



Histology Practical Revision

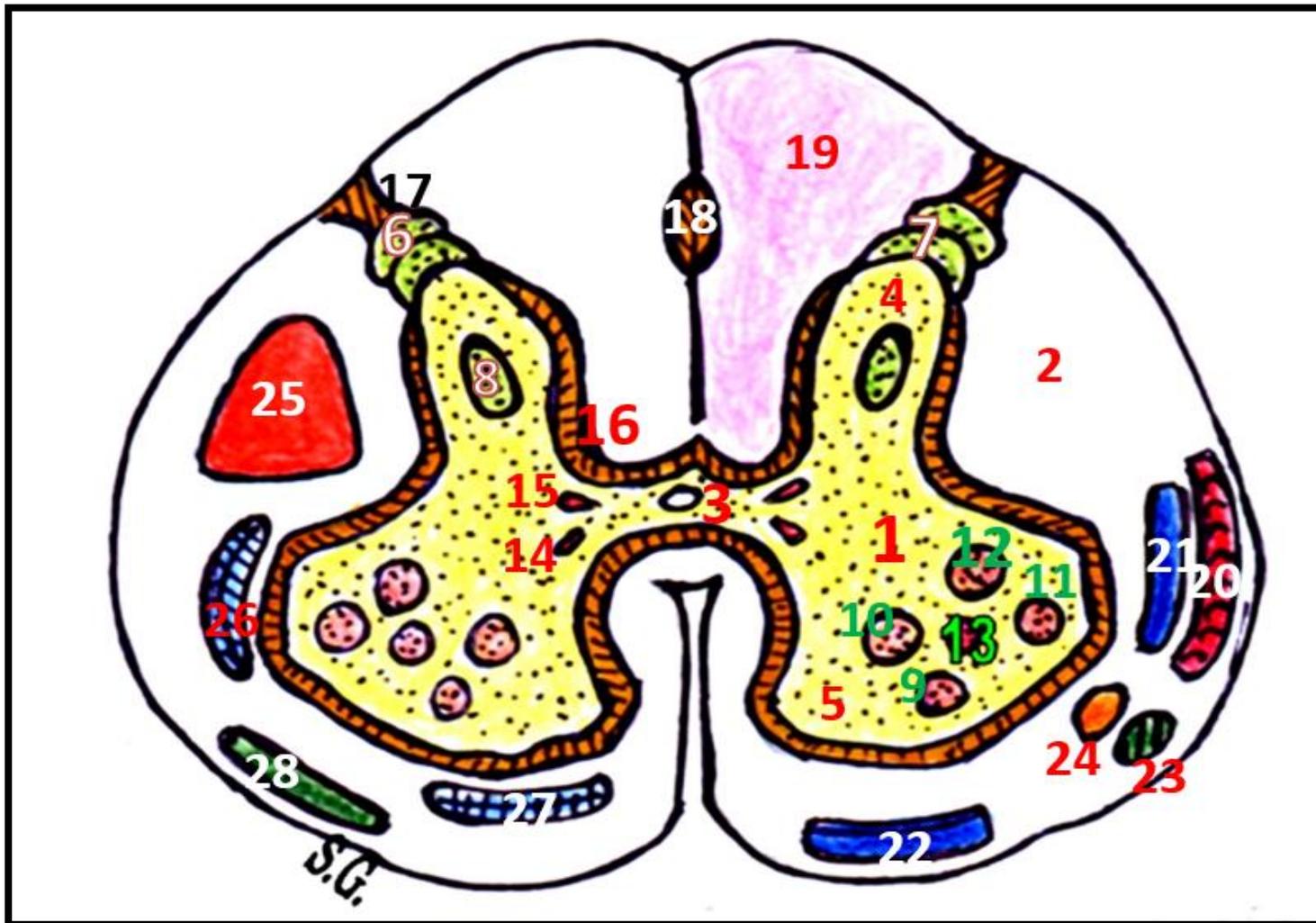


Station 1



Spinal cord (lumbar level)

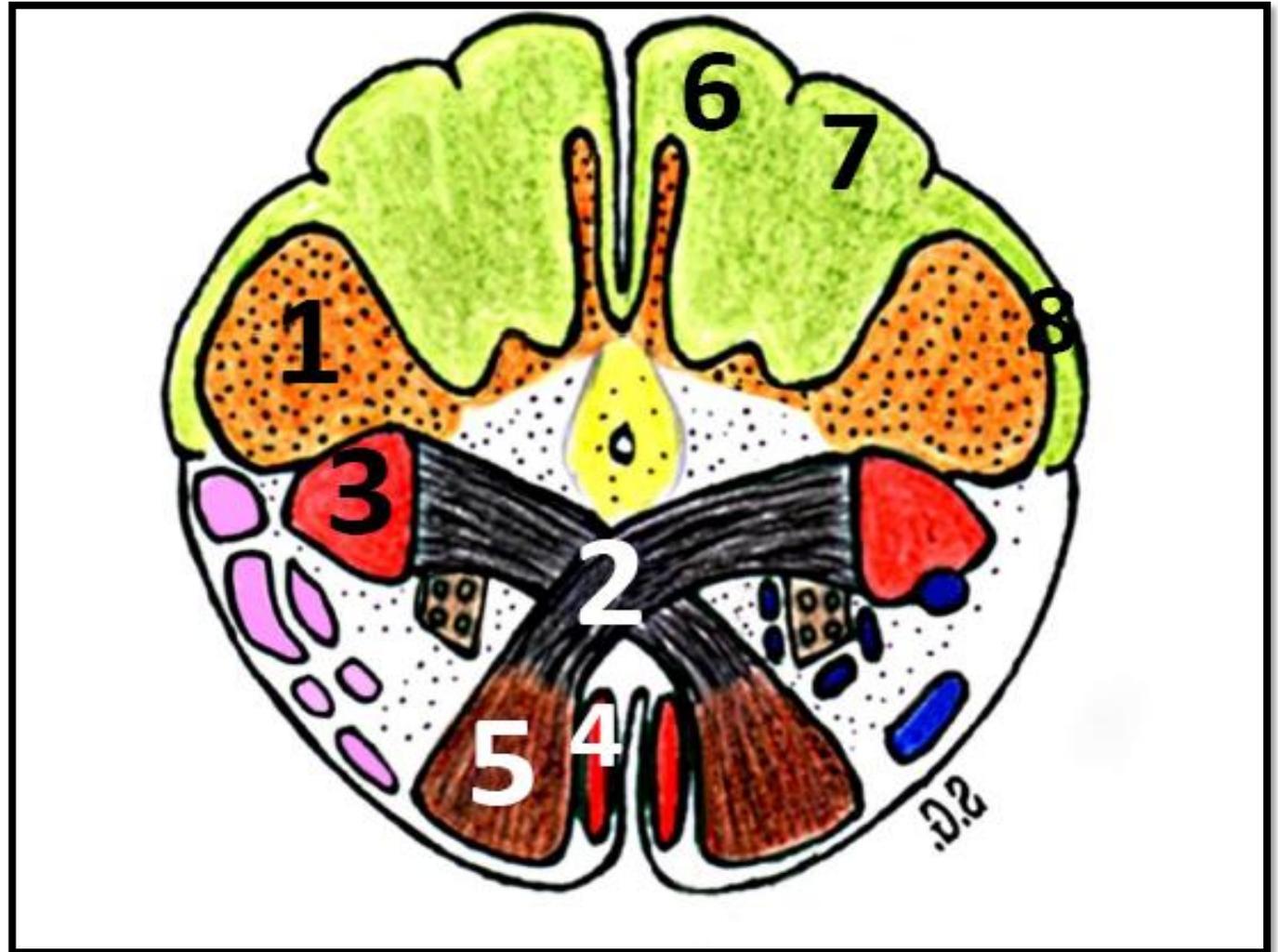
- 20. Ventral spinocerebellar T.
- 21. Lateral spinothalamic T.
- 22. Ventral spinothalamic T.
- 23. Spinoolivary T.
- 24. Spinotectal T.





Closed medulla Level of motor decussation

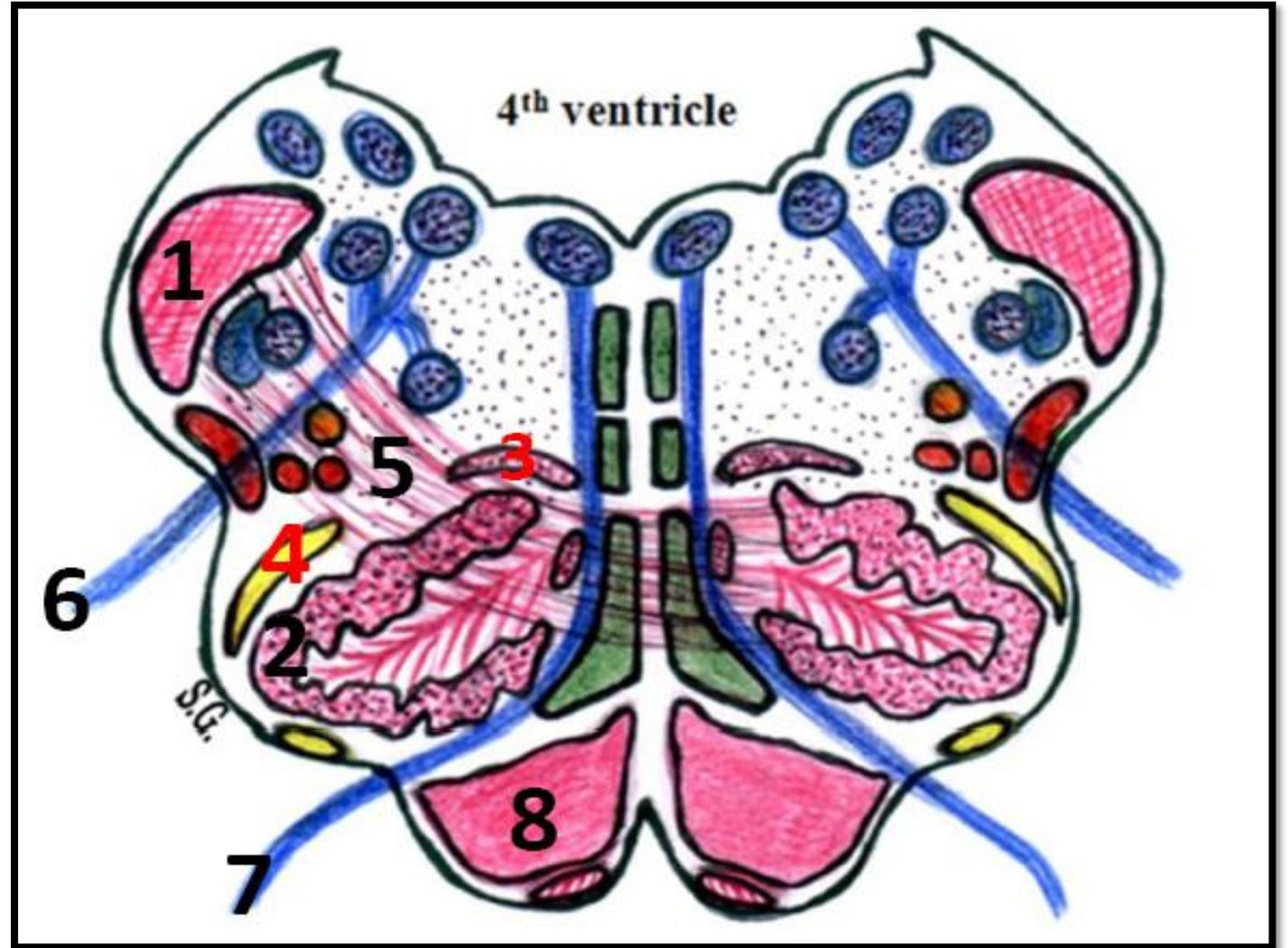
- 1-Spinal N. of trigeminal nerve
- 2-Pyramidal decussation
- 3-Crossed pyramidal tract
- 4-Direct pyramidal tract
- 5-Pyramid
- 6-Gracile tract
- 7-Cuneate tract
- 8-Tract of spinal N. of trigeminal nerve





Open medulla

- 1-Inferior cerebellar peduncle
- 2-Main inferior olive
- 5-Olivocerebellar fibers
- 6-Vagal nerve fibers
- 7-Hypoglossal nerve fibers
- 8-Pyramid



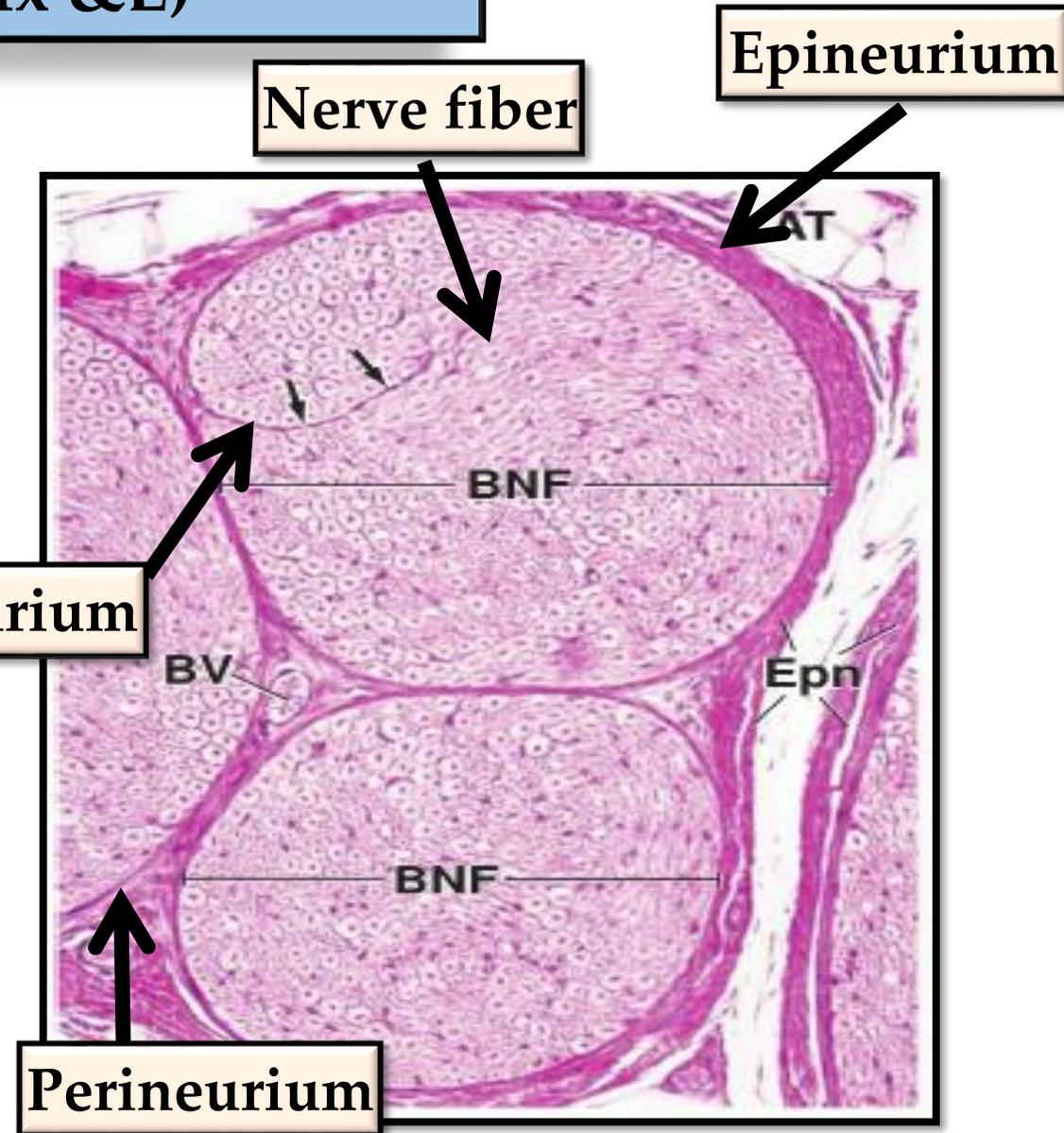


Station 2



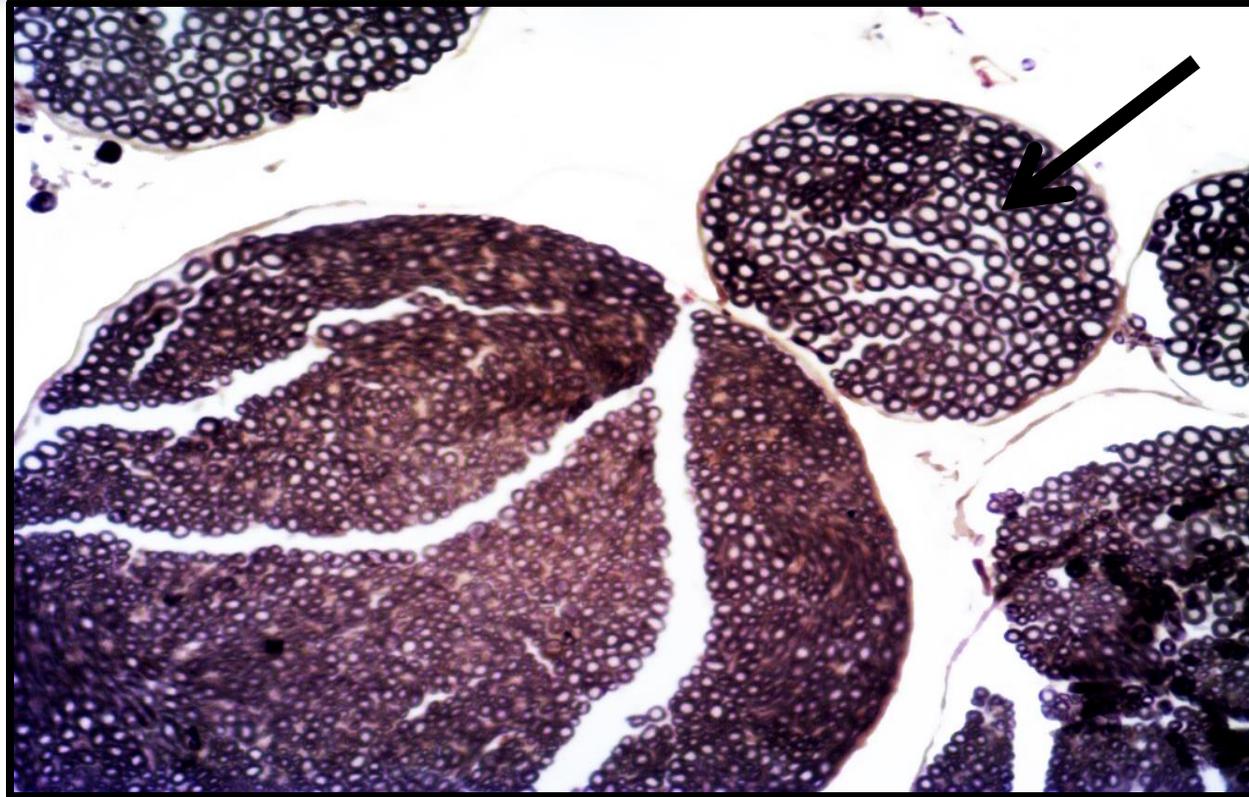
Nerve trunk (Hx &E)

- ❑ Formed of bundles of myelinated nerve fibers.
- Each fiber appears as **central acidophilic axon**, **thin outer pink Schwann cell cytoplasm** and **an empty space of dissolved myelin in between**.
- The nerve trunk has the following CT components:
 - **Epineurium**: surrounds the whole nerve trunk.
 - **Perineurium**: surrounds the bundles of nerve fibers.
 - **Endoneurium**: between the individual nerve





Nerve trunk (Osmic acid)

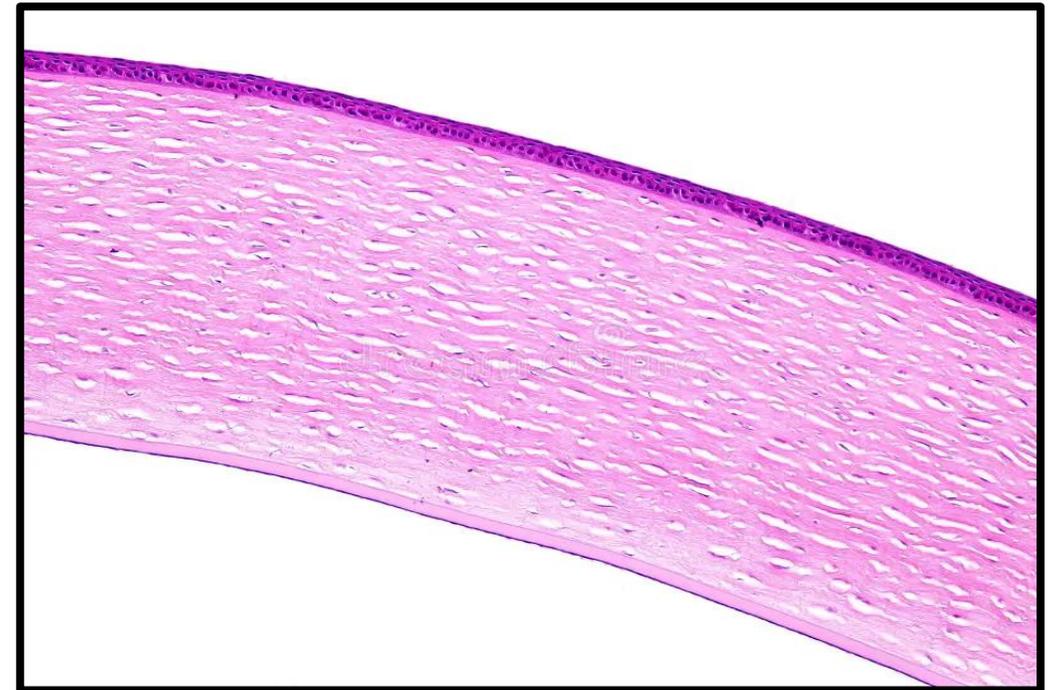
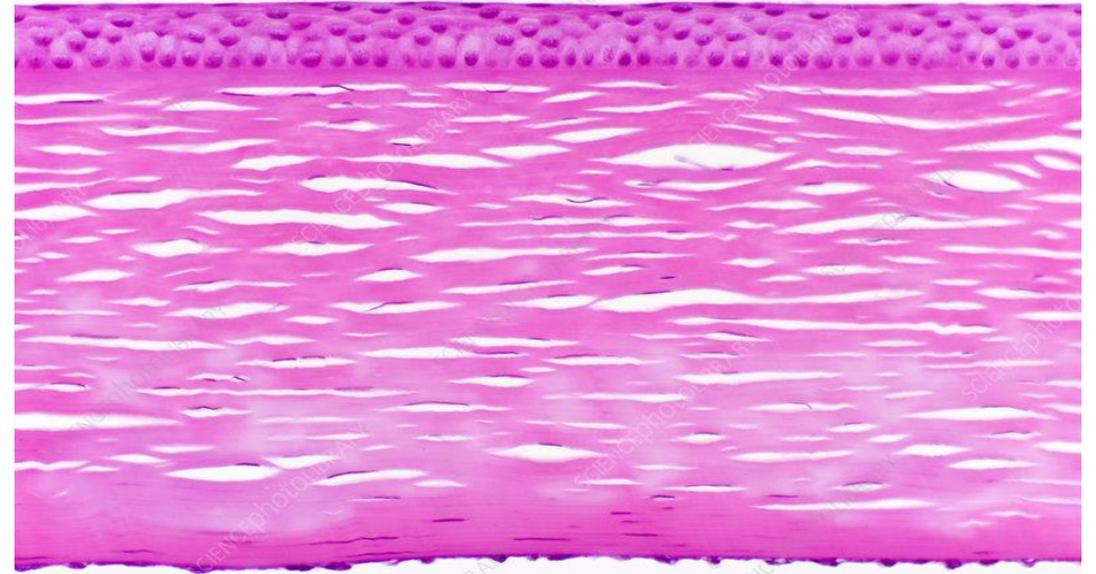


- Myelin sheaths are stained and appear as black circles.
- Axons and Schwann cells are not stained.

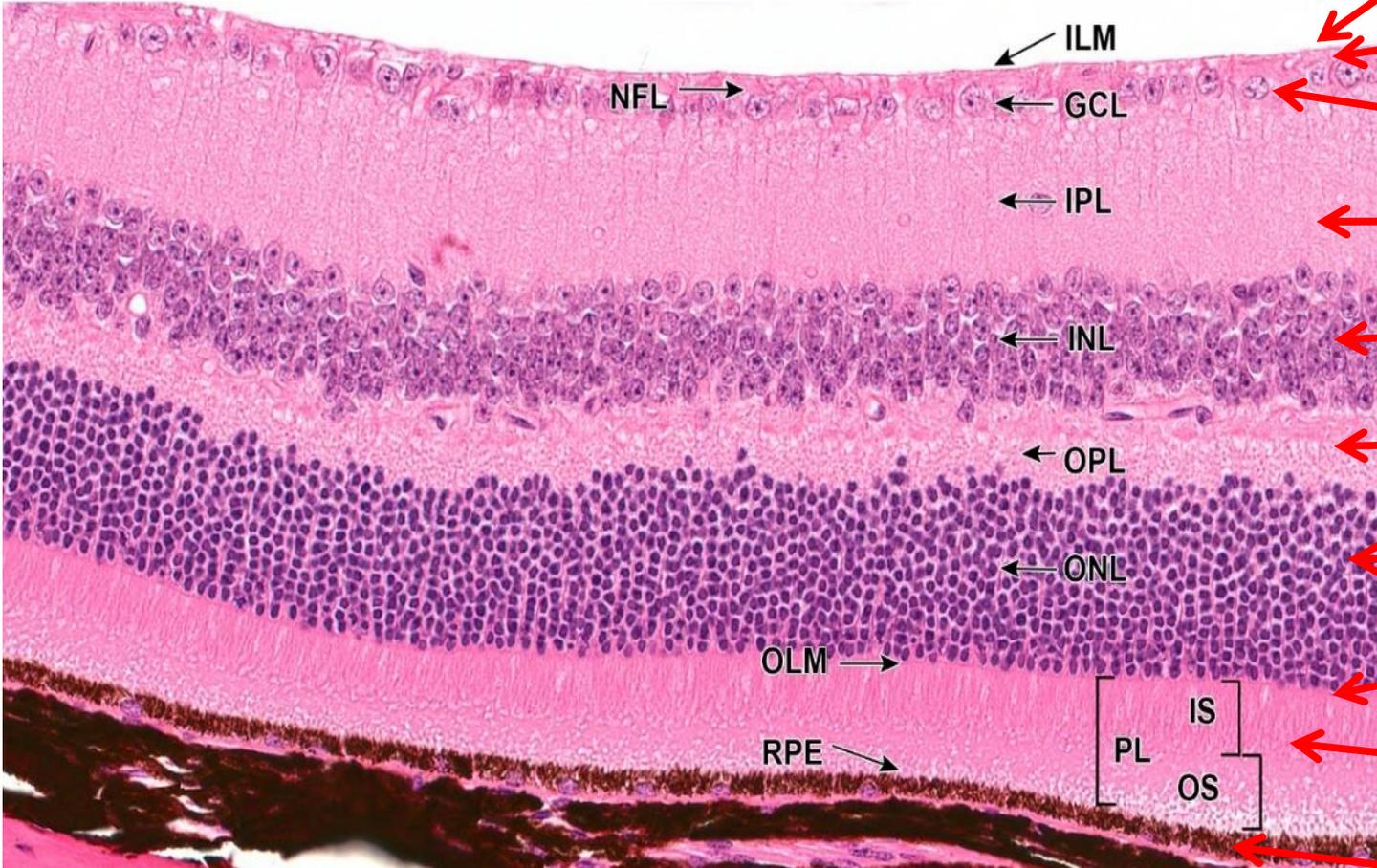
The Cornea

Cornea is formed of 5 layers:

- 1. Corneal Epithelium:** stratified squamous non keratinized
- 2. Bowman's membrane**
- 3. Substantia propria (Stroma)**
 - **It comprises about 90% of the thickness of the cornea**
- 4. Descemet's membrane**
- 5. Descemet's endothelium**



RETINA



The inner limiting membrane

The nerve fiber layer

The ganglion cell layer

The inner plexiform layer

The inner nuclear layer

The outer plexiform layer

The outer nuclear layer

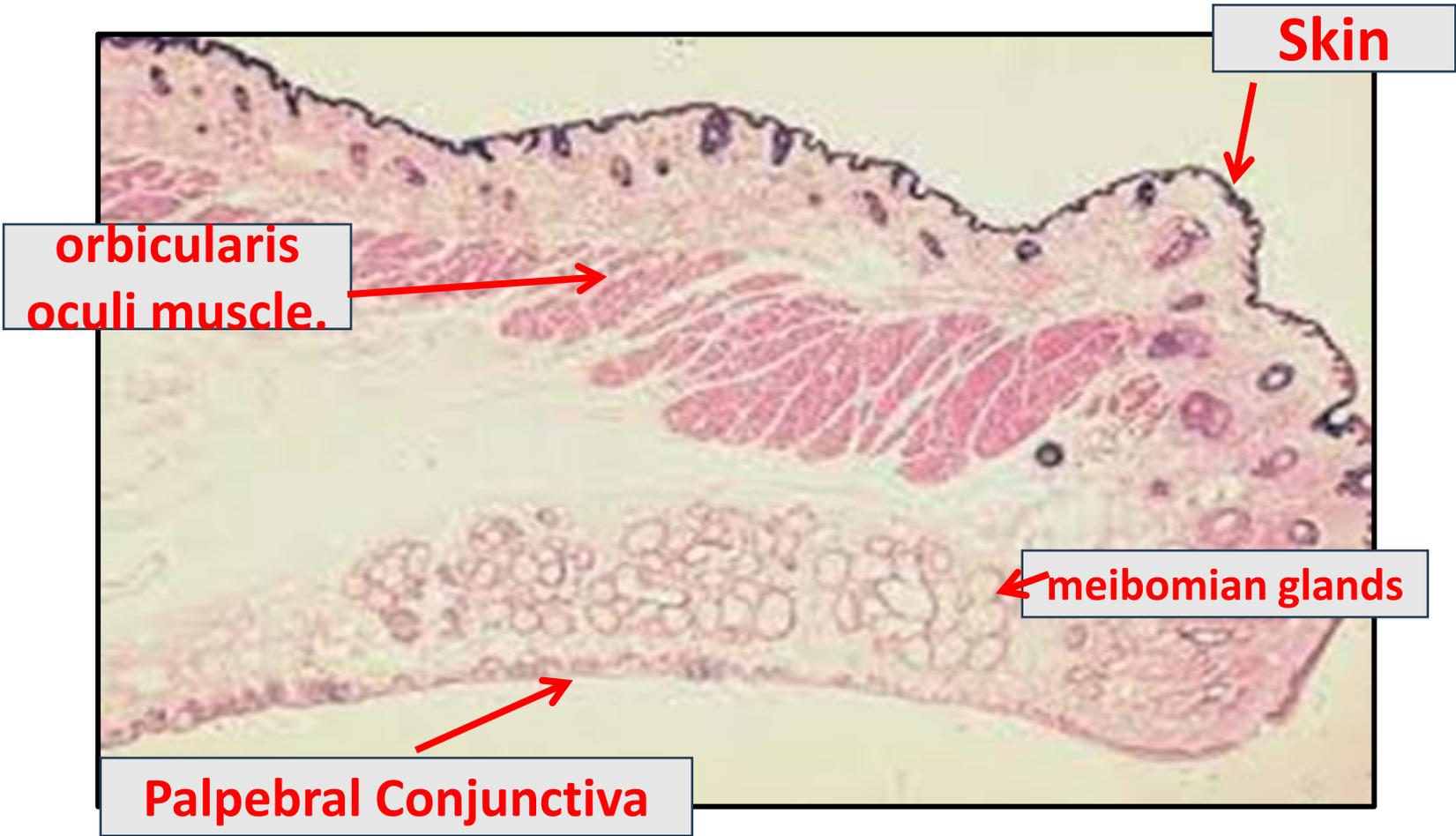
The outer limiting membrane

The rods and cones layer

The pigmented epithelium

The Eyelids

- External surface is covered with **thin Skin**.
- Bundles of the **orbicularis oculi muscle**.
- The **meibomian glands**: (sebaceous glands) in the tarsal plate.
- Internal surface is covered with **Palpebral Conjunctiva**.



Pacinian Corpuscle

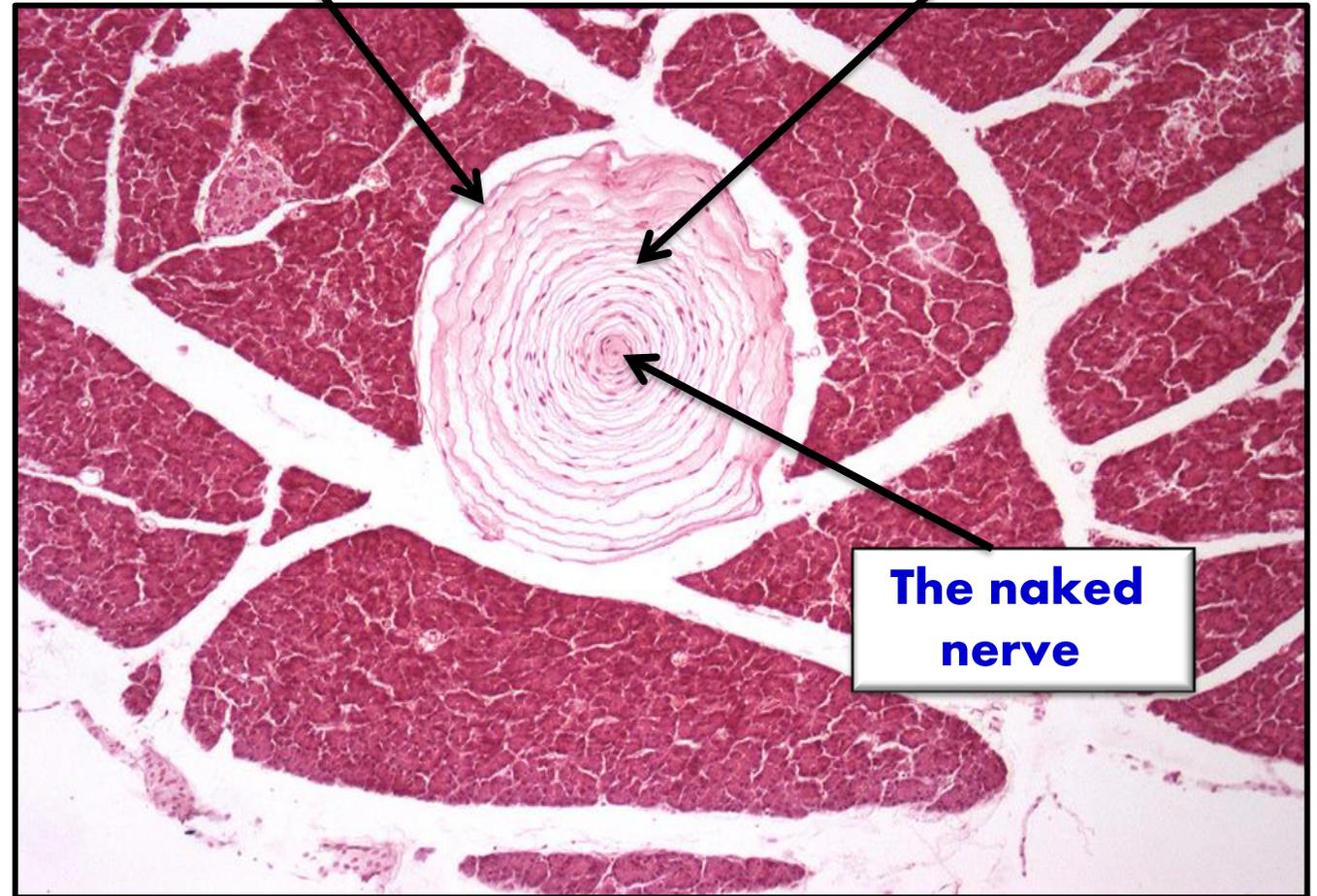
- ❖ Thin C.T. capsule.
- ❖ Concentric layers of modified schwann cells.
- ❖ The naked nerve (non-myelinated) is seen in the center of the corpuscle.

Site:

- Deep in the dermis and hypodermis: Numerous in Fingers and external genitalia.
- Sites subjected to pressure: inter muscular septa,

C.T. capsule

Concentric layers of modified schwann cells

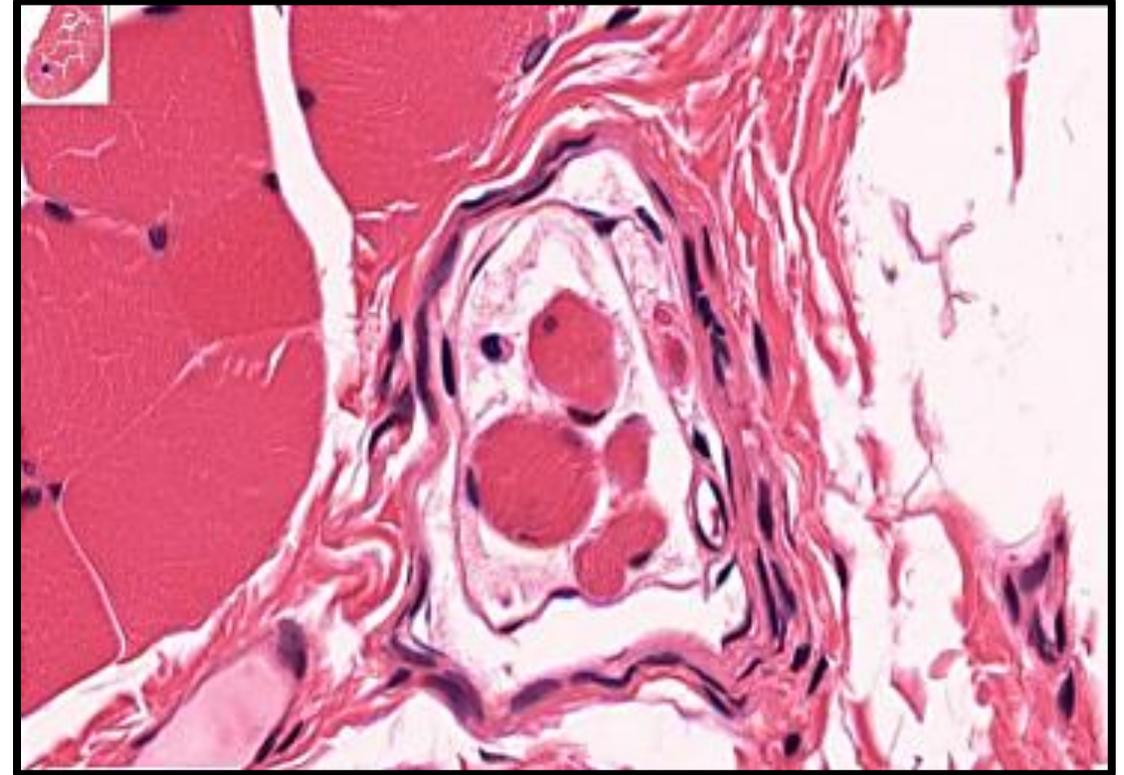


The naked nerve

Muscle Spindle

❖ **Capsulated structure between the skeletal muscle fibers and is formed of:**

- **Capsule**
- **Sub-capsular space**
- **Intrafusal muscle fibers**



Site:

- 1) Between the striated muscle fibers specially near their insertion.**
- 2) Numerous in small muscles doing fine work e.g. Hand muscles.**