

Histology Practical slides

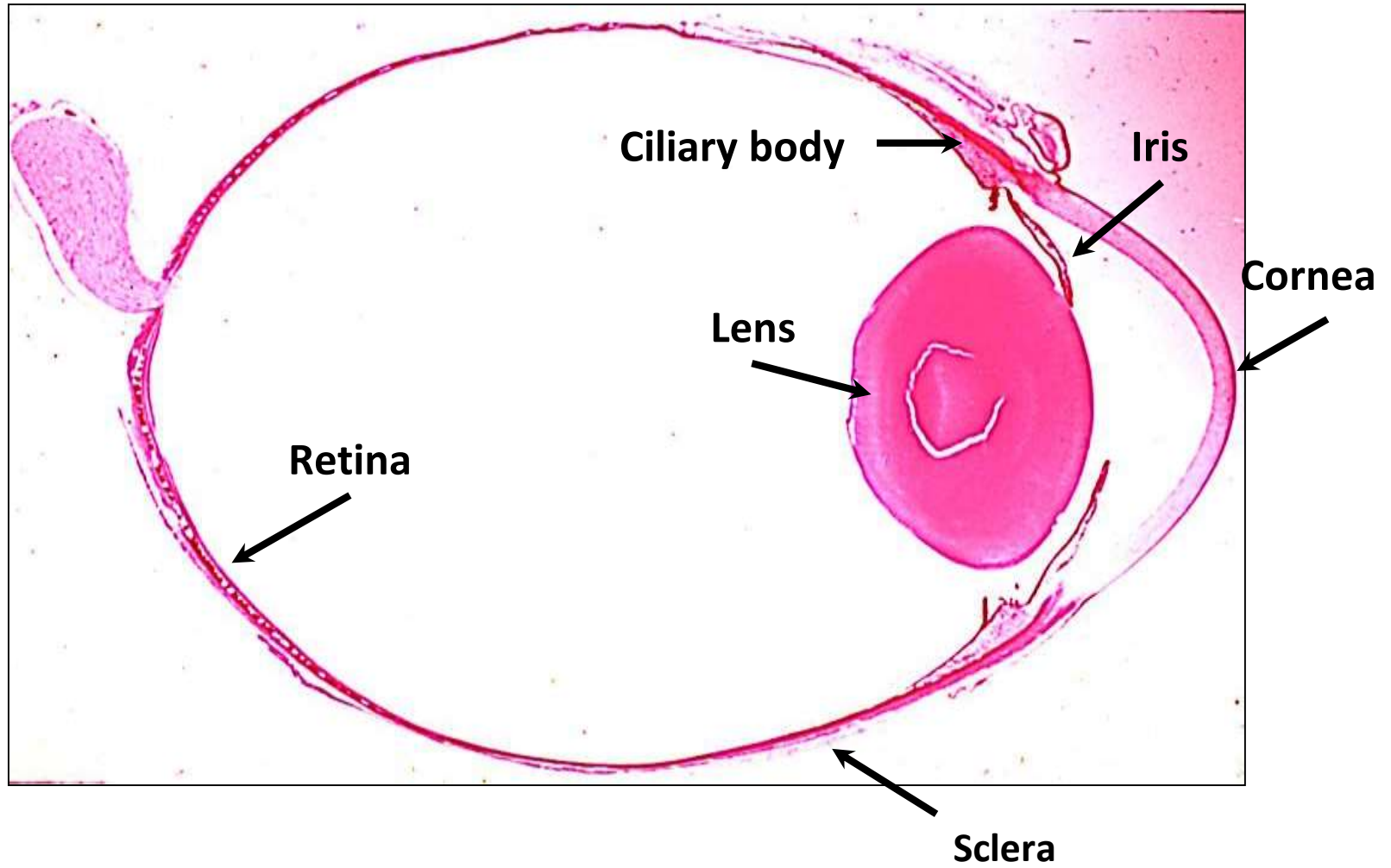
3rd year/ 2023

PNS module

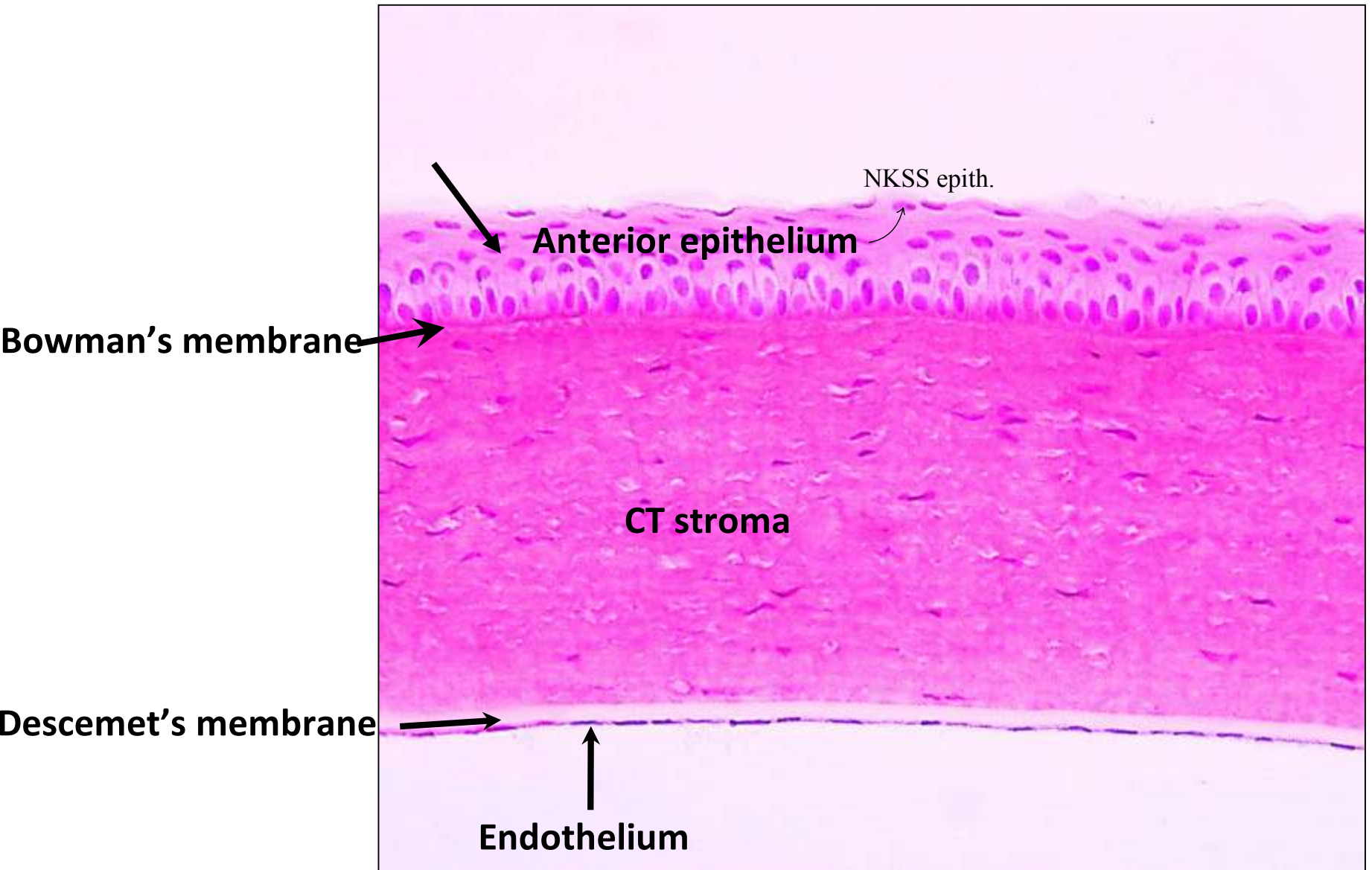
The assigned slides:

1. The eye ball - The cornea - The retina
2. The cochlea (ear)
3. The spinal ganglion (H&E)
4. The spinal ganglion (sliver)
5. The sympathetic ganglion (H&E)
6. The sympathetic ganglion (sliver)
7. The nerve trunk (H&E)
8. The nerve trunk (osmic acid)
9. Pacinian corpuscle in pancreas
10. Messienner's corpuscles in skin

H&E)) The eye ball)



The cornea (H&E)

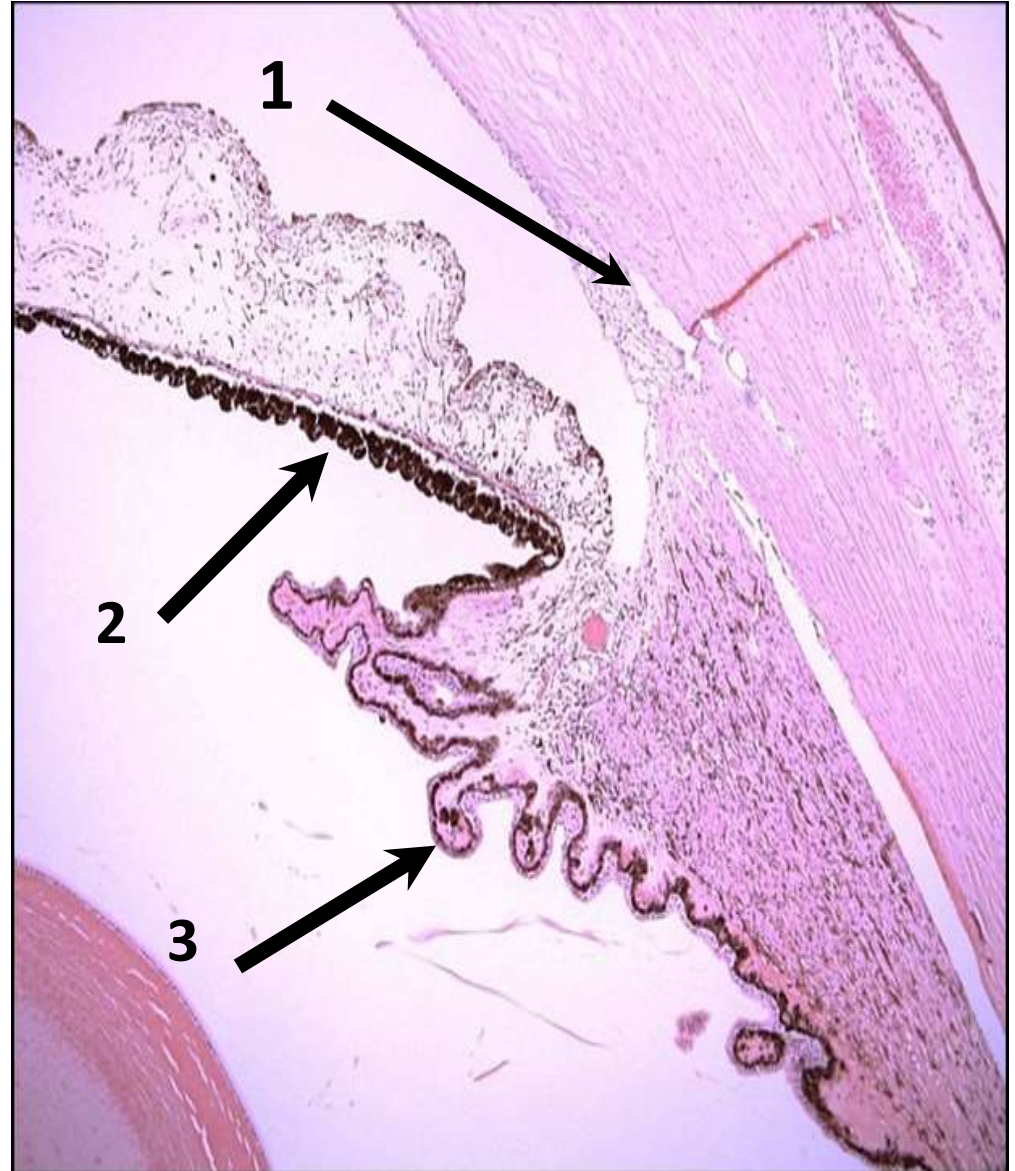


1- Canal of Schlemm

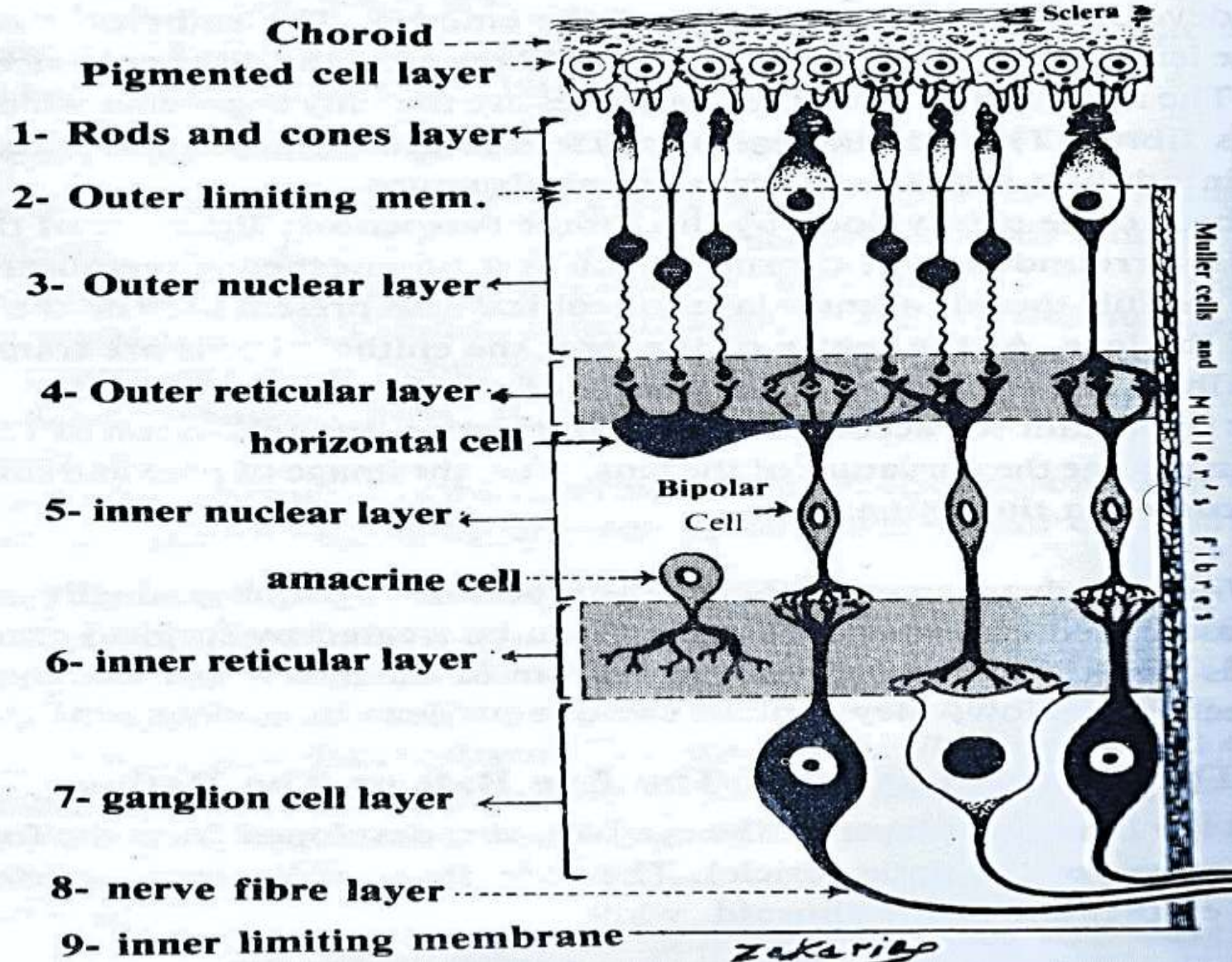
**2- Pigmented epithelium
of lower surface of iris**

3- Ciliary process

which secrete the Aqueous humor



1- The Retina



The retina (H&E)

nerve fiber which form the optic nerve

*Ganglion cell layer →

*Inner plexiform layer →

*Inner nuclear layer →

*Outer plexiform layer →

*Outer nuclear layer →

*Rods and cones →

attached with the villi of pigmented epithelium (the area of retinal detachment) →

*Pigmented epithelium →

↳ Darkness+one layer

choroid



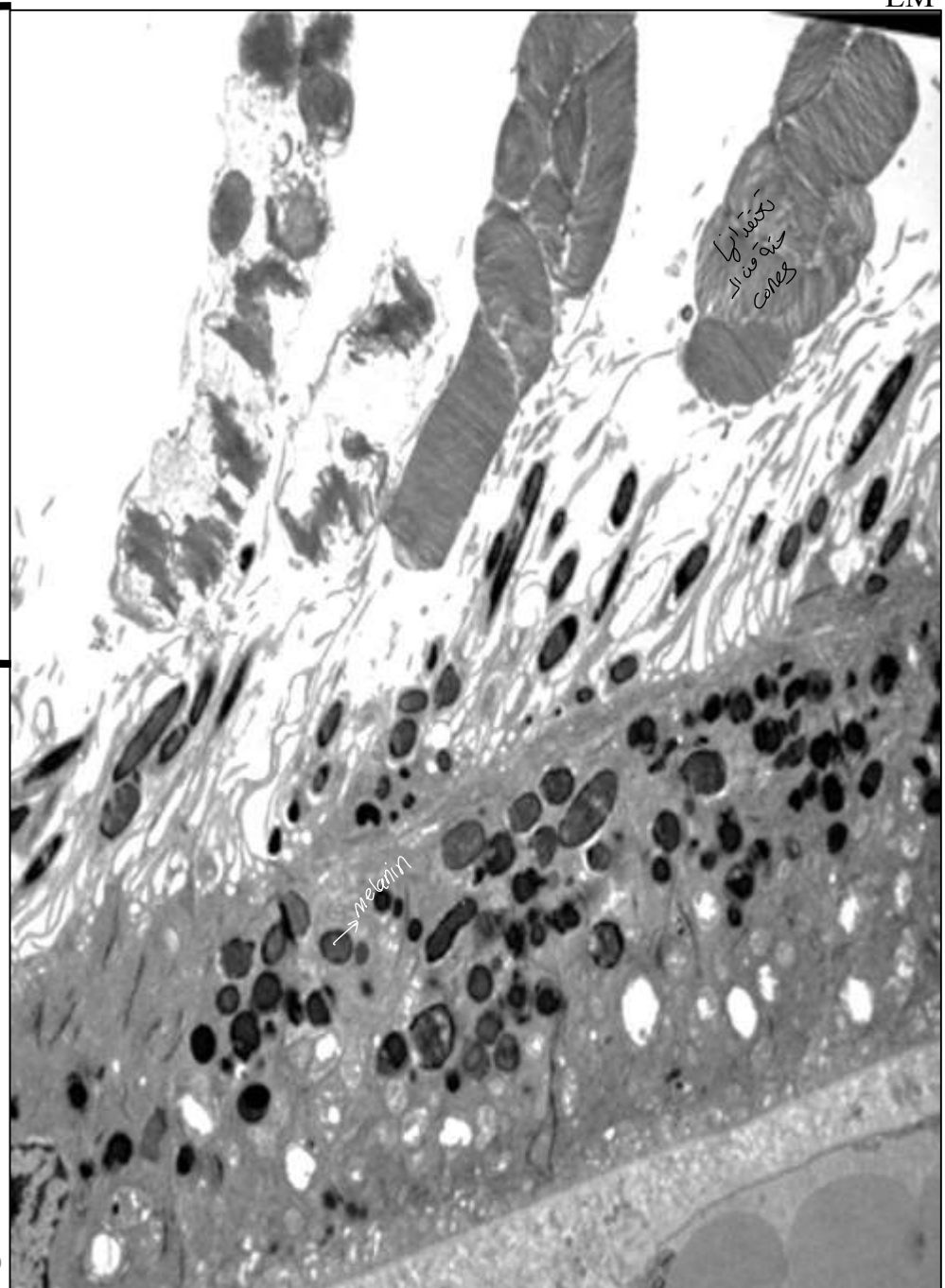
*rods

Outer segment of photoreceptors

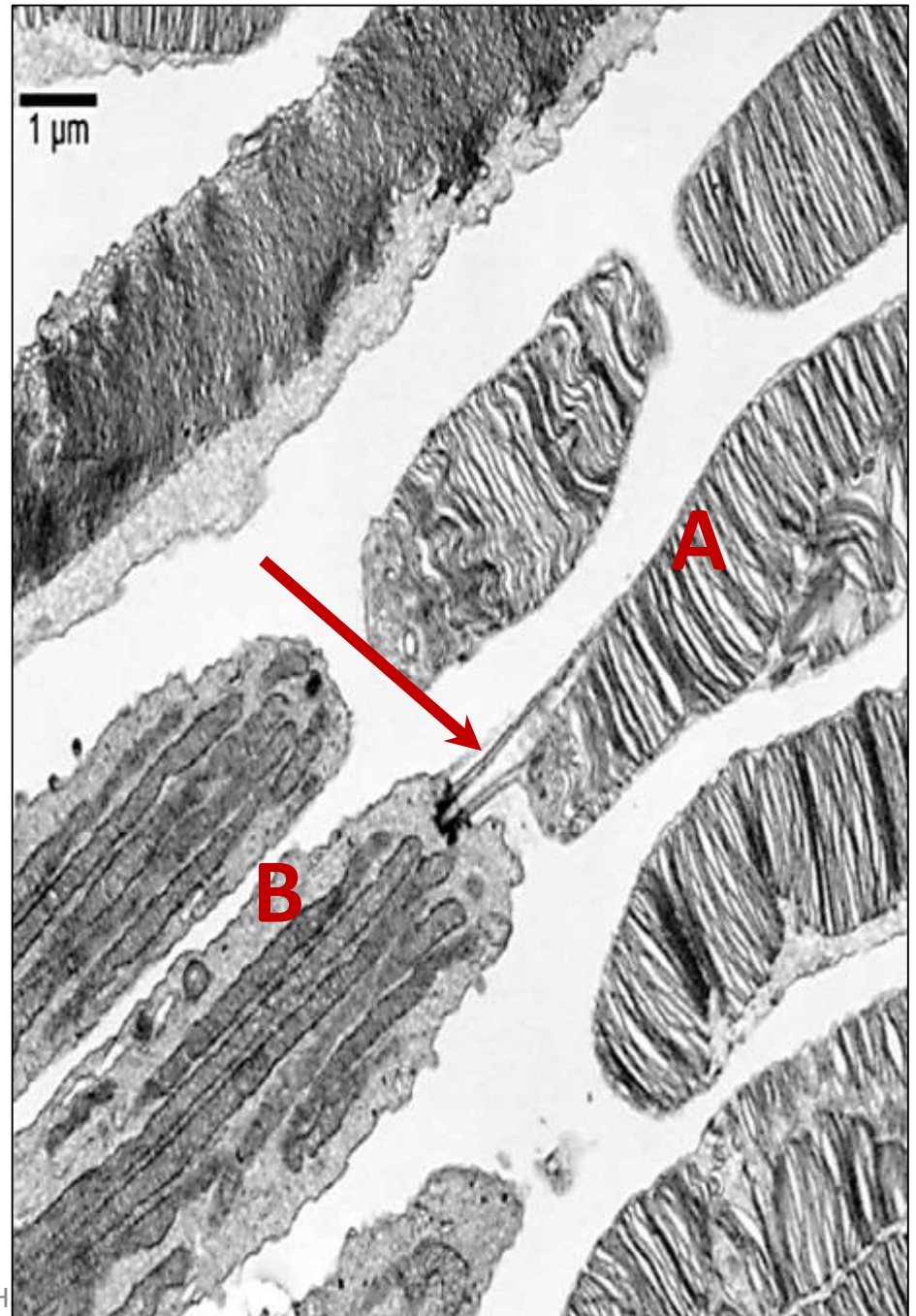
Retinal pigmented epithelium (RPE)

النقاط السوداء عبارة عن pigment

in electron microscope



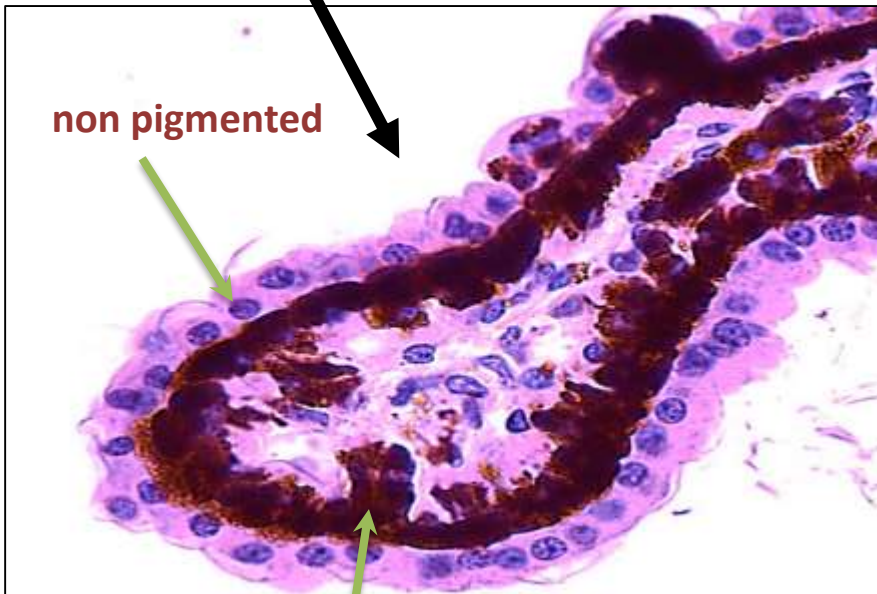
TEM of retina showing
photoreceptor (Rod):
(A) outer segment
(arrow) Cilium \rightarrow = Connecting stalk
(B) inner segment



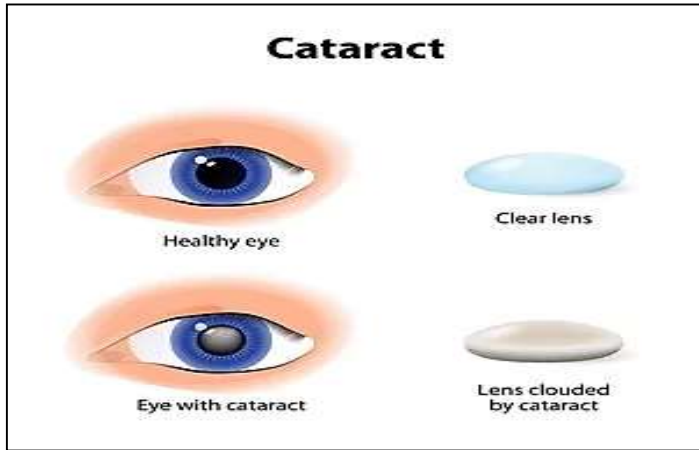
Ciliary epithelium:

Composed of two layers of cuboidal epithelium.

Ciliary Body & process



Lens



Lens capsule



Lens epithelium



↙ = Sub-capsular

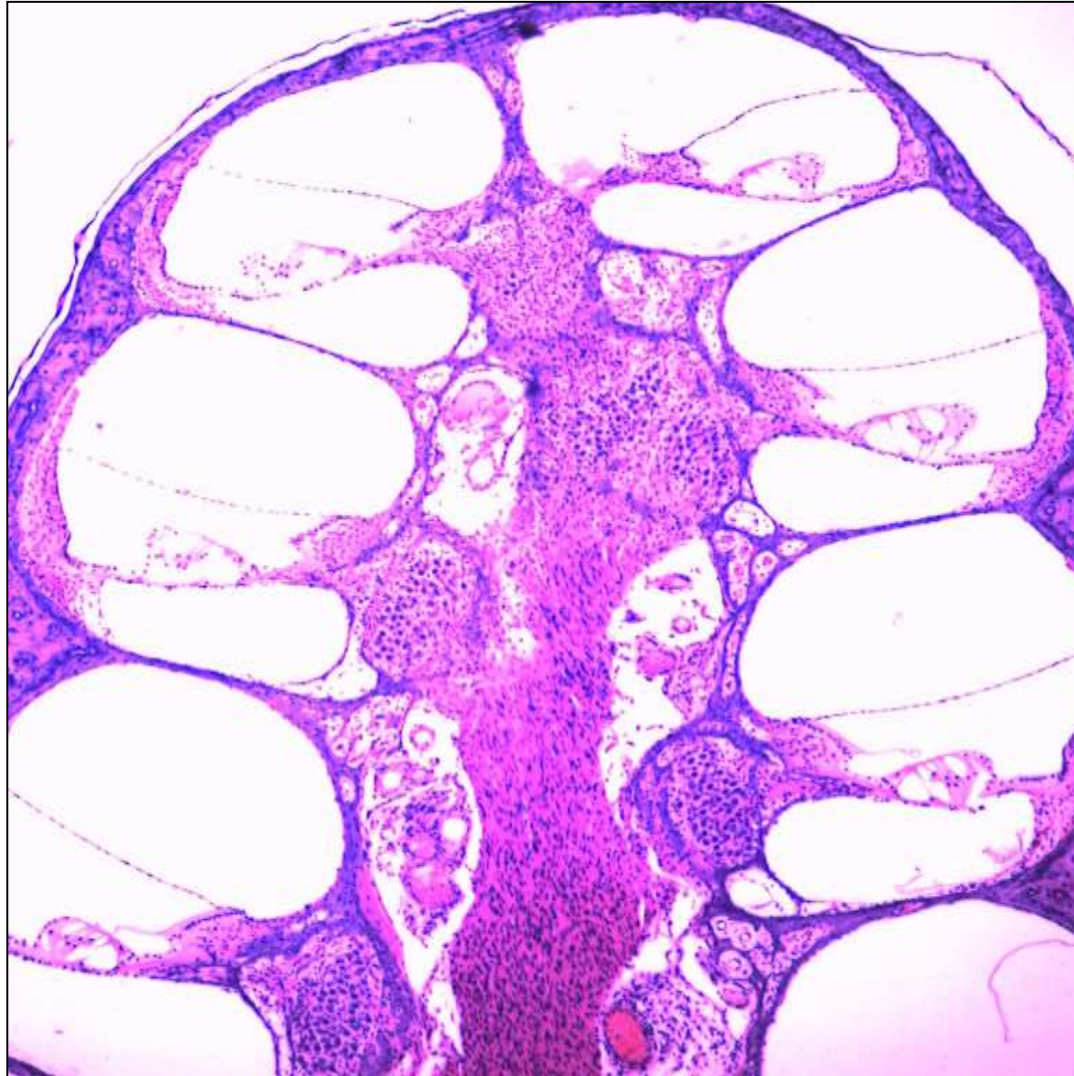
Lens fibers



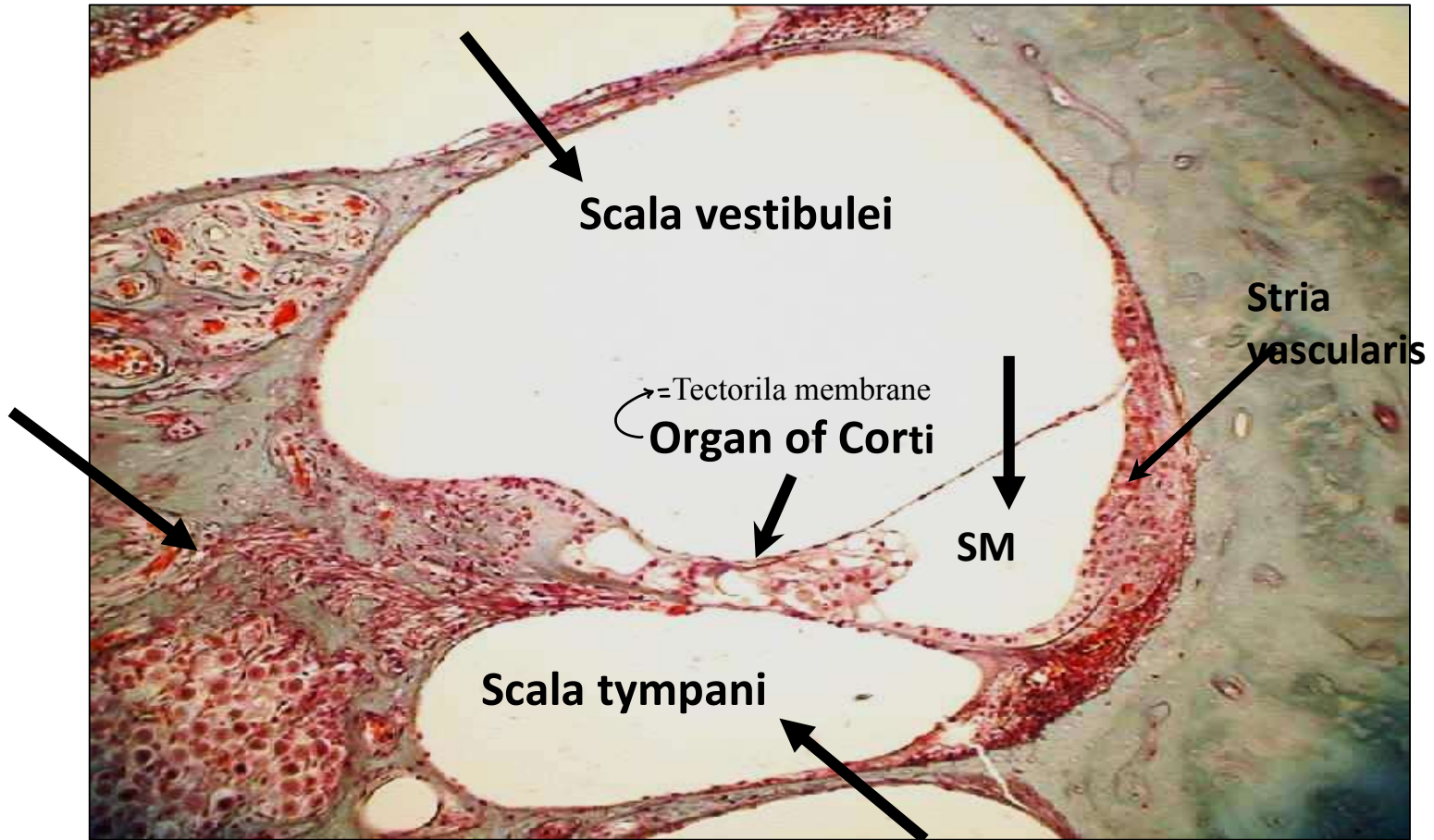
اصليها من ال epithelium



The cochlea



The cochlea – organ of Corti



- 1- Scala vestibule
- 2- Scala tympani
- 3- Scala media (SM) = cochlear duct
- 4- organ of Corti
- 5- stria vascularis **secrete the endolymph**
- 6- Modiolous

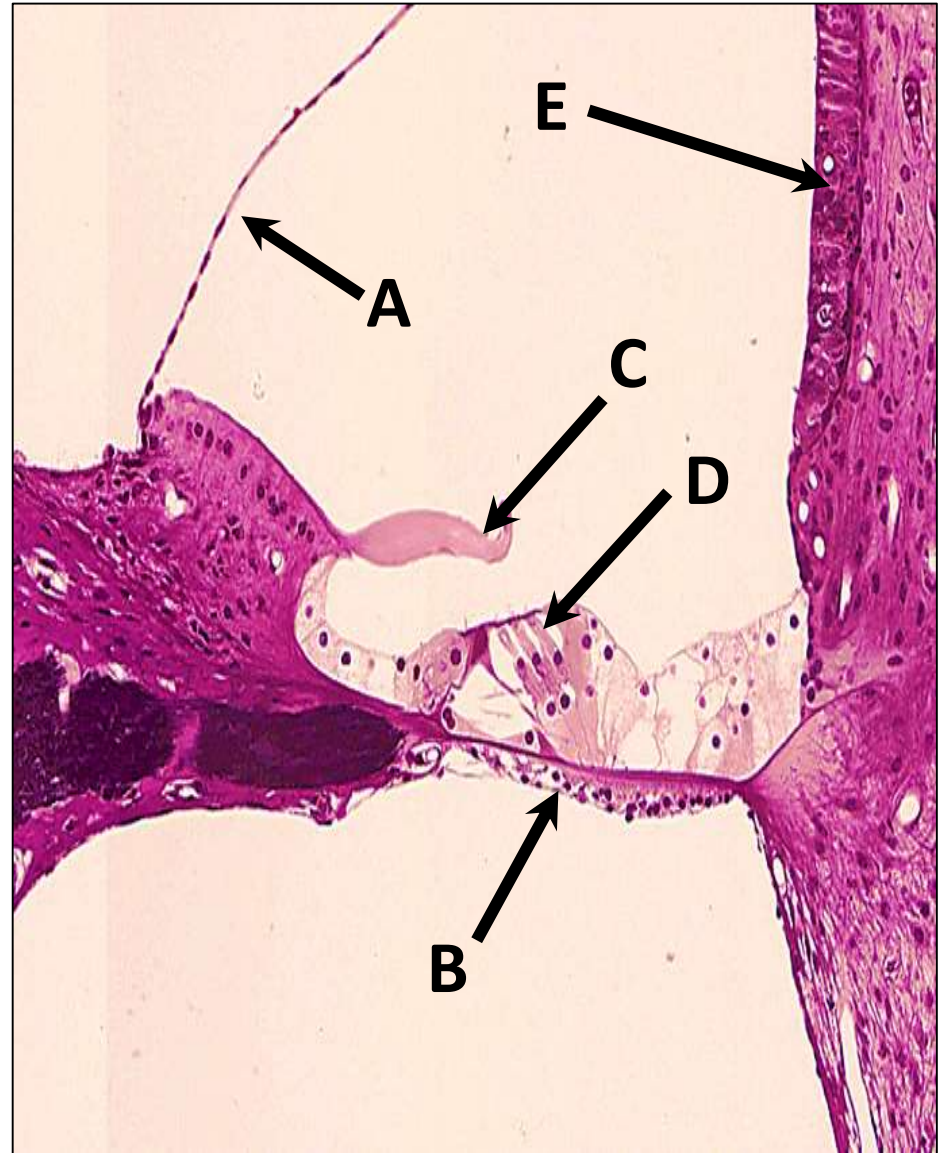
A: Vestibular membrane

B: Basilar membrane

C: Tectorial membrane

D: Outer hair cells

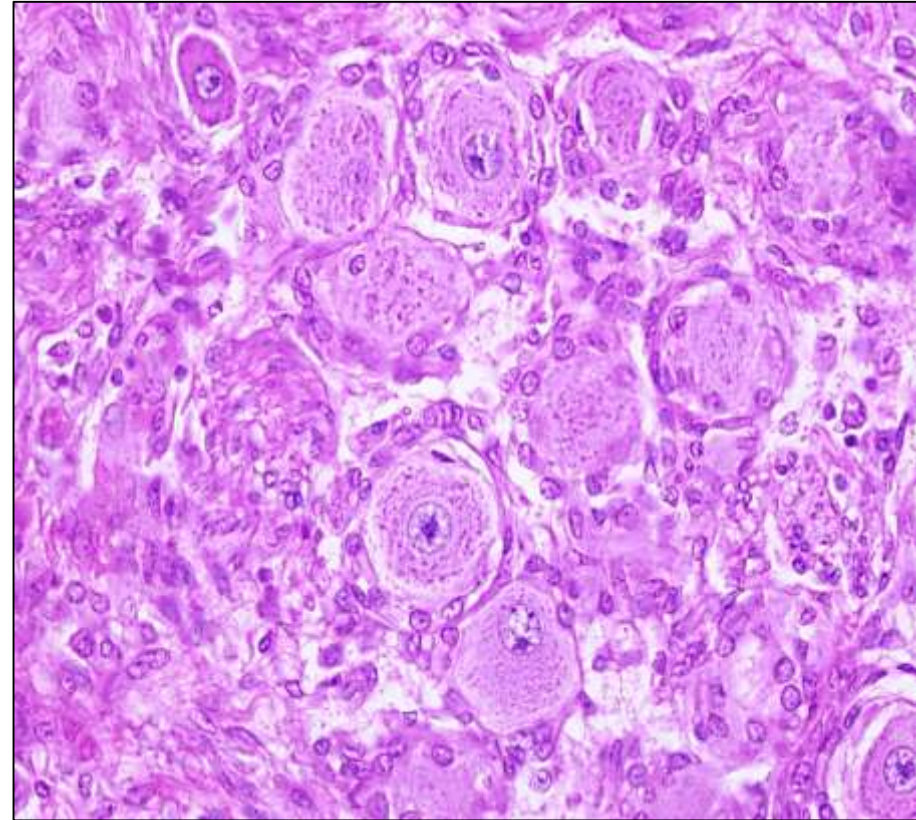
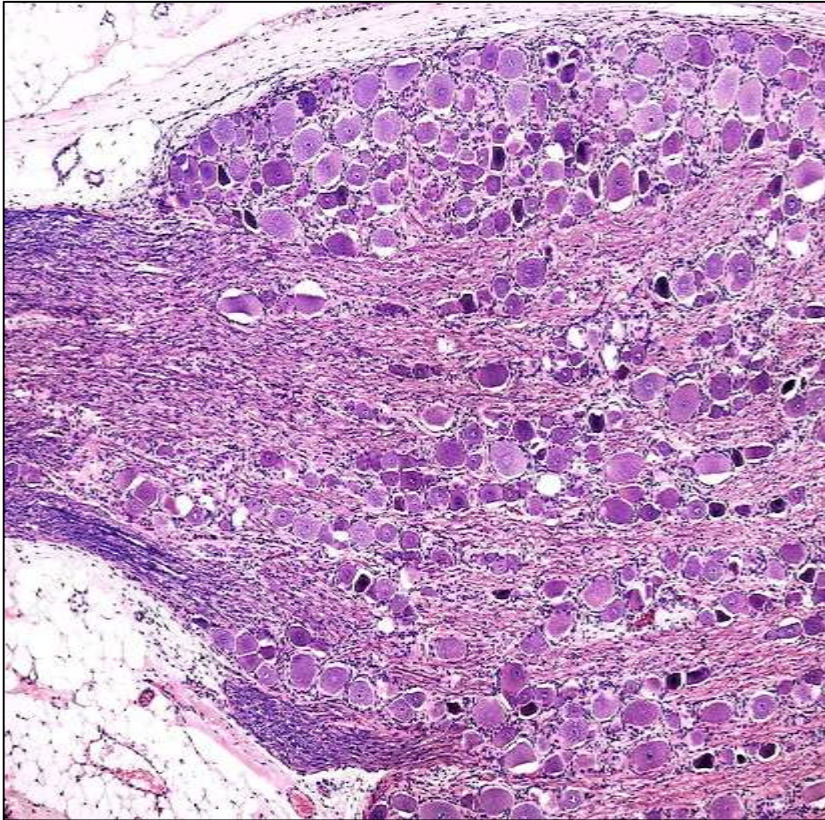
E: Stria vascularis



The spinal ganglion (H&E)

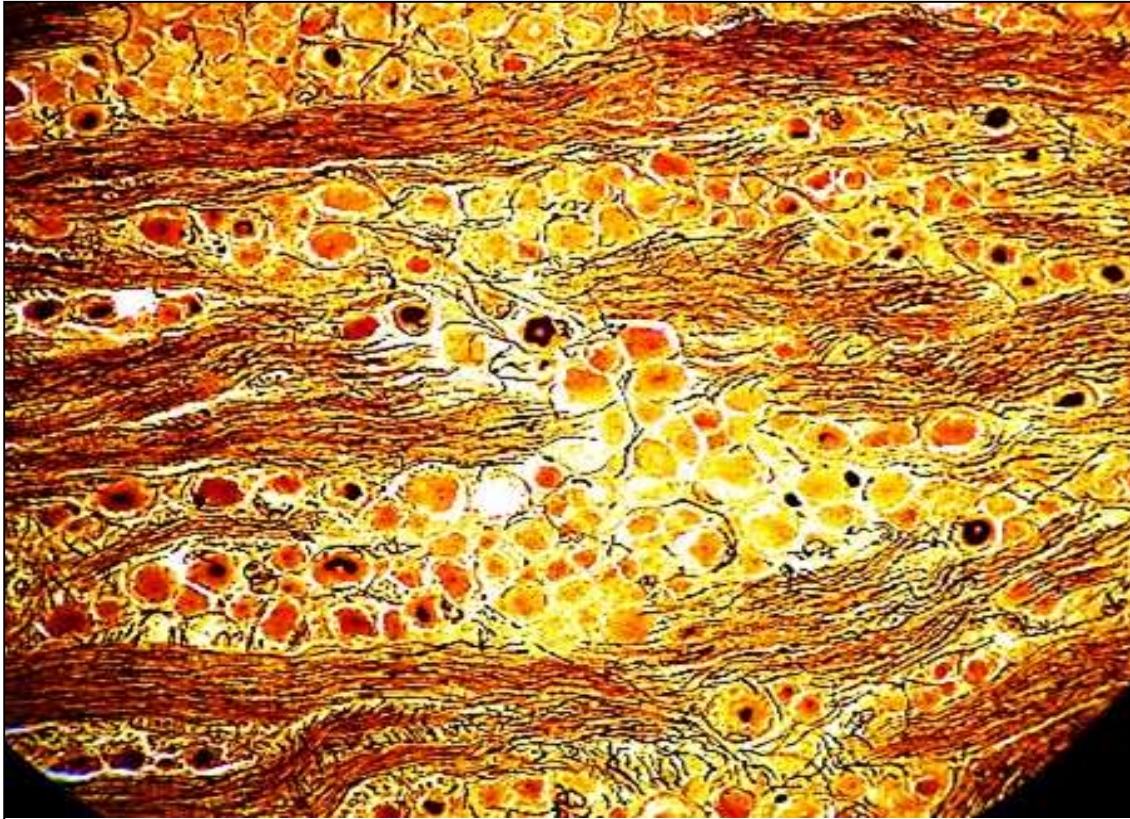
↳ Sensory / Dorsal

Higher magnification



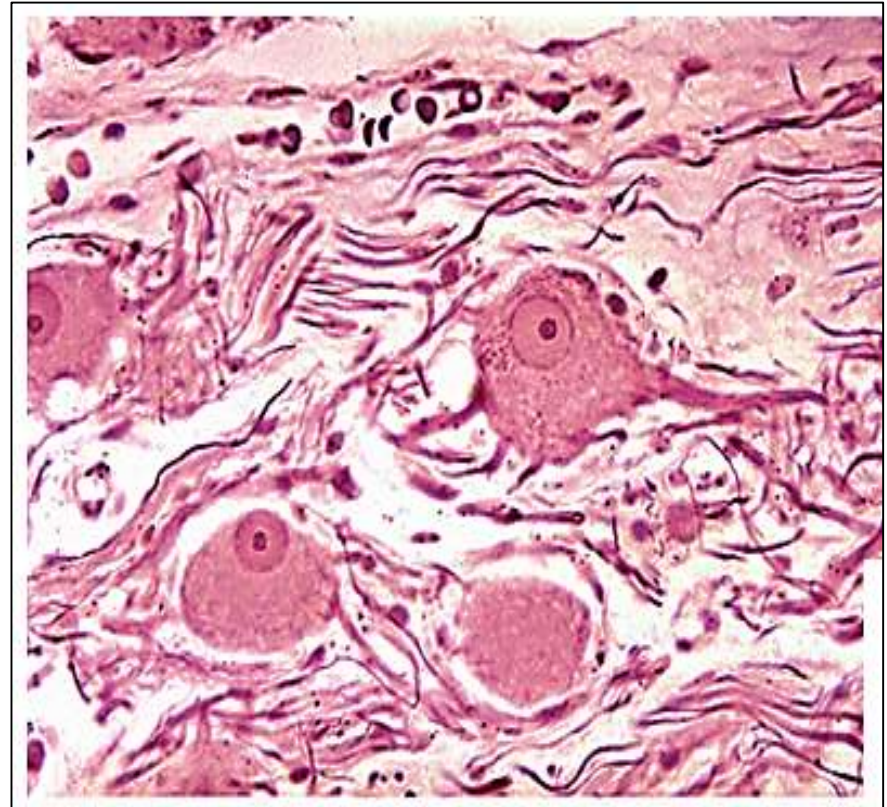
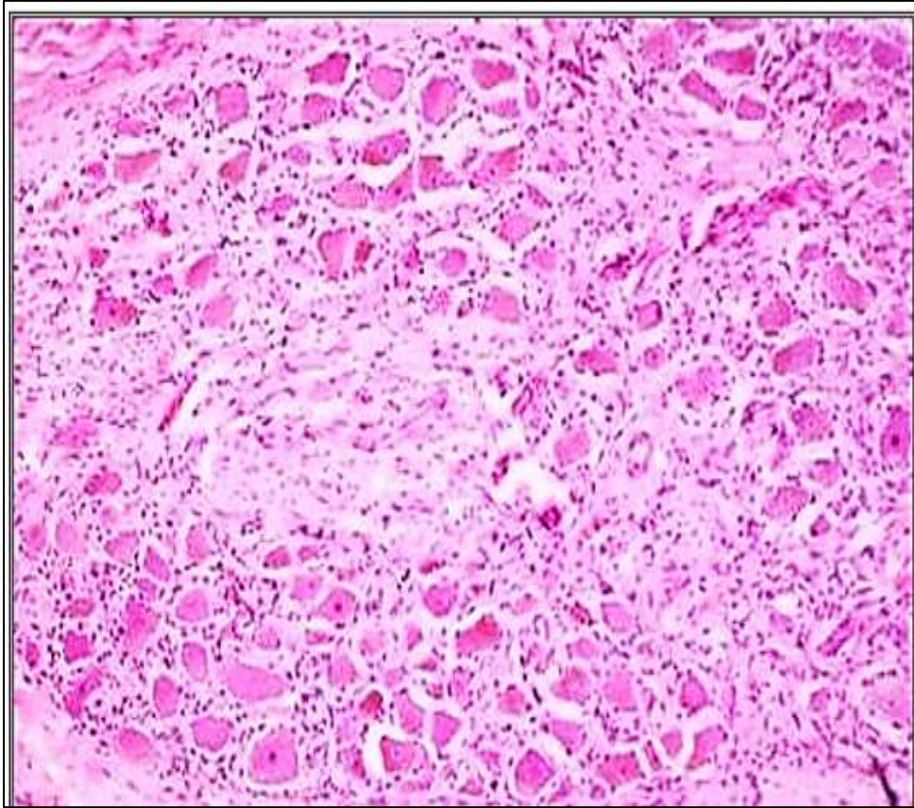
- 1- nerve cells are rounded (unipolar) & present in rows
- 2- nuclei central
- 3- Myelinated nerve fibers
- 4- Satellite cells surround each nerve cell body

The spinal ganglion (sliver)



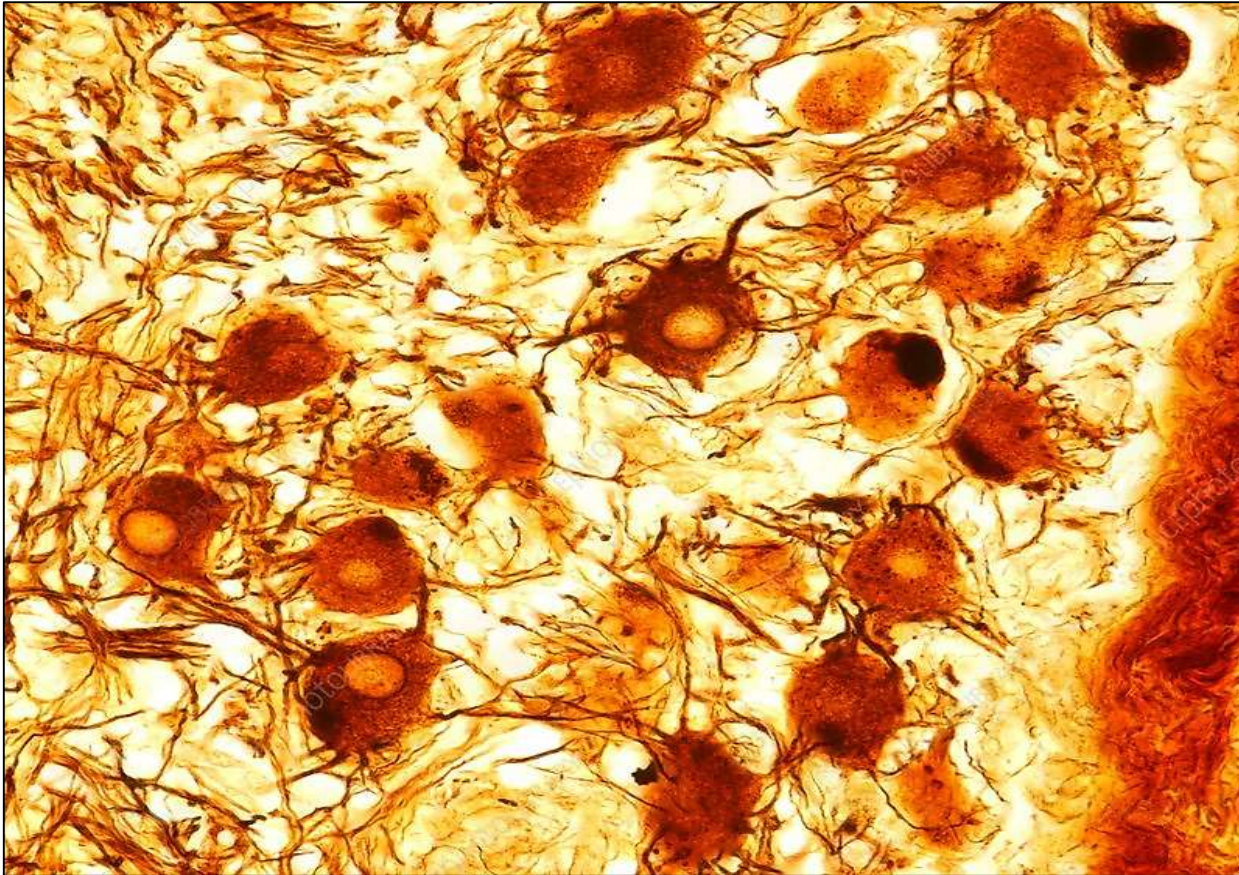
- 1- nerve cells are rounded (unipolar) & present in rows
- 2- Myelinated nerve fibers

Sympathetic ganglion (H&E)



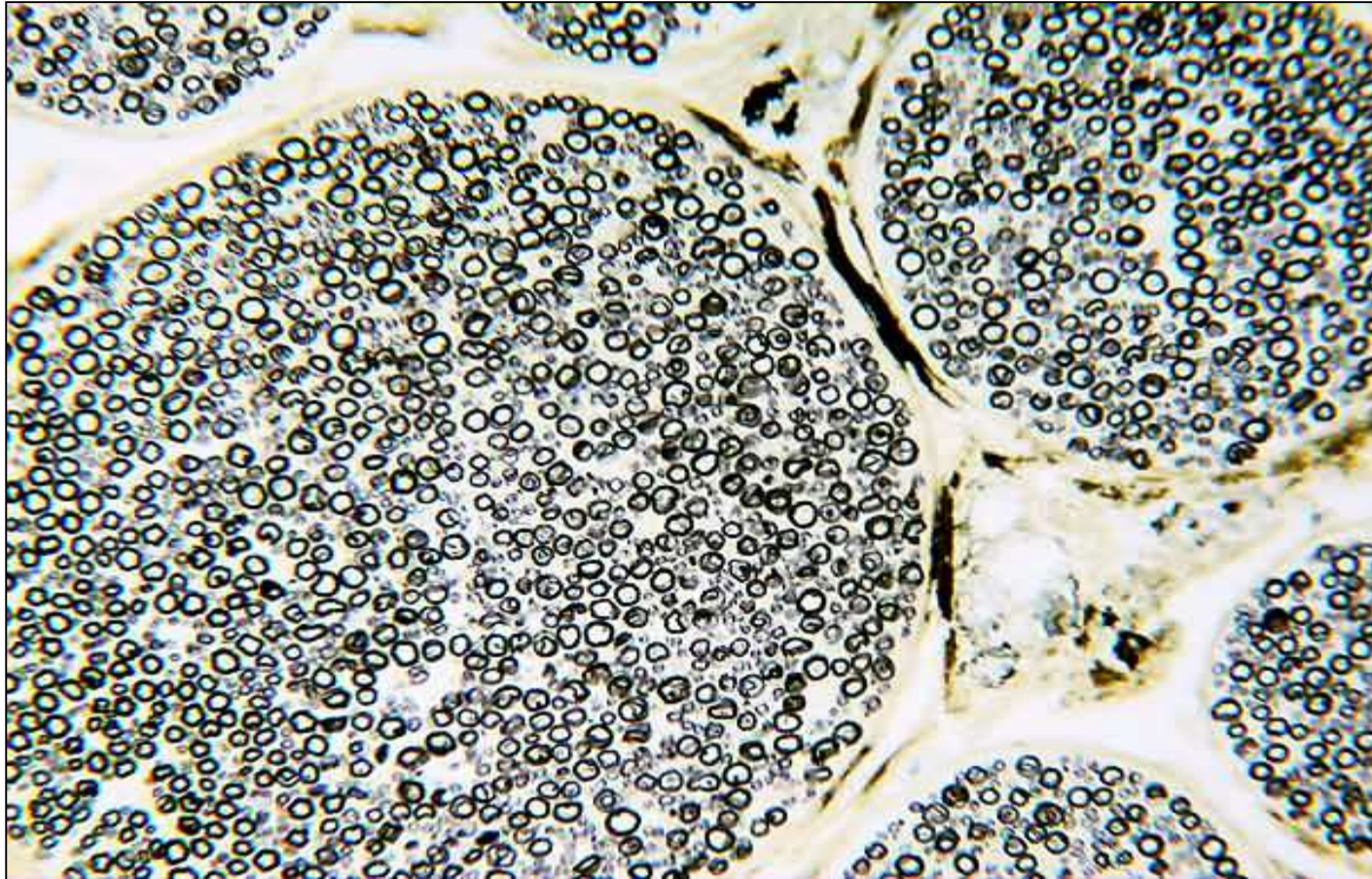
- 1- nerve cells are multipolar and scattered**
- 2- nuclei are eccentric**
- 3- few satellite cells**

Sympathetic ganglion (sliver)



- 1- nerve cells are multipolar and uneven**
- 2- nerve cells are scattered**

Nerve trunk(Osmic acid)



Myelin sheath stained black

Pacinian corpuscle

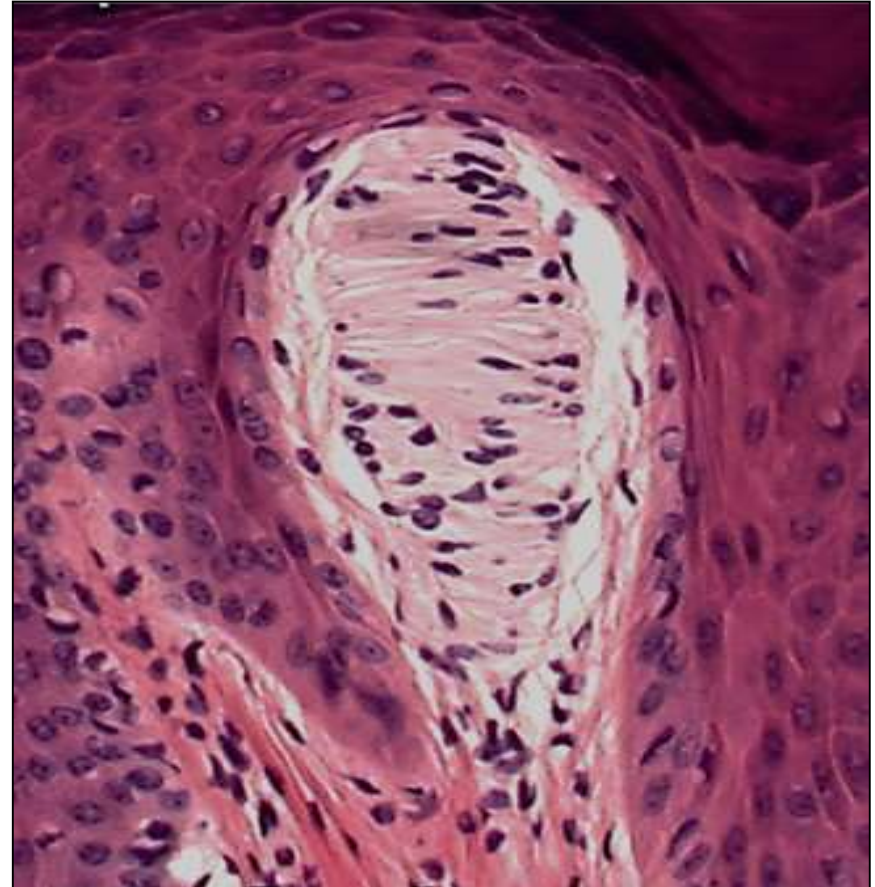


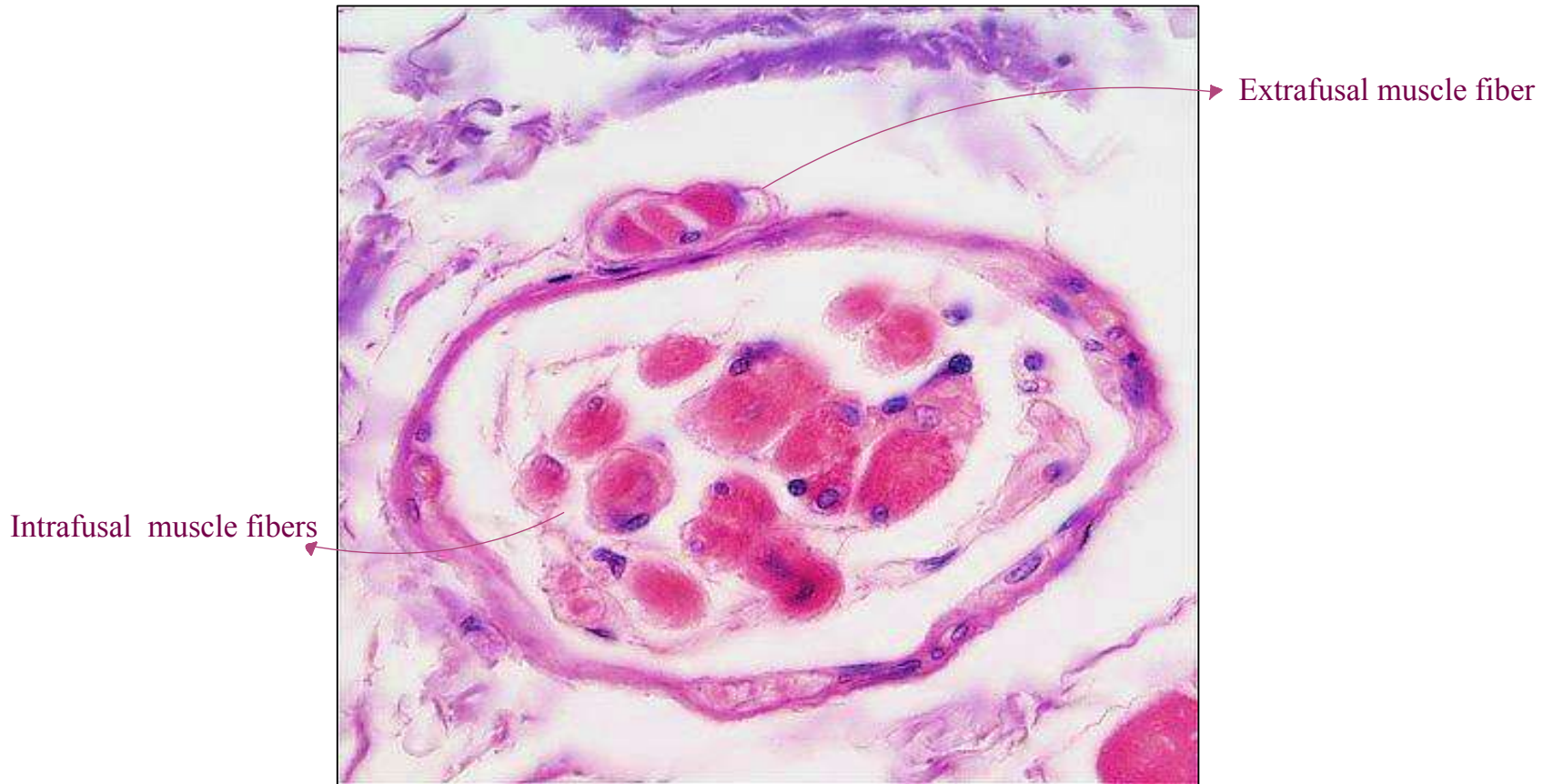
Corpuscle resemble sliced onionin

- 1- Large oval structure
- 2- concentric layers of Schwann like cells

Meissner's corpuscles

- 1- Oval structures
- 2- found at the dermal papillae of skin





Muscle spindle



Crista ampullaris In semicircular canal

Taste buds

- neuroepithelial : 1-taste buds 2-photoreceptor of the retina
 3- crista ampullaris 4- macula utriculi
 5-macula sacculi 6-olfactory epithelium