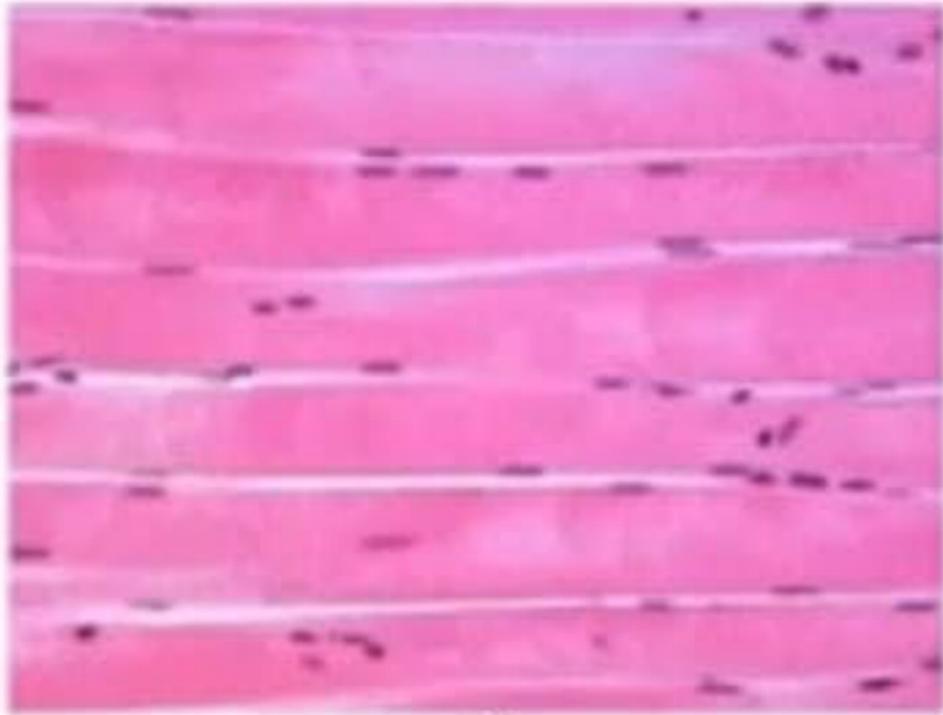


Histo

lab 4

Longitudinal section of skeletal muscle

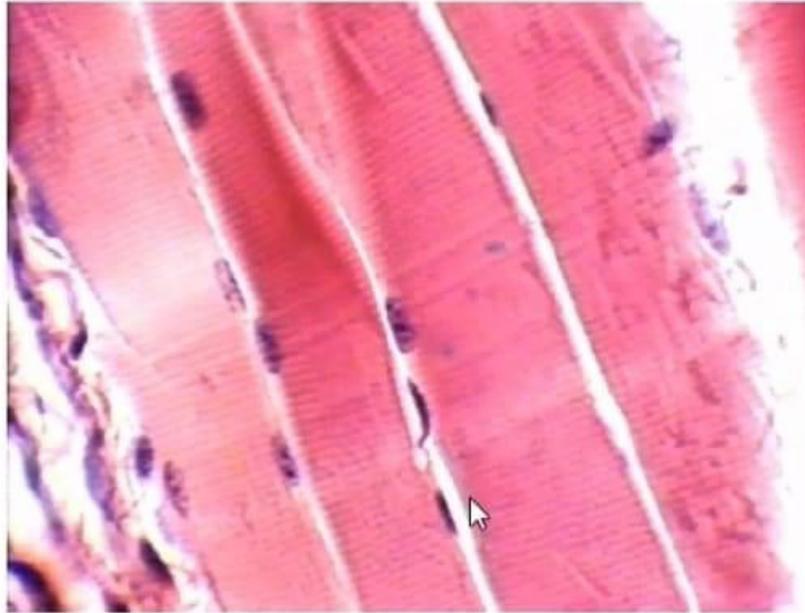
- Non branching fibres
- Striated
- Multi nucleited
- The nuclei peripherally located



slide 1

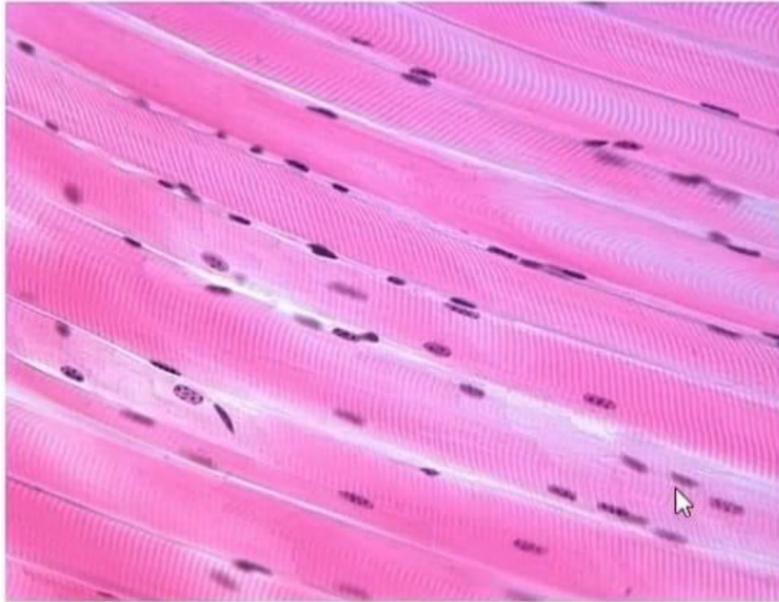
(1)

longitudinal section of the skeletal
muscle



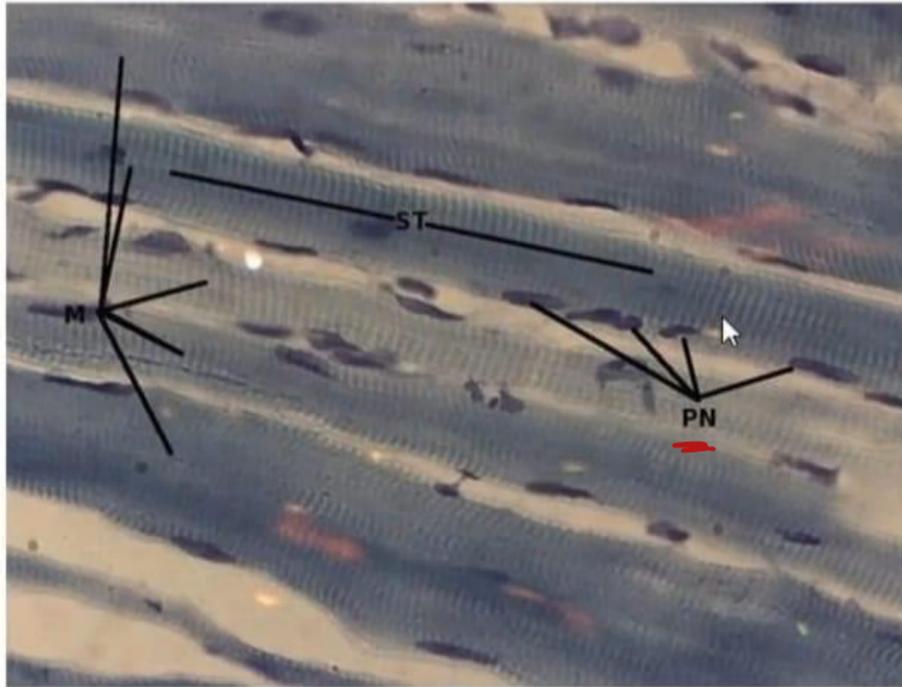
(2)

Longitudinal section of skeletal muscles



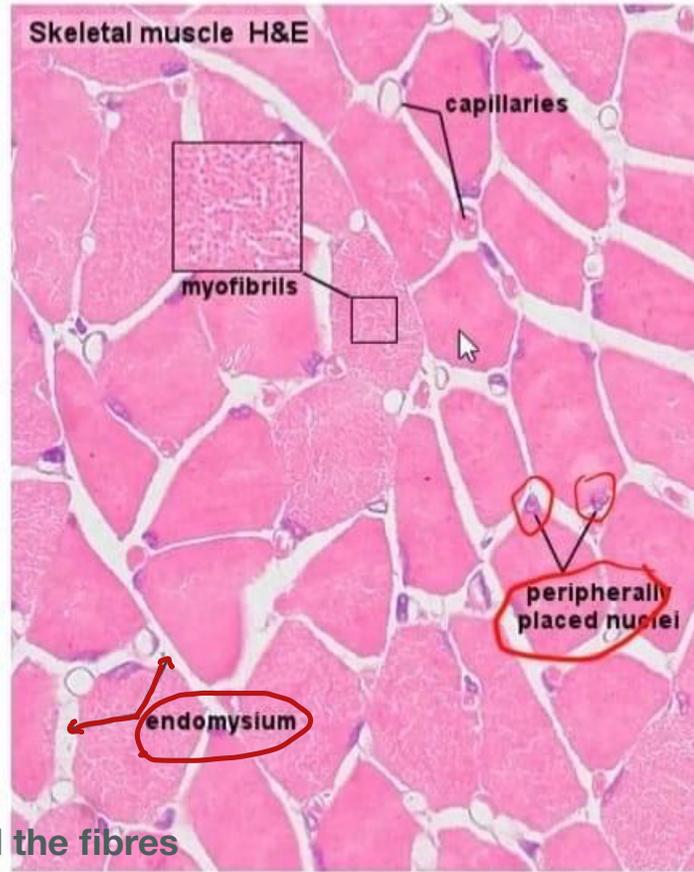
(3)

skeletal muscle-Toluidine blue stain



(4)

skeletal muscle- transverse section (cross section)



Endomysium → C.T around the fibres

Permysium. → C.T around bundles (fascicle)

Epimysium. → C.T around whole muscle (5)

skeletal muscle- transverse section



endomysium
**surrounds
individual
muscle**

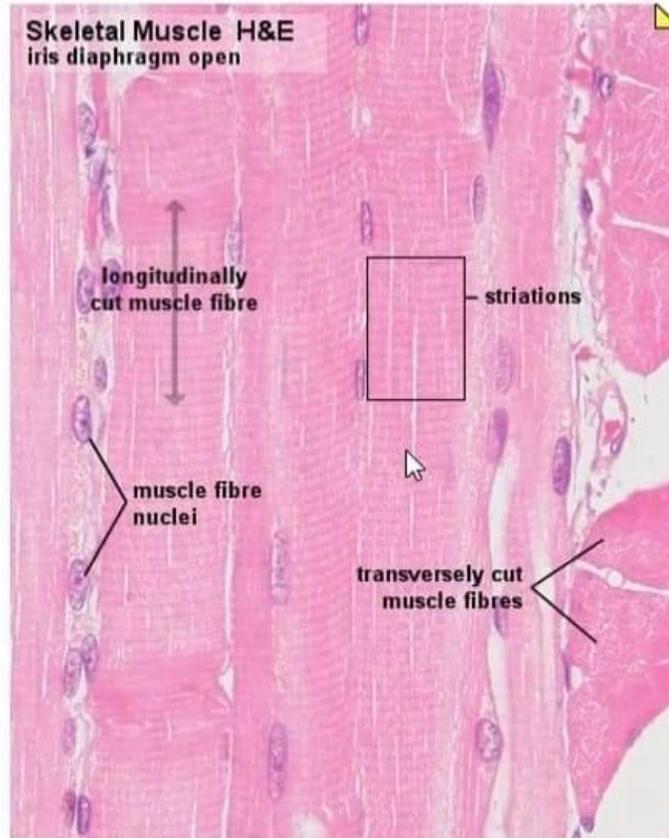
(6)

-these type of siction found in the

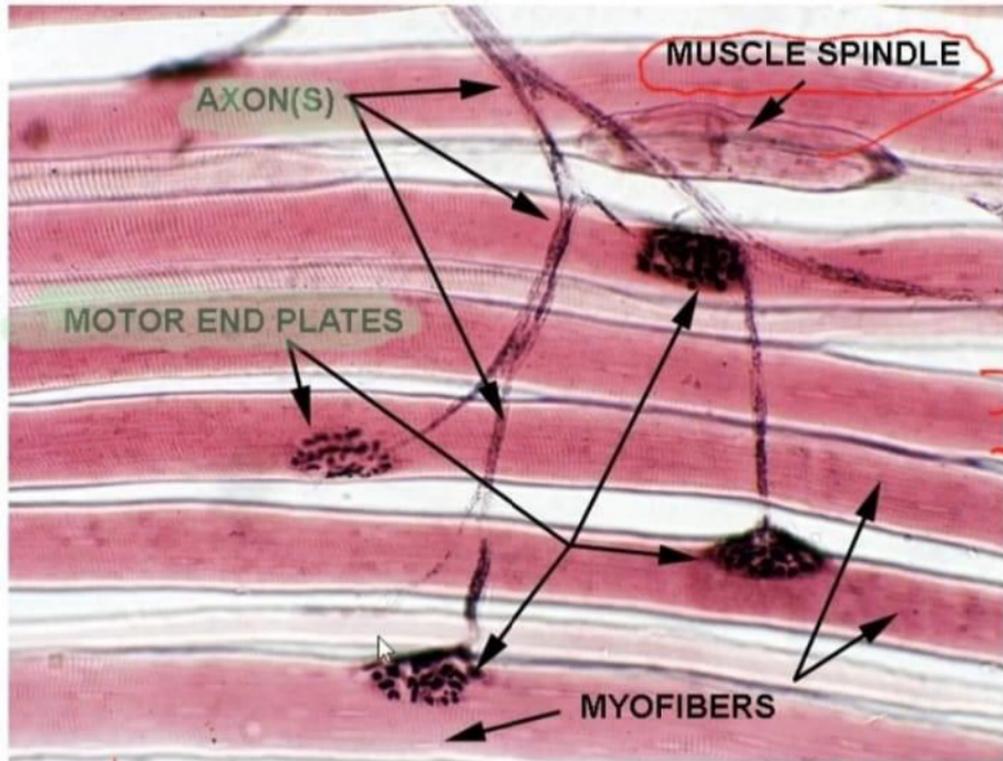
(tongue)



longitudinal section of the skeletal muscle



Single



The sensation of the muscle

MUSCLE SPINDLE

AXON(S)

MOTOR END PLATES

MYOFIBERS

muscle fiber

(9)

-each muscle fiber innervated by motor end plate



Motor end plates

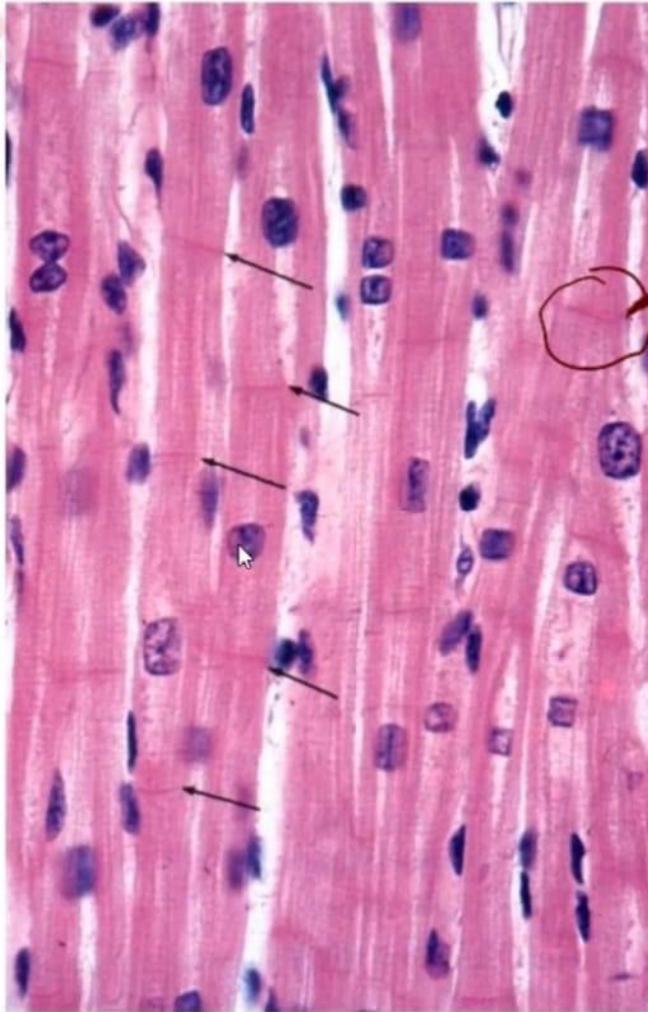
(10)

cardiac muscle

(longitudinal section)

• Branching fibres

• Centrally located single nuclei



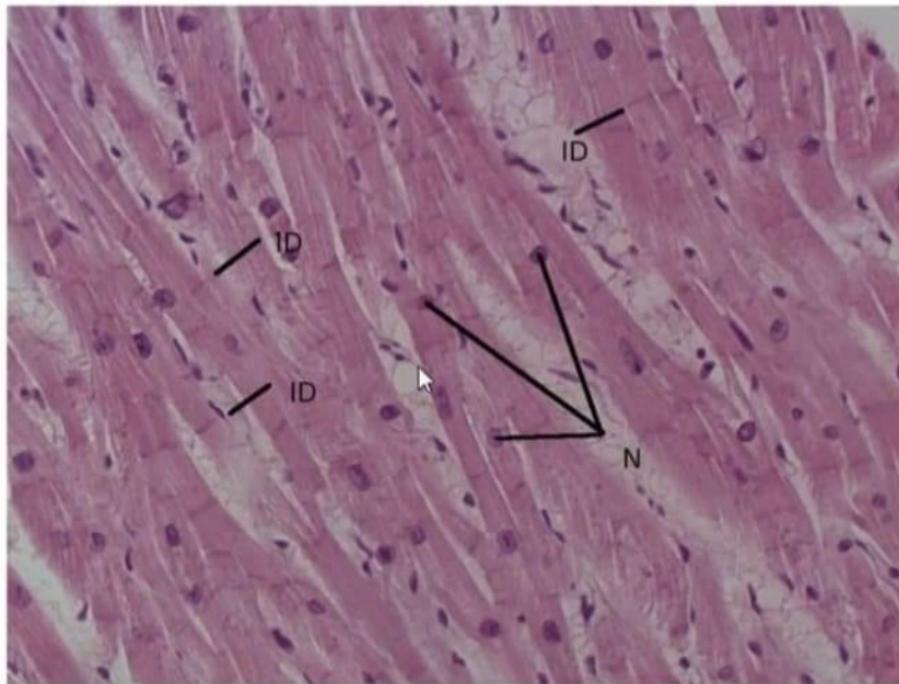
Intercalated discs

بتتشكل من

2 adjacent
cardiac muscle

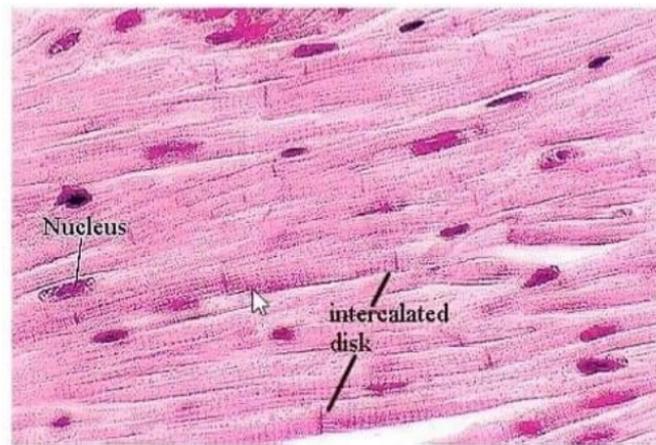
(11)

cardiac muscle -longitudinal section



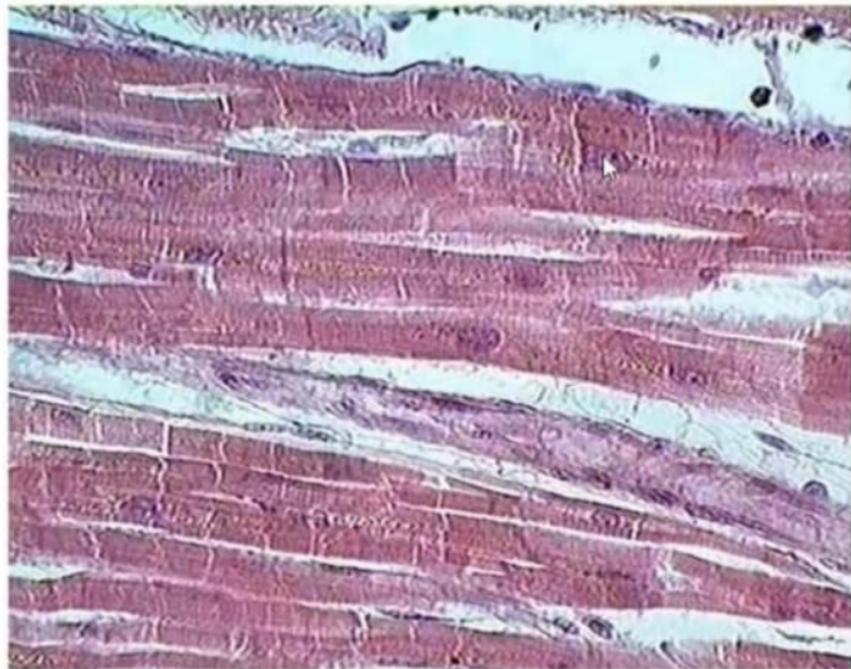
(12)

cardiac muscle-longitudinal section



(13)

cardiac muscle-longitudinal section



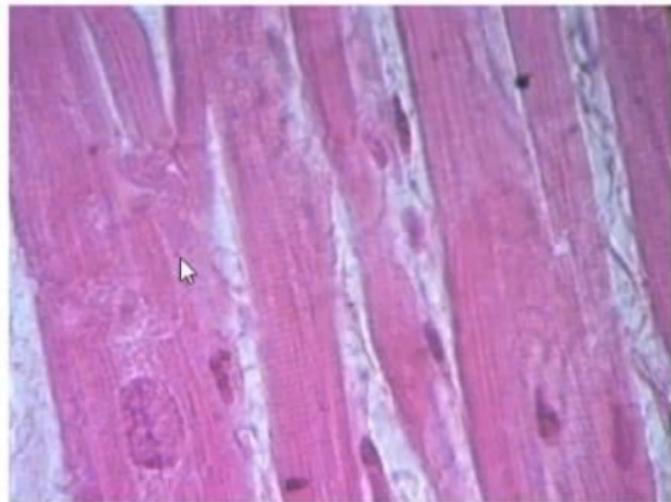
(14) Each fiber contain one a nucleus and each nucleus located in the center..

cardiac muscle-longitudinal section



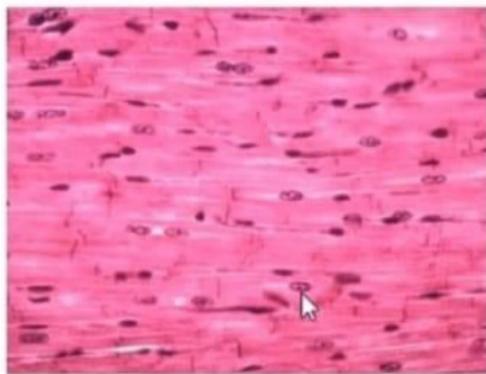
(15)

cardiac muscle-longitudinal section



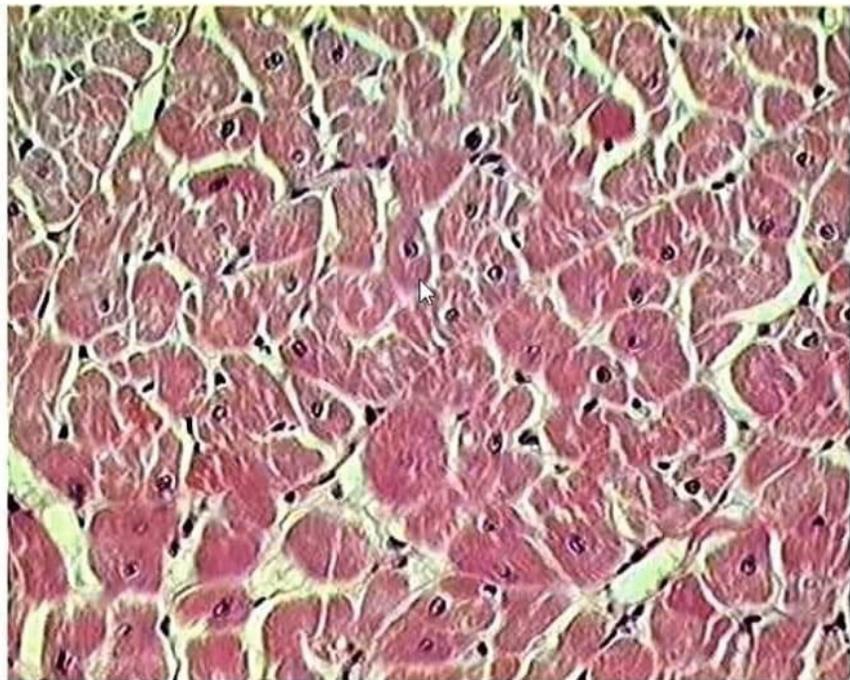
(16)

cardiac muscle-longitudinal section



(17)

cardiac muscle-transverse section

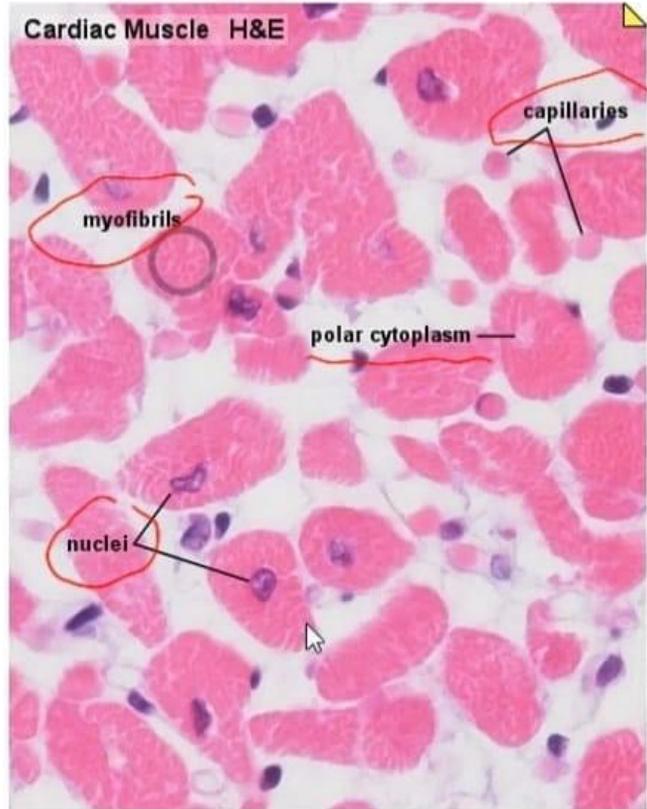


cardiac muscle- transverse section

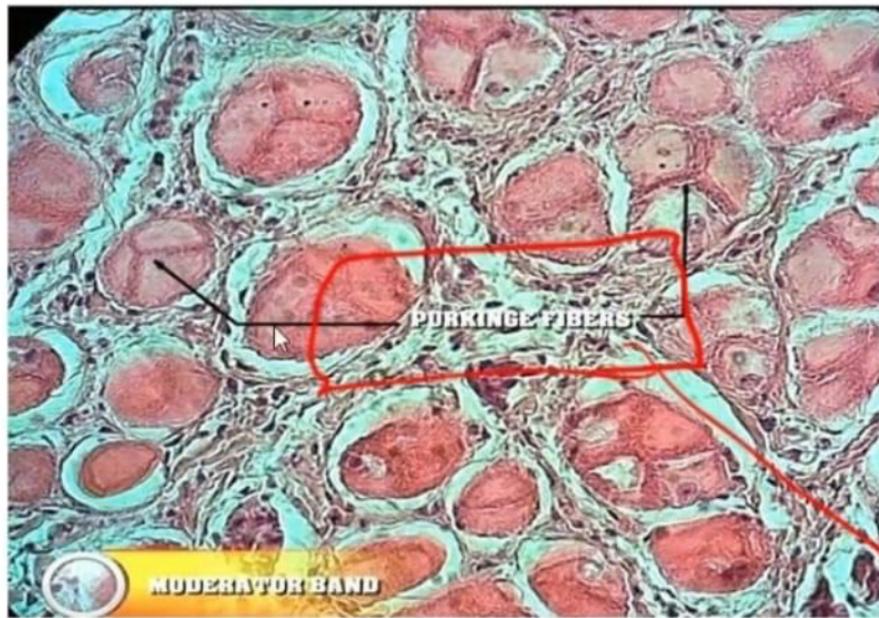
The cross section in the :

Skeletal muscle :
large , polygonal shape of muscle fibres and multi peripheral nuclei

Cardiac muscle:
rounded shape of muscle fibres and central nuclei



specialized cardiac muscle cells



conduction of impulses in Cardiac muscle

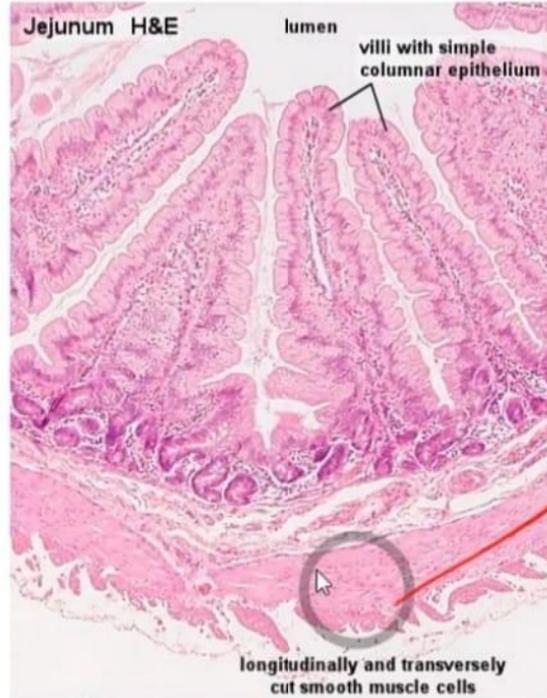
(20)



purkinge Fibers

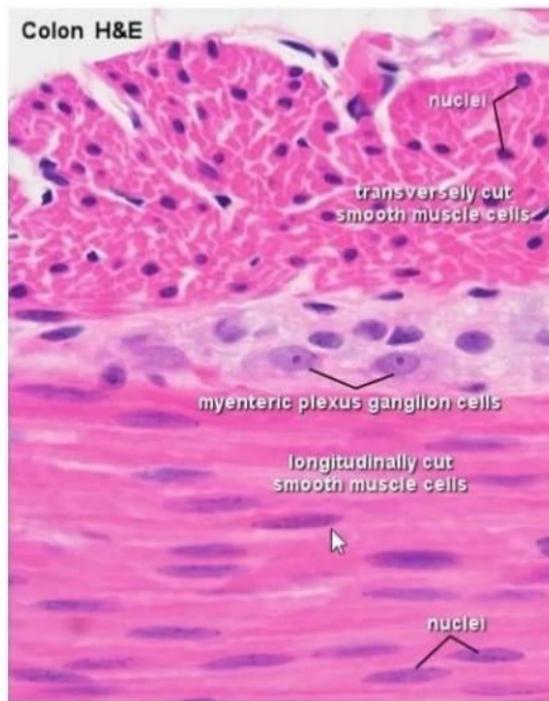
smooth muscle

- ▷ Spindle in shape
- ▷ Single nuclei
- ▷ Arranged as layers or sheets



part from the gut
of the GI tract

smooth muscle-longitudinal section

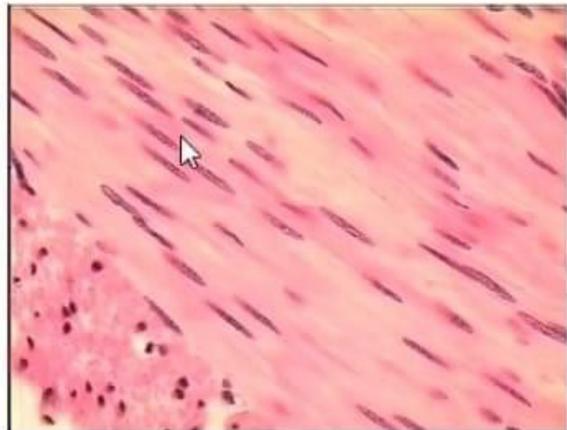


smooth muscle present in blood
vessels



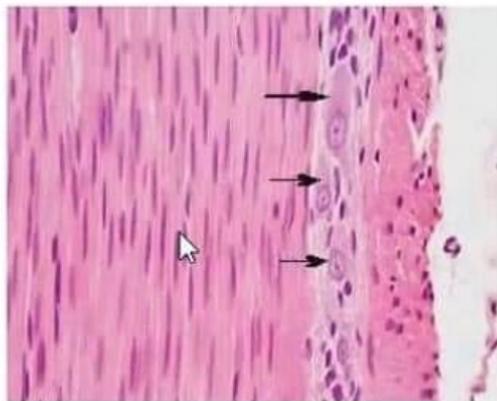
(23)

sheets of smooth muscle in the GI tract



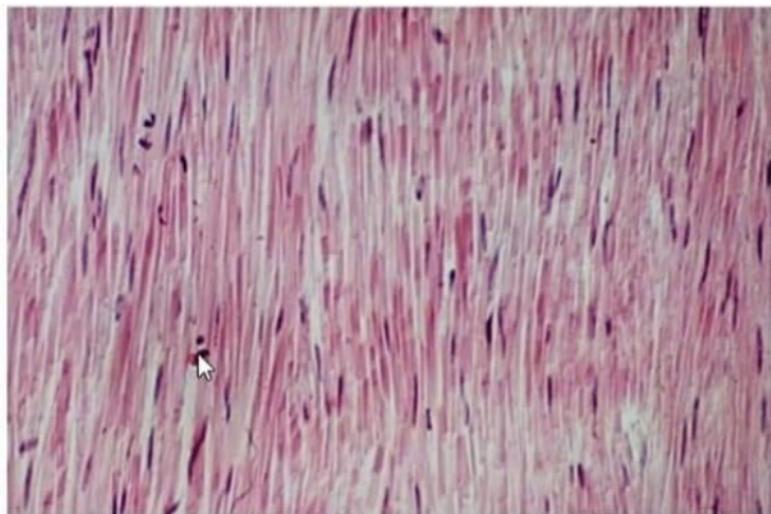
(24)

sheets of smooth muscle in the GI tract



(25)

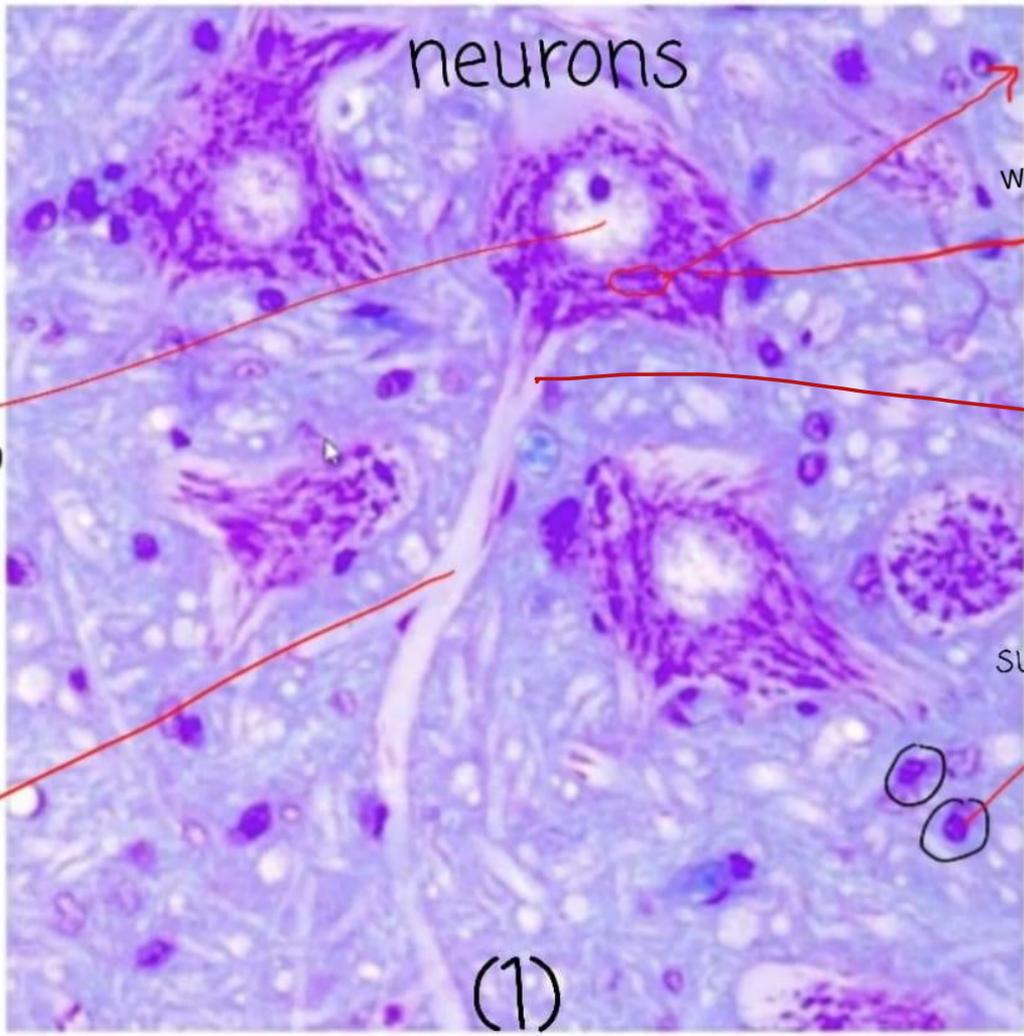
sheets of smooth muscle in the GI tract



(26)

Histology

lab 5



neurons

Nissl bodies

Which is dark stained area

cell body

AXON hillock

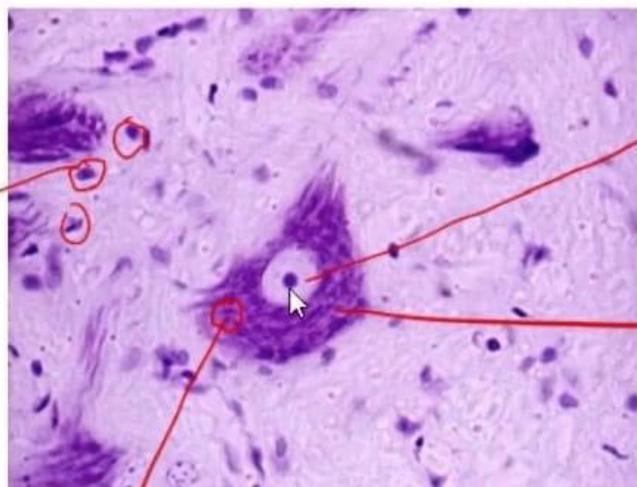
supporting cell

nucleus

AXON

(1)

Neurons



supporting cell

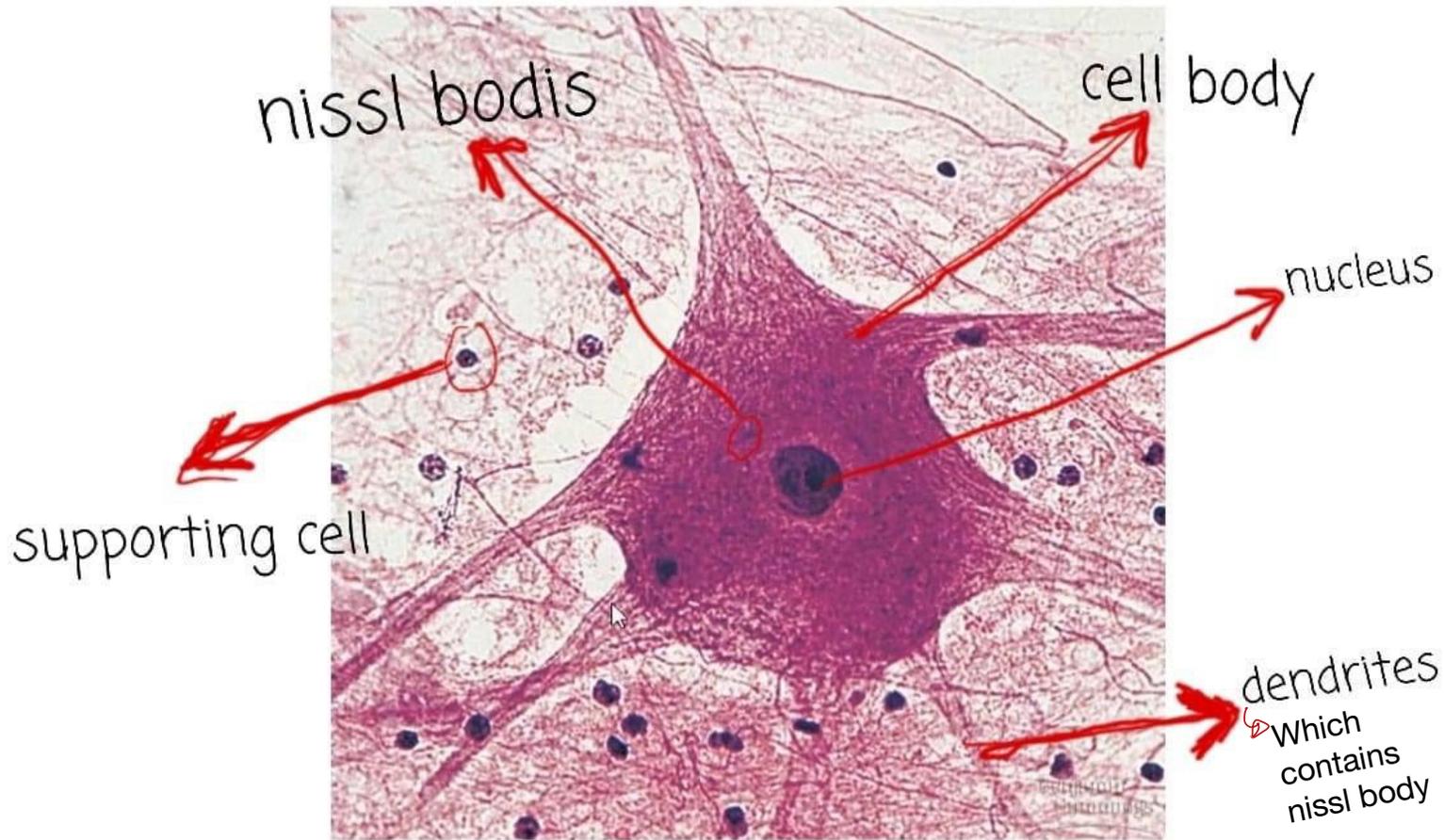
nucleus

cell body

Nissl bodis

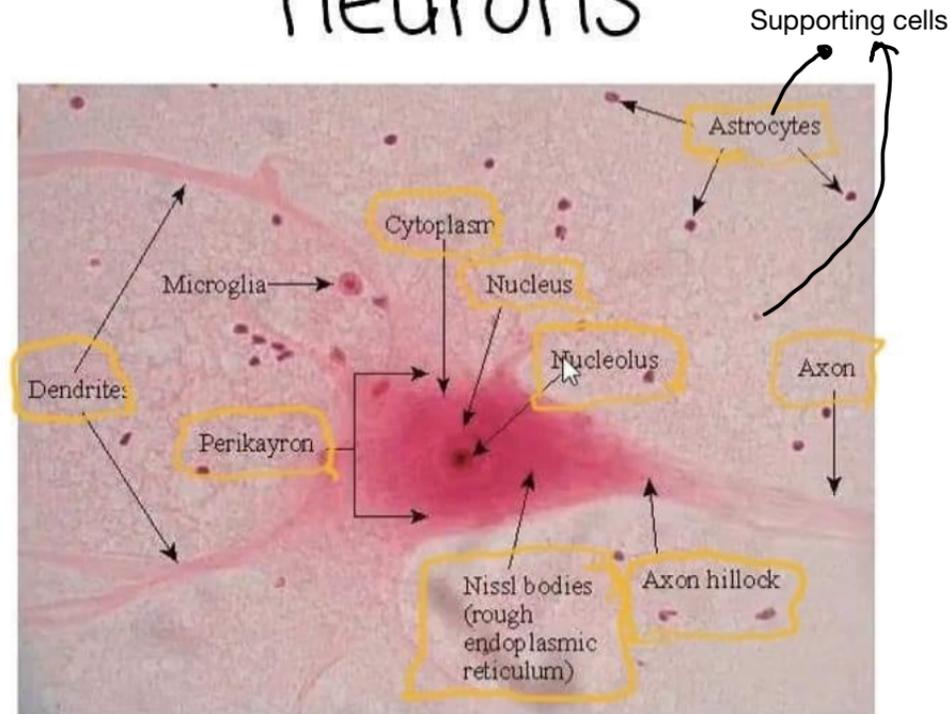
(2)

neurons



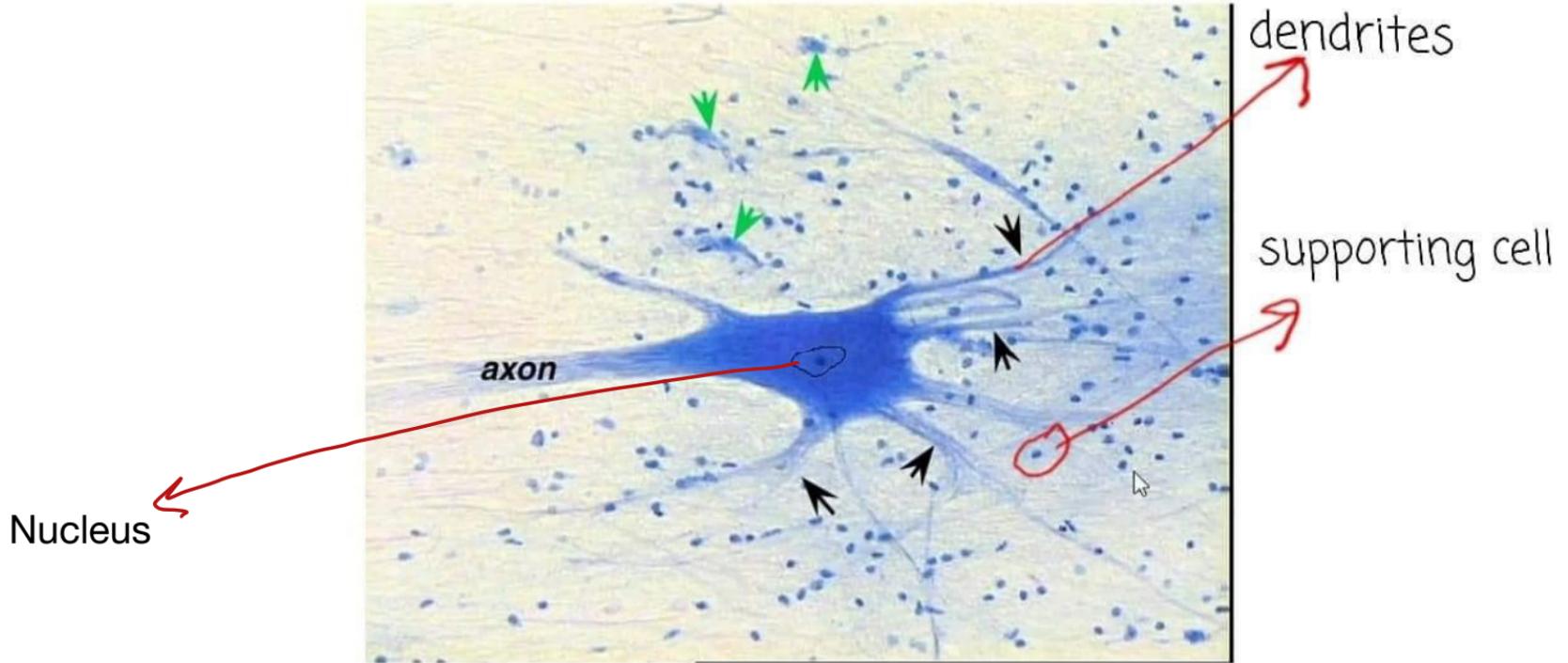
(3)

neurons



(4)

neurons



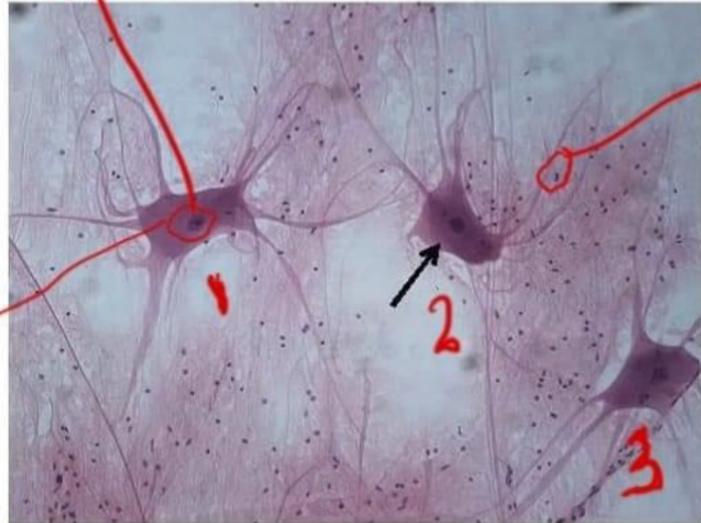
(5)

3 neurons

nucleus

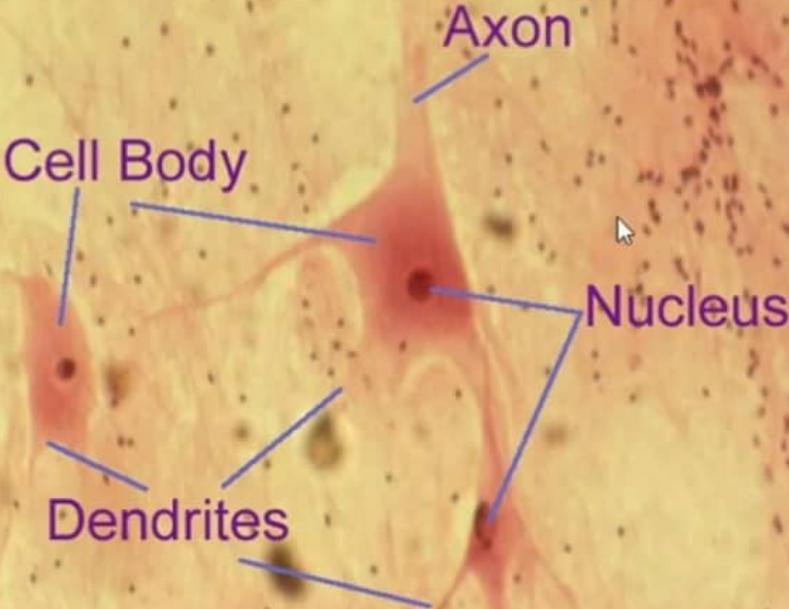
supporting cell

cell body

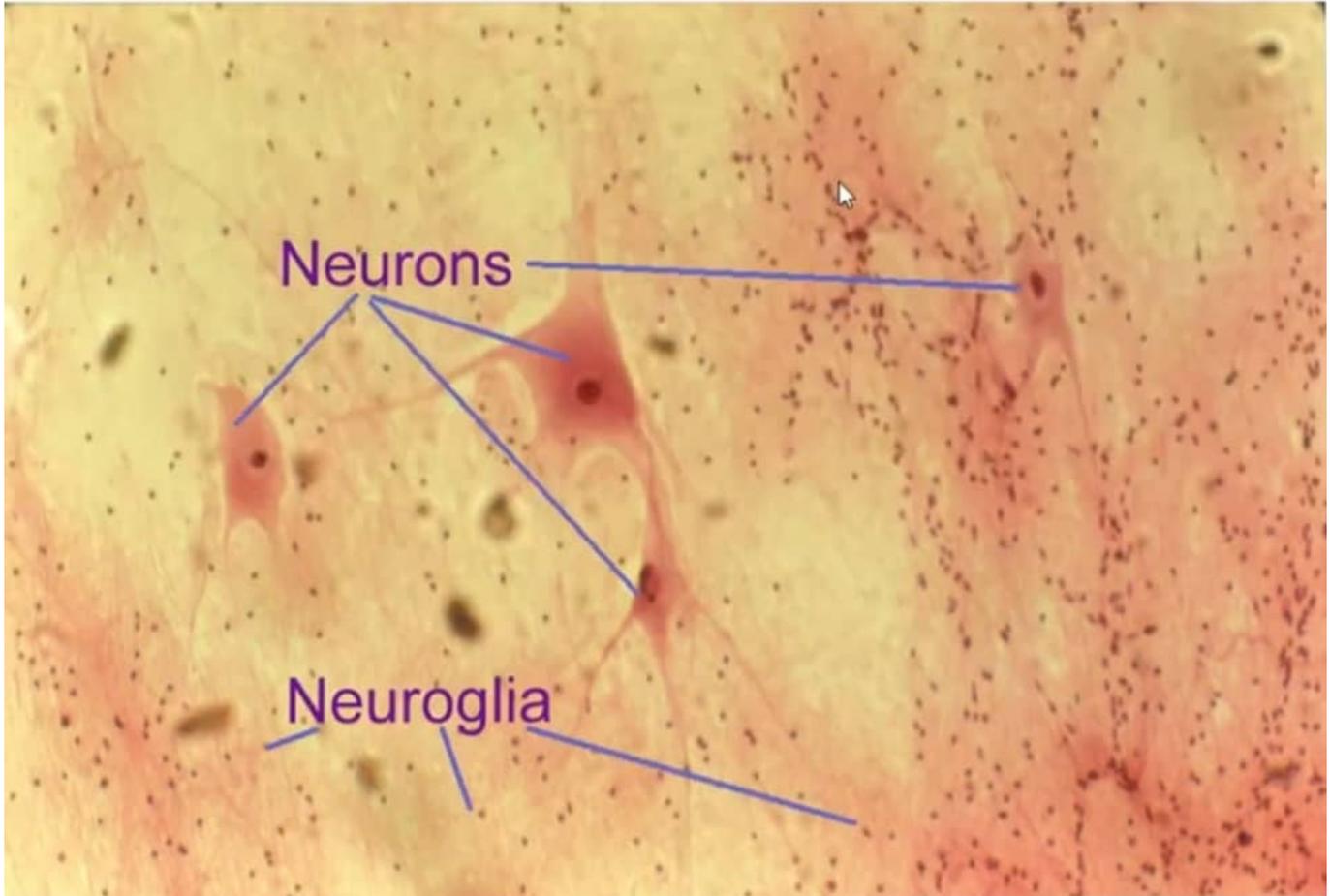


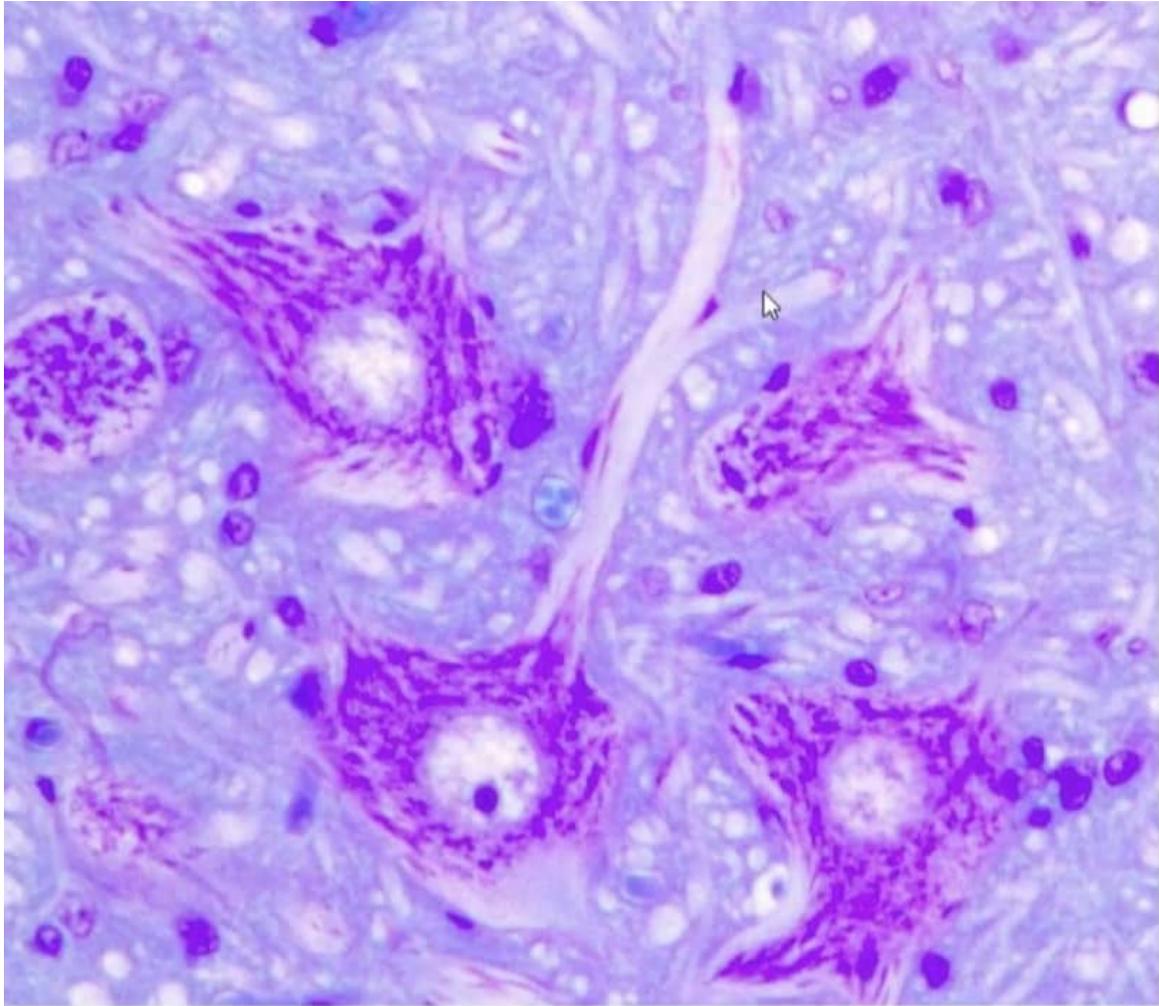
(6)

Neuron Parts



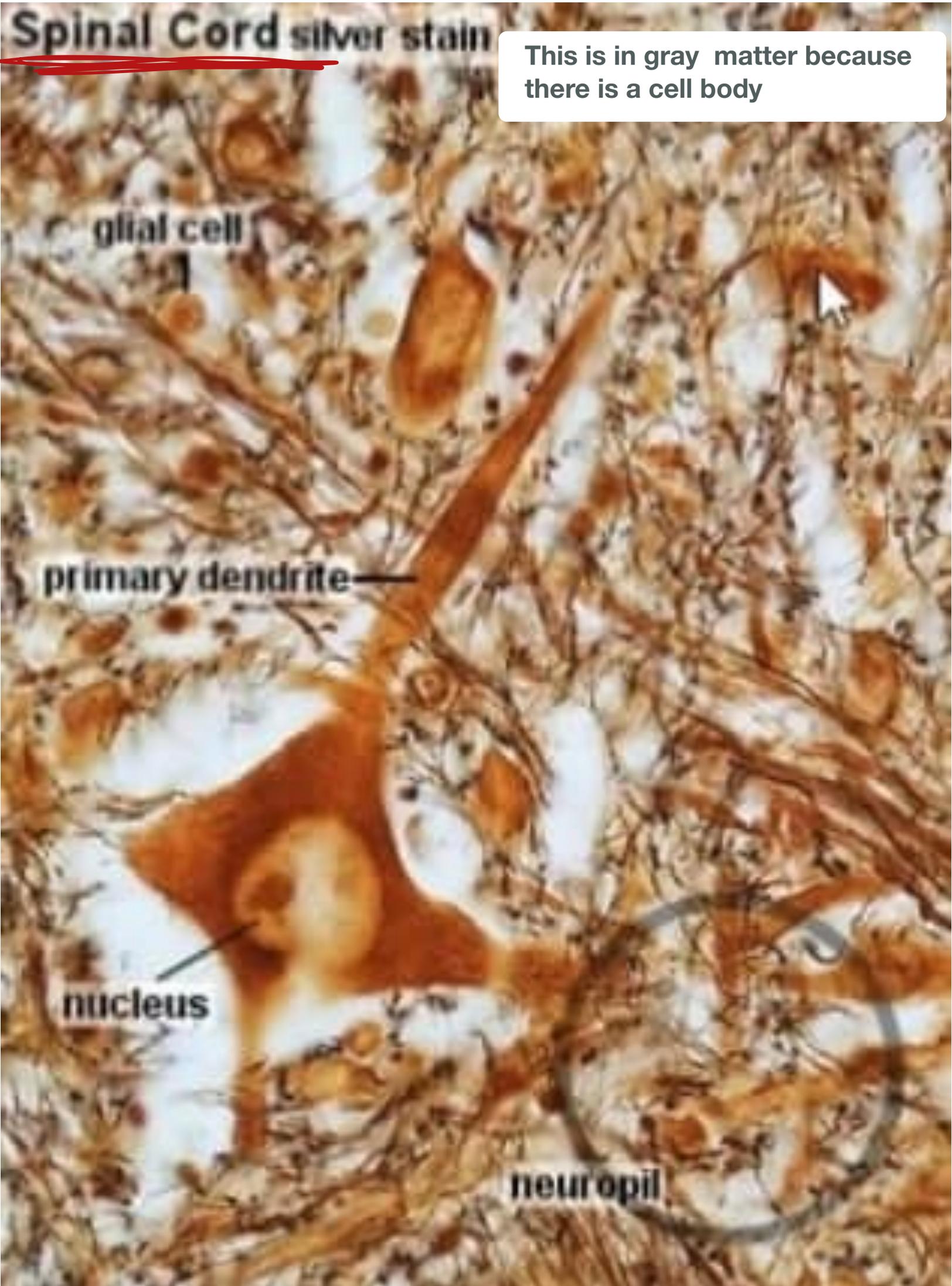
Neuron and Neuroglia





Spinal Cord silver stain

This is in gray matter because there is a cell body

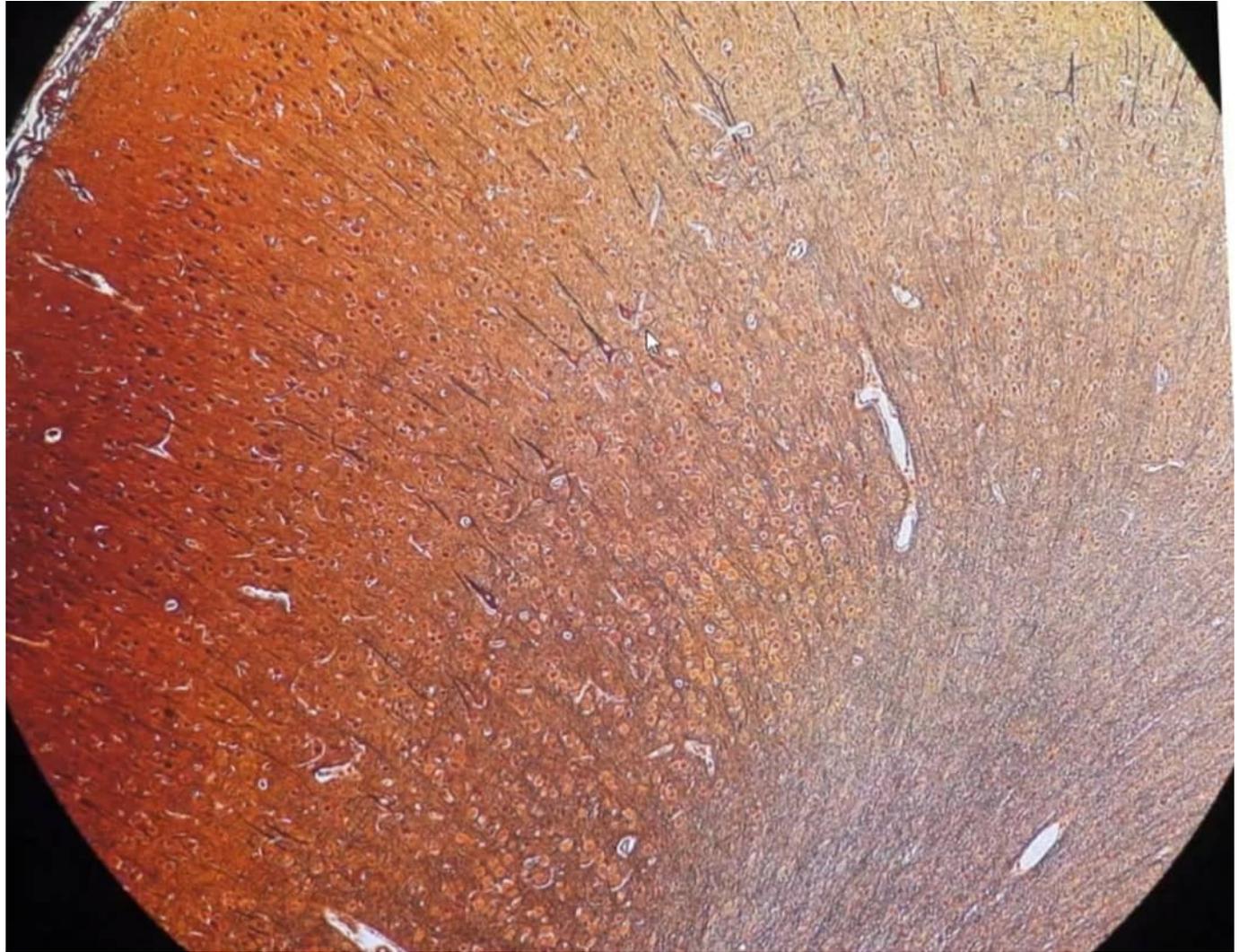


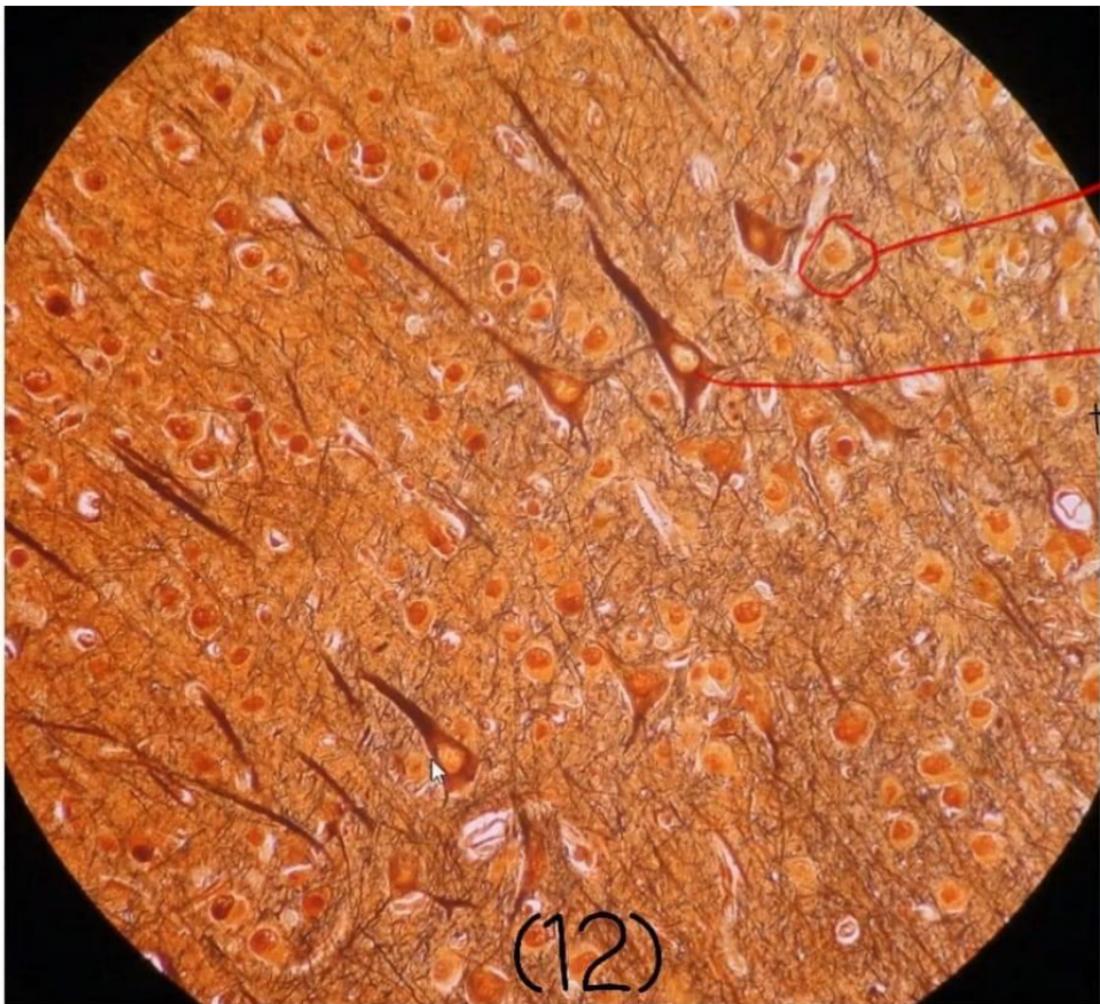
glial cell

primary dendrite

nucleus

neuropil





→ supporting cell

→ the pyramidal neurons
of the cerebral cortex

↓
very long
neurons

(12)

- longitudinal section within the peripheral nerve

it contains Axons
and supporting cell

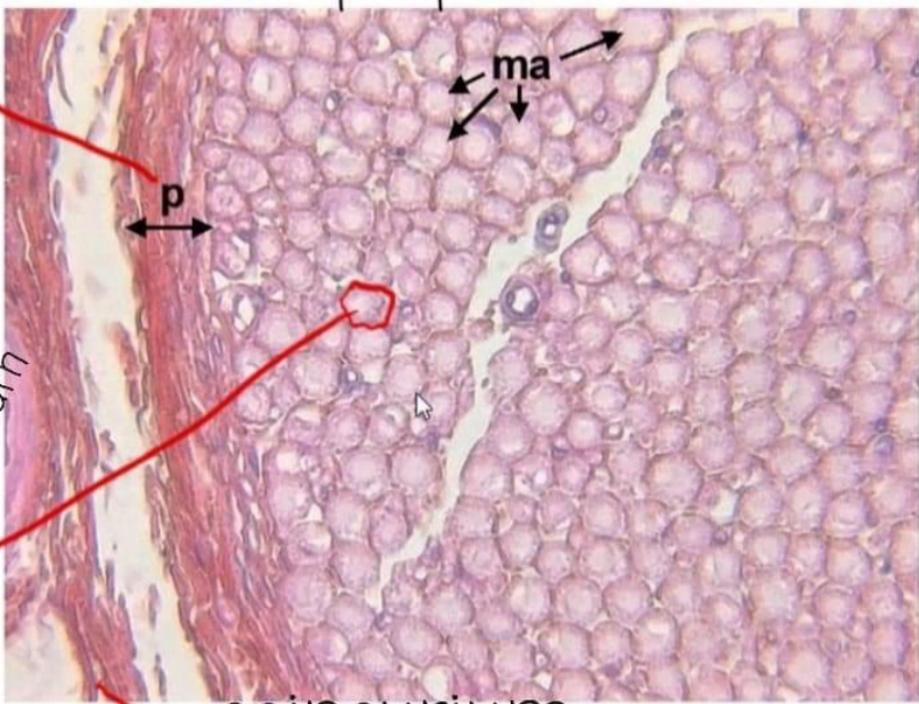


→ AXONS

(13)

Transverse section of the peripheral nerve

perineurium
connective tissue
which surrounds
a group of fiber



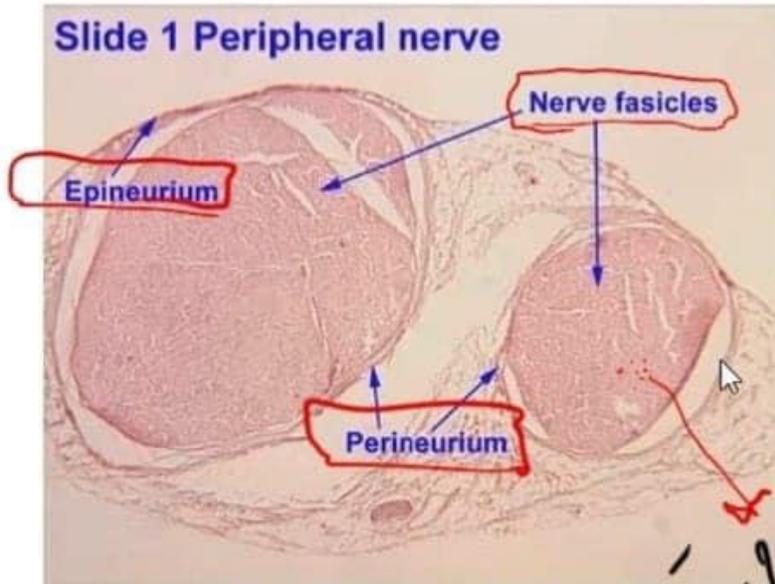
AXON
surrounded by endoneurium

epineurium surrounded the whole Nerve

(14)

cross-section

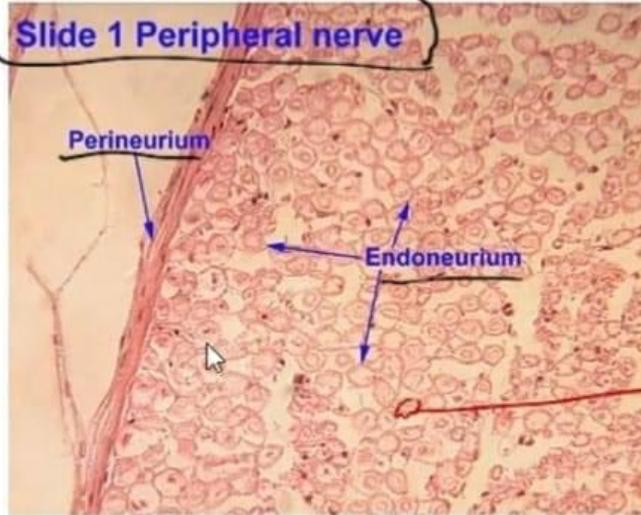
Slide 1 Peripheral nerve



کسارتی
AXONS

(15)

Slide 1 Peripheral nerve



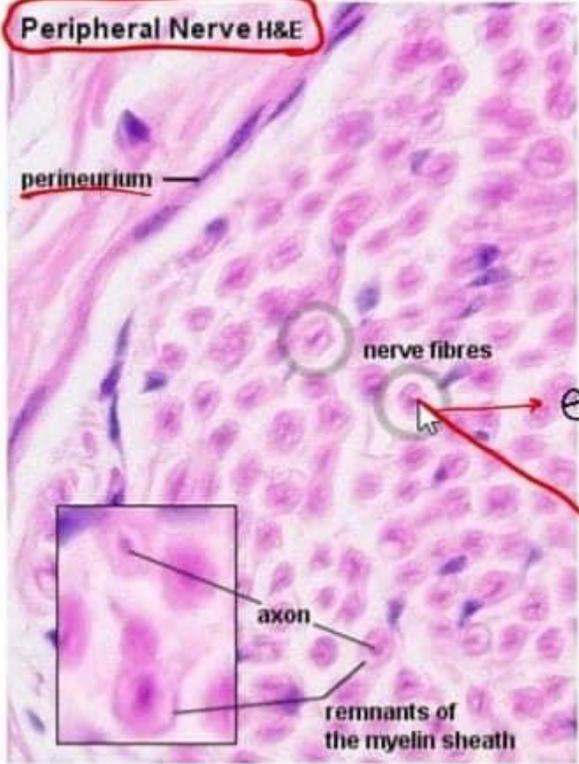
Perineurium

Endoneurium

Axons

Which are covered by endoneurium

Peripheral Nerve H&E



perineurium

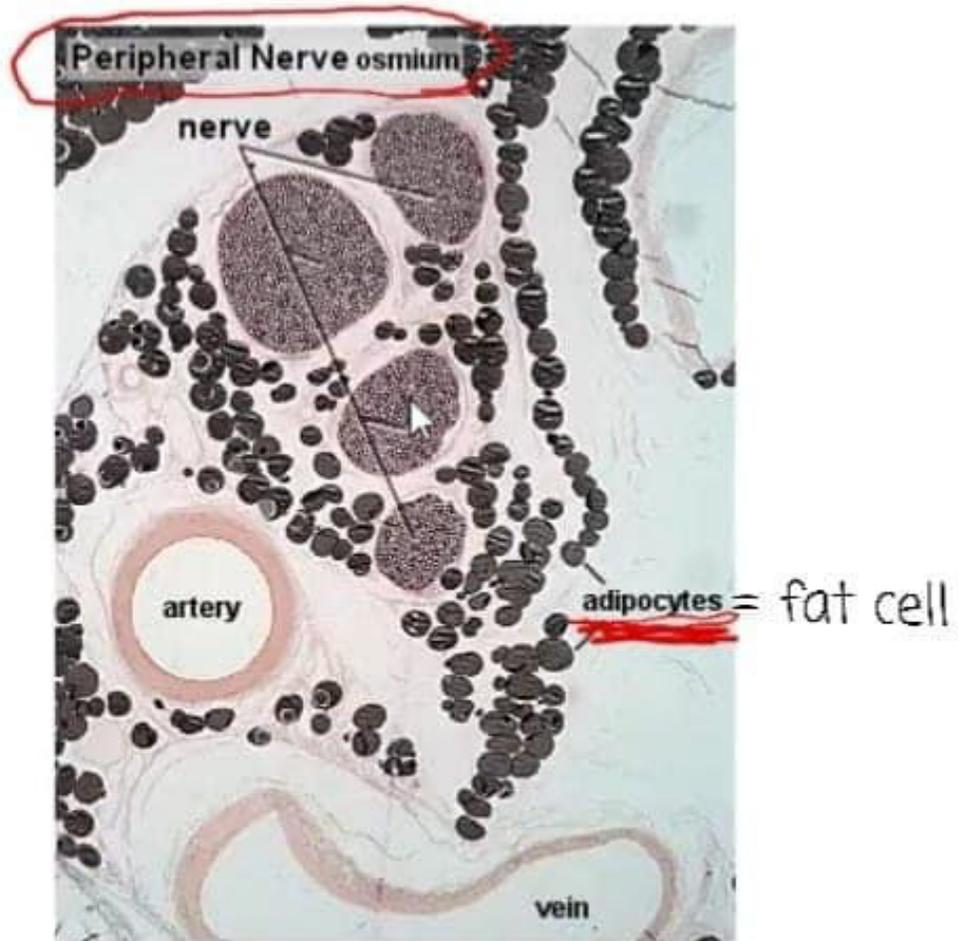
nerve fibres

endoneurium

Axon

axon

remnants of the myelin sheath





(19)

cross section within the peripheral
nerve



All those are
axons

epineurium
Which is dense
connective tissue

(20)

cross section within the peripheral
nerve (higher magnification)

- Peripheral Nerve
contain motor
and
sensory nerve



Axons

(21)

peripheral nerve (nerve trunk)

(low magnification)



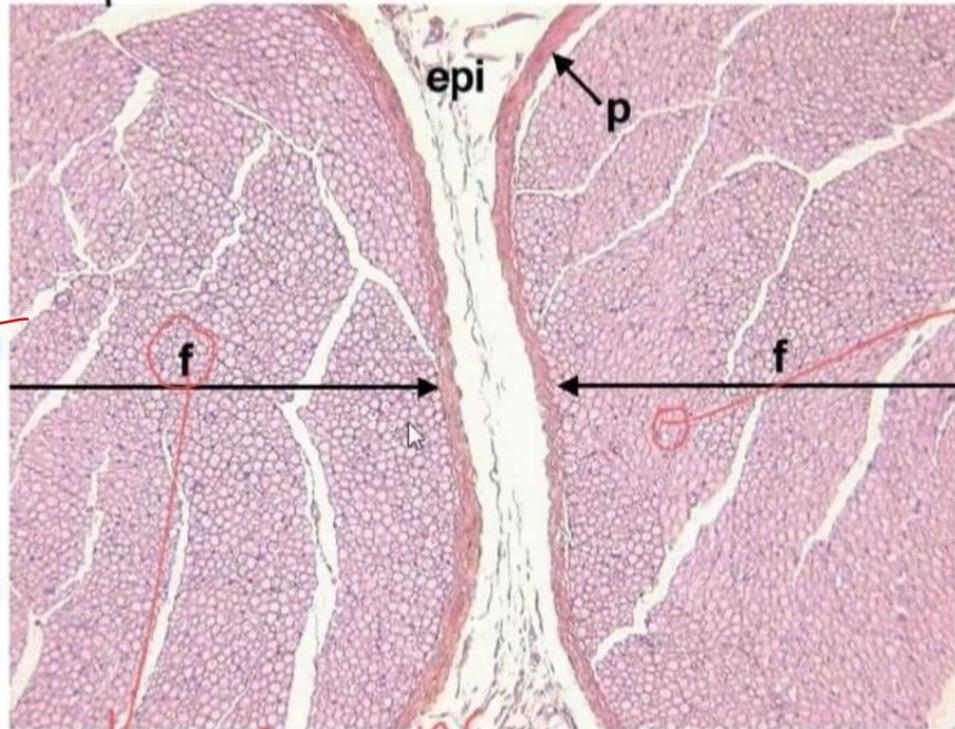
4

(22)

peripheral nerve (nerve trunk)

(higher magnification)

Perineurium



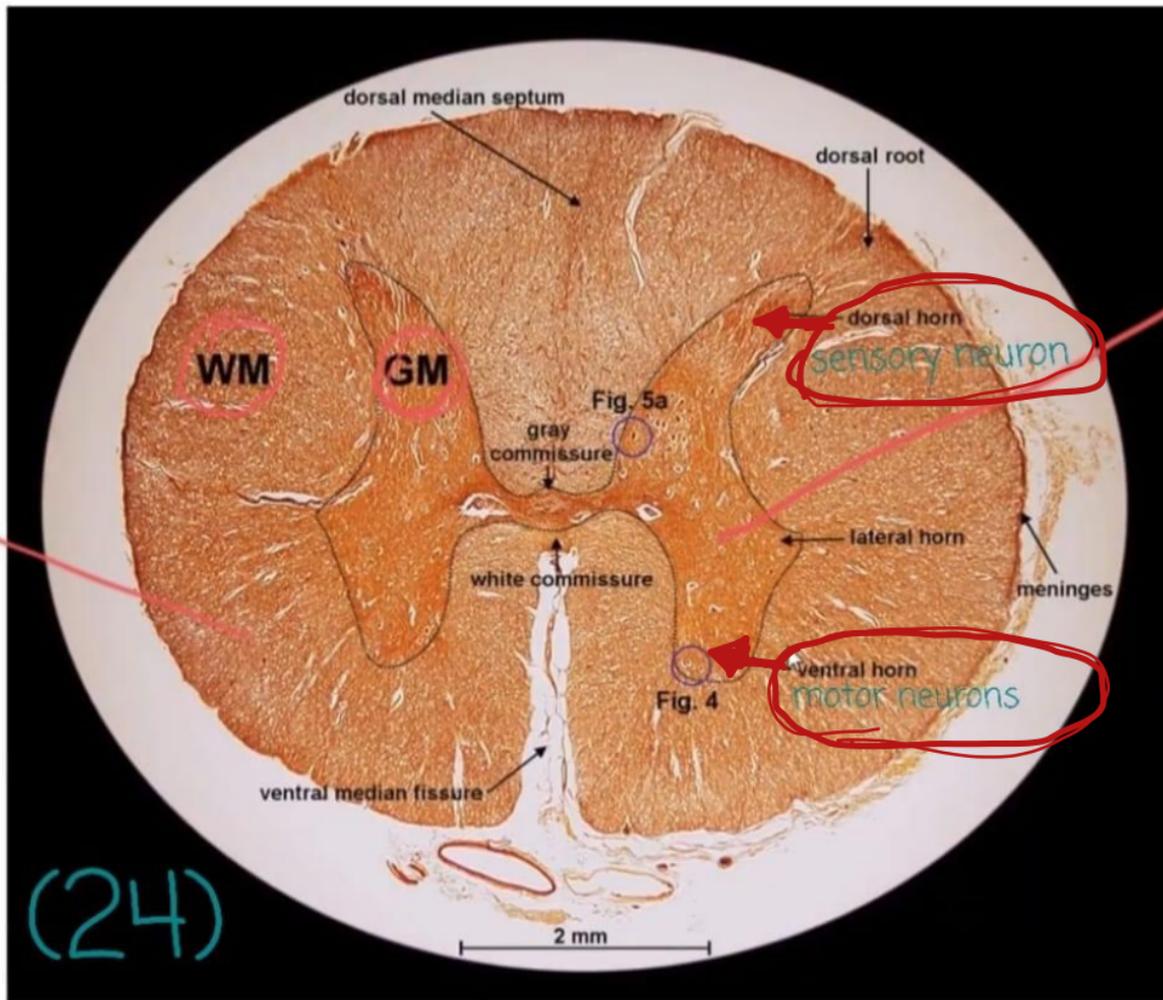
group of AXONS

(23)

spinal cord

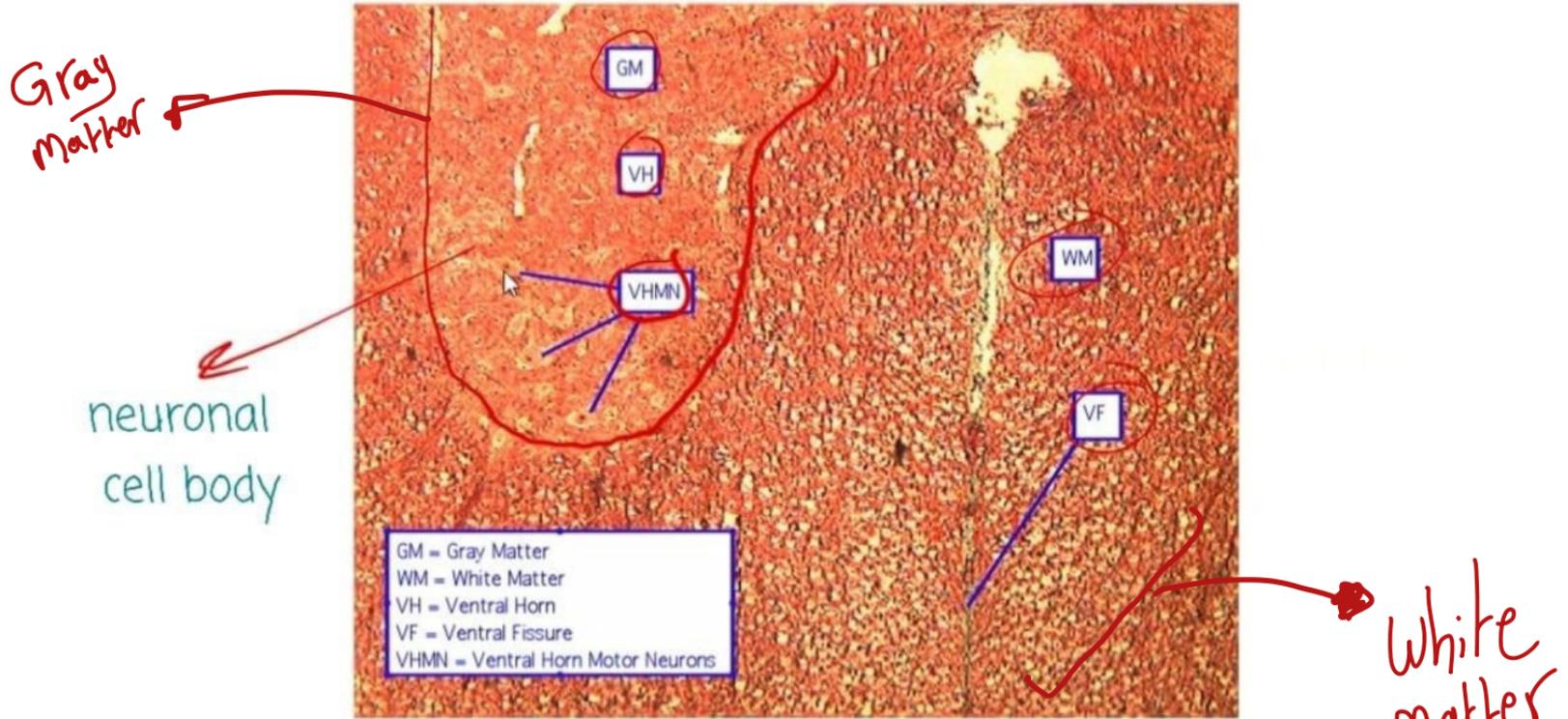
white matter

gray matter
the (butterfly)



(24)

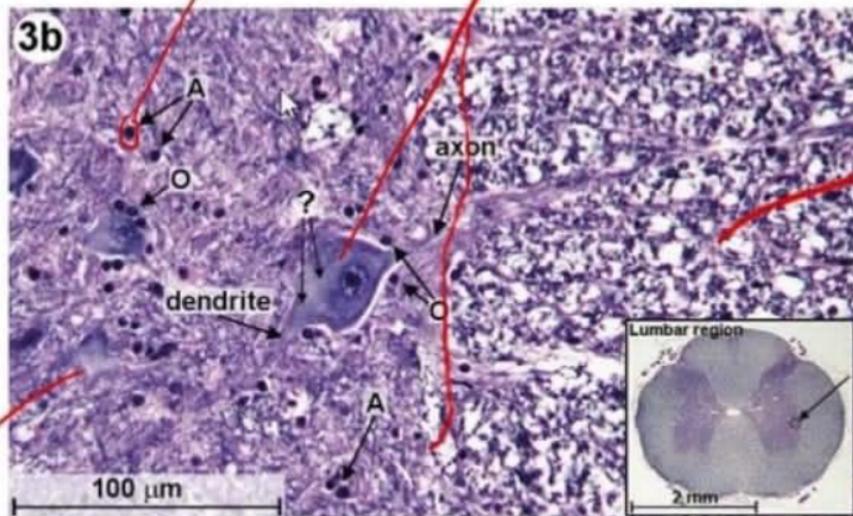
Cross section in spinal cord



GM = Gray Matter
WM = White Matter
VH = Ventral Horn
VF = Ventral Fissure
VHMN = Ventral Horn Motor Neurons

(25)

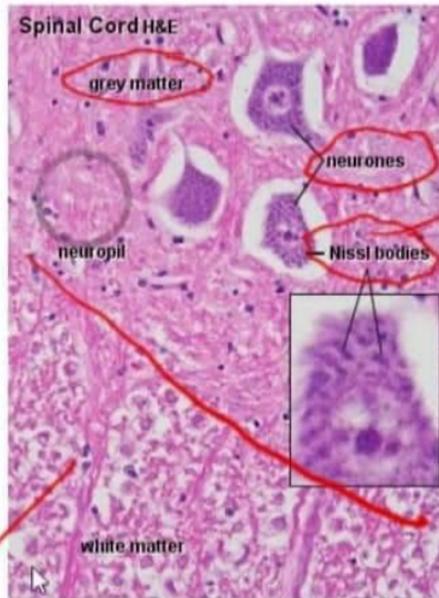
supporting cell neuronal cell body



GM

WWM

(26)

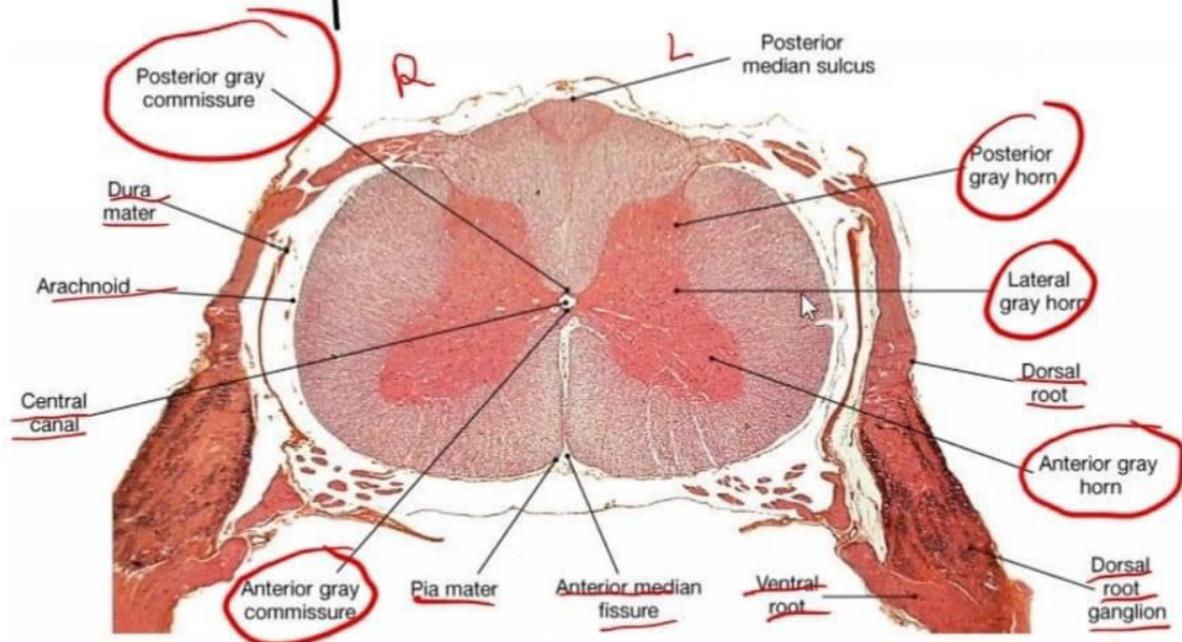


GM

WM

(27)

spinal cord



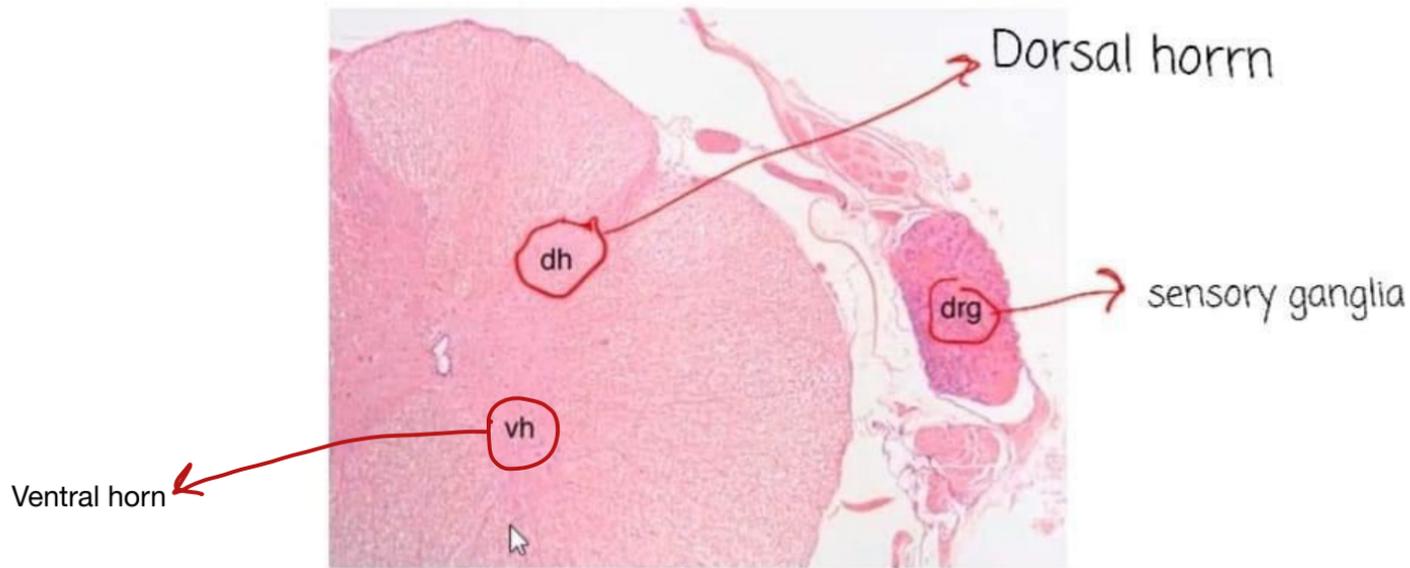
(b)

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unipolar neuron

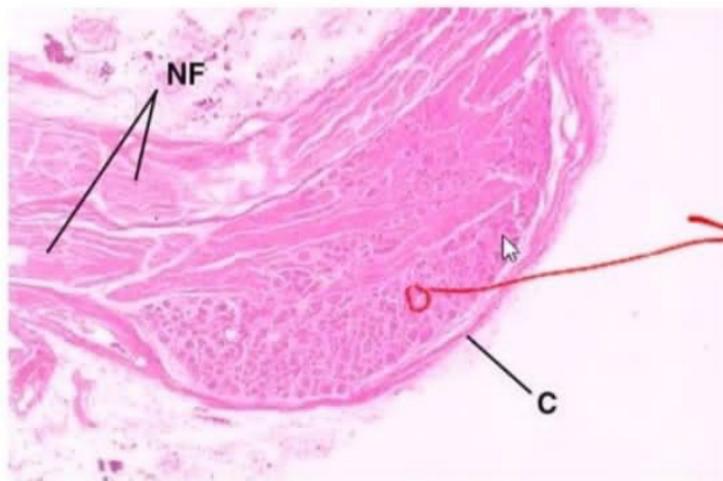
(28)

spinal cord



(29)

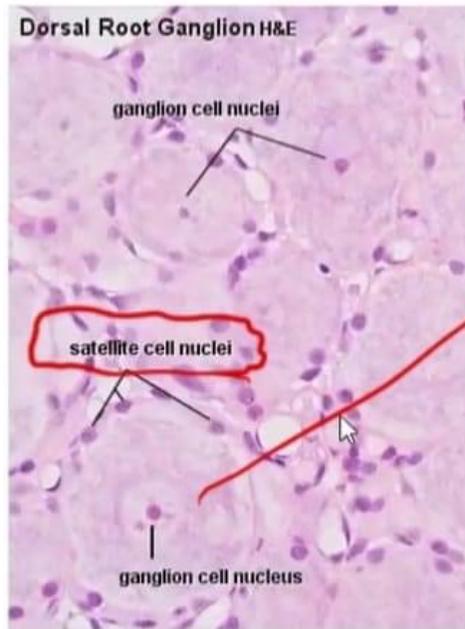
dorsal root ganglia



neuronal cell body

(31)

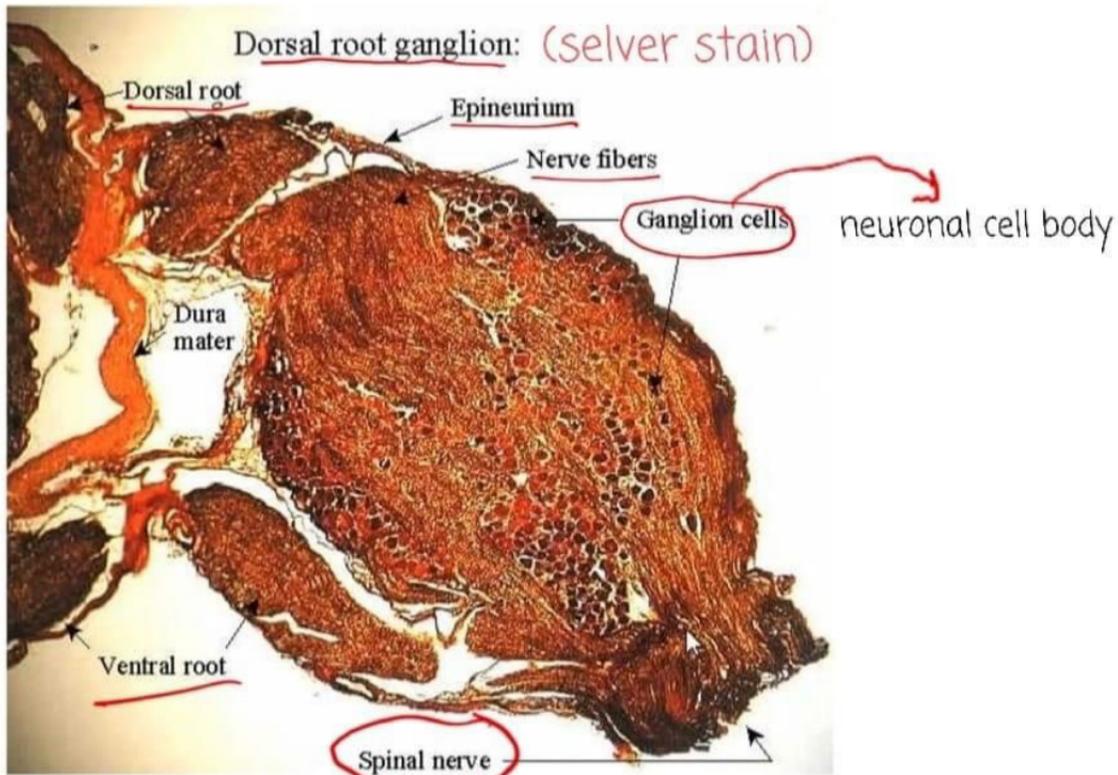
Dorsal Root Ganglion



satellite cell

(33)

Dorsal root ganglion: (selver stain)



(32)



multipolar neurons
diffused all
through the
ganglia

(34)