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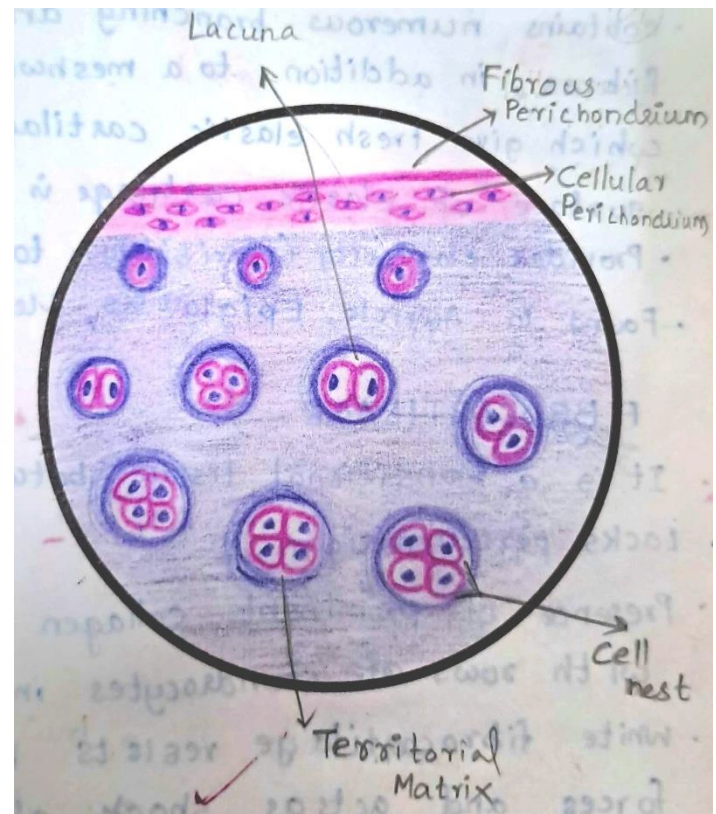
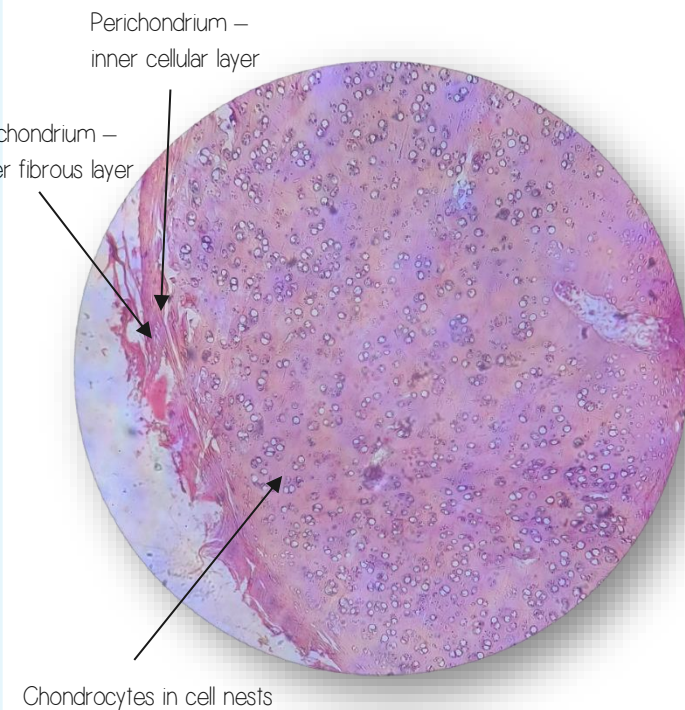
GENERAL HISTOLOGY

1. Hyaline cartilage
2. Elastic cartilage
3. Fibrocartilage
4. Bone T.S
5. Bone L.S
6. Skeletal muscle
7. Smooth muscle
8. Cardiac muscle
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11. Large sized vein
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14. Spinal ganglion
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25. Umbilical cord

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36. Ovary
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38. Uterus – Secretory
39. Fallopian tube

GENERAL HISTOLOGY

1. HYALINE CARTILAGE



Salient Features

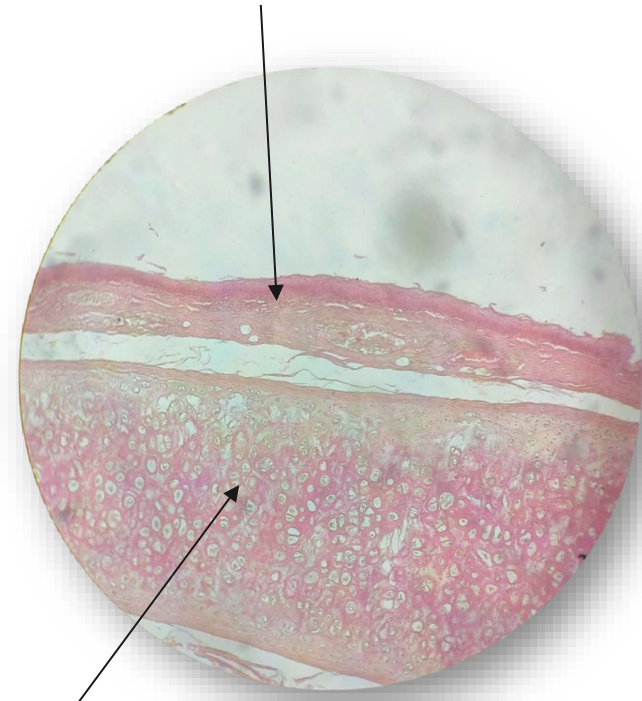
1. Matrix appears homogenous and glassy.
2. Chondrocytes present in groups called Cell nest.
3. Perichondrium surrounding the cartilage presents an outer fibrous & inner cellular layer.

Seen in: Tracheal rings, large and smaller bronchi, costal cartilages, thyroid, cricoid, base of arytenoid cartilage, articular cartilage, epiphysis, fetal cartilage

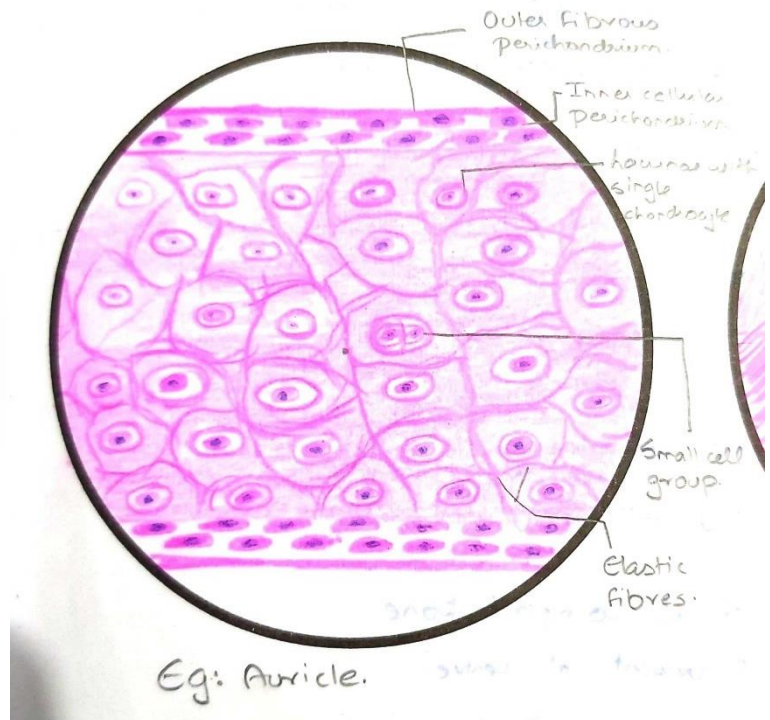
2. ELASTIC CARTILAGE

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Perichondrium



Elastic fibres



Salient Features

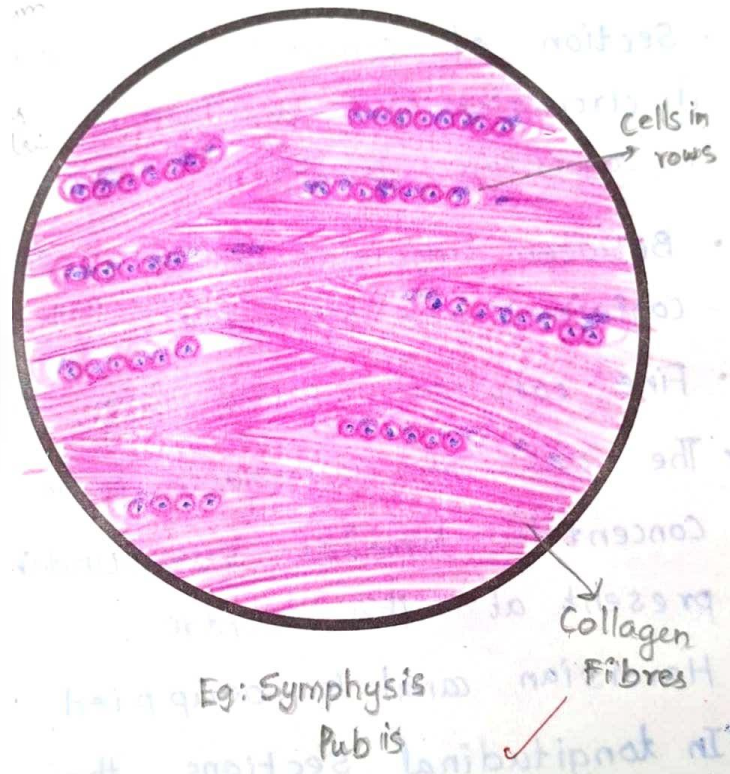
1. Presence of lacunae; each lacuna contains one chondrocyte.
2. Numerous branching and anastomosing elastic fibres surrounding the lacunae.
3. Surrounded by an Outer Fibrous & Inner Serous layers of Perichondrium.

Seen in: Auditory tube, epiglottis, cuneiform and corniculate cartilage, ear pinna

3. FIBROCARILAGE

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Collagen fibres arranged in bundles



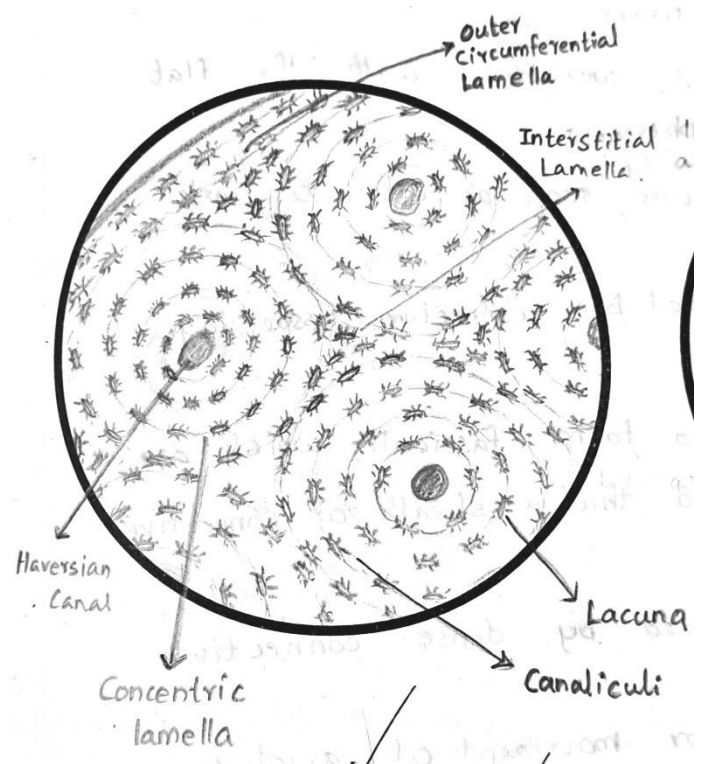
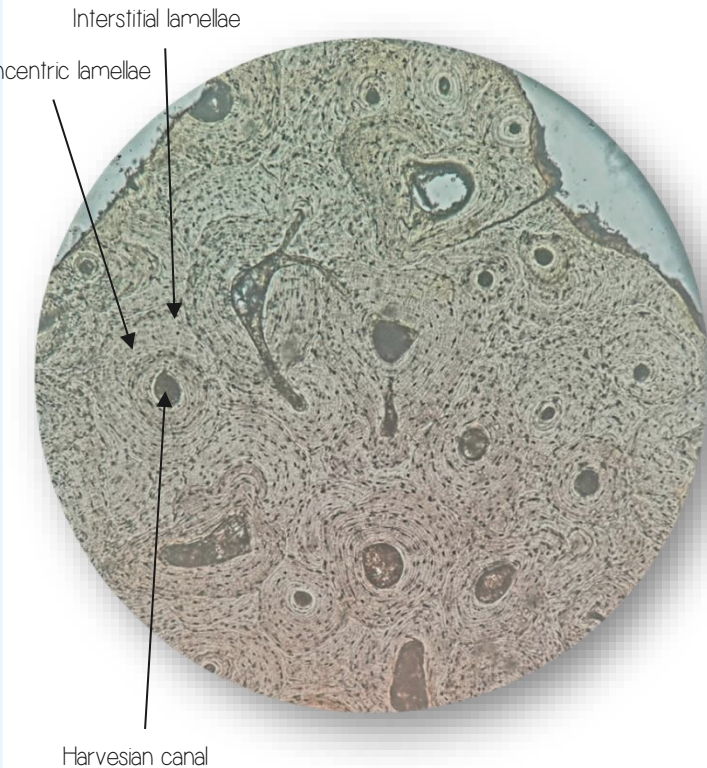
Salient features

1. Presence of prominent collagen fibres, arranged in bundles.
2. Rows of Chondrocytes present between the bundles.
3. Perichondrium is absent.

Seen in: Intervertebral discs, Symphysis pubis, Menisci of knee joint, Articular disc of sternoclavicular and temporomandibular joint.

4. BONE – T.S

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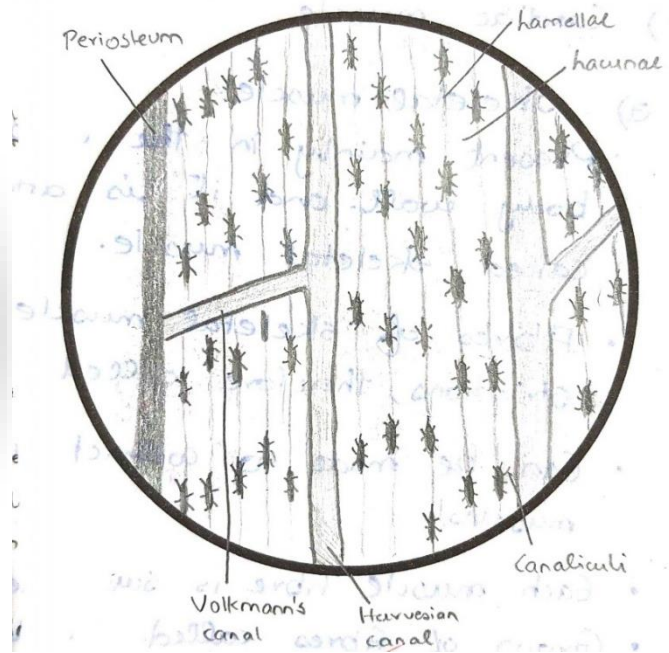
Salient Features

1. Three types of lamellae are seen:- (1) Circumferential, (2) Concentric , (3) Interstitial .
2. Small lacunae present between adjoining lamellae, each containing one osteocyte.
3. Haversian Canal present at the centre of concentric lamellae.

5. BONE – L.S

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Haversian canal

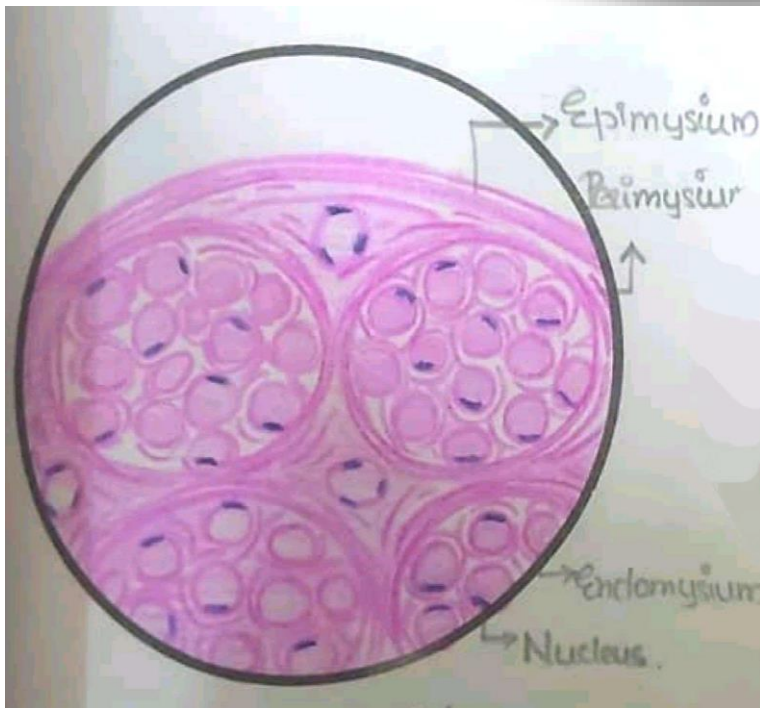
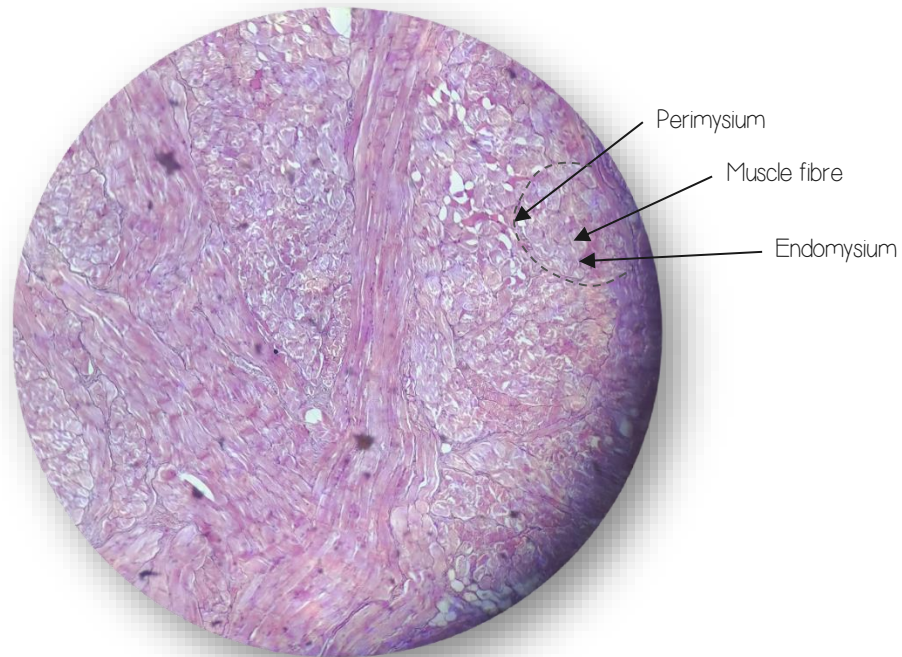


Salient Features

1. Lacunae seen between adjoining lamellae, each containing one osteocyte.
2. Volkmann's Canal seen, interconnecting Haversian Systems.
3. Fine canaliculi spreads from each lacuna.

6. SKELETAL MUSCLE

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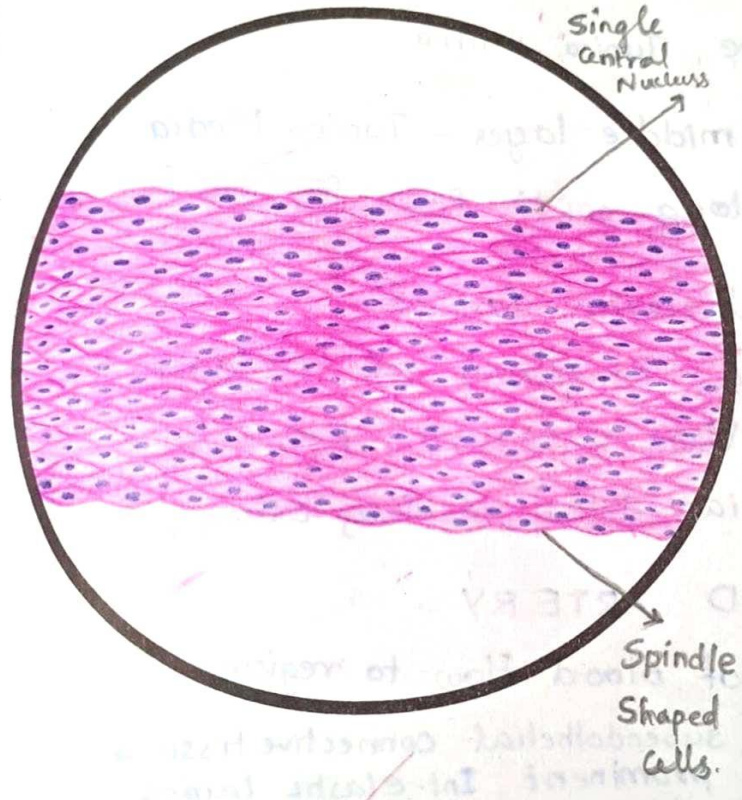
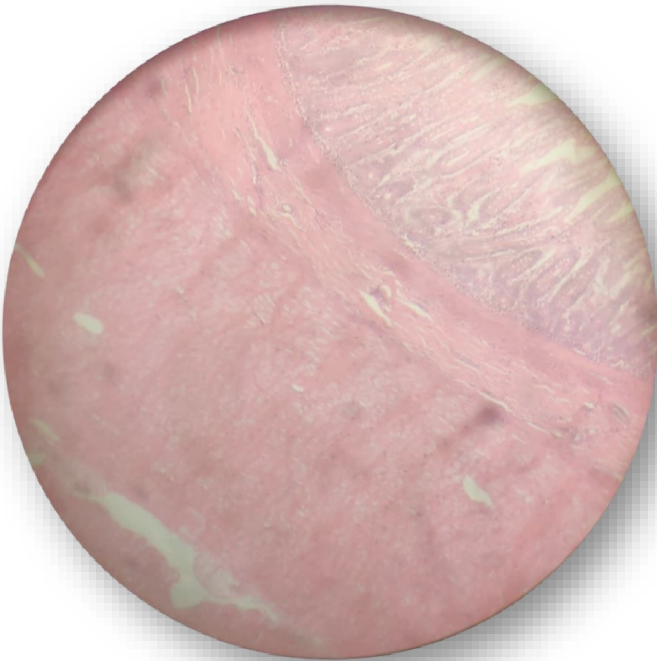


Salient Features

1. Long and parallel fibres, without branching.
2. Each muscle fibre is multinucleated; flat nuclei located peripherally.
3. Muscle fibre has transverse striations.

7. SMOOTH MUSCLE

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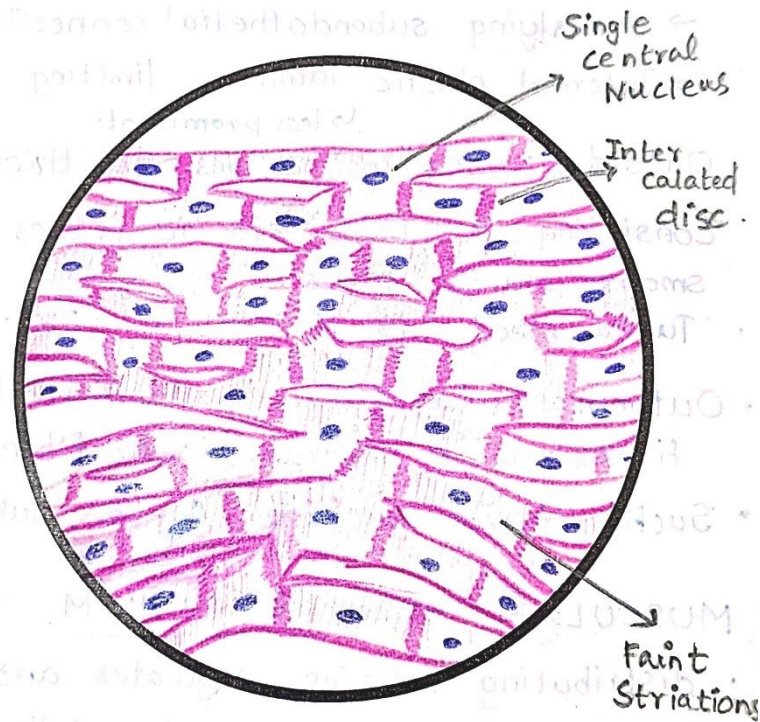
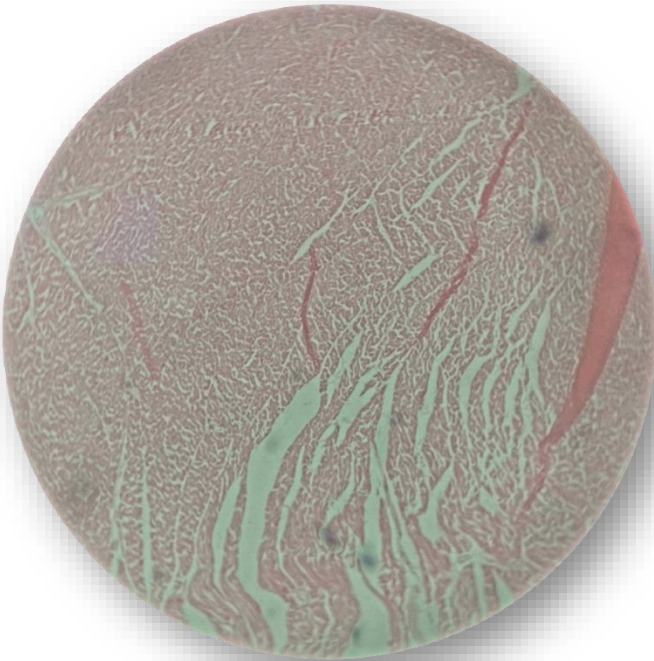


Salient features

1. Made of spindle shaped cells having broad centre and tapering ends.
2. Single, central, oval/elongated nucleus.
3. Muscle fibres are non-striated.

8. CARDIAC MUSCLE

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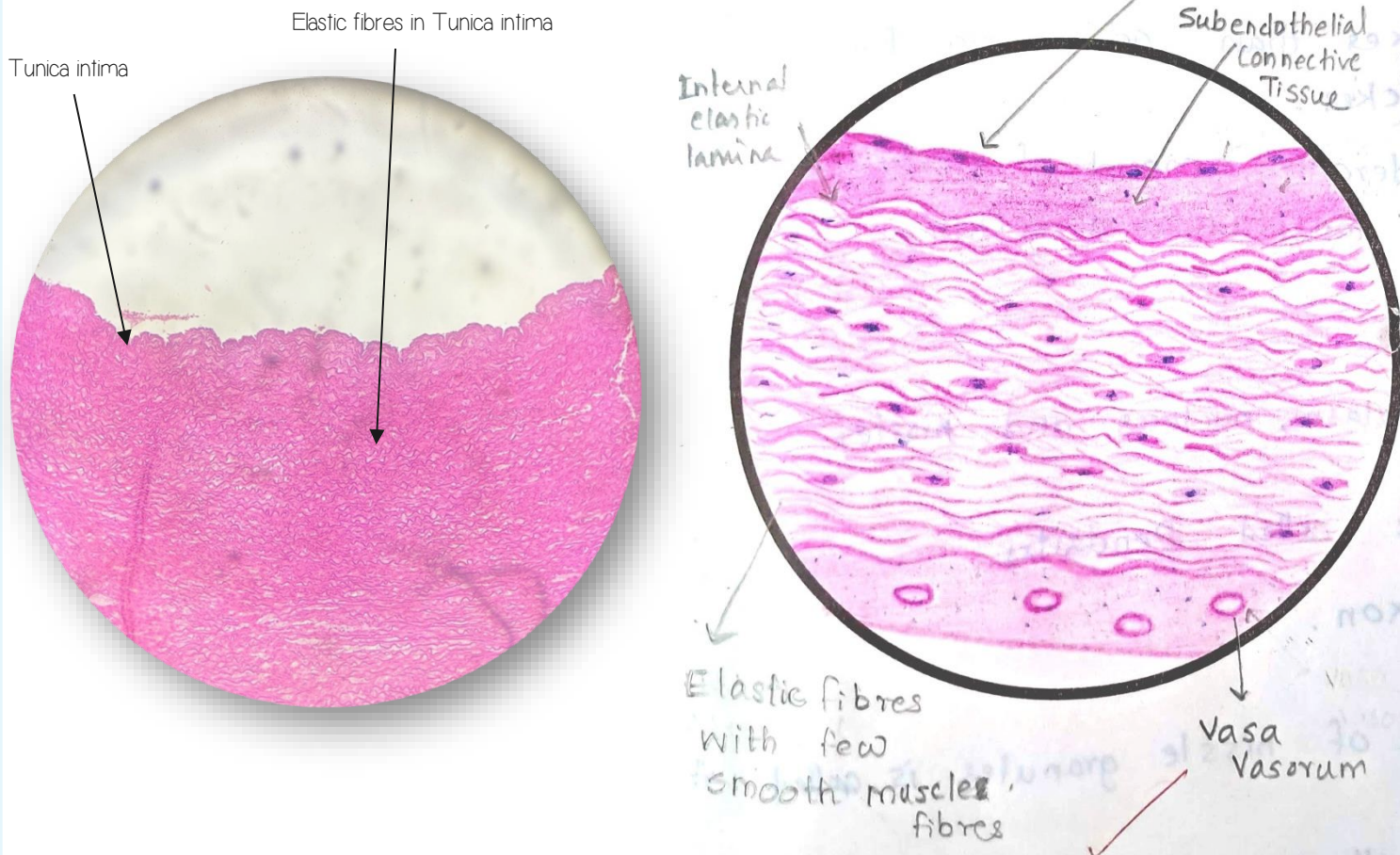


Salient features

1. Made of branched muscle fibres.
2. Each cell has single, central nucleus.
3. Adjacent cells separated from each other by intercalated discs.
4. Faint striations seen.

9. LARGE SIZED ARTERY

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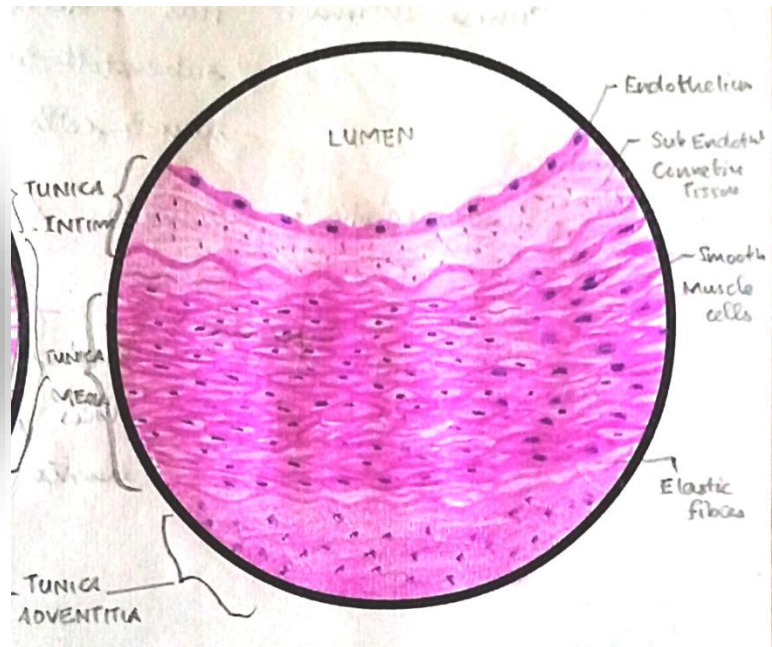
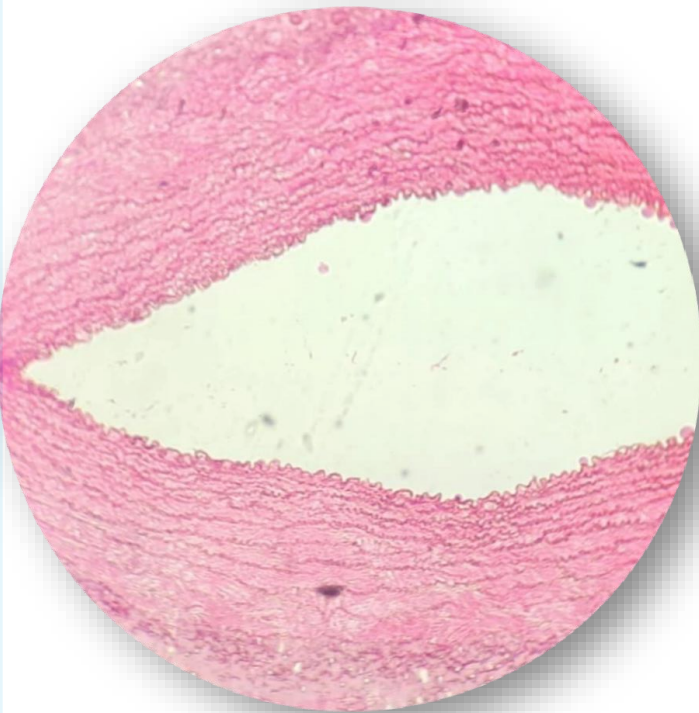


Salient features

1. Tunica media consists mainly of elastic fibres, along with few smooth muscle fibres.
2. Tunica intima consists of endothelium, subendothelial connective tissue and internal elastic lamina.
3. Internal Elastic Lamina is less prominent.
4. Tunica adventitia contains collagen fibres with several elastic fibres.

10. MEDIUM SIZED ARTERY

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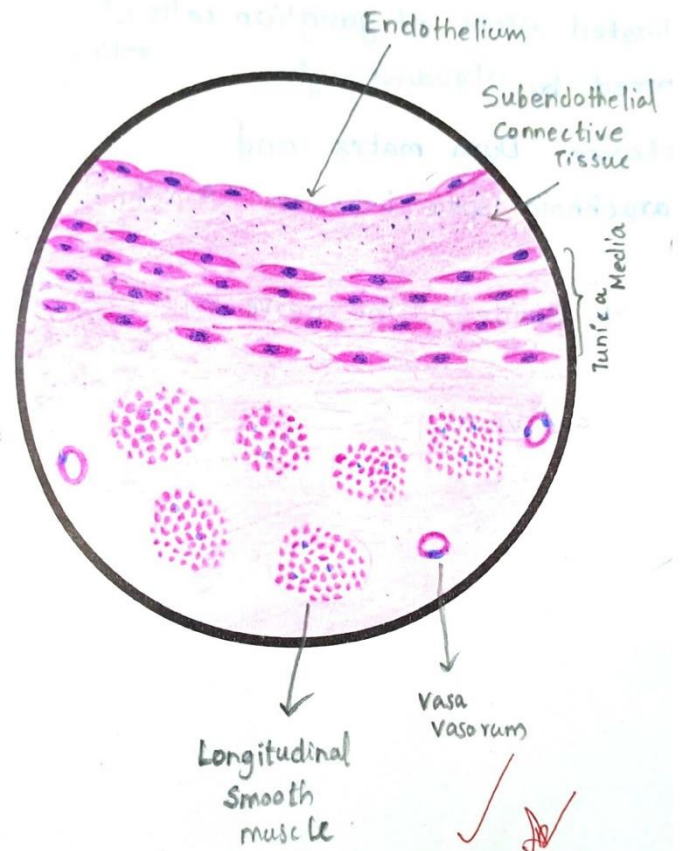
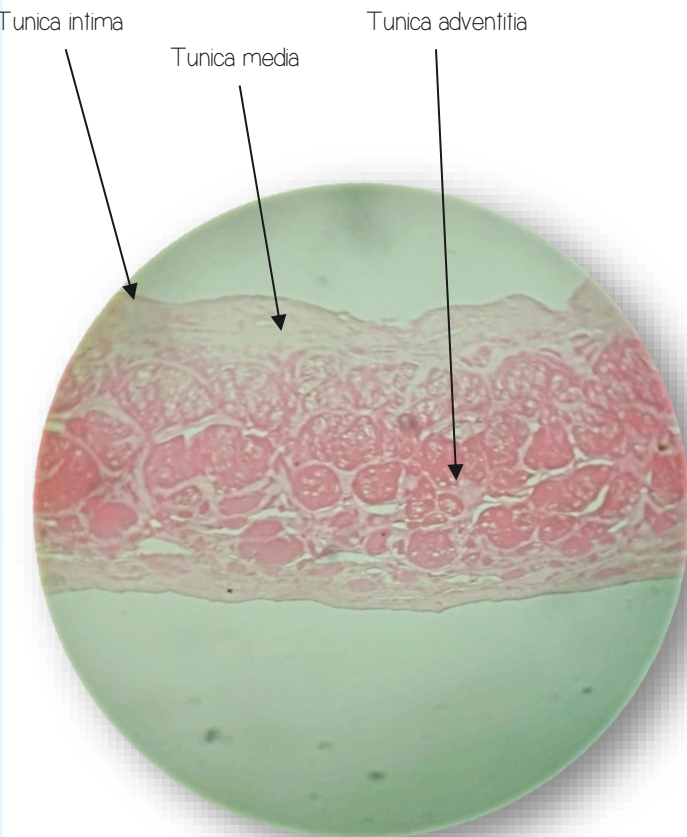


Salient features

1. Tunica media composed mainly of smooth muscle fibres, with few elastic fibres.
2. Internal Elastic Lamina is more prominent
3. Tunica adventitia contains collagen fibres and few elastic fibres.

11. LARGE SIZED VEIN

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Salient features

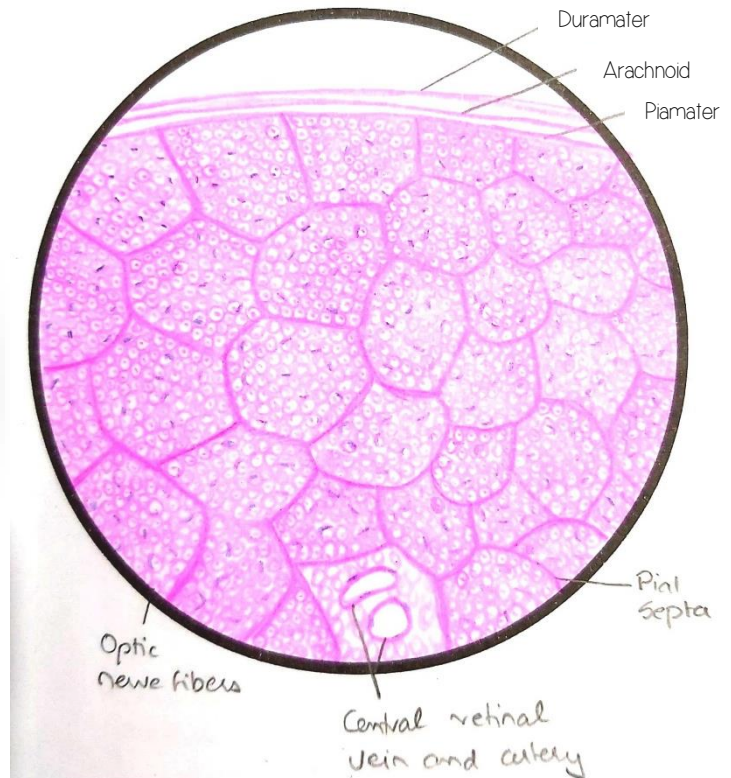
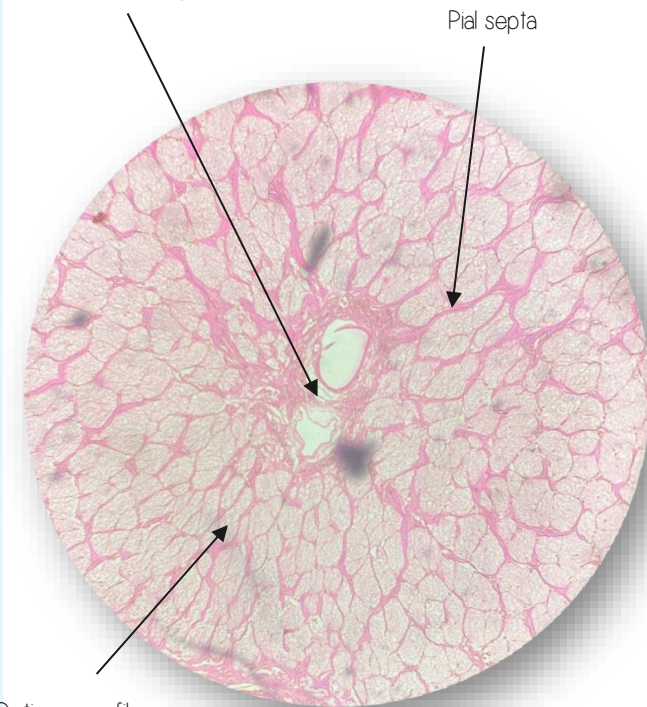
1. Vein has thinner wall and larger lumen compared to artery.
2. Tunica intima, media, and adventitia are not sharply demarcated.
3. Tunica adventitia contains longitudinally arranged smooth muscles fibres.

12. OPTIC NERVE

Central retinal artery and vein

Pial septa

Optic nerve fibres

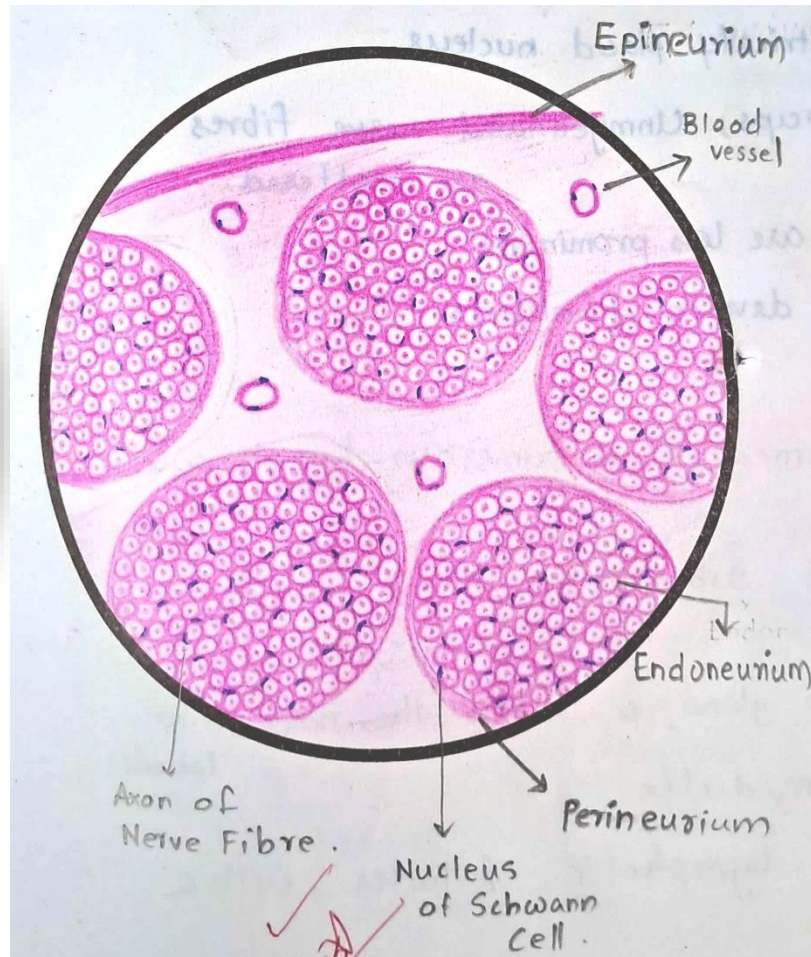


Salient features

1. Covered by meningeal layers – dura mater, arachnoid mater, and pia mater.
2. Pia mater sends pial septa which divides the optic nerve into bundles.
3. Presence of Central Retinal Artery and Vein.

13. PERIPHERAL NERVE

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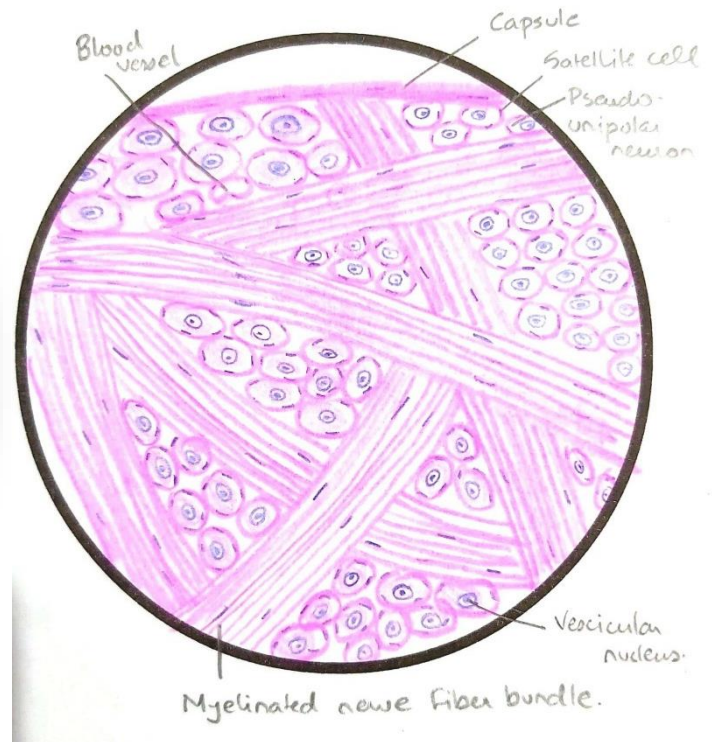
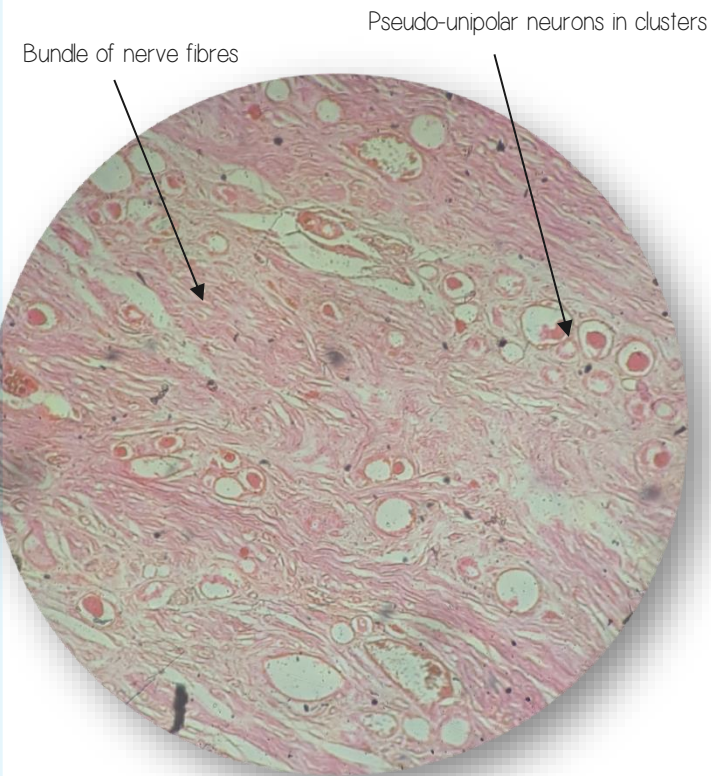


Salient features

1. Bundles of nerve fibres, surrounded by connective tissue coverings.
2. Each nerve fibre with its Schwann cells & basal lamina, is surrounded by Endoneurium.
3. Nerve fibre bundles/fasciculi covered by Perineurium.
4. Many fascicles are held together by endoneurium.

14. SPINAL GANGLION

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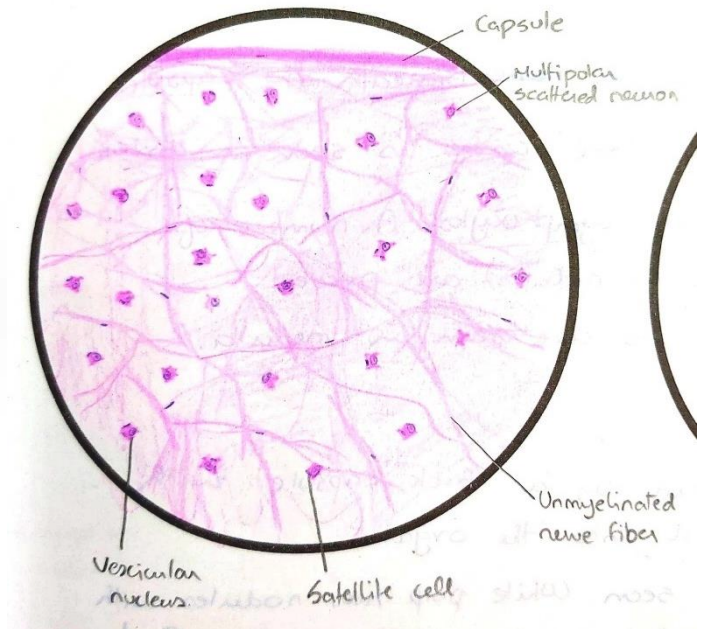
Salient features

1. Bundles of myelinated nerve fibres present.
2. Neurons are Pseudo unipolar; large cell body with central, vascular nucleus.
3. Cell bodies arranged in groups, are present between the nerve fibre bundles.
4. Cell body surrounded by prominent Satellite cells.

15. SYMPATHETIC GANGLION

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Multipolar dispersed neurons

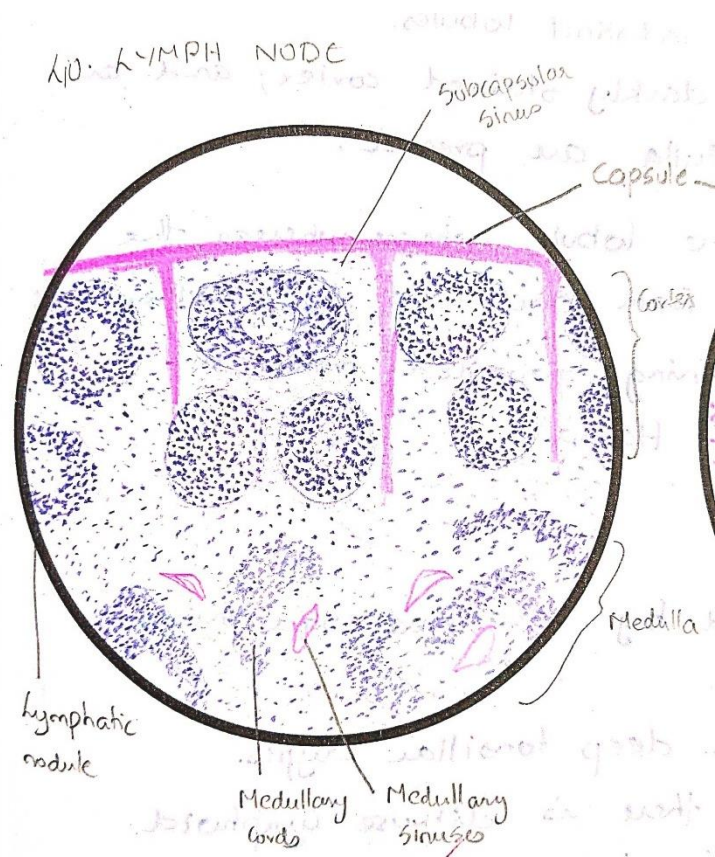
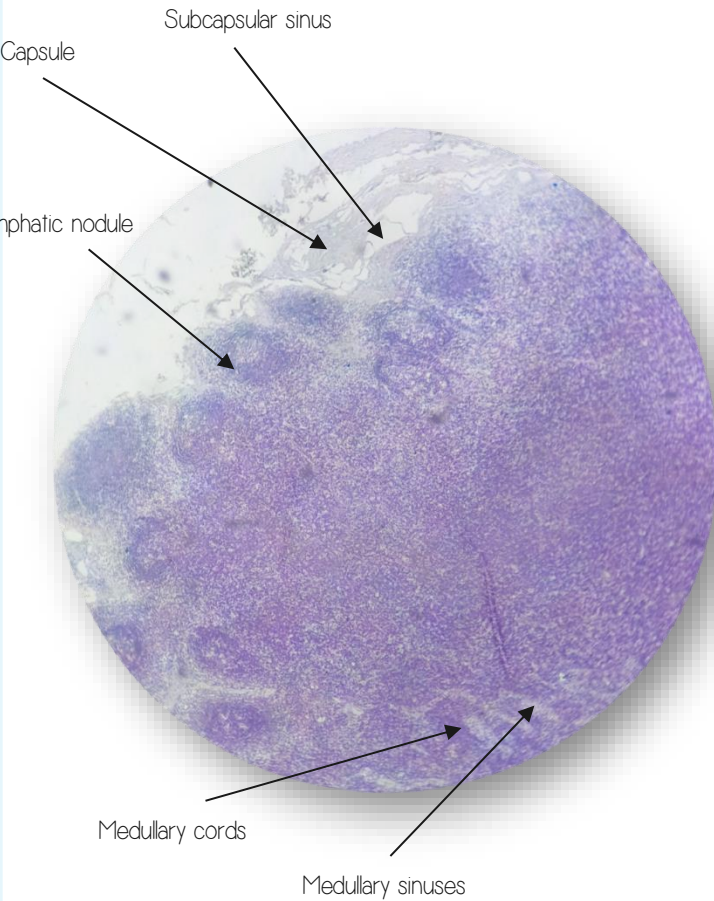


Salient features

1. Unmyelinated nerve fibres seen.
2. Multipolar type neurons, with eccentrically placed nucleus, are scattered between nerve fibres.
3. Satellite cells around the neuron are less prominent.

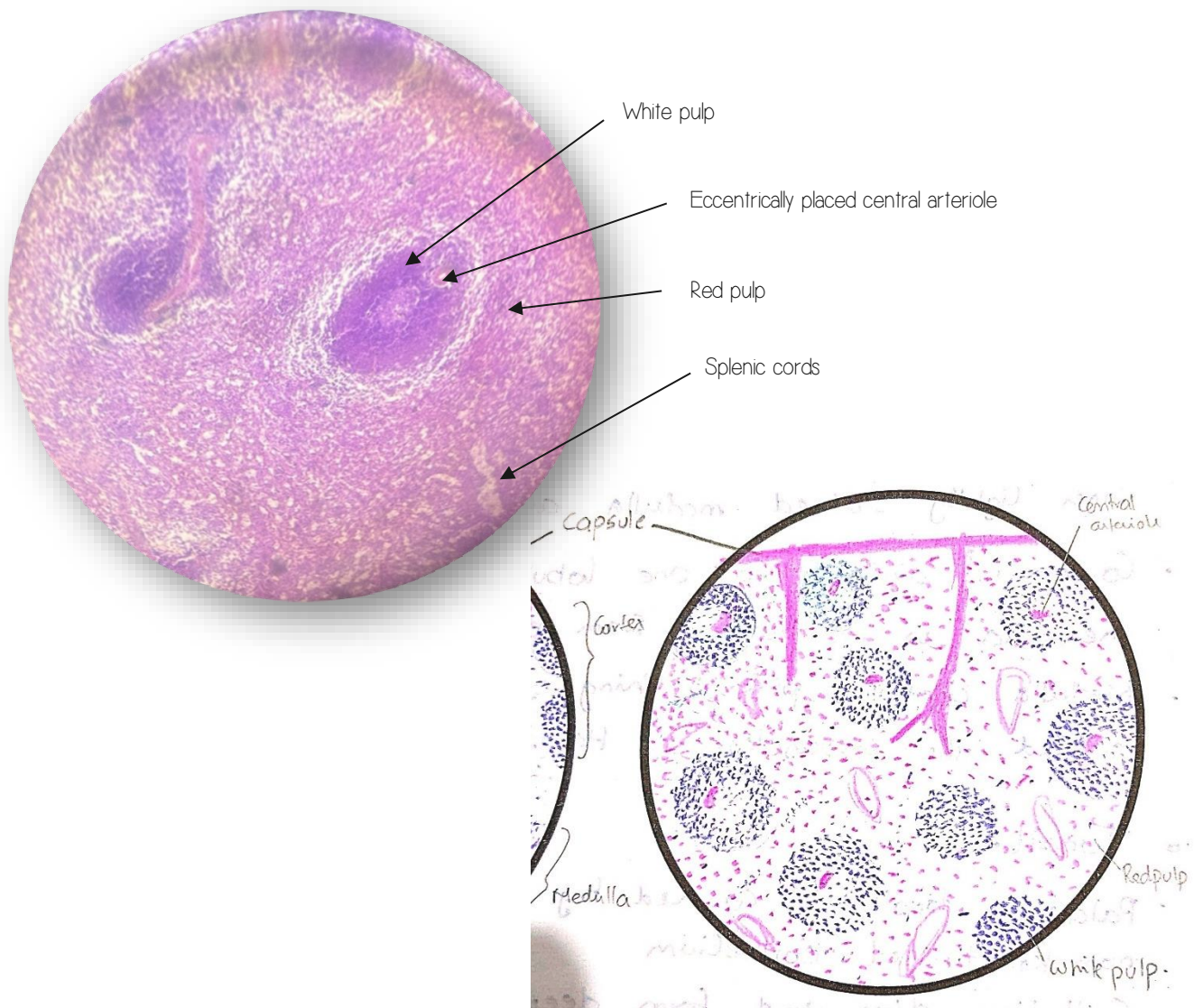
16. LYMPH NODE

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Salient features

1. Fibrous capsule surrounds the lymph node; sends trabeculae.
2. Lymph node has an outer cortex and inner medulla region.
3. Cortex has a number of rounded Lymphatic follicles, with a germinal centre.
4. Medulla composed of medullary cords with medullary sinuses.

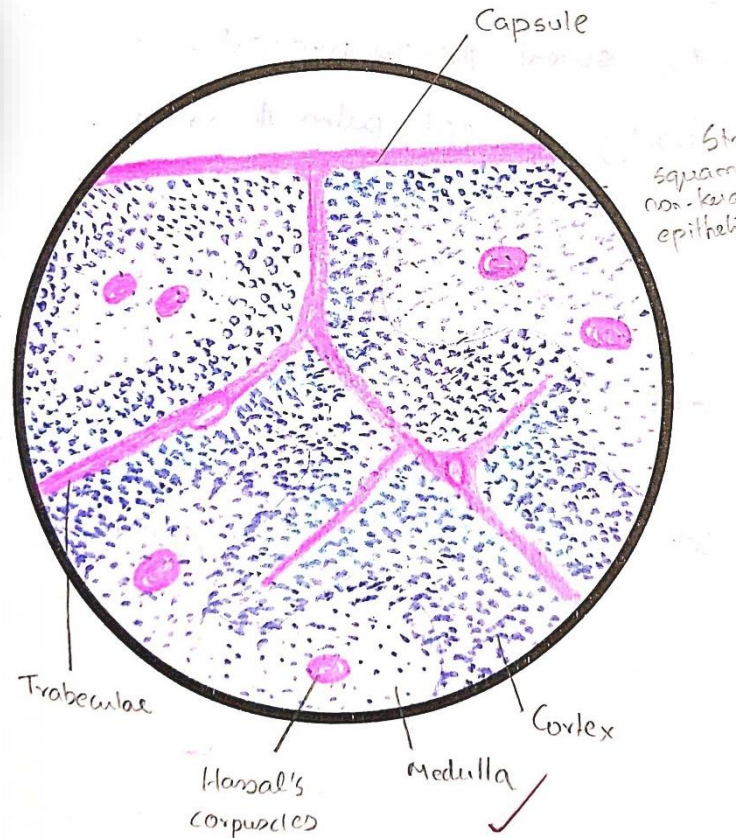
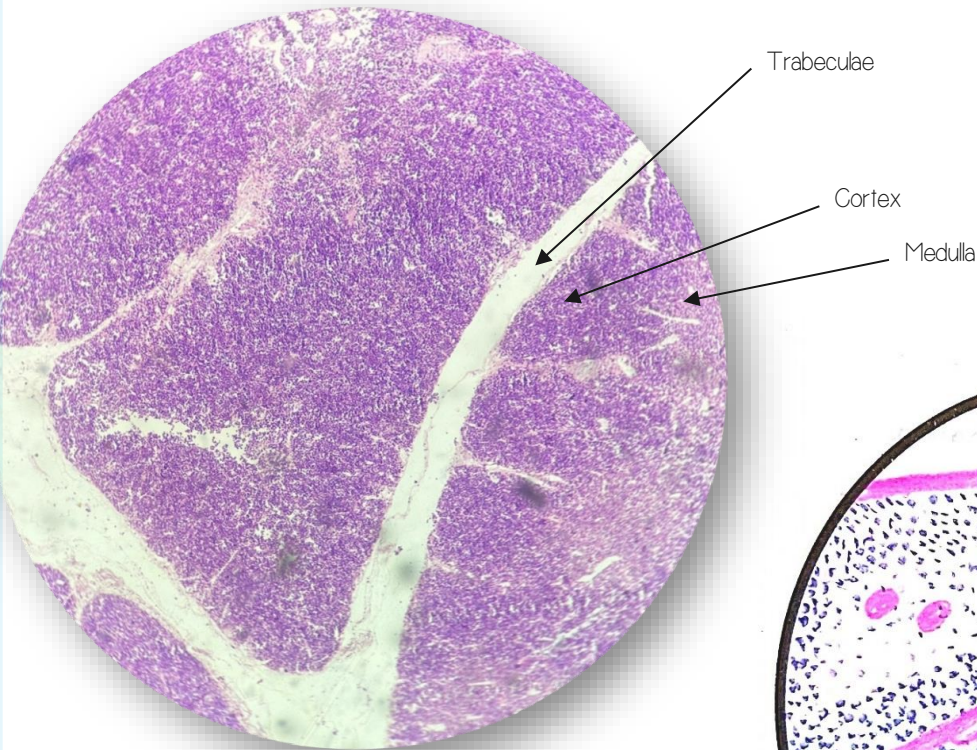


Salient features

1. Thick capsule surrounds the spleen.
2. The trabeculae extends from the capsule into the organ.
3. Arterioles in spleen are surrounded by aggregations of lymphocytes, thus forming the White Pulp.
4. Arteriole of White Pulp is placed eccentrically.
5. Matrix surrounding the White Pulp, appears red in colour, and is called Red Pulp.

18. THYMUS

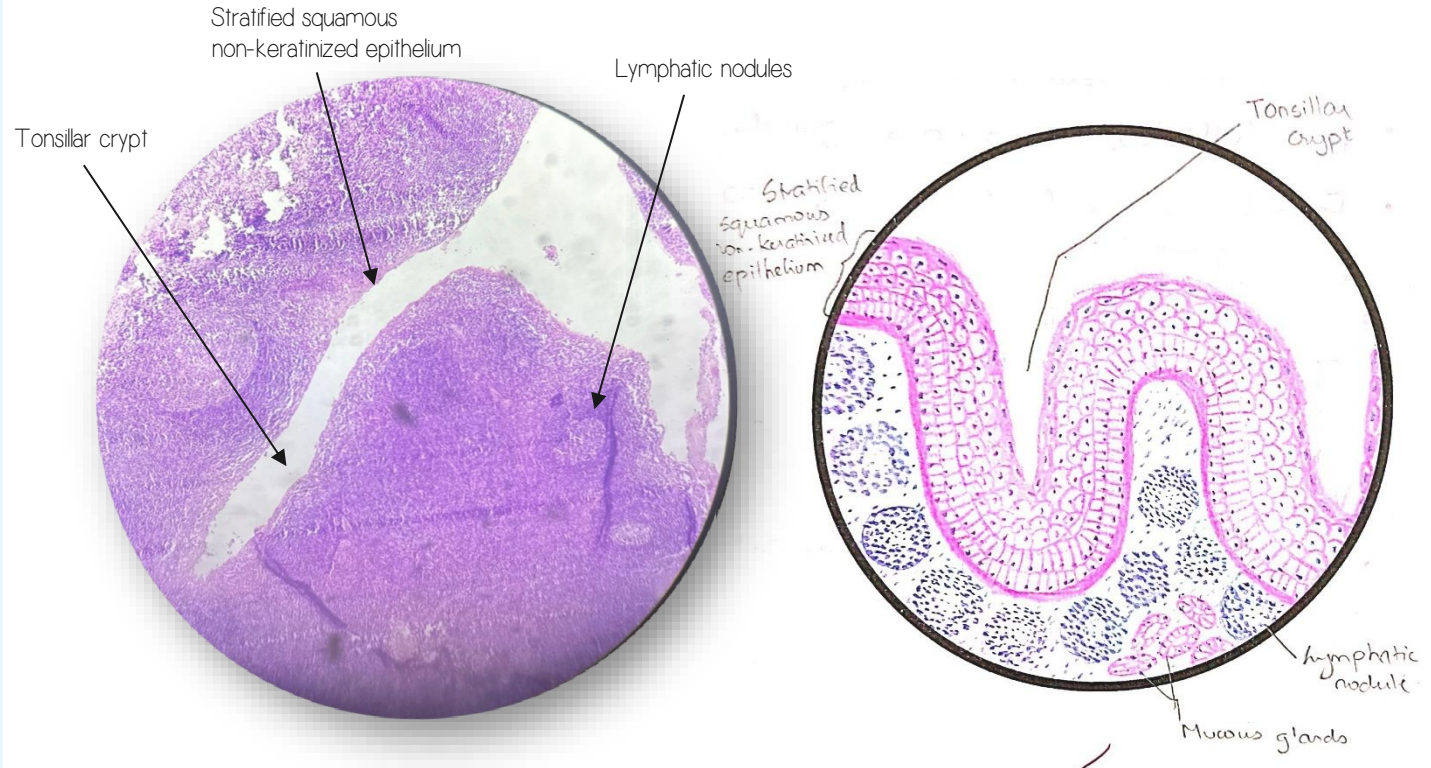
23



Salient features

1. Thymus is covered by septa extending into the organ and divides it into lobules.
2. Each lobule has an outer darkly stained cortex and an inner light medulla.
3. Medulla is continuous from one lobule to another, whereas cortex is confined to one lobule.
4. Medulla contains pink staining round masses called Hassall's Corpuscles.

19. TONSIL

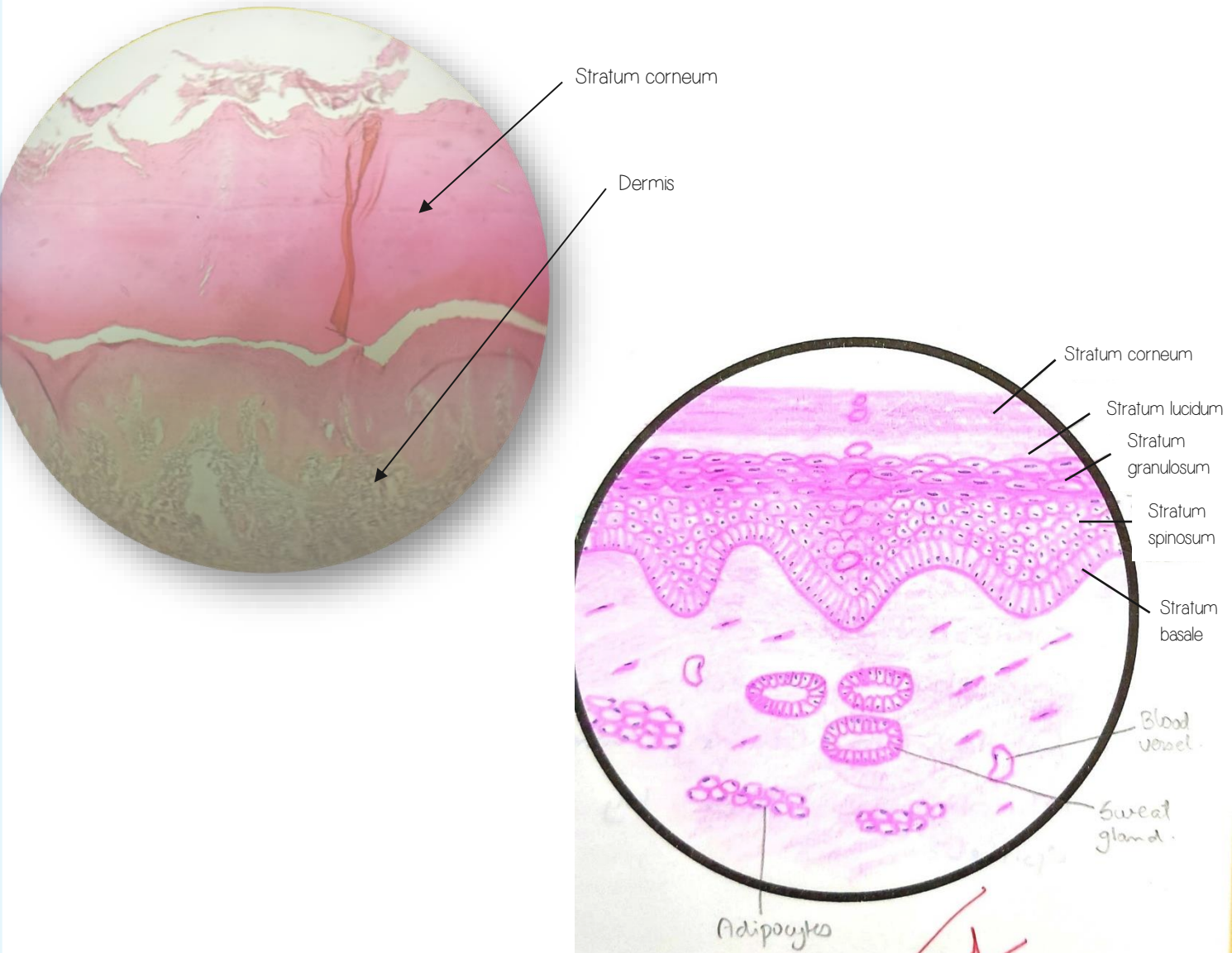


Salient features

1. Tonsil is covered by a layer of Stratified Squamous Non – Keratinized Epithelium.
2. Epithelium dips into the connective tissue subtends of the tonsil and forms deep Tonsillar Crypts.
3. Deep to epithelium, there is lymphoid tissue aggregates with lymphatic nodules.

20. THICK SKIN

25

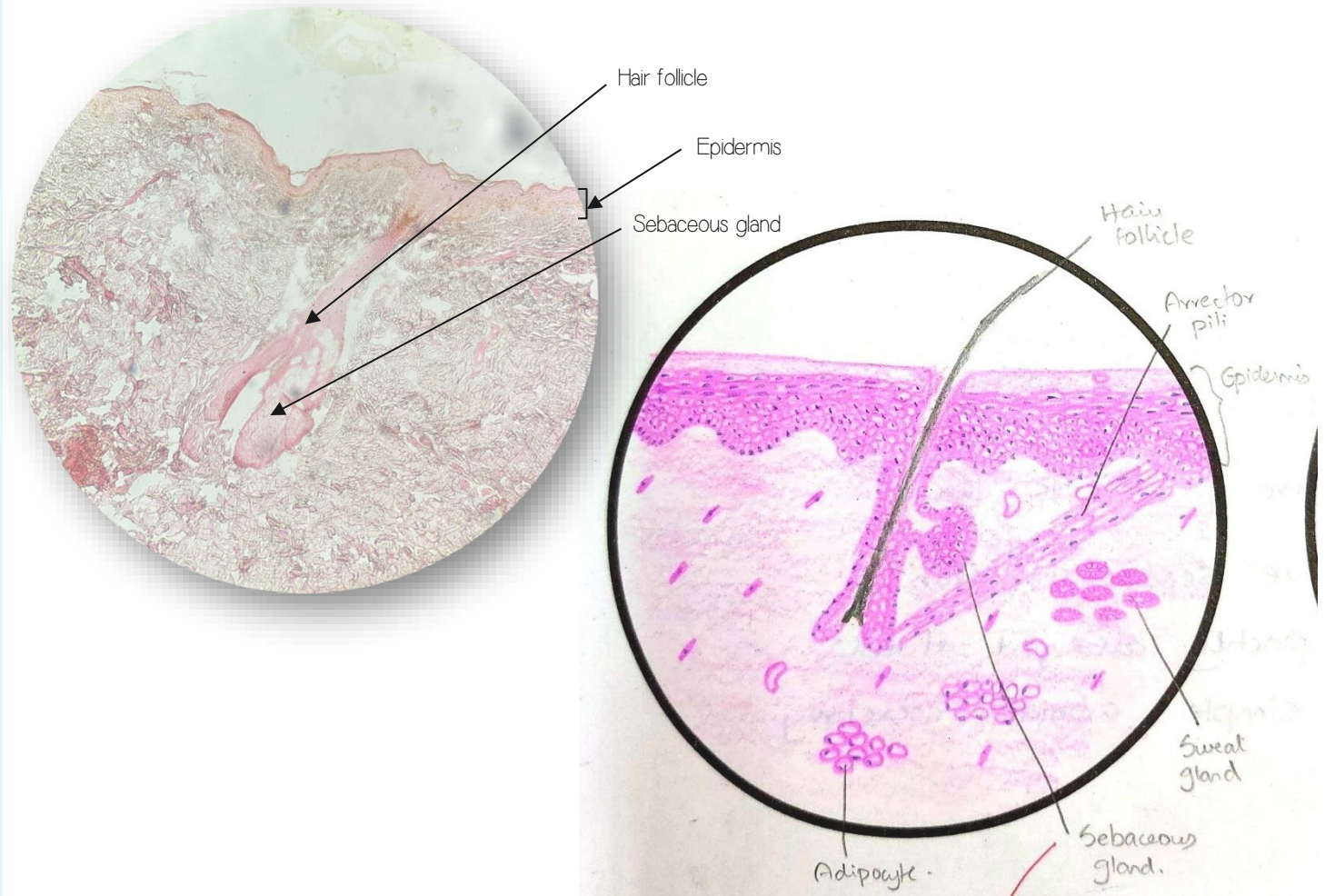


Salient features

1. Epidermis is thick, and composed of five layers: (a) Stratum Corneum, (b) Stratum Lucidum, (c) Stratum Granulosum, (d) Stratum Spinosum, & (e) Stratum Basale.
2. Dermis layer is thinner, and does not contain hairs and sebaceous glands.
3. Less number of sweat glands are present.
4. Downward projection of epidermis called Epidermal Papillae seen.
5. Upward projection of dermis called Dermal Papillae seen.

21. THIN SKIN

26

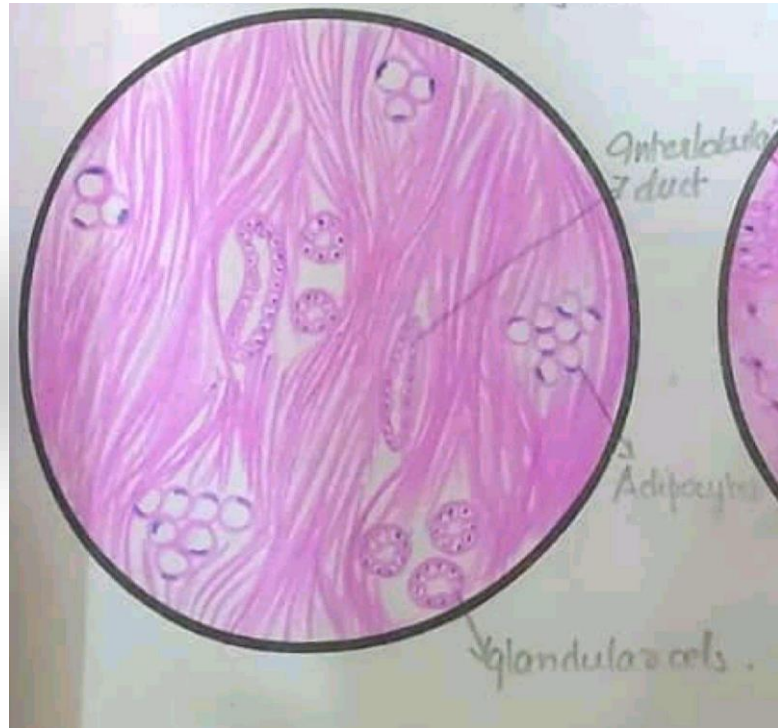
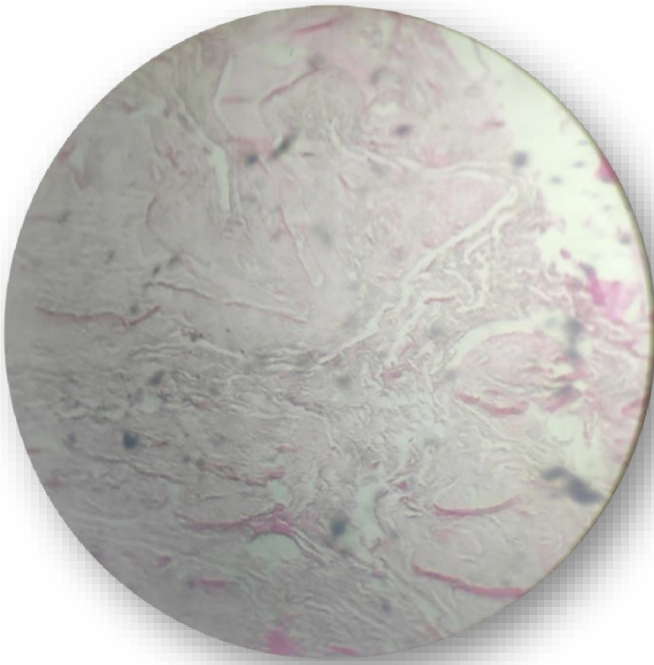


Salient features

1. Epidermis is thin, made of Stratified Squamous Keratinized epithelium, with only four layers, ie, Stratum Lucidum is absent.
2. Dermis layer is thicker, and contain hair follicles, sweat glands and sebaceous glands.
3. Arrector Pili muscle is present, made of smooth muscle fibres.
4. Ducts of sweat glands are seen.

22. MAMMARY GLAND (INACTIVE)

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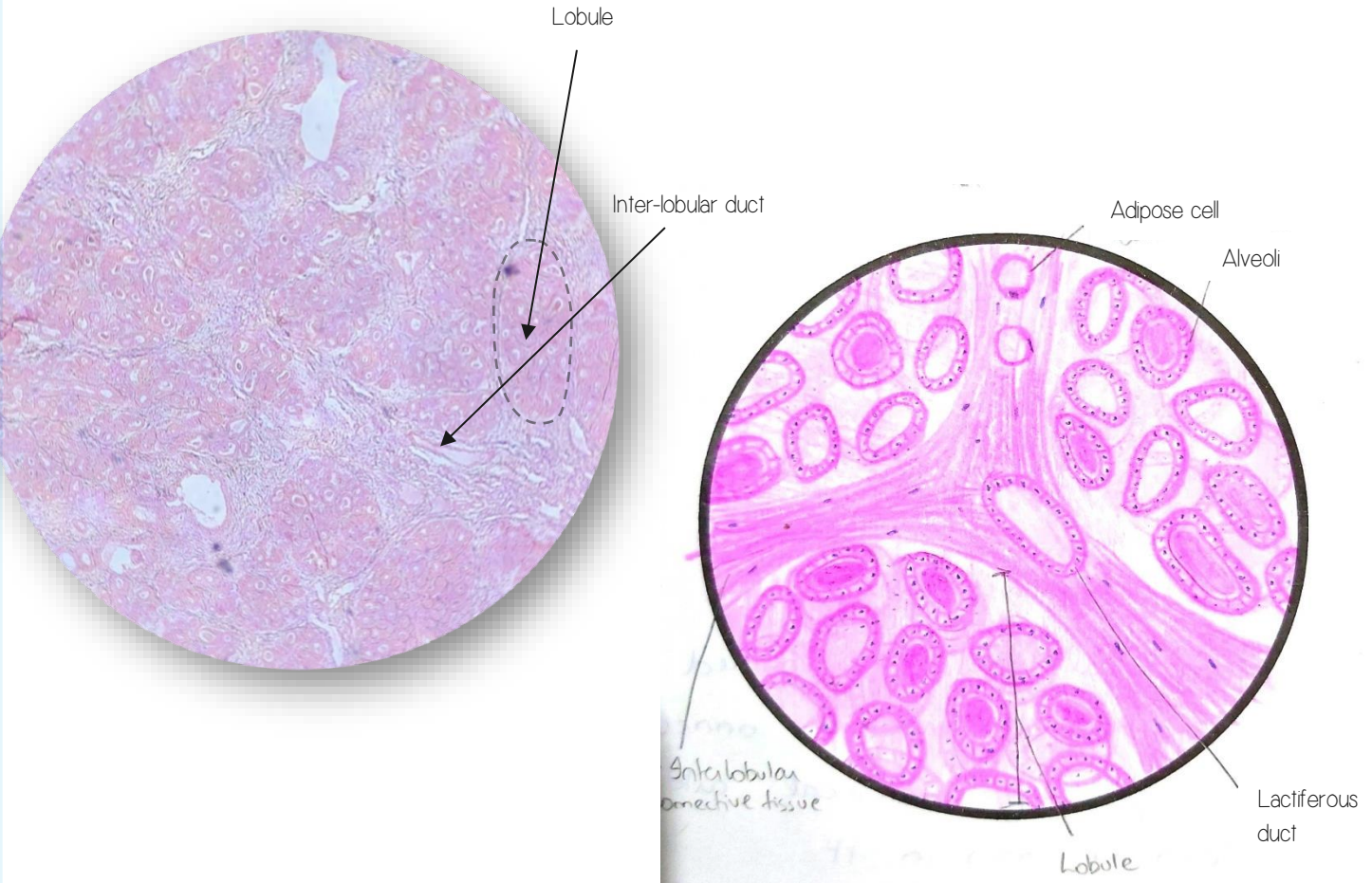


Salient features

1. Mammary gland is made of stroma and parenchyma.
2. The lobules of glandular tissue are separated by considerable quantity of connective tissue and fat.
3. Non lactating mammary glands contain more connective tissue and less glandular tissue.
4. Glandular lobules or alveoli are lined by cuboidal epithelium and have a wider lumen.

23. MAMMARY GLAND (ACTIVE)

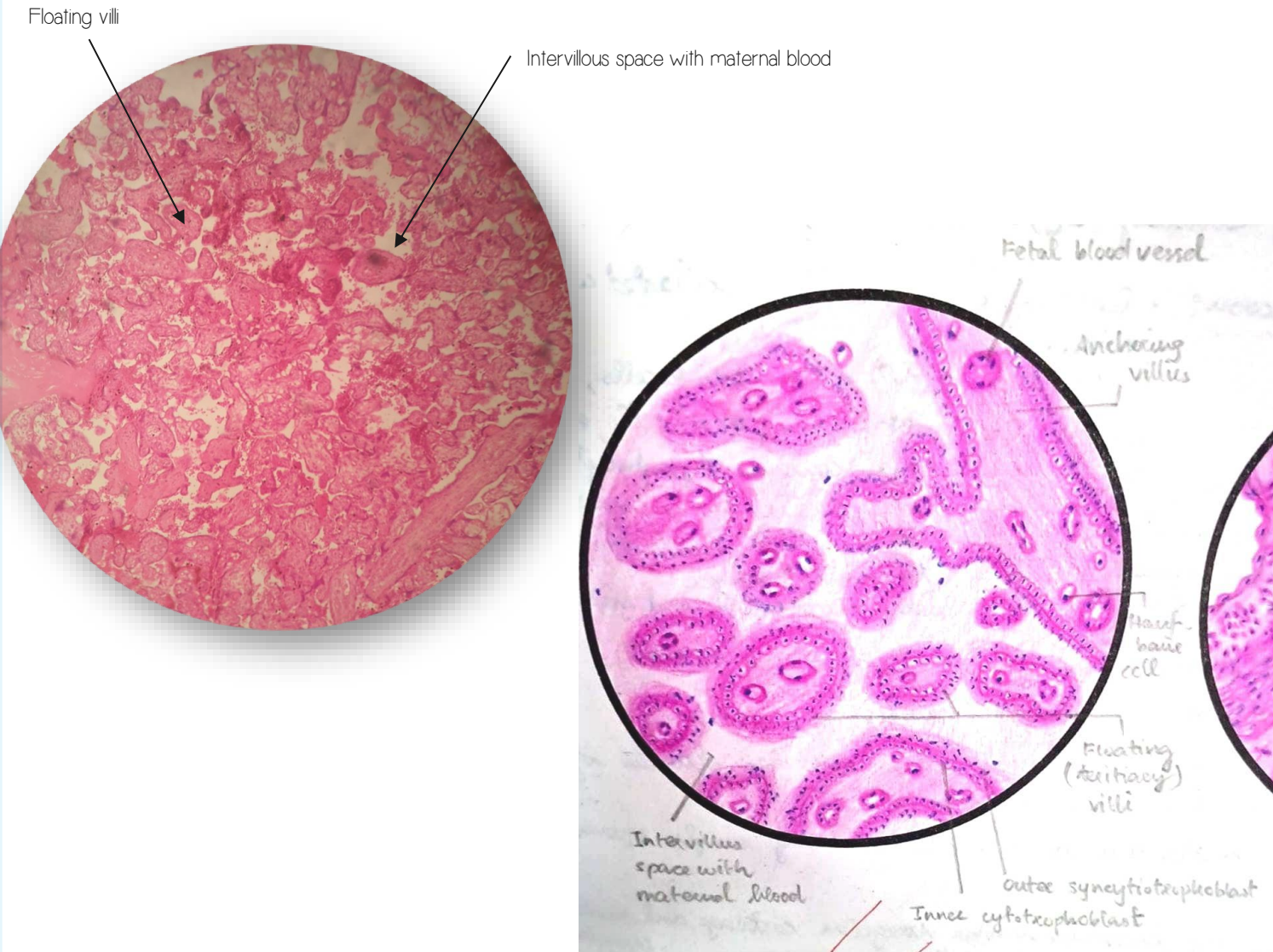
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Salient features

1. Lactating mammary glands has more glandular tissue and less connective tissue.
2. Inter lobular connective tissue septum is thin.
3. Lobules are formed by compactly arranged alveoli.
4. The Alveoli are lined by Simple Cuboidal epithelium, that has secretory function.

24. PLACENTA

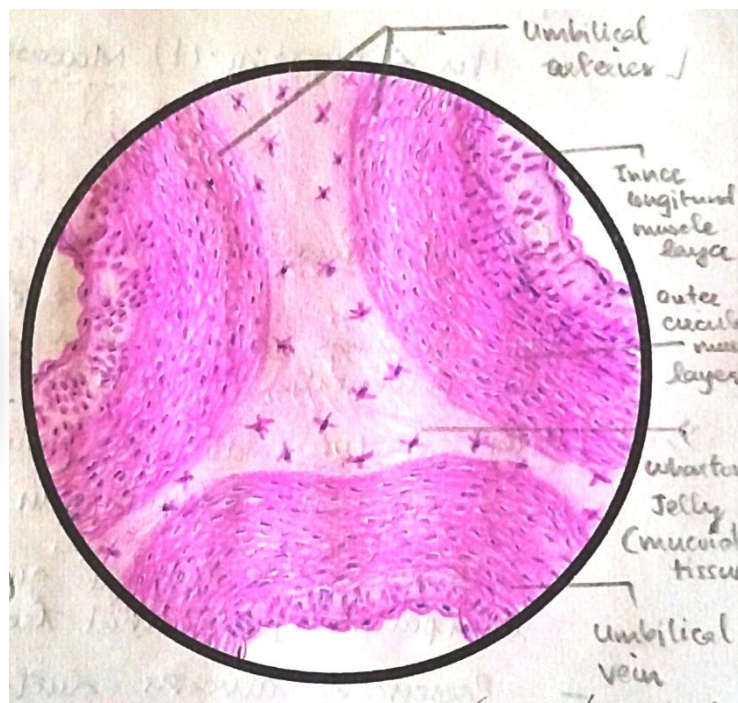
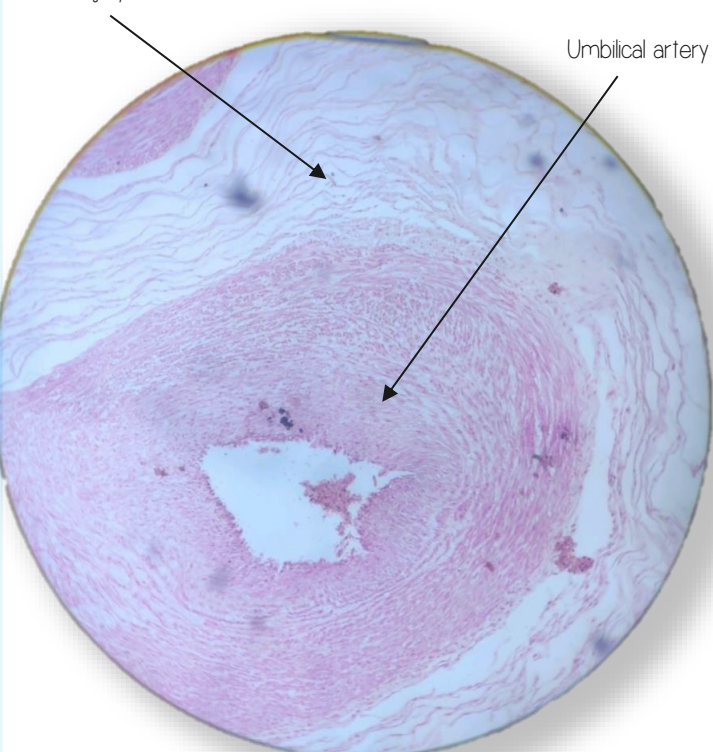


Salient features

1. Tertiary villi of various size and shapes are seen.
2. Inter villous space contains maternal blood.
3. Section of tertiary villi has a core of mesoderm with blood vessels, surrounded by cytotrophoblast and syncytiotrophoblast layers.
4. Mesoderm contains Hofbauer cells seen.

25. UMBILICAL CORD

Wharton's jelly – mucoïd connective tissue

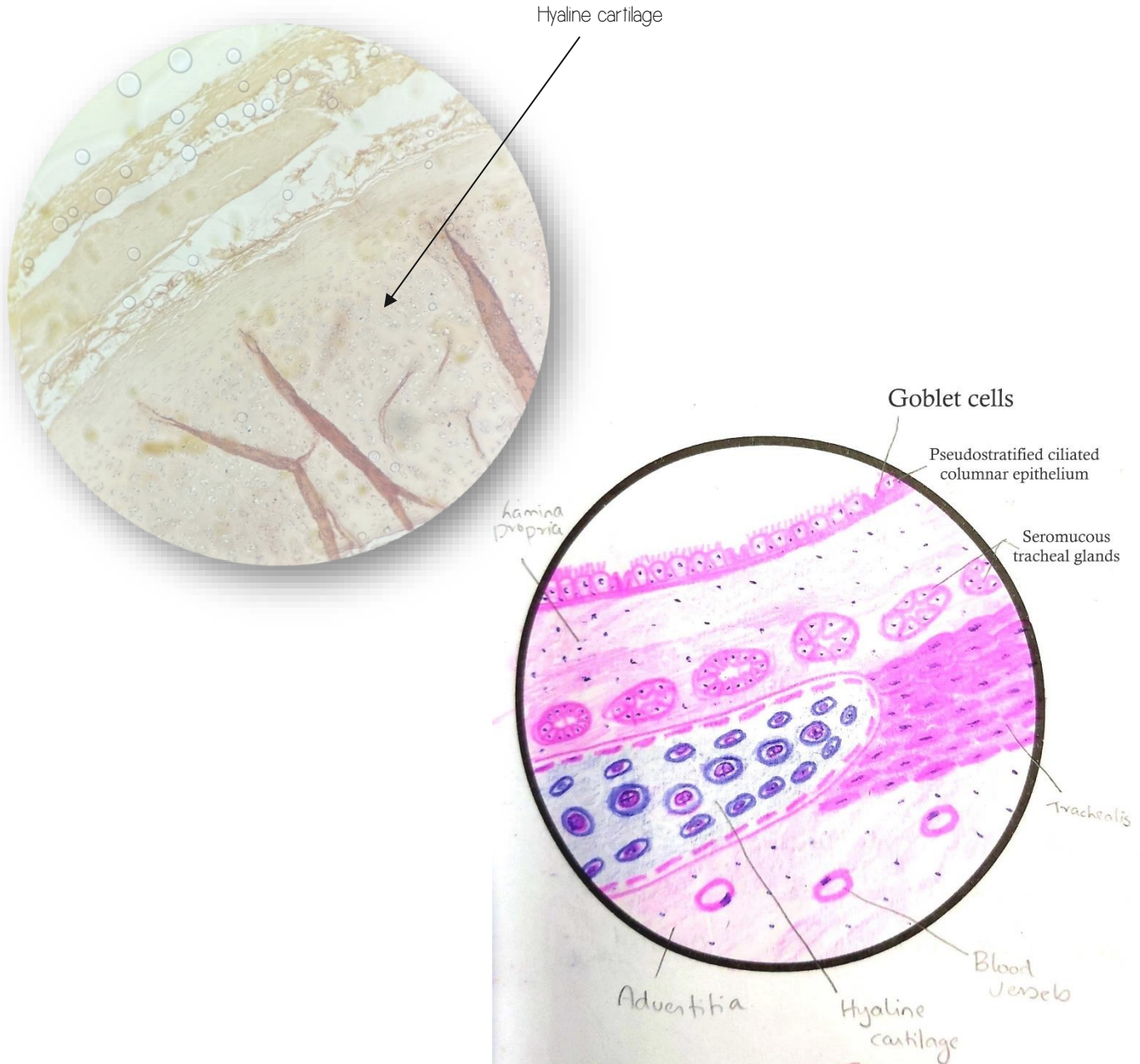


Salient features

1. Umbilical cord covered by simple cuboidal epithelium.
2. Contains blood vessels – single Umbilical Vein and two Umbilical Arteries, are seen.
3. Filled with gelatinous connective tissue called Wharton's Jelly, which supports the blood vessels.

SYSTEMIC HISTOLOGY

1. TRACHEA



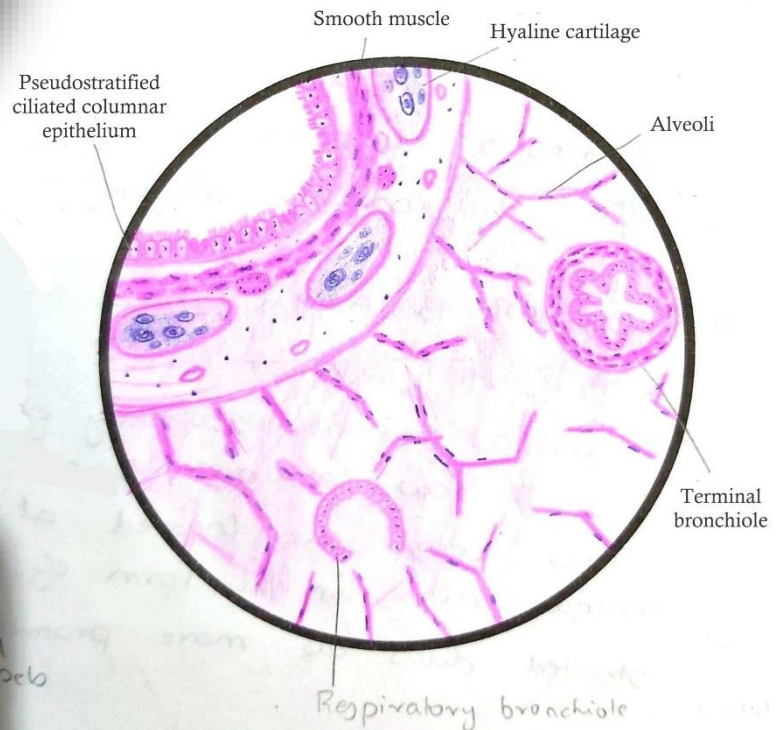
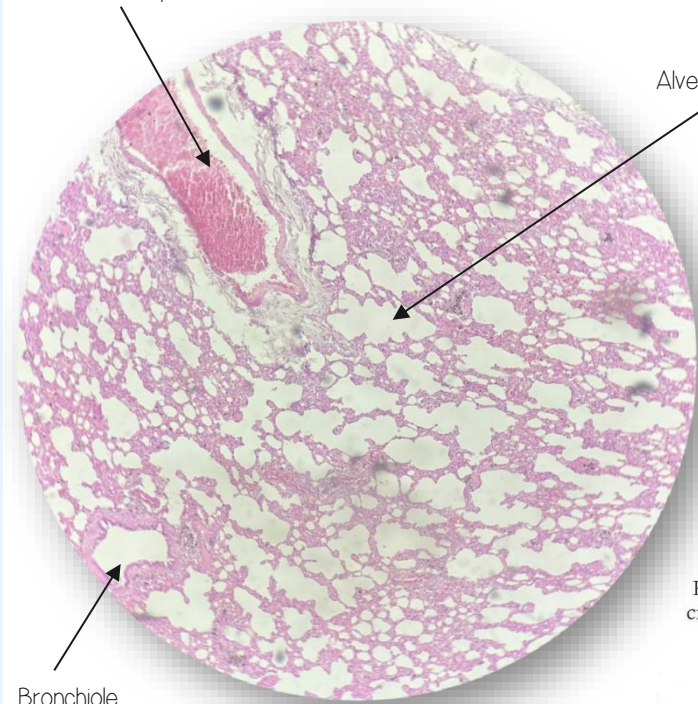
Salient Features

1. Lining epithelium is Pseudostratified Ciliated Columnar Epithelium.
2. Thick basement membrane and lamina propria is seen underneath.
3. Submucosa contains serous and mucous glands.
4. Hyaline Cartilage and Trachealis Muscle is present in the substance of trachea.

2. LUNG

Bronchi lined by pseudostratified
ciliated columnar epithelium

Alveolar sac

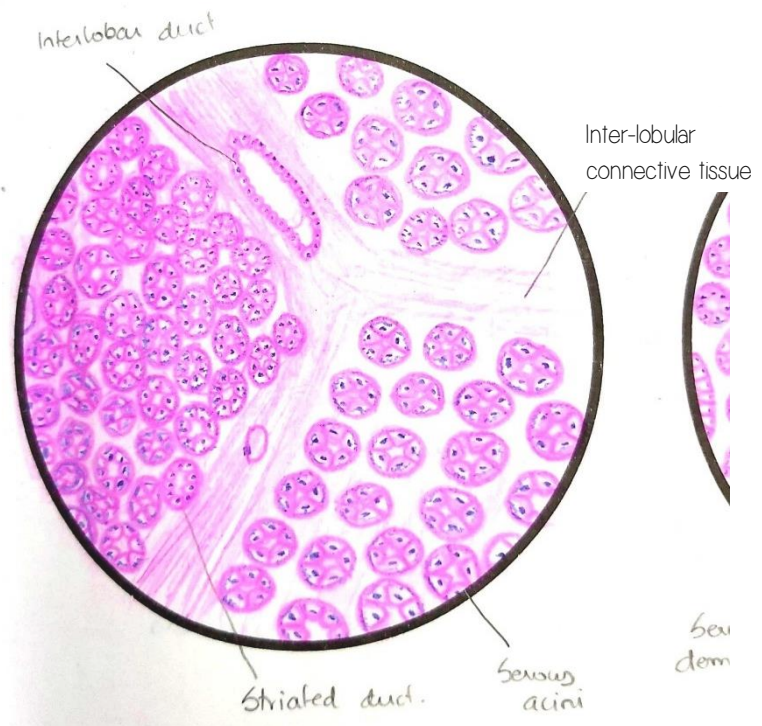
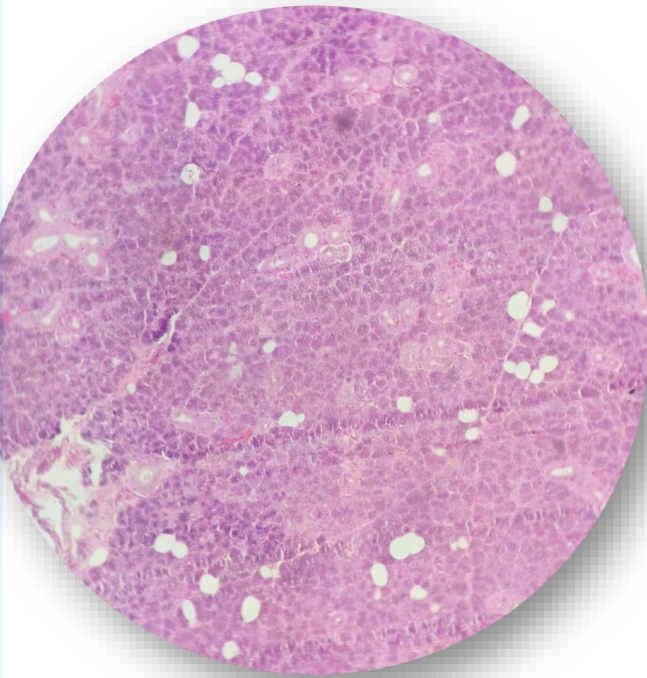


Salient Features

1. Alveolar Ducts and Alveolar Sacs are seen.
2. Alveolar sac is lined by simple Squamous epithelium.
3. Respiratory Bronchioles are lined by simple Cuboidal epithelium.
4. Presence of Intrapulmonary bronchus with varying amount of islands cartilage and smooth muscle.

3. SEROUS SALIVARY GLAND

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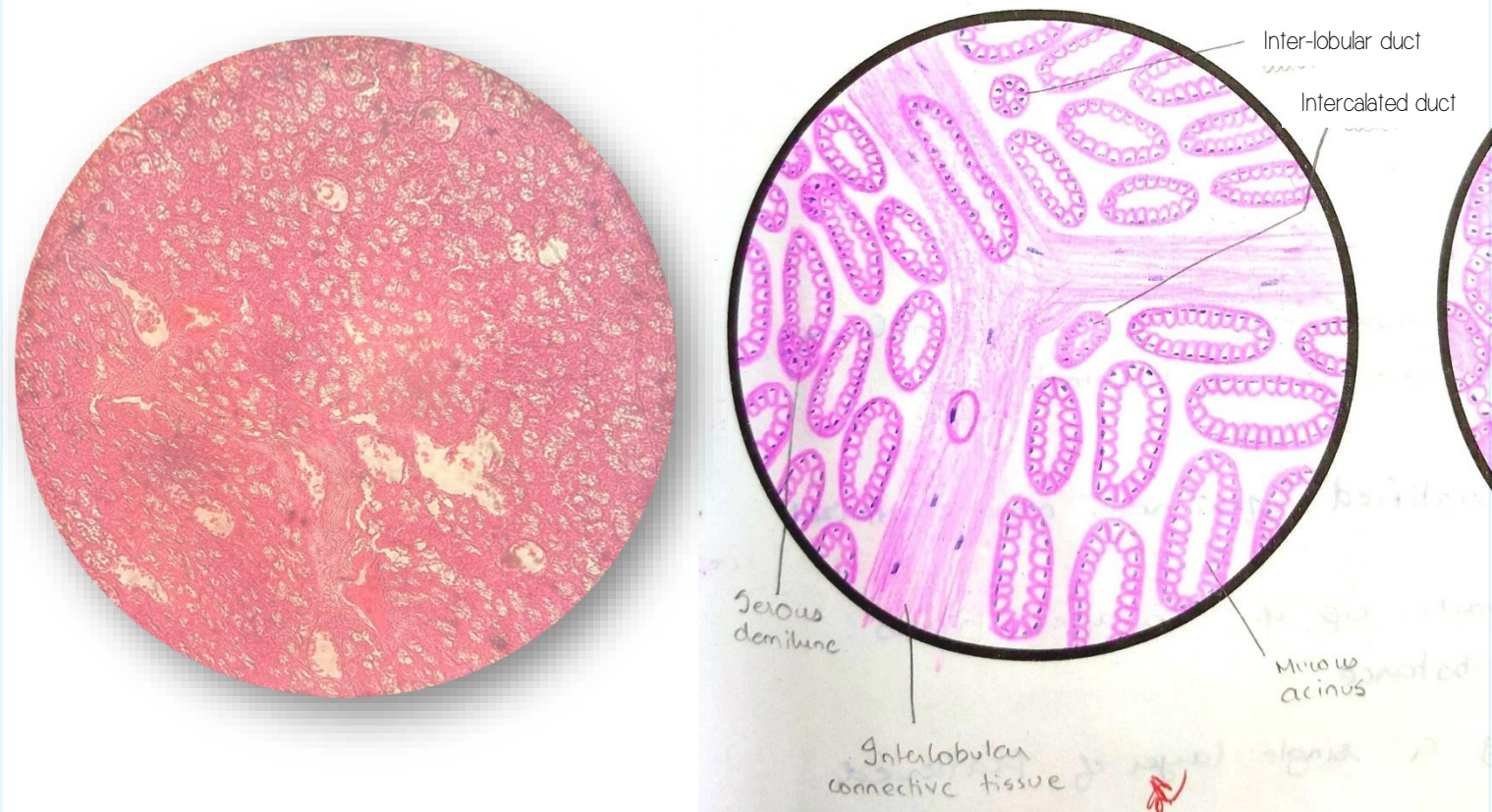


Salient Features

1. Serous acini are predominant, which contain basophilic zymogen granules and are darkly stained.
2. Numerous connective tissue septa arise from the capsule, thus dividing the gland into lobes and lobules.
3. Interlobular ducts are present in the connective tissue septa, which are lined by columnar epithelium.
4. Intralobular ducts are present, which are lined by cuboidal epithelium.

4. MUCOUS SALIVARY GLAND

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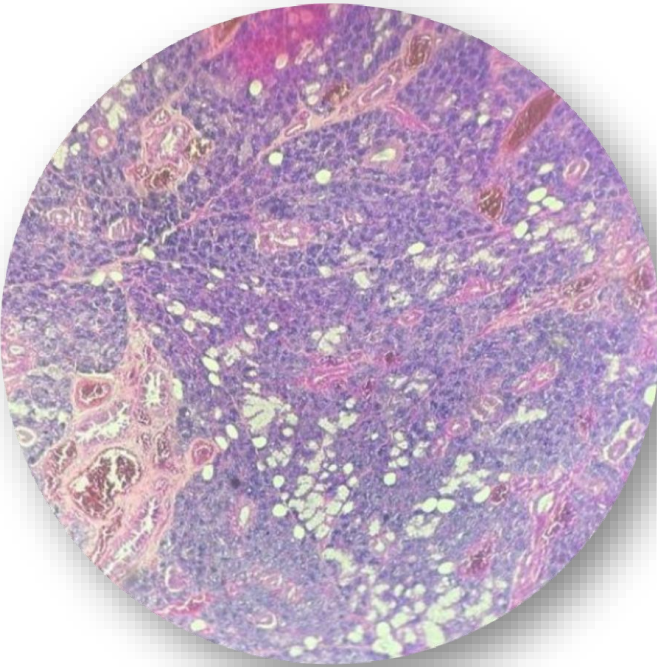


Salient Features

1. Mucous acini are predominantly seen.
2. Interlobular connective tissue septa are more abundantly seen in mucous salivary gland.
3. Intralobular Ducts are more prevalent.
4. Intercalated ducts are short/absent, and not easily visualised.
5. Serous demilunes may be present.

5. MIXED SALIVARY GLAND

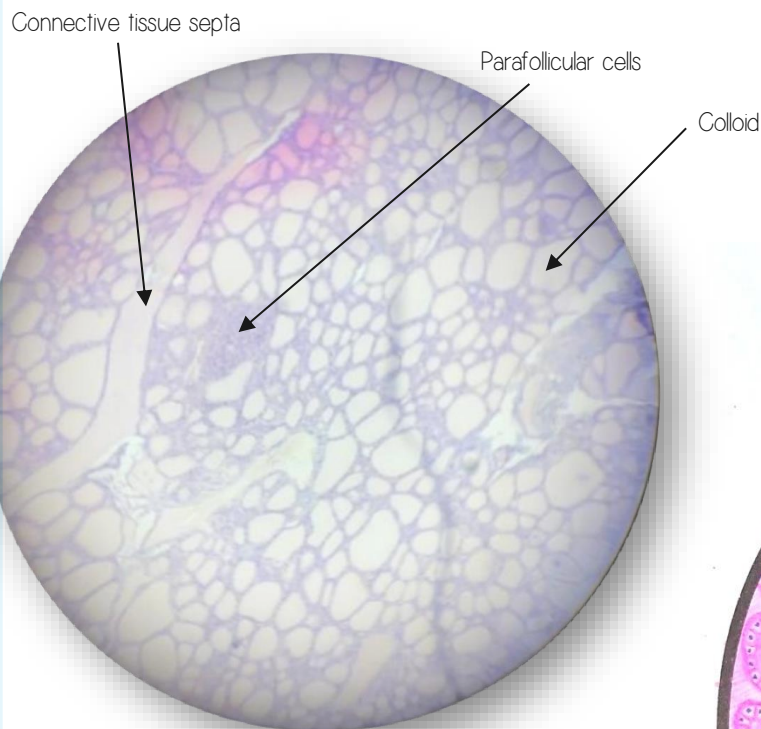
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Salient Features

1. Both serous and mucous acini are present, with serous acini predominating.
2. Serous demilunes are dispersed among the acini.
3. Striated ducts are prominent than in serous salivary gland.
4. Intercalated ducts are less extensive.

6. THYROID GLAND

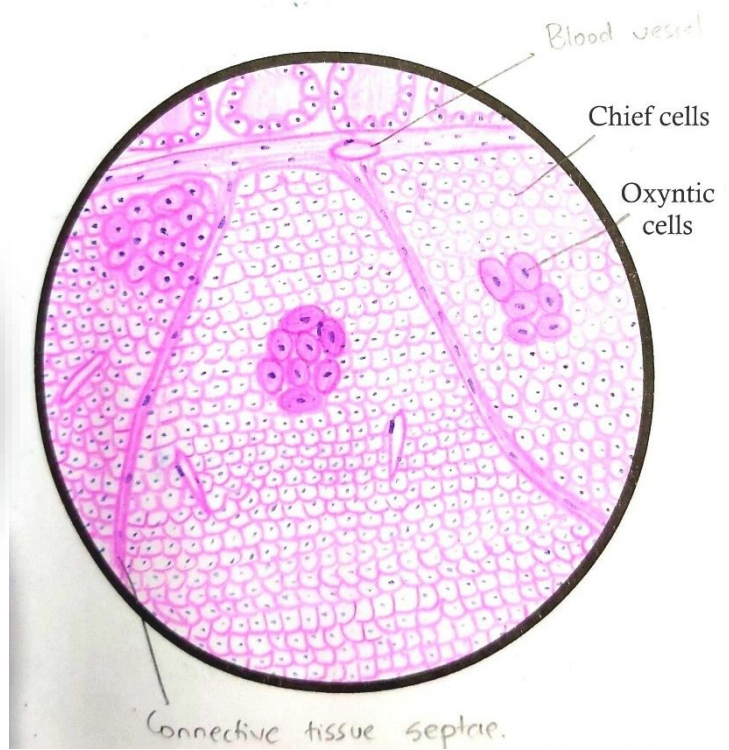
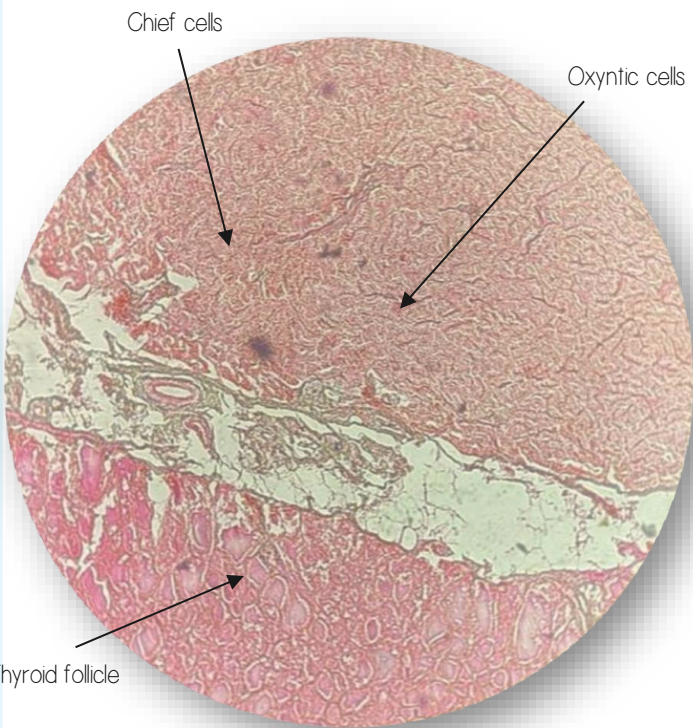


Salient Features

1. Thyroid Gland is made up of Stroma and Parenchyma.
2. Stroma consists of dense connective tissue capsule from which septa arises and divides the gland into lobules.
3. Parenchyma is made up of Follicular and Parafollicular Cells.
4. Follicular Cells lines each follicle. These are simple Cuboidal cells.
5. Follicles are filled with colloid.
6. Parafollicular cells are few in no. and present between the follicles.

7. PARATHYROID GLAND

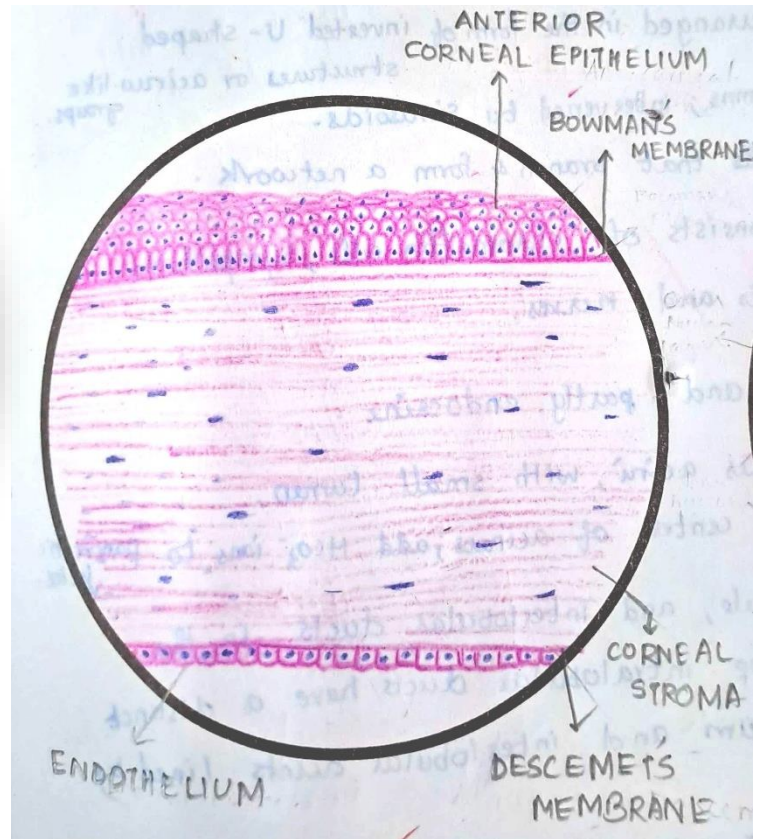
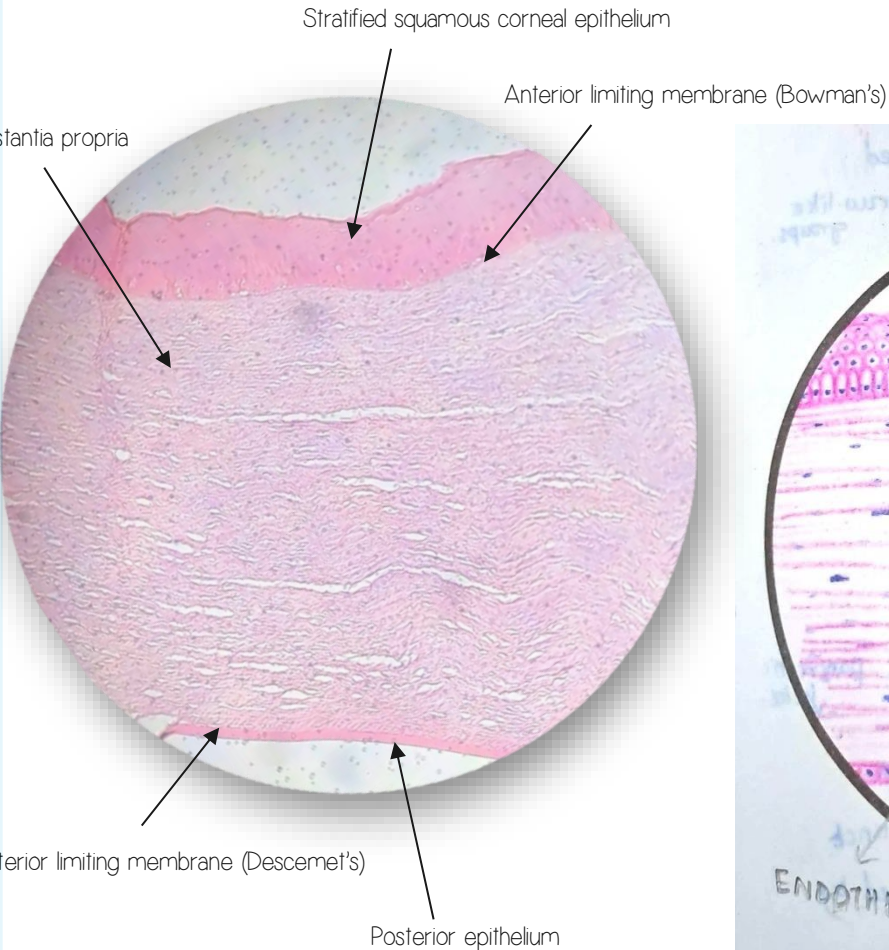
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Salient Features

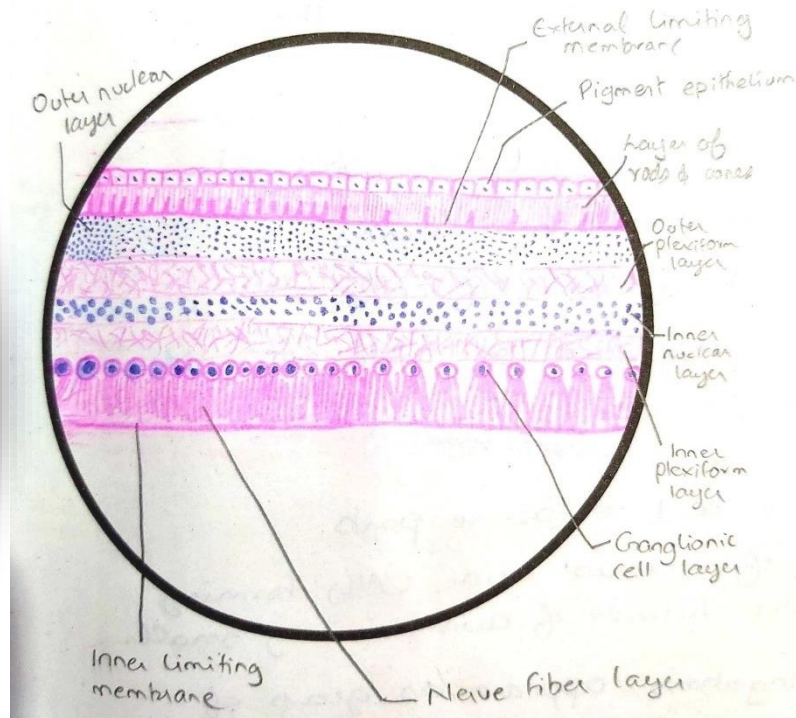
1. Parathyroid gland is made up of stroma and parenchyma.
2. Stroma consists of connective tissue capsule and vascular septa arising from it.
3. Parenchyma composed of masses of cells, with numerous capillaries in between.
4. Mainly 2 types of cells- Chief cells and Oxyphil Cells.
5. Chief cells are more numerous, smaller sized and lightly stained cells.
6. Oxyphil cells are lesser in number, larger appearance and strong eosinophilic stained cells.
7. Adipose cells are also seen.

8. CORNEA



Salient Features

1. Cornea is made up of 5 layers: Anterior corneal epithelium, Bowman's Membrane, Corneal stroma, Descemet's membrane, and Endothelium.
2. Anterior Corneal Epithelium is 5-6 cell thick, made of Stratified Squamous Non-Keratinized Epithelium.
3. Corneal Stroma is made up of parallelly arranged Type 1 collagen fibres.
4. Endothelium is made of single layer of cuboidal cells.

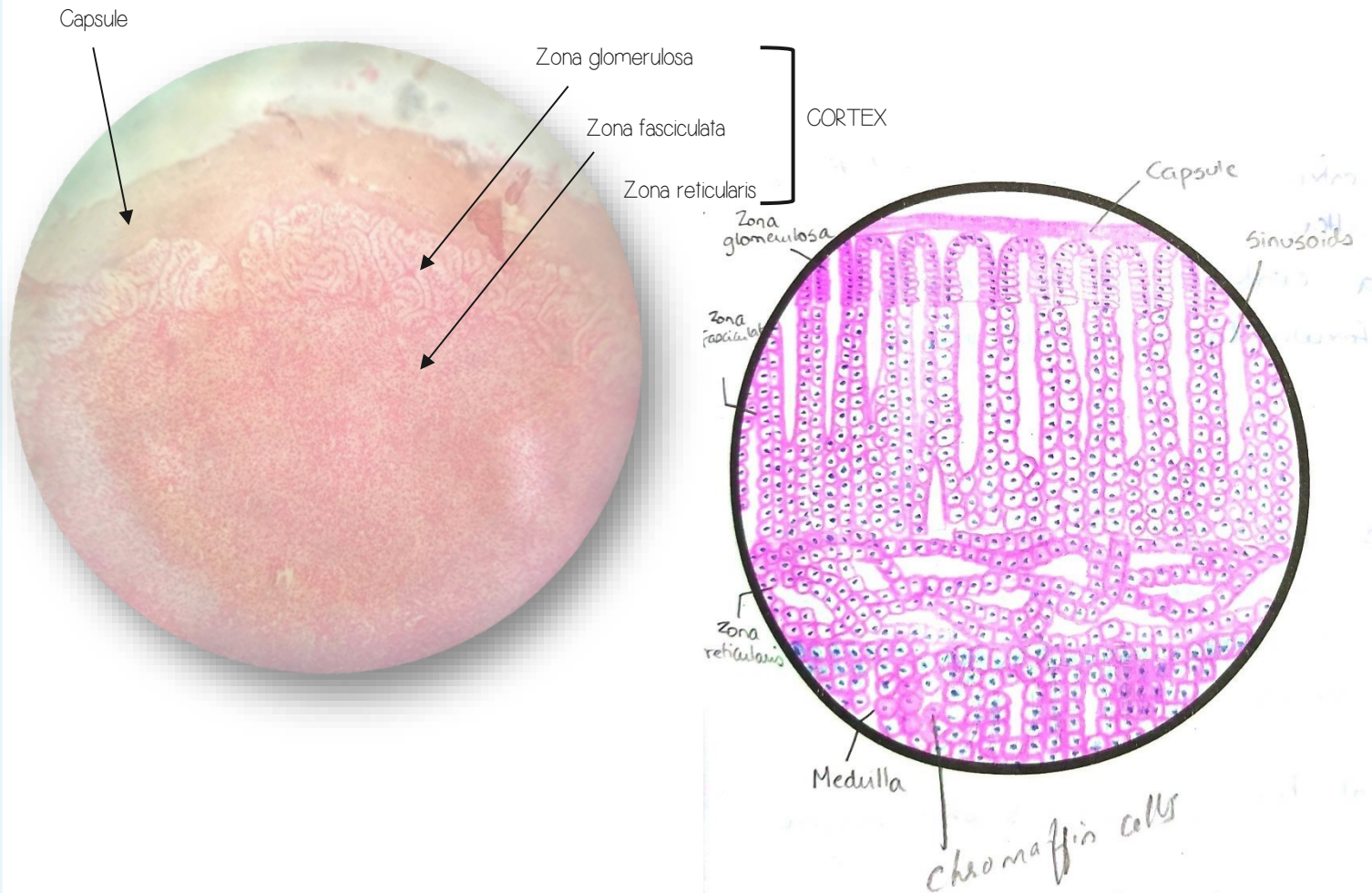


Salient Features

1. Made up of 10 layers: (1) Pigmented cell layer, (2) Layer of Rods & Cones, (3) External Limiting Membrane, (4) Outer Nuclear Layer, (5) Outer Plexiform Layer, (6) Inner Nuclear Layer, (7) Inner Plexiform Layer, (8) Ganglion Cell Layer, (9) Layer of Optic Nerve fibres, & (10) Internal Limiting Membrane.
2. Outer pigmented epithelium is made of simple cuboidal cells.
3. External & Internal Nuclear Layers composed of Cell bodies and nuclei of Rod cells & cone cells.

10. SUPRARENAL GLAND

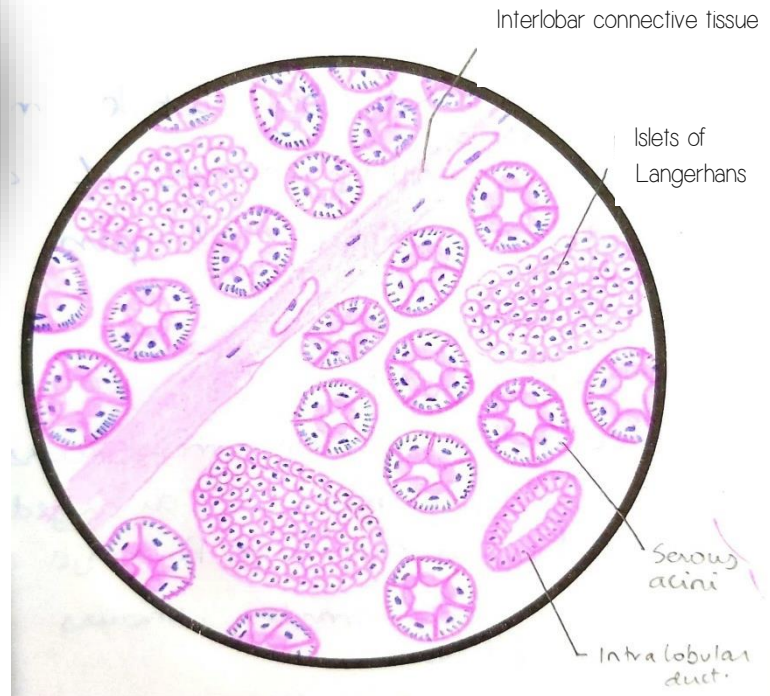
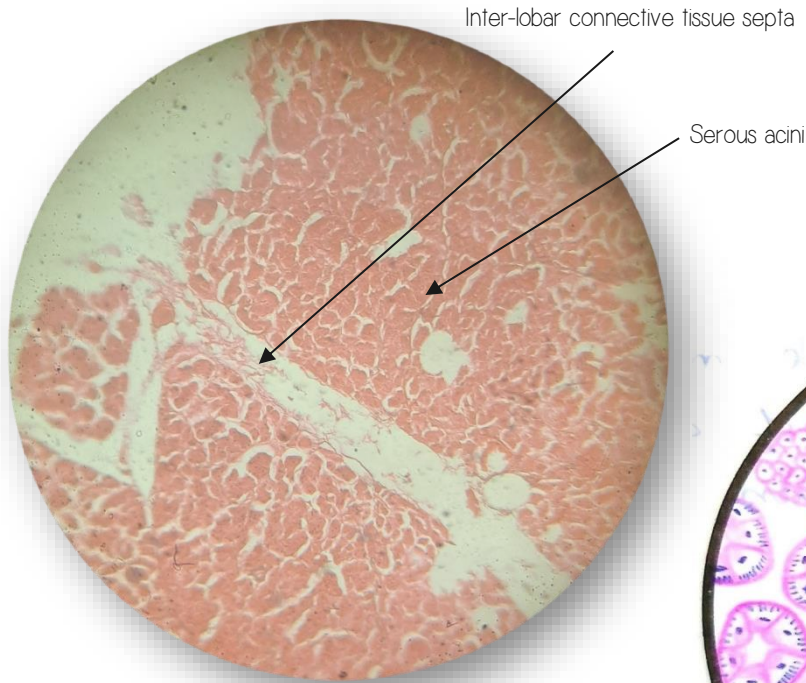
41



Salient Features

1. Composed of an outer cortex and inner medulla.
2. Cortex divisible into 3 zones – Zona Glomerulosa, Zona Fasciculata, & Zona Reticularis.
3. Zona glomerulosa contains cells arranged in inverted U- shaped structure.
4. In Zona Fasciculata, cells are arranged as straight columns, with sinuses intervening between them.
5. Zona Reticularis contains cord of cells that branch & form networks.
6. Medulla forms the central core; contains sympathetic neurons, capillaries, chromaffin cells, etc.

11. PANCREAS

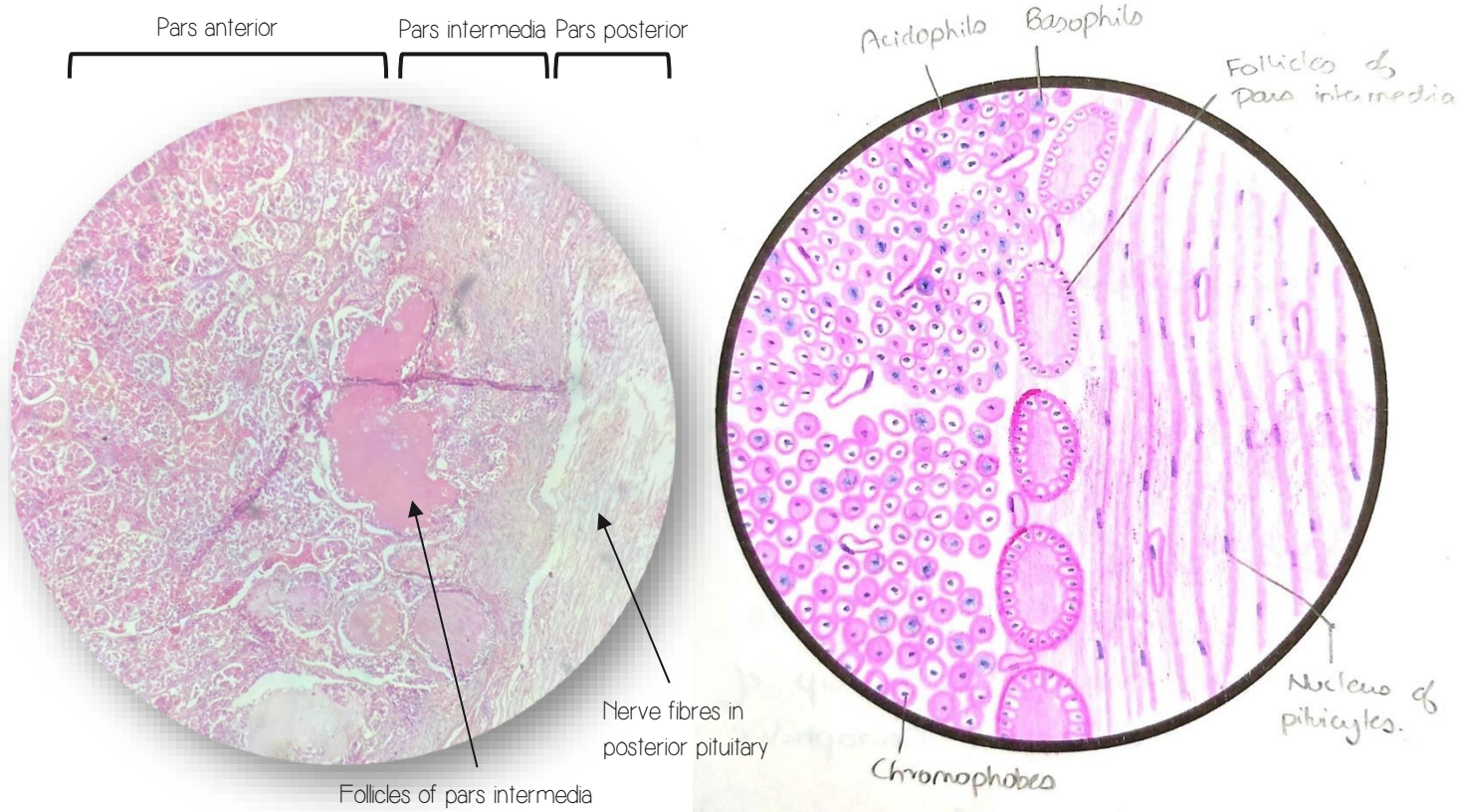


Salient Features

1. Covered by connective tissue capsule, and it sends septa into parenchyma and divides it into lobules.
2. Pancreas has both Exocrine and Endocrine part.
3. Exocrine part is composed of serous acini, which is highly basophilic. Some acini show pale staining Centroacinar cells in the centre.
4. Intralobular ducts (lined by cuboidal epithelium) and Interlobular ducts (lined by columnar epithelium) are seen.
5. Endocrine part composed of group of small cells with lightly stained cytoplasm, called Islets of Langerhans.

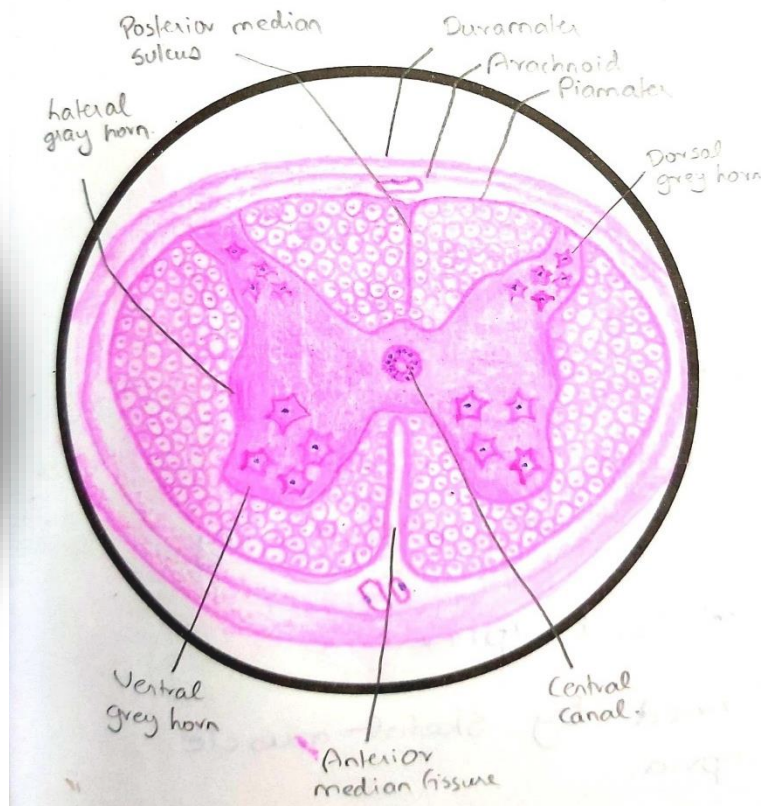
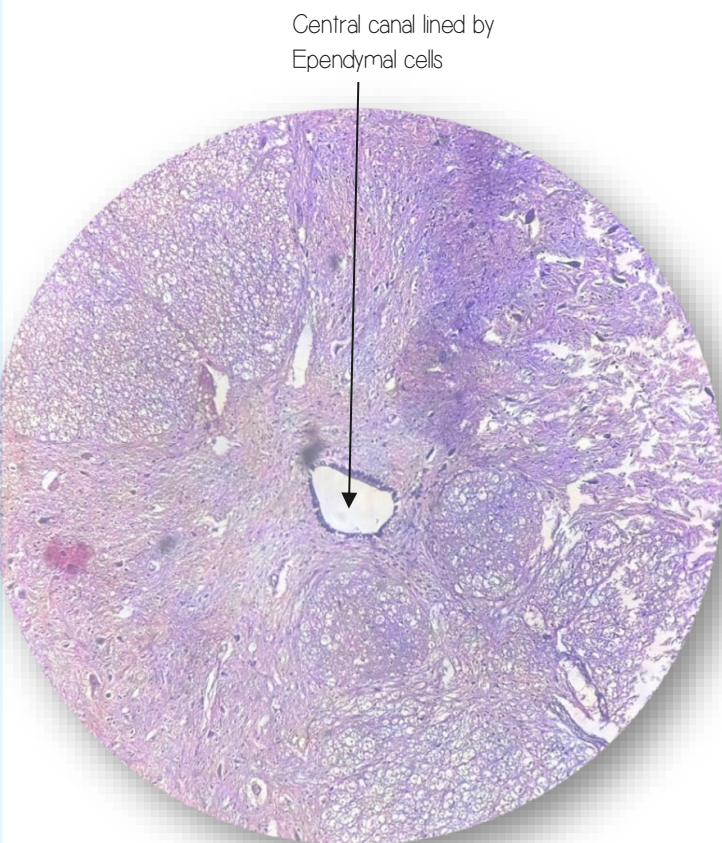
12. PITUITARY GLAND

43



Salient Features

1. Pars Anterior, Pars Intermedia, and Pars Posterior regions are seen.
2. Pars Anterior composed of groups of cells (Chromophils & Chromophobes), separated by fenestrated sinusoids.
3. Chromophils are brightly stained cells, which are either Acidophils or Basophils.
4. Chromophobes are cells that are not stained prominently.
5. Pars Intermedia is characterised by the presence of colloid filled follicles.
6. Pars Posterior composed of numerous Unmyelinated nerve fibres, along with supporting glial cells called Pituicytes.

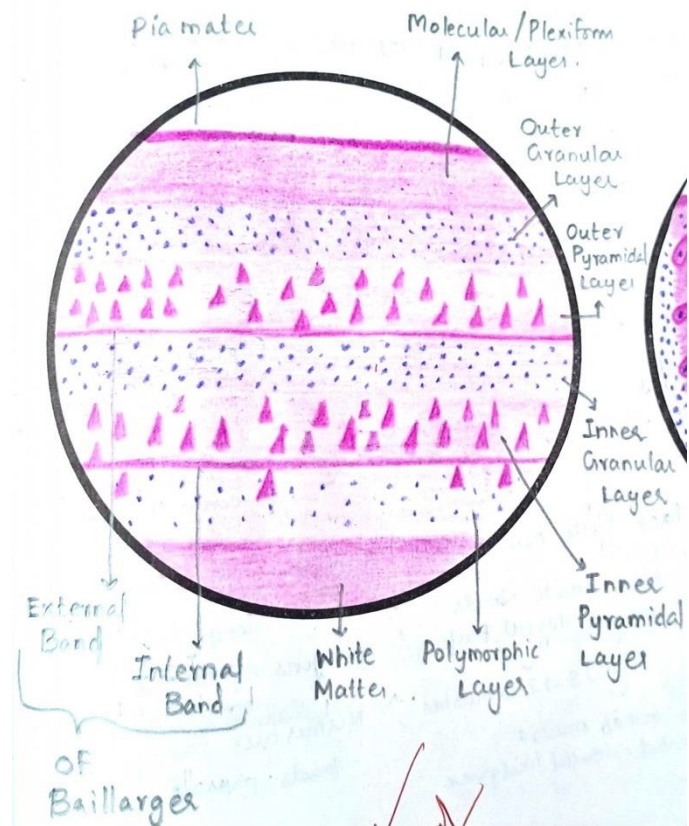


Salient Features

1. Made up of White Matter and Gray Matter.
2. Gray matter consists of cell bodies of neurons along with neuroglia cells and blood vessels, and is arranged in an H-shaped column.
3. Gray matter lies at centre, and is surrounded by White matter. A Central canal is also present.
4. White matter consists of nerve fibres, occupying periphery of gray matter, and is divide into left & right halves by an Anterior Median fissure & a Posterior Median sulcus.

14. CEREBRUM

45

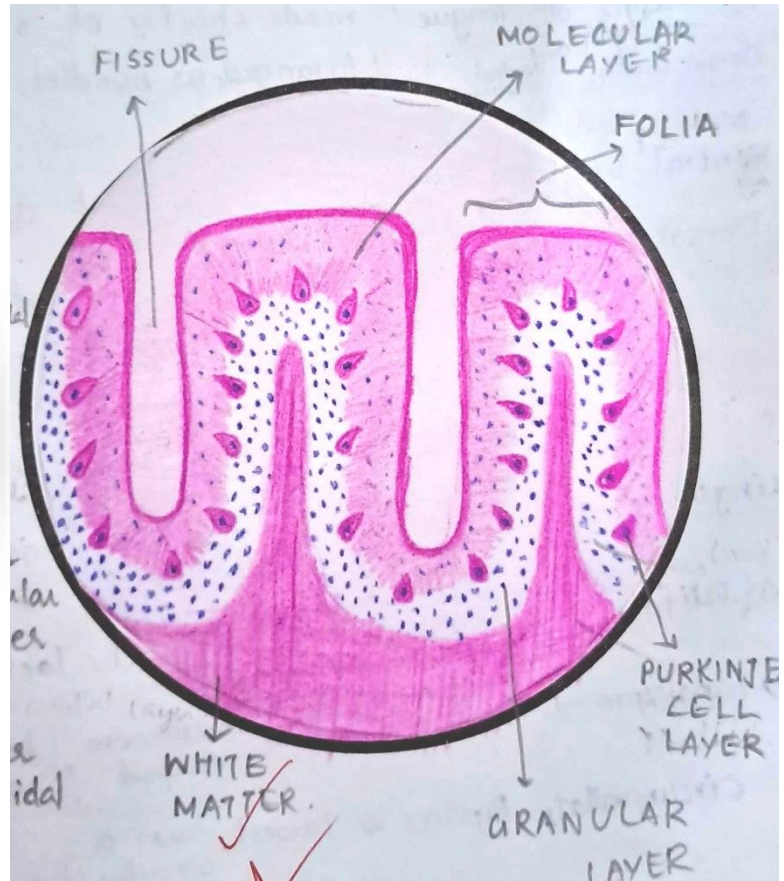
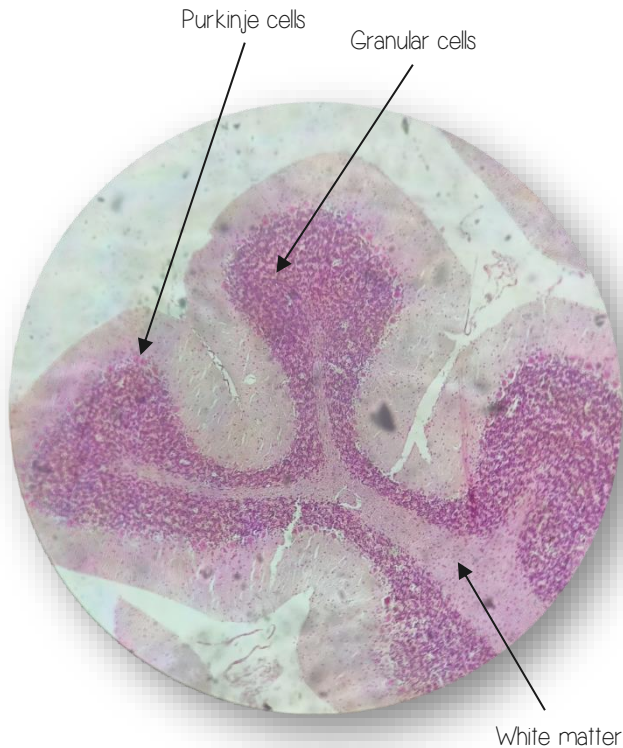


Salient Features

1. Cerebral Cortex shows outer Gray Matter and inner White Matter.
2. Multipolar neurons are arranged in 6 layers in the Gray Matter. Their axons are present in White Matter.
3. 6 layers of Gray Matter – (1) Plexiform Layer, (2) Outer Granular Layer, (3) Outer Pyramidal Layer, (4) Inner Granular Layer, (5) Inner Pyramidal Layer, & (6) Polymorphic Layer.
4. Neuroglia and Blood vessels are also present in Gray & White matter.

15. CEREBELLUM

46

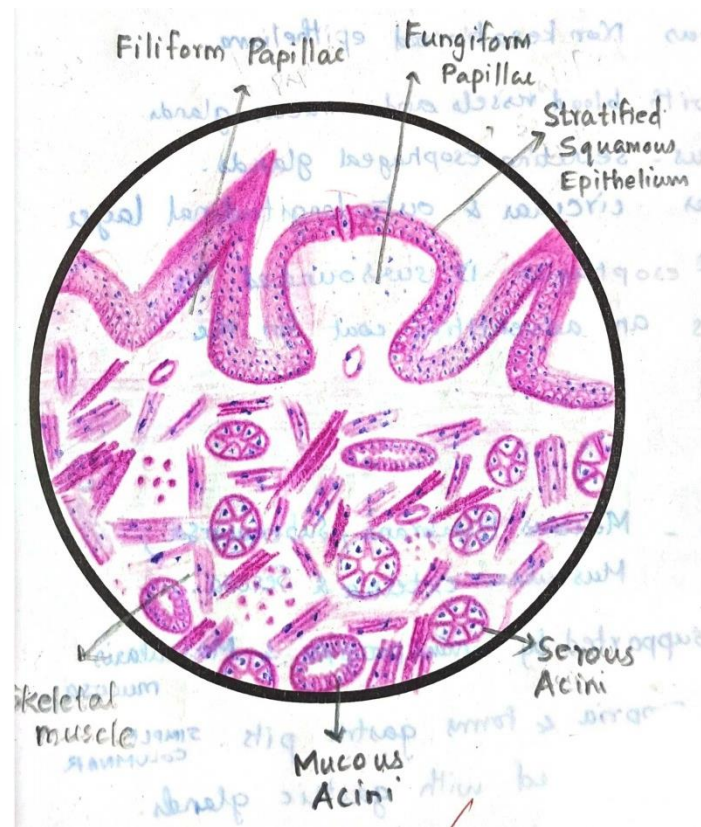
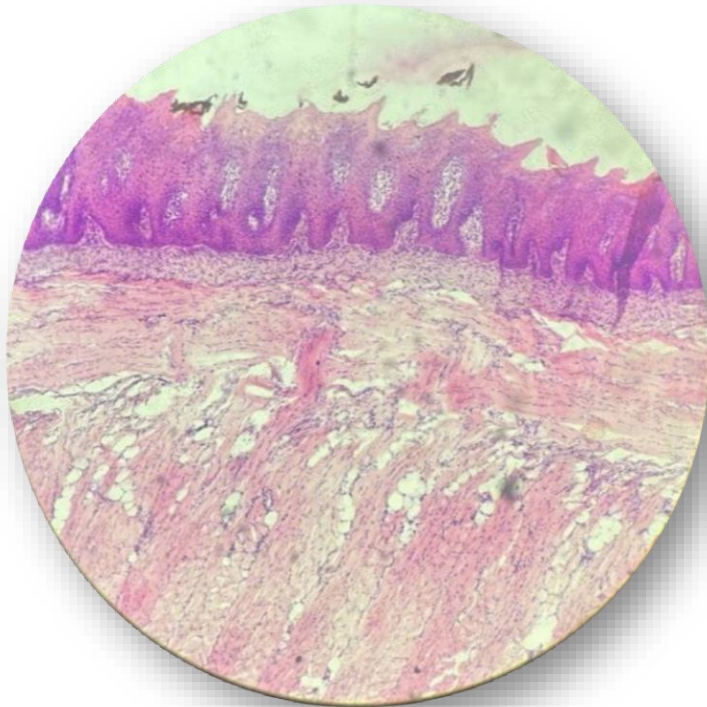


Salient Features

1. Sections of cerebellum shows numerous transverse folds called Folia, separated by fissures.
2. Outer Gray Matter is arranged in 3 layers – outer Molecular Layer, middle Purkinje Cell Layer, & inner Granular Layer.
3. Flask shaped cell bodies of Purkinje cells are seen in Purkinje cell layer.
4. Cell bodies and dendrites of Granule cells present in Granular layer.
5. Inner white matter shows axons which appear as pink fibres.

16. FILIFORM PAPILLAE

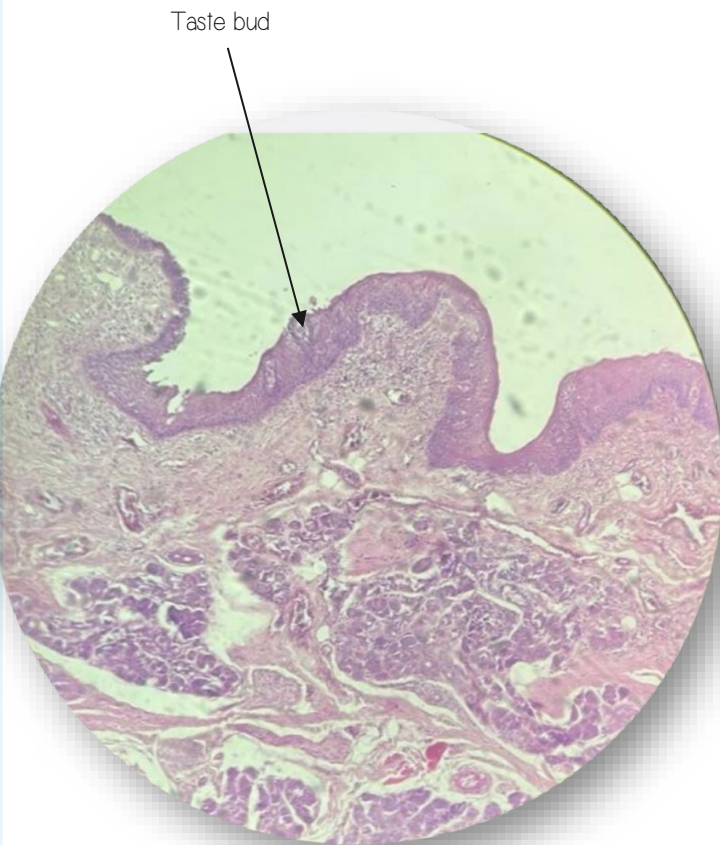
47



Salient Features

1. Filiform Papillae are small and conical in shape. They lack taste buds.
2. Epithelium is Stratified squamous, which are keratinised at the tips of these papillae.
3. Skeletal muscle fibres, along with numerous serous and mucous glands, are present beneath the epithelium, forming the core.

17. FUNGIFORM PAPILLAE



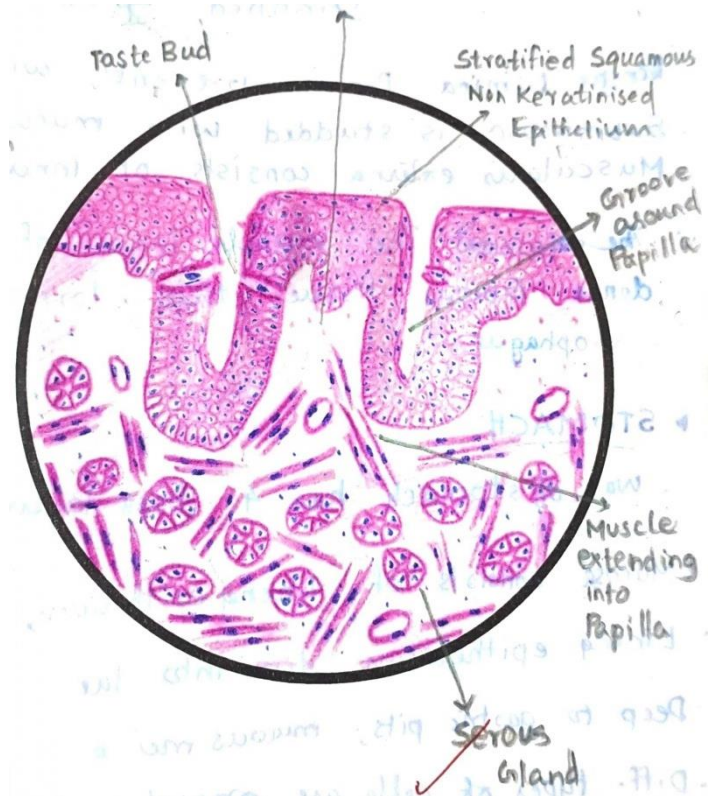
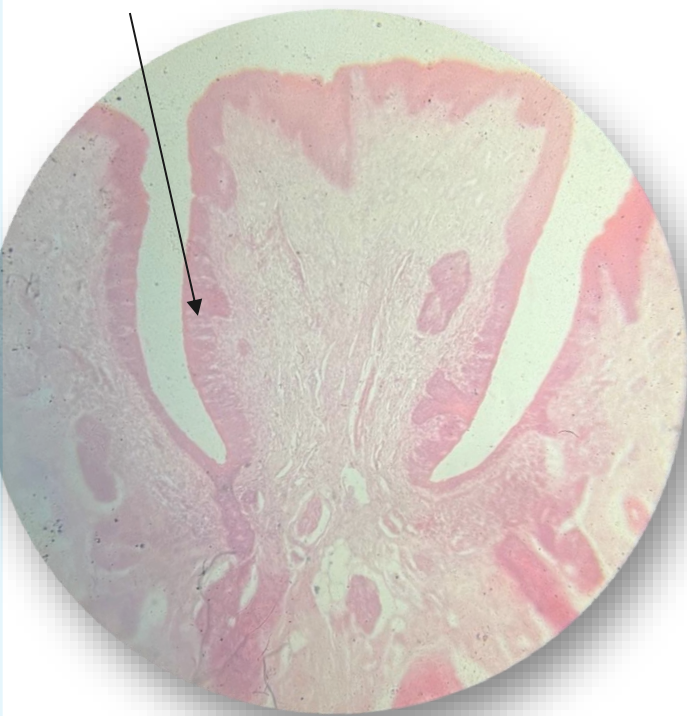
Salient Features

1. Fungiform Papillae are larger, mushroom-shaped, reddish papillae.
2. They have rounded summits and narrower bases.
3. Fungiform papillae are lined by Stratified Squamous Non-Keratinized epithelium.
4. Taste buds are present on the dorsal surface of the papillae.

18.CIRCUMVALLATE PAPILLAE

49

Taste bud



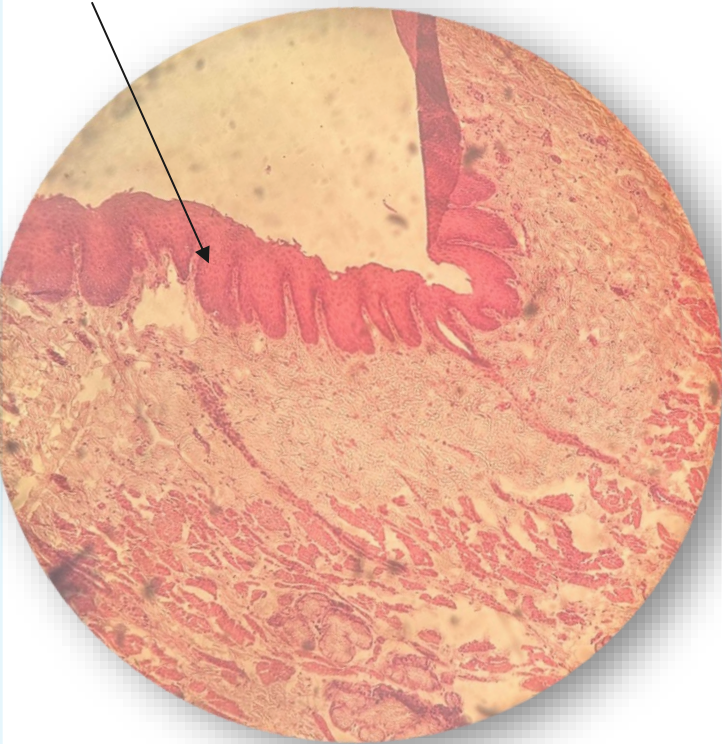
Salient Features

1. Largest papillae of tongue; lined by Stratified Squamous Non-Keratinized epithelium.
2. Grooves are present around the papillae.
3. Numerous taste buds are present on the inner and outer walls of the groove of papillae.
4. Underlying connective tissue contains serous glands, and skeletal muscles that are extending into the papillae.

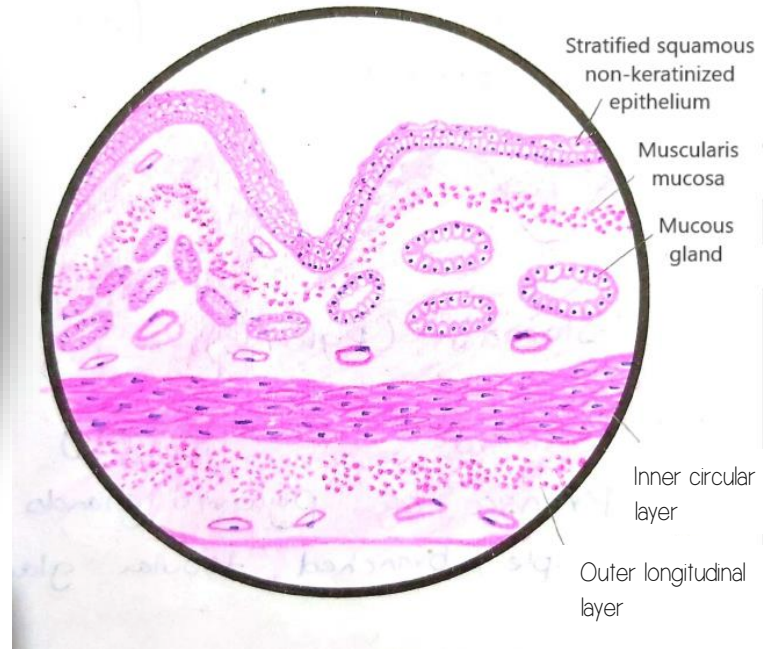
19. OESOPHAGUS

50

Stratified squamous
non-keratinized epithelium



OESOPHAGUS

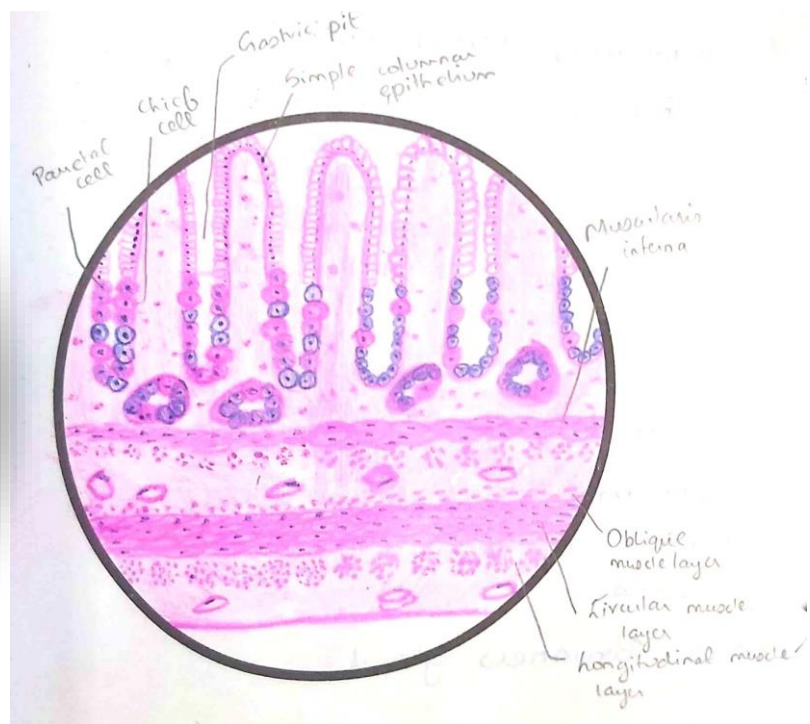
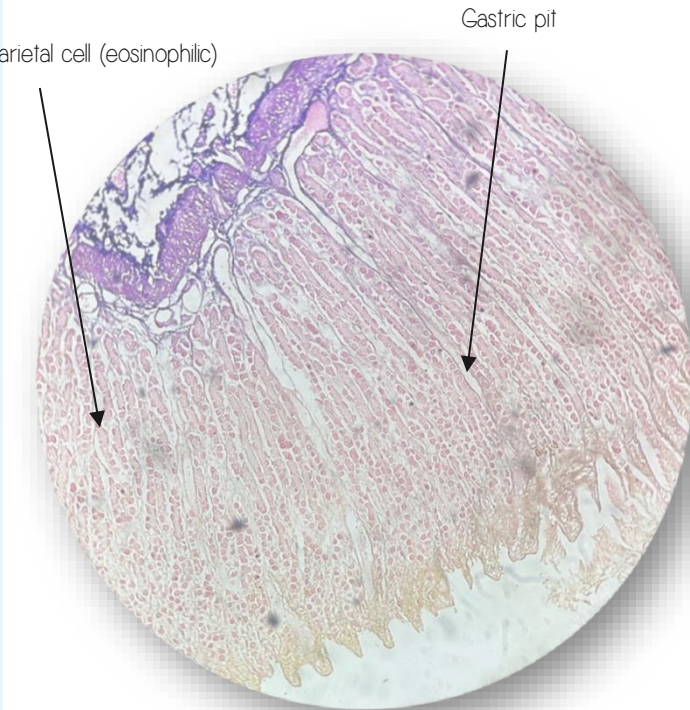


Salient Features

1. Walls of Oesophagus has 4 layers- Mucosa, Submucosa, Muscularis Externa, & Serosa.
2. Mucosa is lined by Stratified squamous non-keratinized epithelium, and shows several longitudinal folds.
3. Submucosa is studded with mucus secreting Oesophageal Glands.
4. Muscularis externa composed of Inner Circular & Outer Longitudinal Layers of muscle fibres.

20. STOMACH – FUNDUS

51

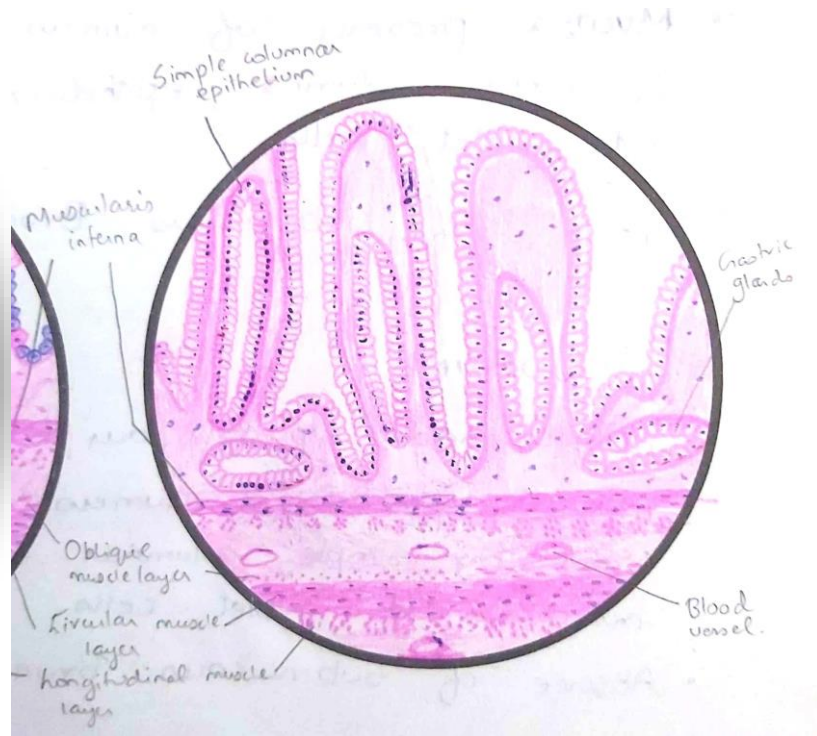
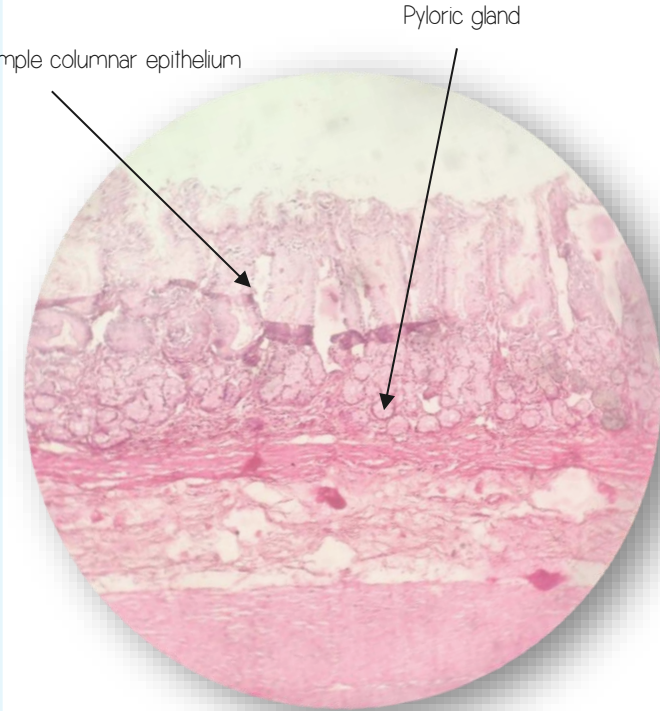


Salient Features

1. Stomach wall made up of 4 layers– Mucosa, Submucosa, Muscularis externa, & Serosa.
2. Lining epithelium of mucosa dips into the lamina propria, and form shallow Gastric Pits occupying one-fourth of mucosa.
3. Epithelium lining the glands composed of basophilic Peptic Cells, and eosinophilic Parietal Cells.
4. Muscularis external composed of 3 layers– inner oblique, middle circular, and outer longitudinal layers.
5. Mucosa shows presence of Gastric glands that are simple/branched tubular.

21. STOMACH – PYLORUS

52



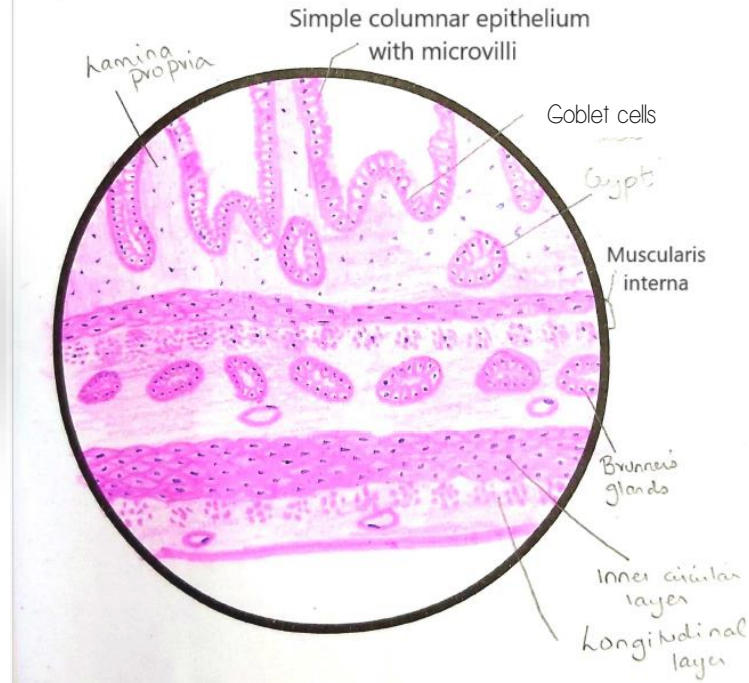
Salient Features

1. 4 layers are present in the gastric wall.
2. Deep gastric pits, occupying two-third of the depth of mucosa.
3. Presence of Pyloric Glands in the mucosa, that are simple/branched tubular & coiled.
4. Muscularis externa composed of 3 muscle layers– inner oblique, middle circular & outer longitudinal.

Brunner's gland

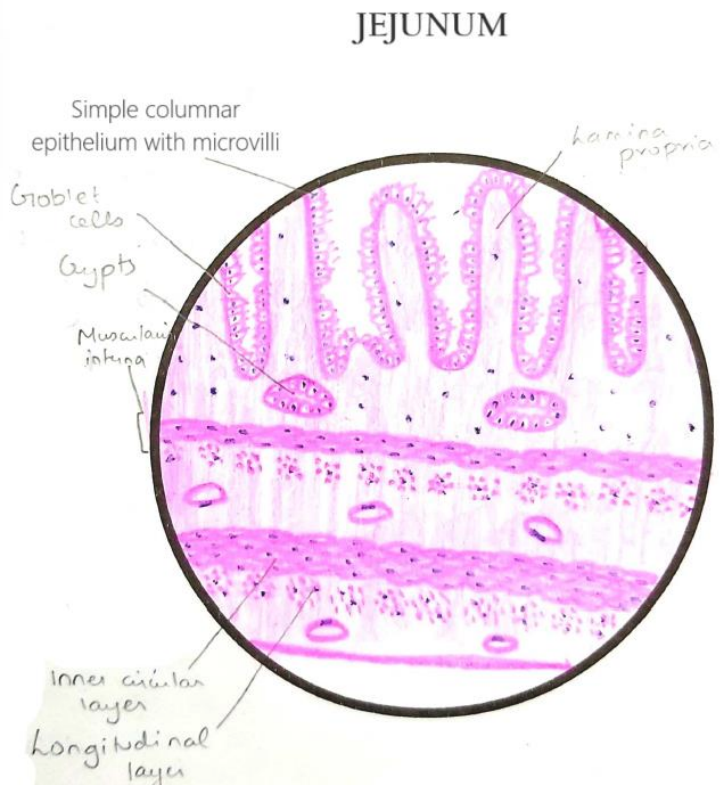
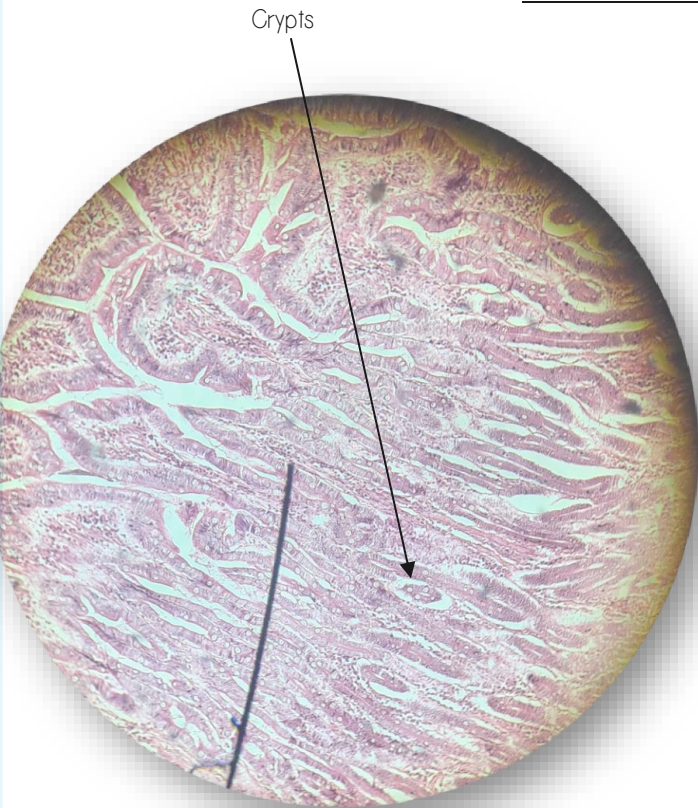


DUODENUM



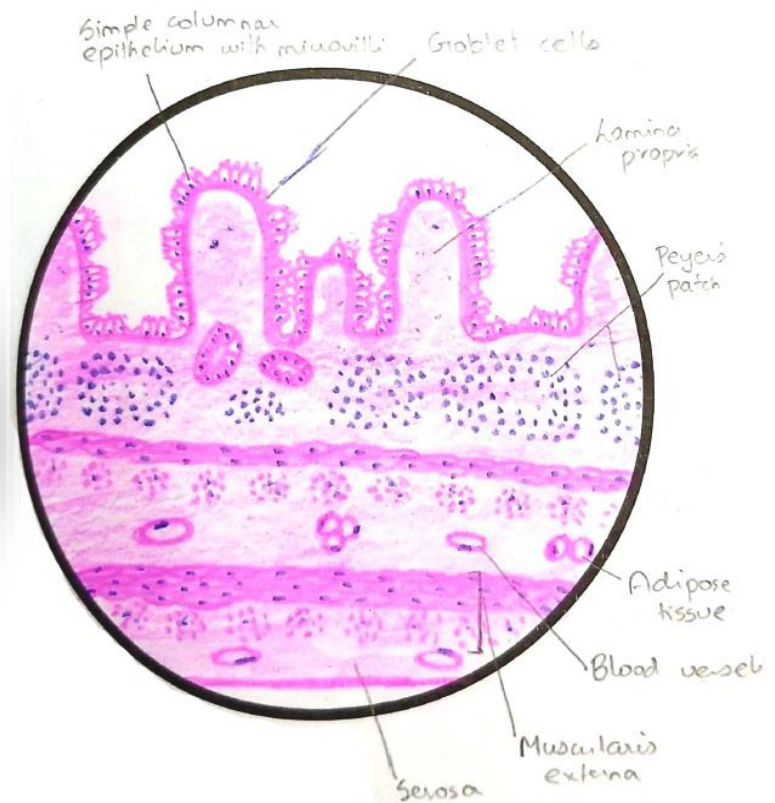
Salient Features

1. Wall made up of 4 layers- Mucosa, Submucosa, Muscularis externa, & Serosa.
2. Mucosa shows presence of numerous broad villi, lined by simple columnar epithelium with microvilli and goblet cells.
3. Characteristic feature of Duodenum is the presence of Brunners Glands in submucosa.
4. Crypts of Lieberkuhn are present, which extend into the lamina propria.



Salient Features

1. Wall made up of 4 layers- Mucosa, Submucosa, Muscularis externa, & Serosa.
2. Mucosa shows presence of numerous tall, slender villi, lined by simple columnar epithelium with microvilli and goblet cells.
3. Submucosa does not show presence of Brunners glands.
4. Muscularis externa composed of Inner circular & Outer longitudinal layers.

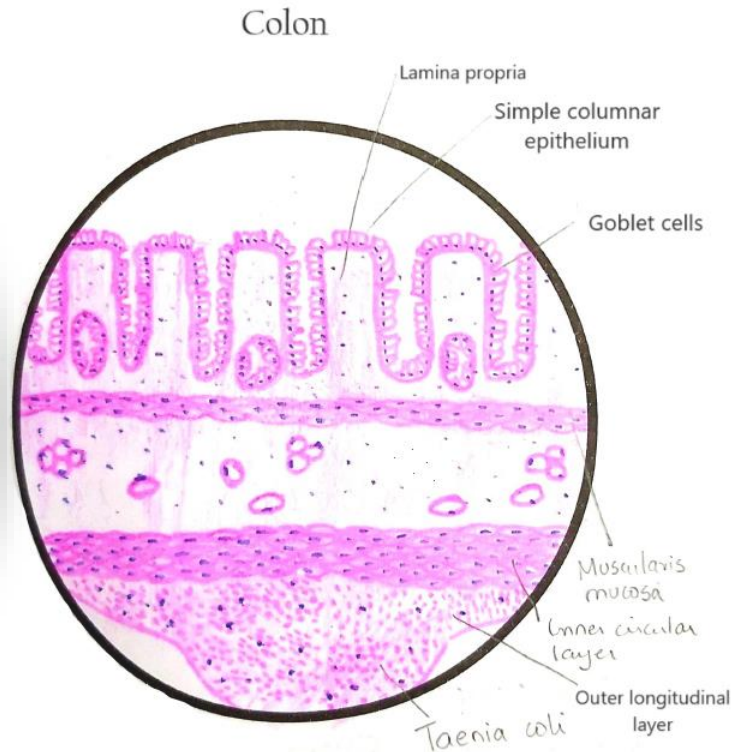
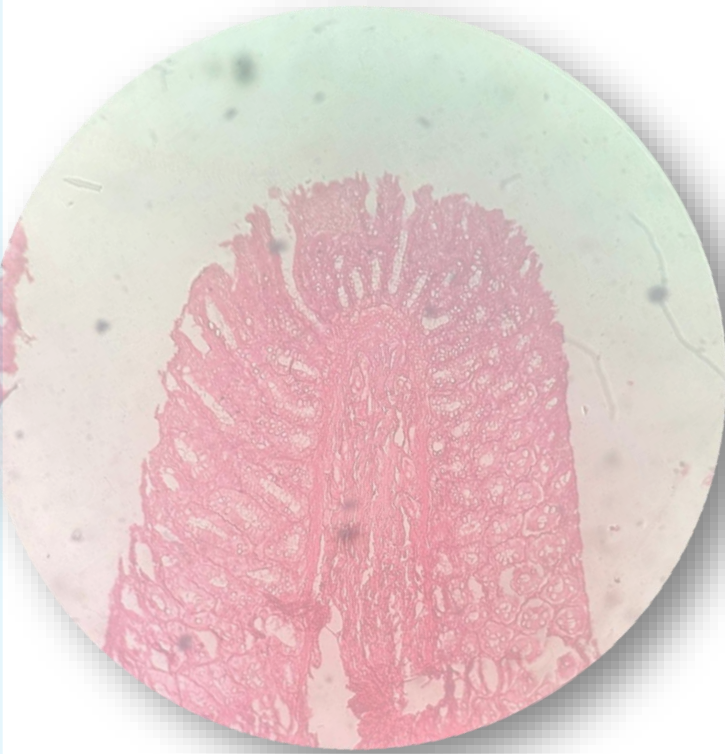


Salient Features

1. Wall made up of 4 layers– Mucosa, Submucosa, Muscularis externa, & Serosa.
2. Mucosa shows presence of few, short, smaller villi, lined by simple columnar epithelium with microvilli and goblet cells.
3. Lamina propria shows presence of aggregation of lymphatic nodules, forming Peyer's Patches.
4. Muscularis externa composed of inner circular and outer longitudinal layers.

25. LARGE INTESTINE

56



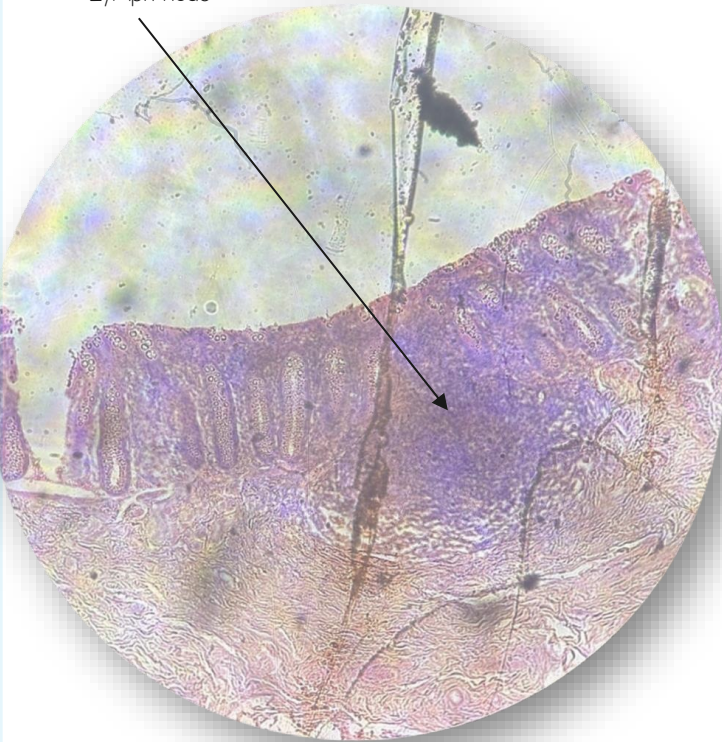
Salient Features

1. Wall made up of 4 layers– Mucosa, Submucosa, Muscularis externa, & Serosa.
2. Villi are absent in mucosa; Mucosa lined by Simple Columnar epithelium, with numerous Goblet cells.
3. Muscularis externa composed of Inner circular & Outer longitudinal layers.
4. Outer longitudinal muscle fibres aggregate to form thick bands called Taenia Coli.

26. VERMIFORM APPENDIX

57

Lymph node



Simple columnar epithelium

Goblet cells

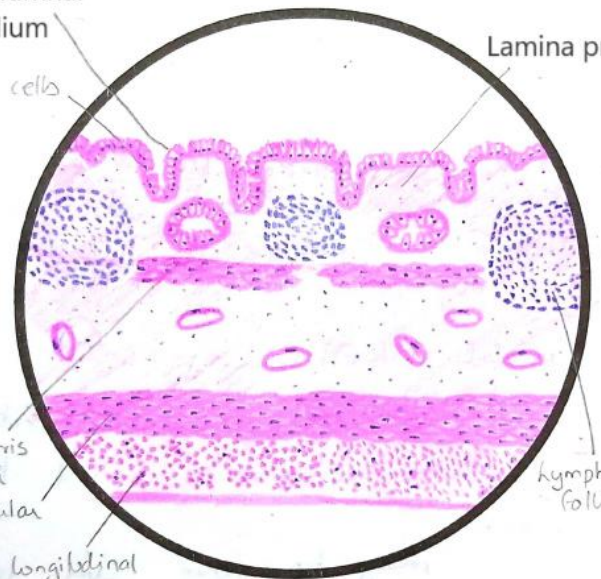
Lamina propria

Muscularis mucosa

Inner circular layer

Outer longitudinal layer

Lymphatic follicle



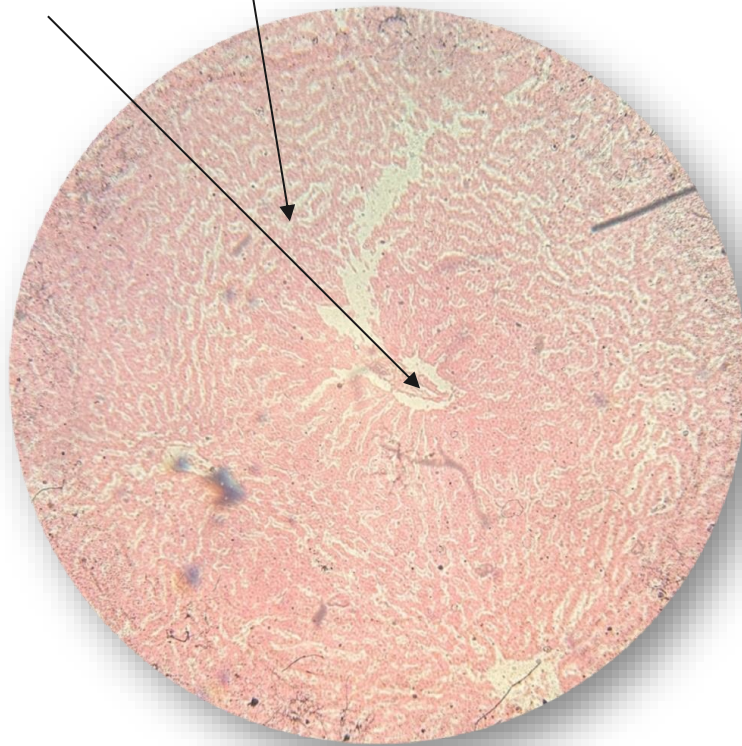
Salient Features

1. Wall made up of 4 layers- Mucosa, Submucosa, Muscularis externa, & Serosa.
2. Mucosa is devoid of villi, lined by simple columnar epithelium with numerous goblet cells.
3. Submucosa contains abundant lymphatic follicles, which may extend to lamina propria.
4. Absence of Taenia coli, appendices epiploicae.

27. LIVER

Hepatocytes radiating from centre

Central vein

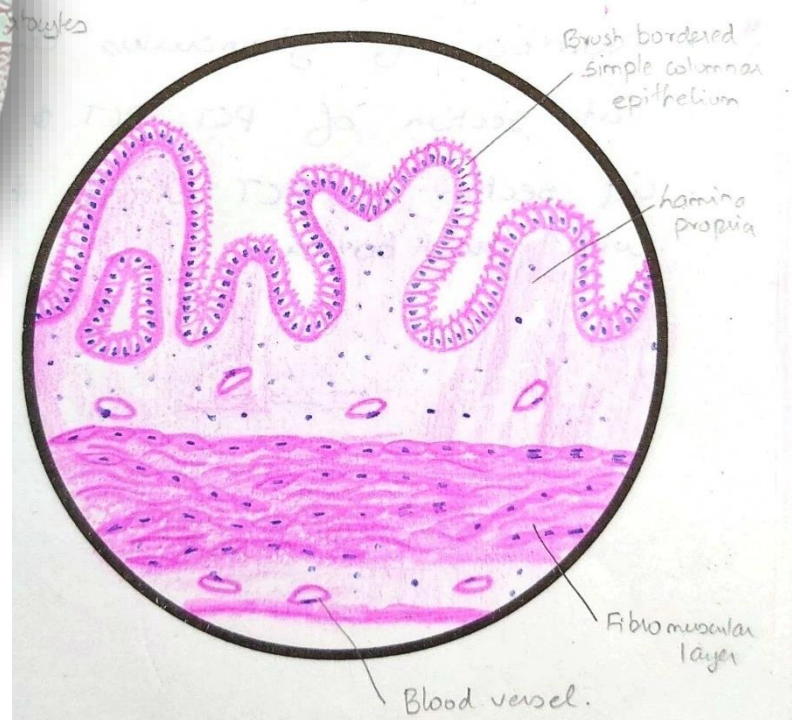
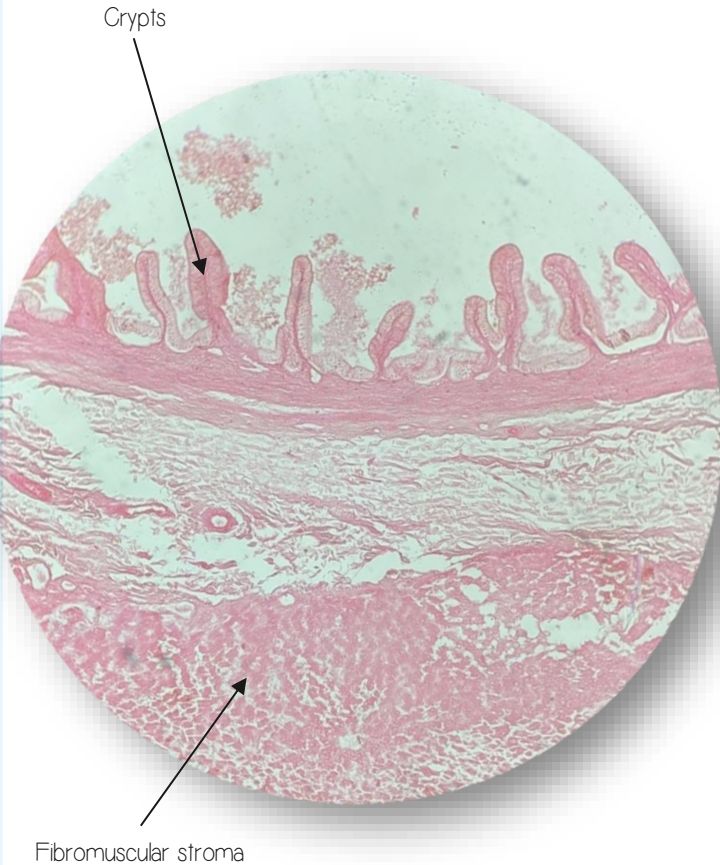


Salient Features

1. Liver is covered by a connective tissue capsule called Glisson's Capsule.
2. Liver Parenchyma is divided into hexagonal Hepatic Lobules.
3. Each lobule has a Central Vein, and several cords of hepatocytes radiates towards ends. Hepatic cords are separated by Hepatic sinusoids.
4. Portal Triad is located at the corners of Hepatic lobule. It consists of a branch of Portal vein, a branch of Hepatic artery, & an Interlobular branch of Bile Duct.

28. GALL BLADDER

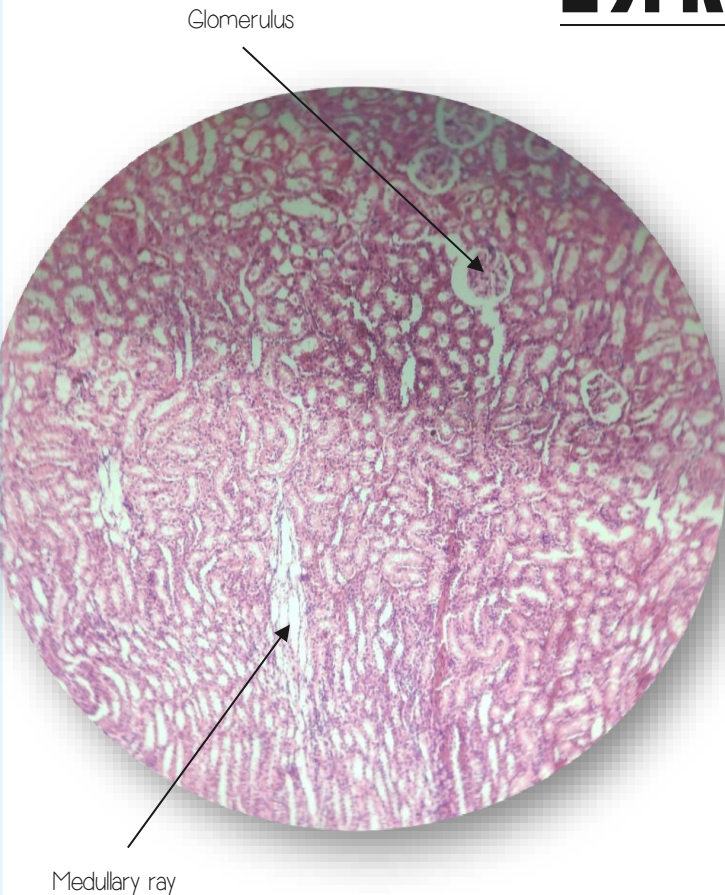
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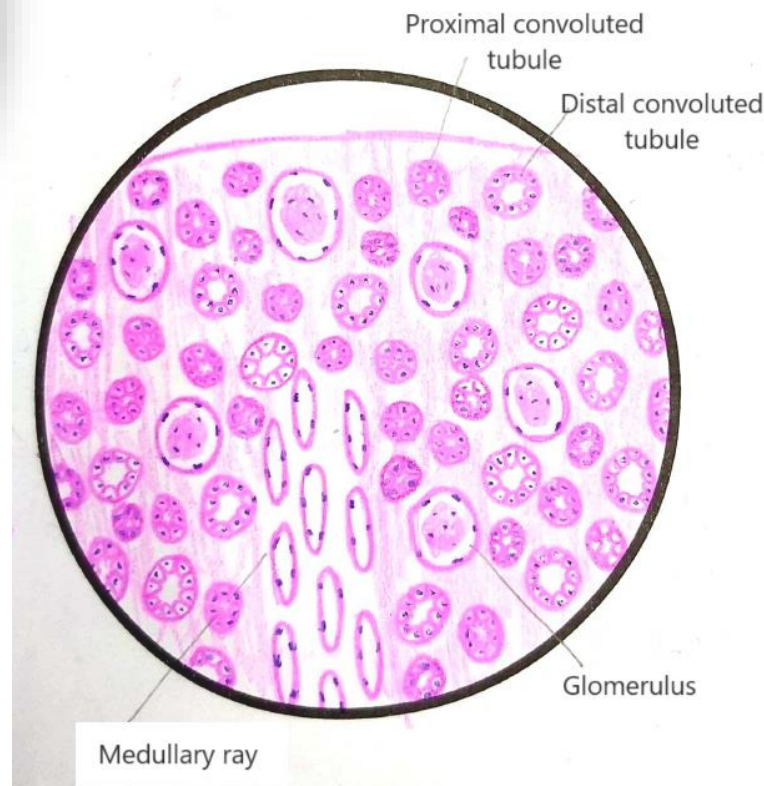
Salient Features

1. Wall of Gall Bladder is made up of outer Serous, middle Fibromuscular & inner Mucous Layers.
2. Mucous Membrane is lined by tall columnar cells, and is highly folded.
3. Fibromuscular layer is composed of numerous connective tissue fibres with some amount of smooth muscles.
4. Crypts may be found in Lamina Propria.

29. KIDNEY



KIDNEY (Low magnification)



Salient Features

1. Kidney consists of an outer cortex and an inner medulla.
2. Medullary rays are seen extending into the cortex.
3. Number of Glomeruli, with surrounding Bowman's capsule is present.
4. Cut sections of Proximal Convoluted tubule, Distal Convoluted tubule, Loop of Henle, and ducts are seen.

30. URINARY BLADDER

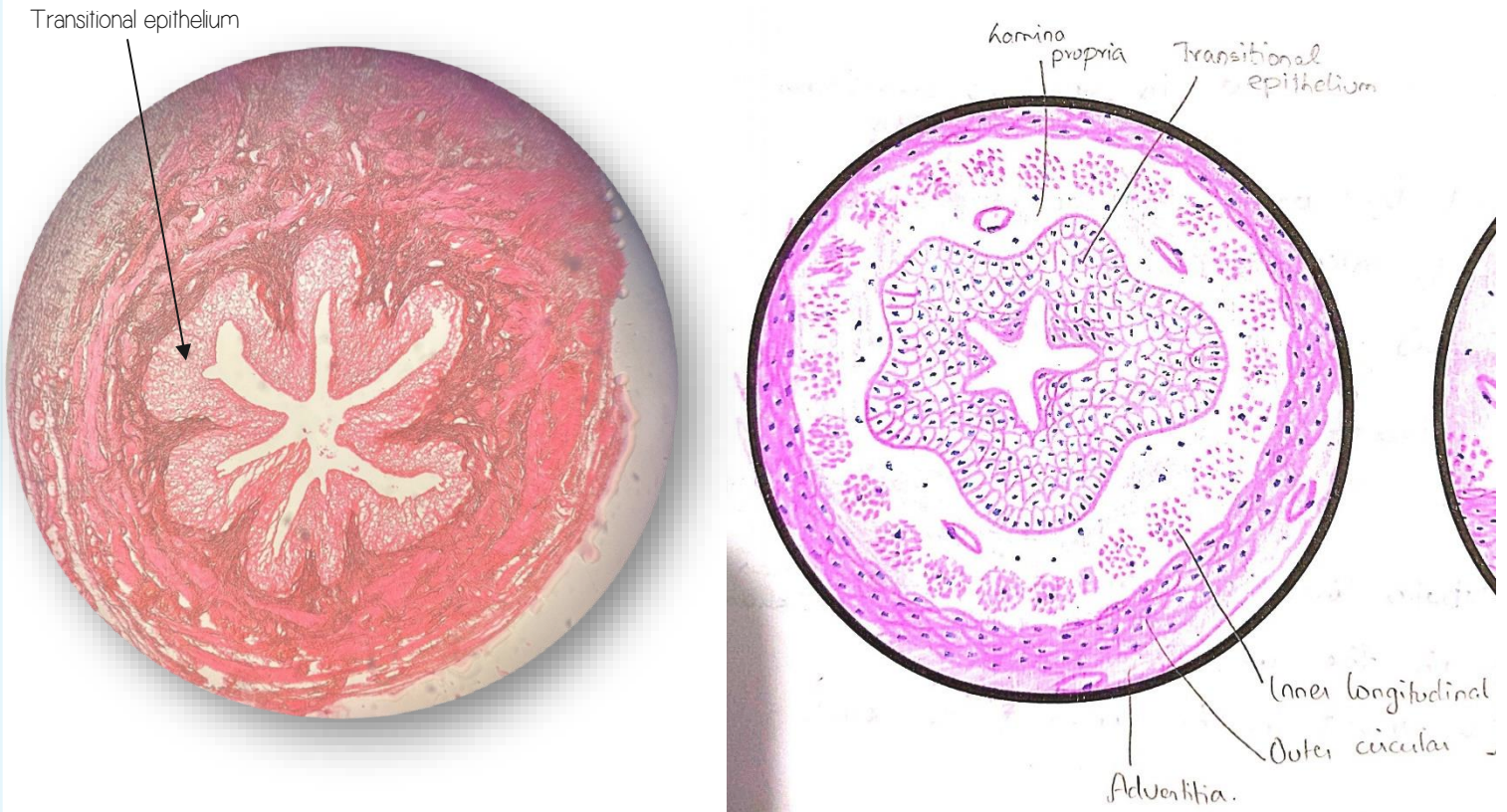
61



Salient Features

1. Composed of Mucosa, Muscular Layer and Serous Layers.
2. Mucous membrane is lined by Transitional Epithelium, and is thrown into several folds.
3. Thick muscular layer is composed of Inner & Outer Longitudinal layers, with a Middle Circular layer.
4. Serous layer is composed of fibroelastic connective tissue, with blood vessels, nerves & lymphatics.

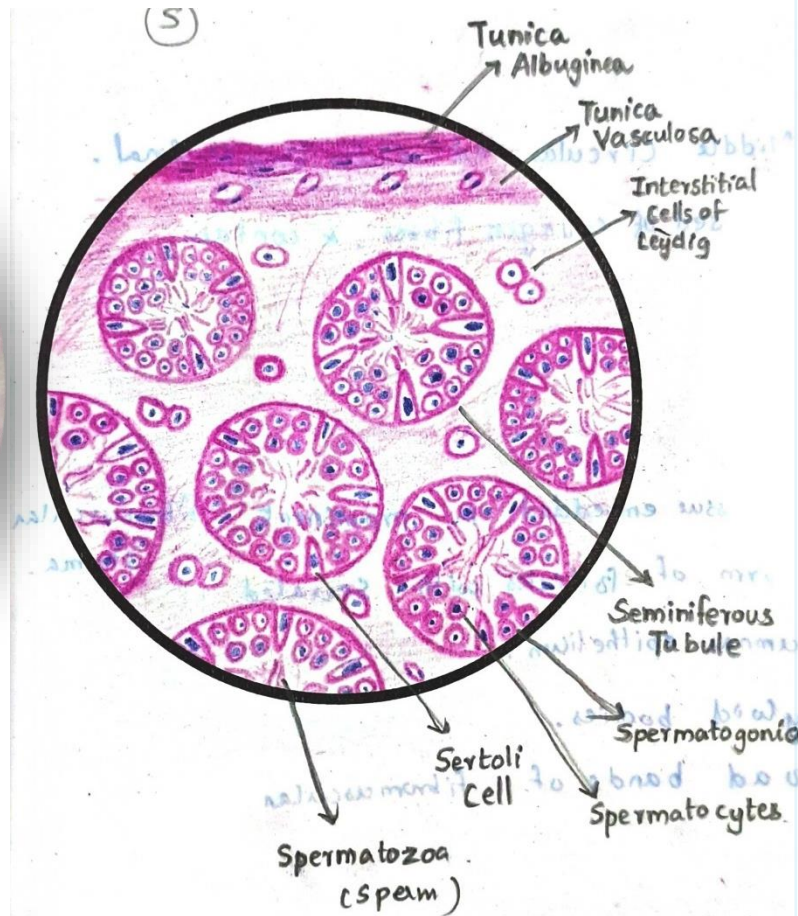
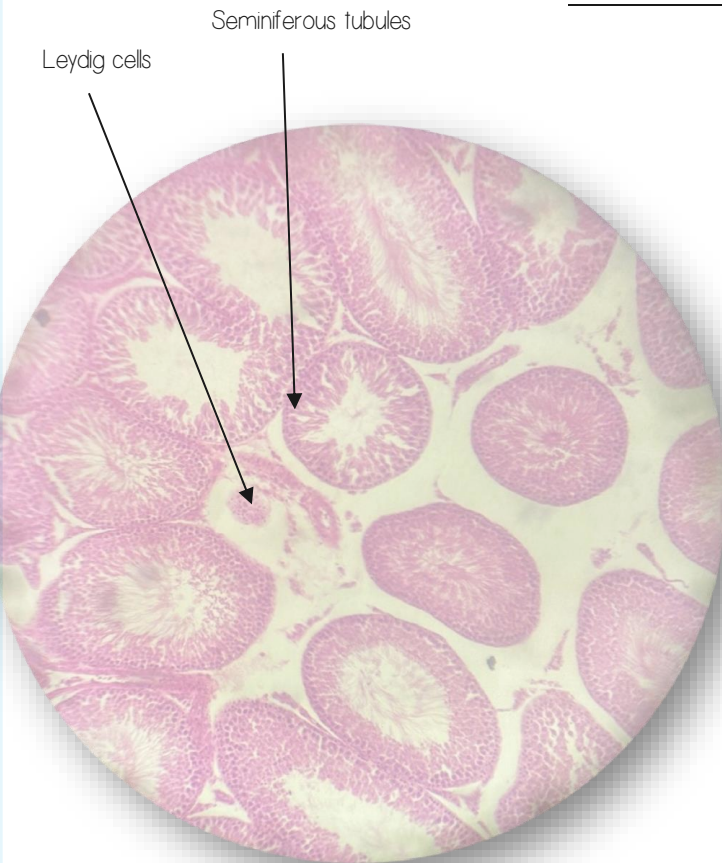
31. URETER



Salient Features

1. Wall of Ureter made up of Mucous, Muscular and Serous Layers.
2. Mucosa lined by Transitional epithelium, which shows several folds, thus there is appearance of a Star-Shaped Lumen.
3. Dense, irregular connective tissue forms Lamina Propria, which underlies the epithelium.
4. Muscular layer is made up of an Inner longitudinal & an Outer circular layer.

32. TESTIS



Salient Features

1. Capsule surrounding Testis composed of 3 layers- Tunica Vaginalis, Tunica Albuginea & Tunica Vascuosa.
2. Cut Sections of Seminiferous Tubules are seen, which are separated by connective tissue containing blood vessels & Interstitial Cells of Leydig.
3. Each Seminiferous Tubule contains Spermatogenic cells and Sertoli cells.
4. Cluster of Sperms are seen in the lumen of Seminiferous Tubules.

33. EPIDIDYMIS

64

Clumps of sperms

Pseudostratified ciliated columnar epithelium



Clumps of sperm

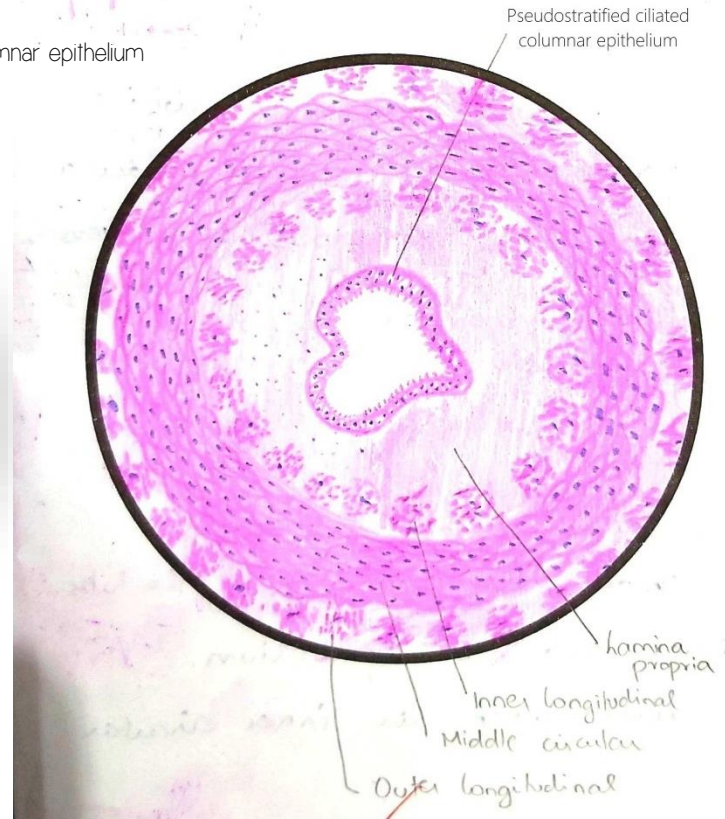
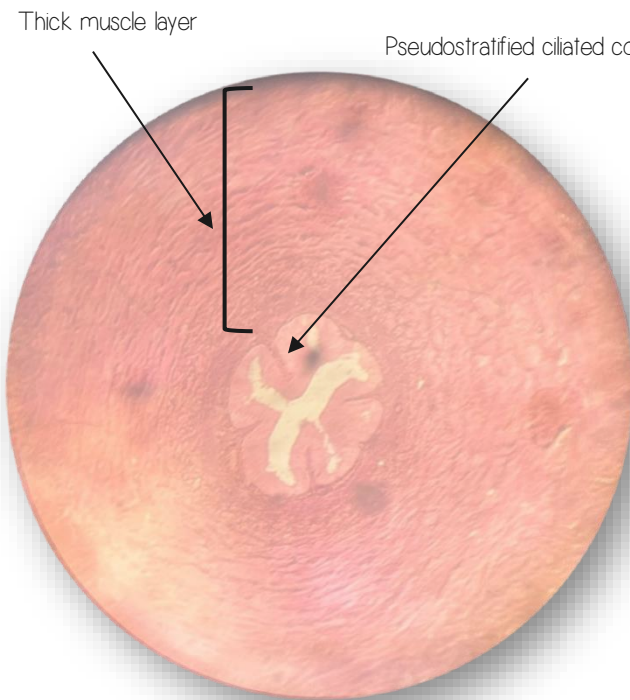


Salient Features

1. Epididymis is highly convoluted tubule; a section shows number of tubules.
2. Epididymis is lined by Pseudostratified Ciliated Columnar Epithelium, bearing stereocilia.
3. Lining epithelium is supported by circularly arranged smooth muscles and loose connective tissue rich in capillaries.
4. Clumps of Sperms are present in the lumen of duct.

34. VAS DEFERENS

65



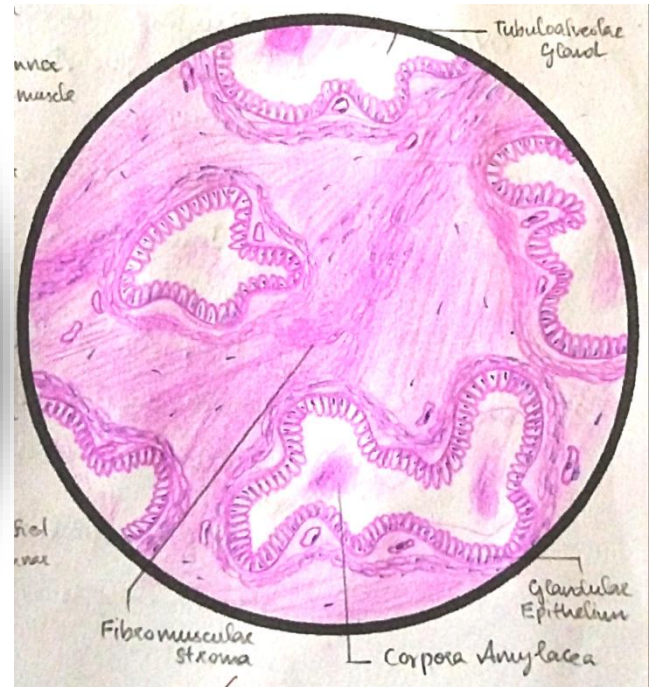
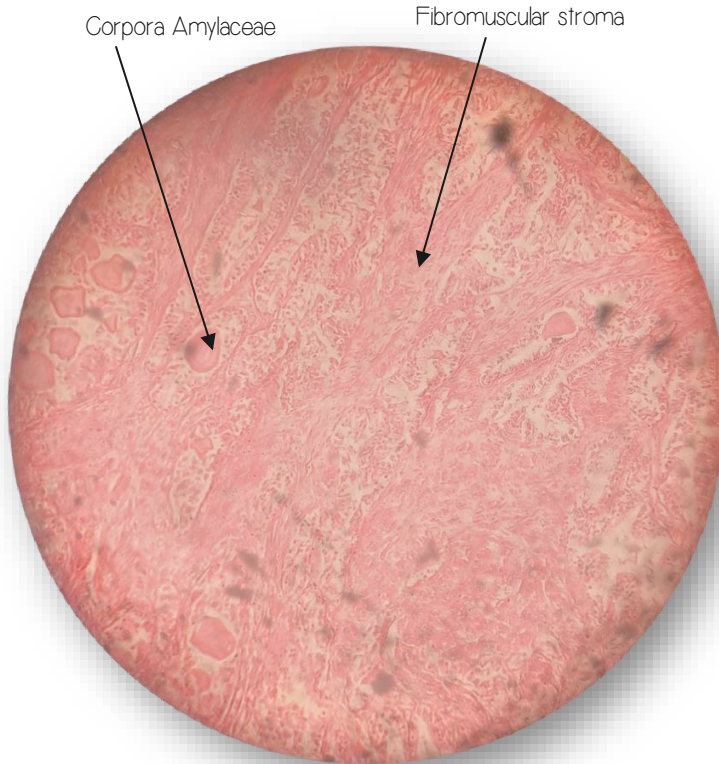
Salient Features

Tubular structure displays:

- A small irregular lumen
- Mucous membrane lined by pseudostratified columnar epithelium with underlying lamina propria.
- The muscle coat is very thick. Three layers, inner longitudinal, middle circular and outer longitudinal are seen.
- Outermost layer is adventitia composed of collagen fibers and containing blood vessels.

35. PROSTATE GLAND

66

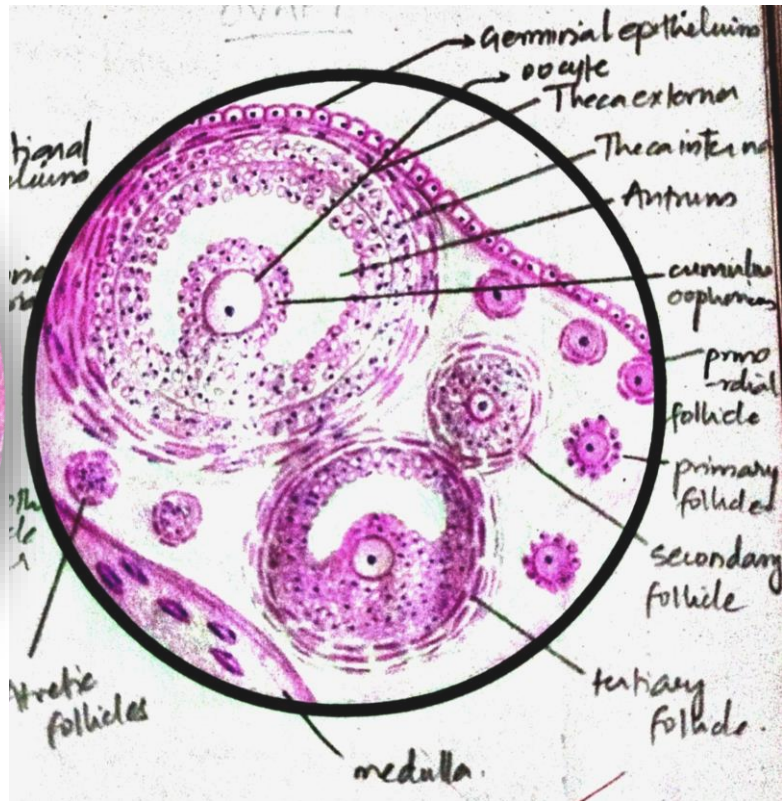
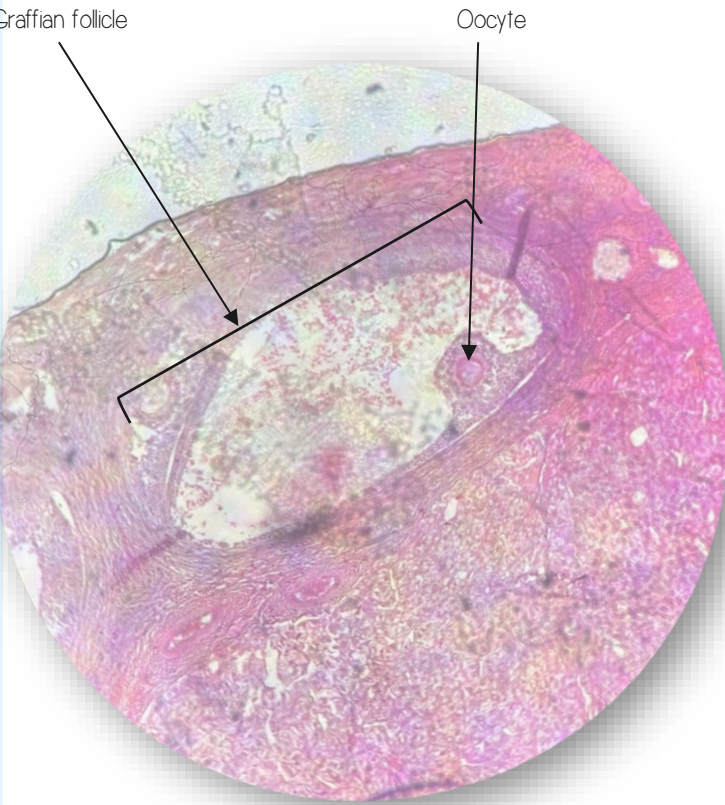


Salient Features

1. Prostate gland consists of Glandular tissue, embedded in prominent fibromuscular stroma.
2. Glandular Tissue is in the form of follicles, with serrated edges. Follicles are lined by Columnar epithelium; Lumen contains Amyloid Bodies.
3. Follicles are separated by fibromuscular tissue, containing collagen fibres and smooth muscles.

36. OVARY

67



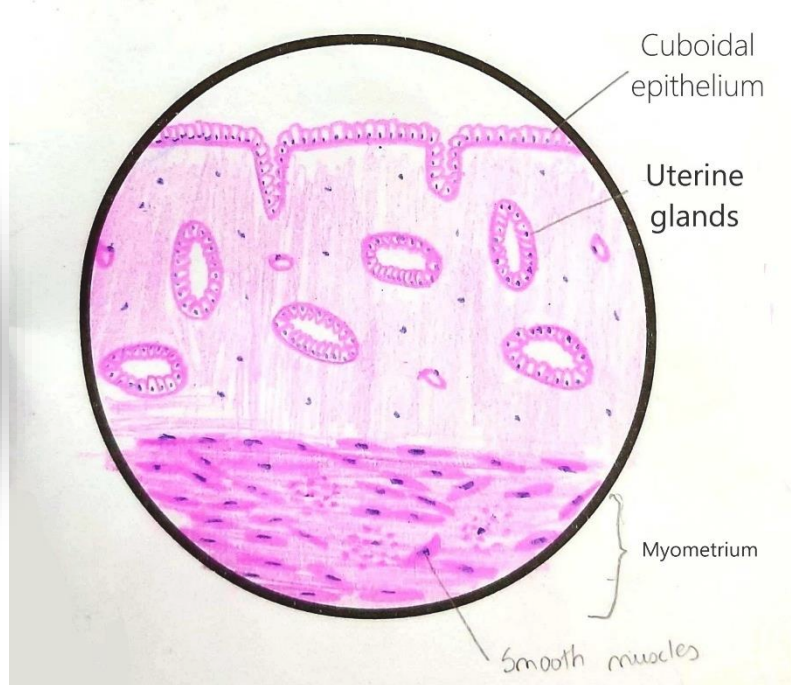
Salient Features

1. Surface of ovary is covered by Cuboidal Epithelium.
2. Substance of ovary has an outer cortex and an inner medulla.
3. Cortex contains many primordial follicles, with developing ovum.
4. Large follicles have a follicular cavity, surrounded by several layers of follicular cells; condensation of connective tissue forms a capsule for it.
5. Capsule composed of Theca Interna and Theca Externa.

37. UTERUS – PROLIFERATIVE

68

Straight Uterine glands

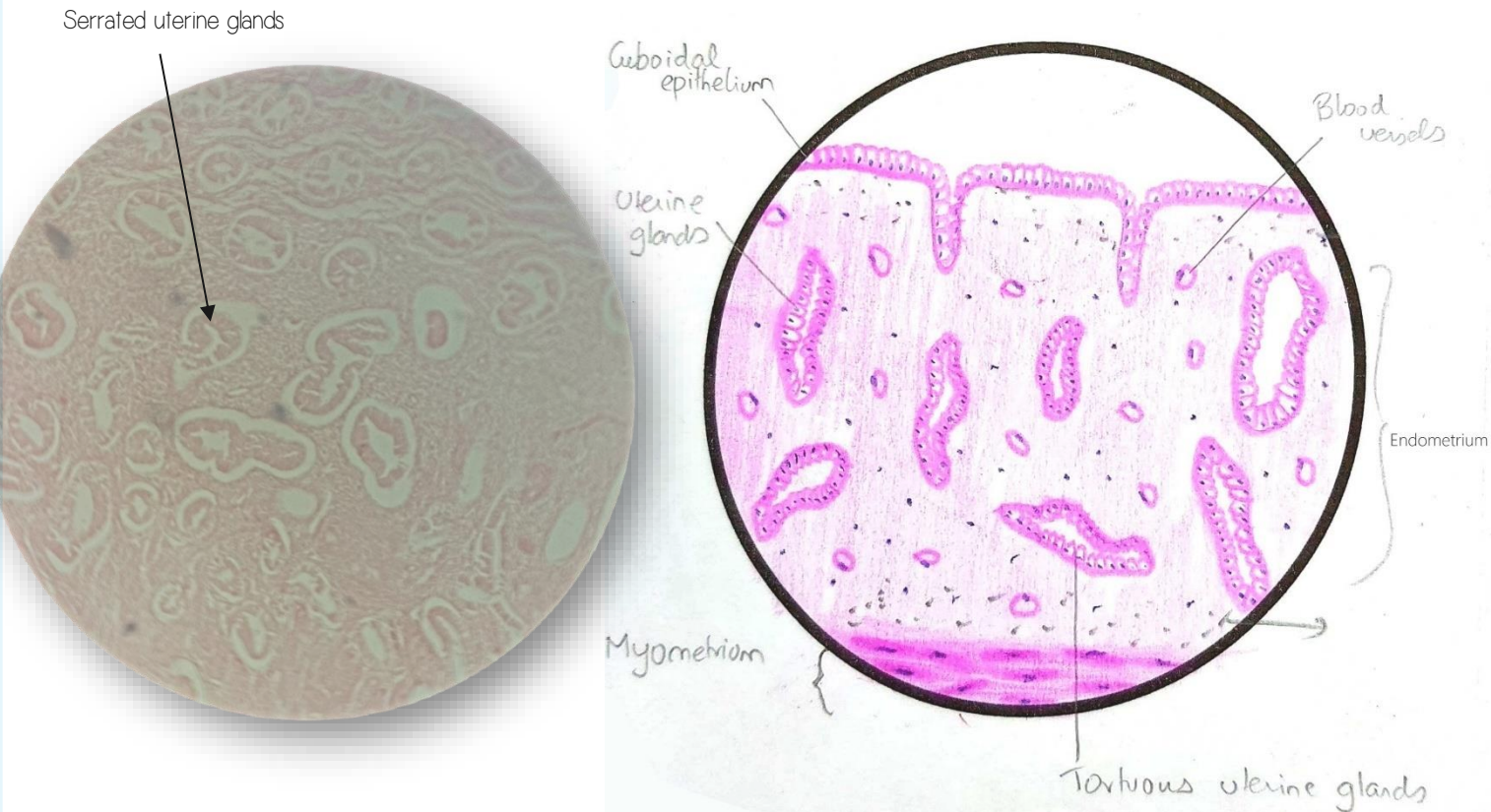


Salient Features

1. Mucous membrane (Endometrium) of Uterus, consists of Lining Epithelium, Lamina Propria & Uterine Glands.
2. Lining epithelium is Columnar epithelium.
3. Thick Muscular Layer (Myometrium) underlies the Endometrium.
4. In Proliferative Phase, Uterine Glands are elongated, straight, and tubular without secretions.
5. Spiral arteries of endometrium are less coiled.

38. UTERUS – SECRETORY

69

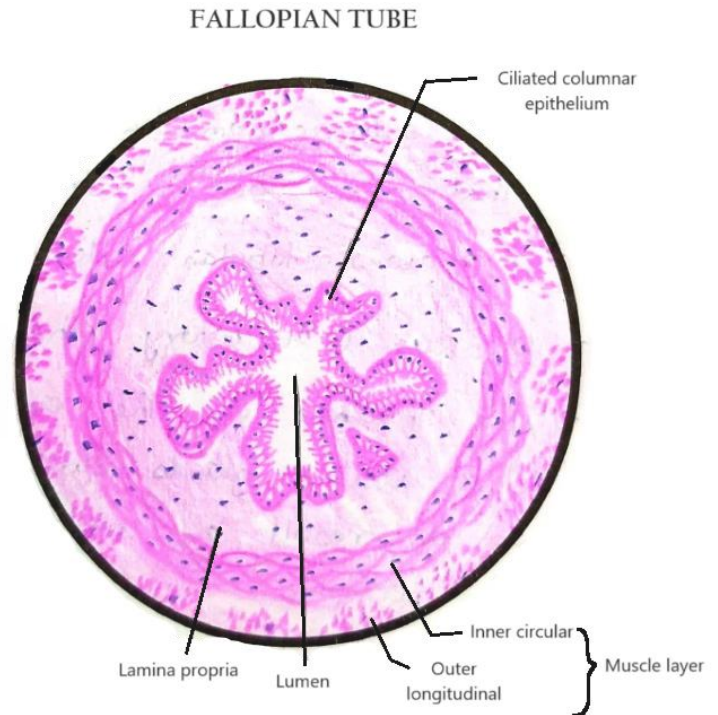
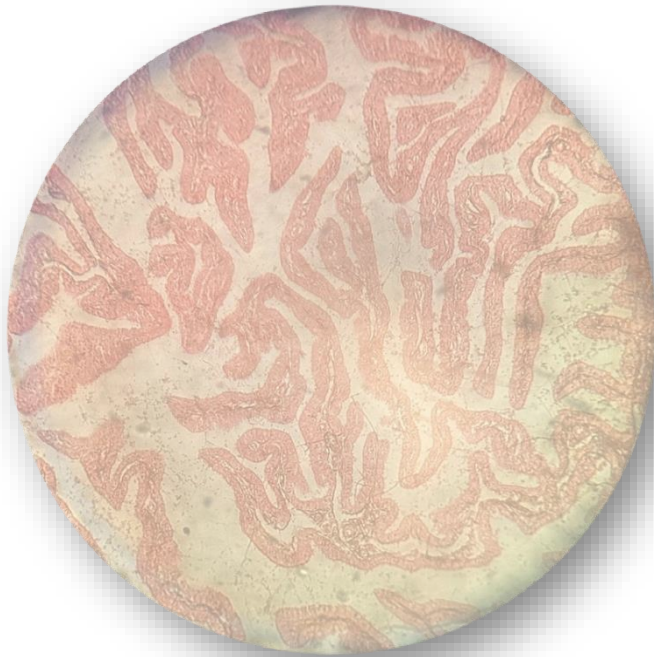


Salient Features

1. Endometrium of Uterus becomes more thickened in Secretory phase.
2. Uterine Glands become more elongated, dilated, tortuous and giving a saw-toothed appearance, with secretion.
3. Spiral Arteries become more coiled and reach the superficial part of endometrium.

39. FALLOPIAN TUBE

70



Salient Features

1. Wall of Fallopian Tube consists of Mucous membrane, Muscular Layer & Serous layer.
2. Uterine tube is characterised by presence of several branching mucosal folds that almost fill the lumen of tube.
3. Mucosa is lined by Ciliated Columnar epithelium.
4. Muscular layer composed of outer longitudinal and inner circular layer.