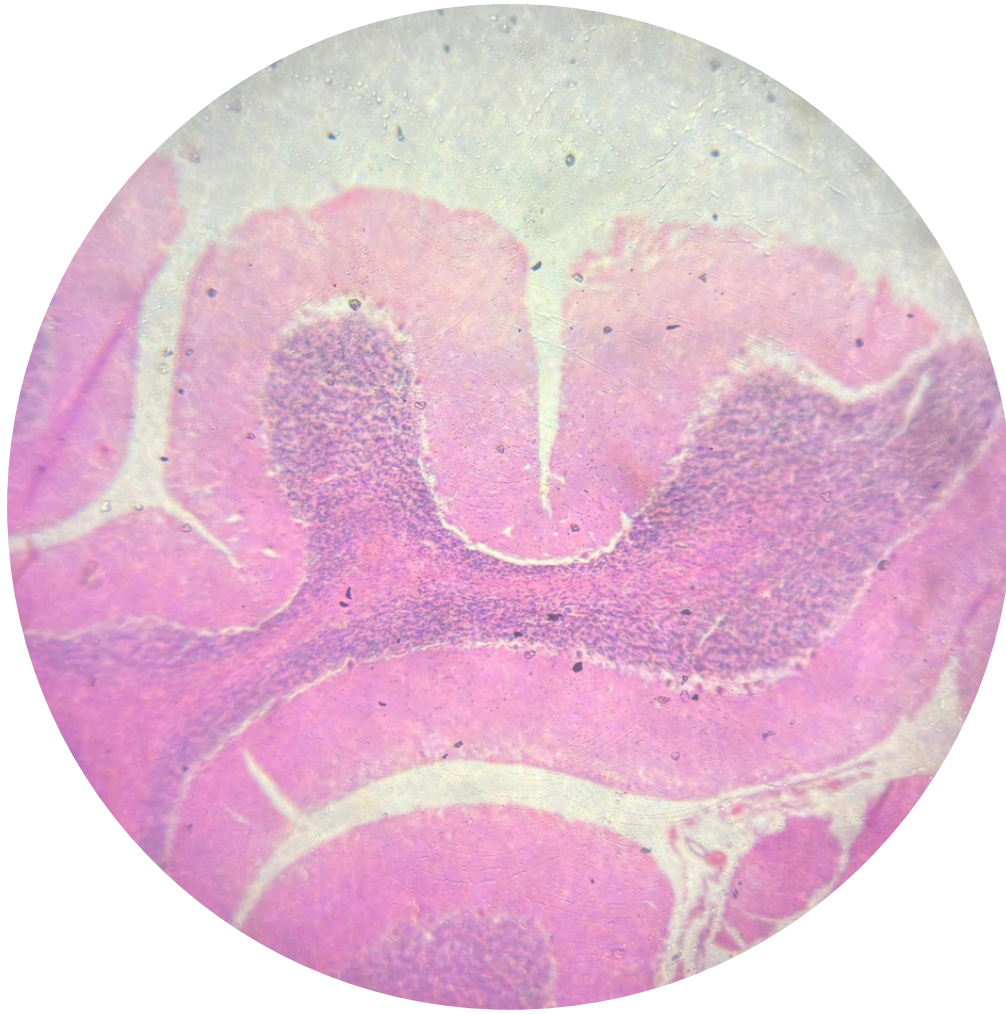
RETINA

- Outer pigment epithelium[cuboidal cells with spherical nucleus] and cytoplasm filled with dark brown pigment
- Layer of rods and cons
- outer limiting membrane
- outer nuclear layer contain nuclei of rods and cons
- outer plexiform layer with axon of rods and cons synapse with dendrites of bipolar and horizontal cells
- Inner nuclear layer-nuclei of bipolar, horizontal and amacrine cell
- Inner plexiform layer
- Ganglion cell layer-large multipolar with large round nuclei
- Nerve fibre layer
- Inner limiting membrane



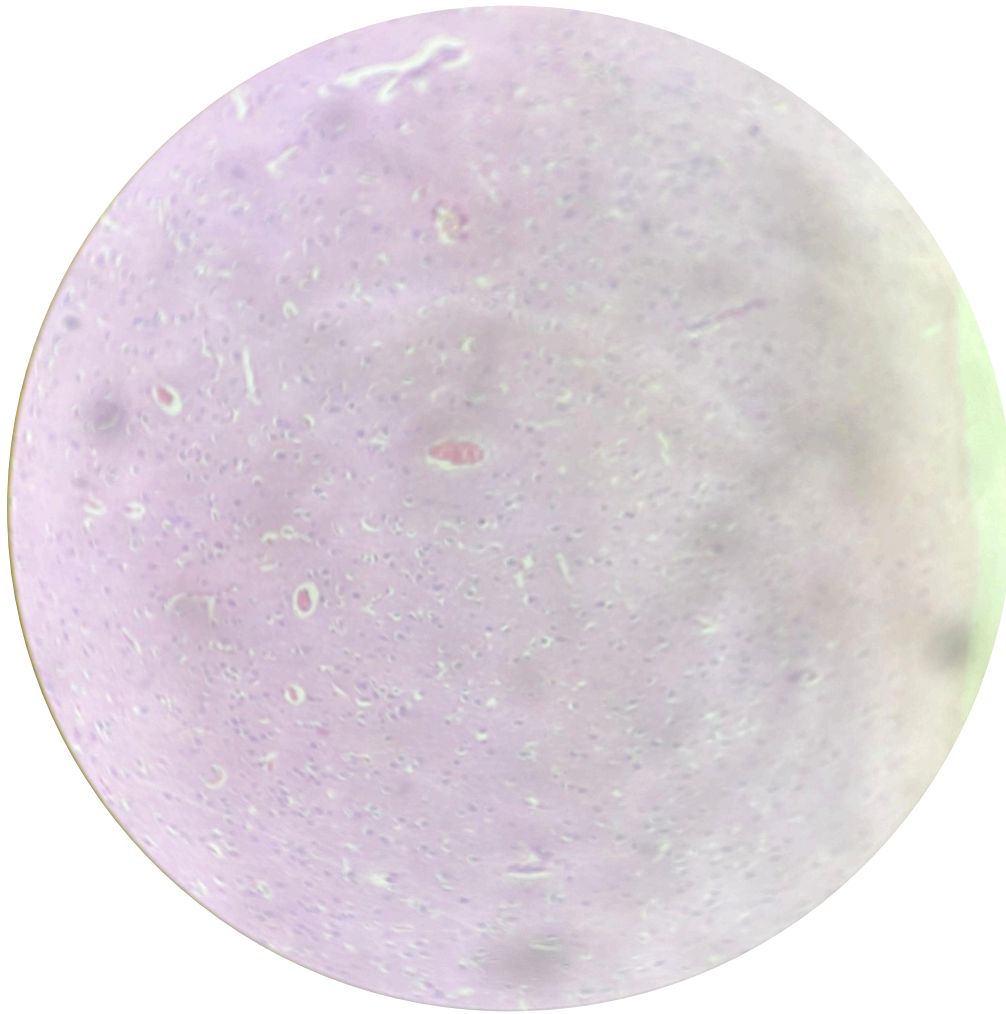
OPTIC NERVE

- Covered by dura mater, arachnoid mater and pia mater
- Pial septa divides nerve into bundles/fascicles
- Each bundle has myelinated nerve fiber axons of ganglion cells of retina with supporting astrocytes
- Presence of central artery and central vein



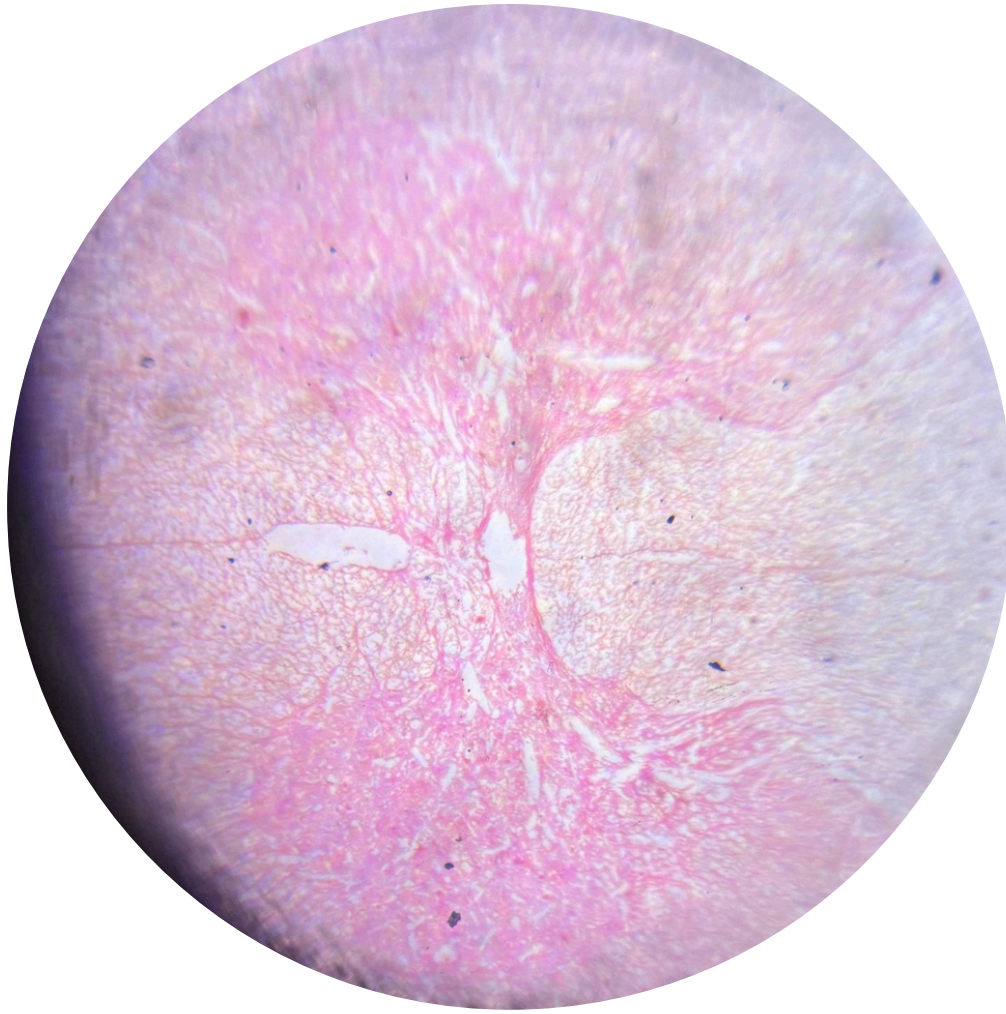
CEREBELLUM

- Presence of leaf like folia
- Cortex - 3 layers
- Molecular layer-stellar and basket cell
- Purkinje cell layer-purkinje cell (flask shape)
- Granular layer- granular cells and Golgi cells



CEREBRUM

- Presence of giant pyramidal cells
- Presence of outer grey matter and inner white matter
- Presence of six layers in the outer grey matter.
- Layers from outside to inside are
 1. Molecular layer-transverse fibers and neurons
 2. outer granular layer -stellate cells
 3. outer pyramidal layer -pyramidal cells,some stellate and basket cells
 4. Inner granular layer
 5. Inner pyramidal layer
 6. Multiform or polymorphic layer



SPINAL CORD

- Section shows central canal lined by ependyma
- Central canal has surrounding grey matter and outer white matter
- Covered by outer layer of pia mater
- White matter consists of myelinated nerve fibres