



Motivational Corner:

"Patience, persistence and perspiration make an unbeatable combination for success."



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HISTOLOGY CNS PARTICAL



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Thanks you for checking
our work, Good luck.
-Team histology.



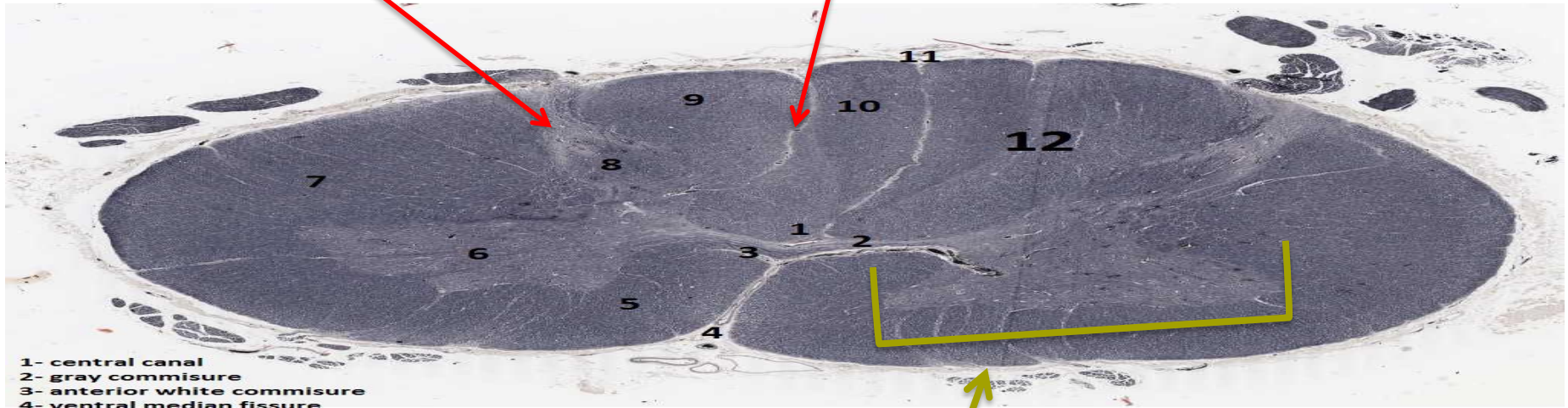
HISTOLOGY
435

Cervical Spinal Cord



Posterolateral sulcus

Posterior intermediate sulcus



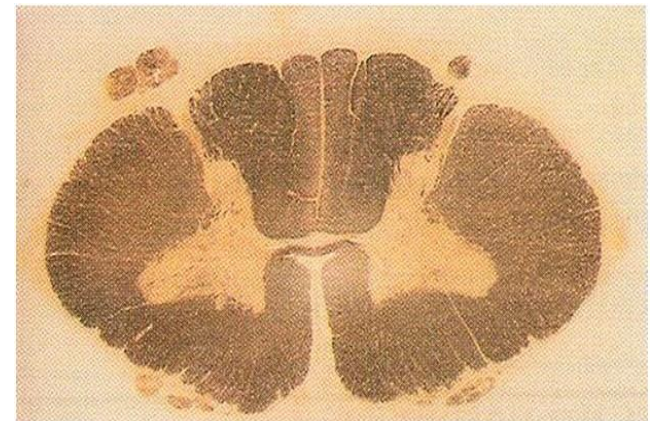
- 1- central canal
- 2- gray commissure
- 3- anterior white commissure
- 4- ventral median fissure
- 5- anterior white column
- 6- anterior gray horn
- 7- lateral white column
- 8- posterior gray horn
- 9- cuneate tract
- 10- gracile tract
- 11- dorsal median sulcus
- 12- posterior white column

Cervical Spinal Cord

You have to memorize them all

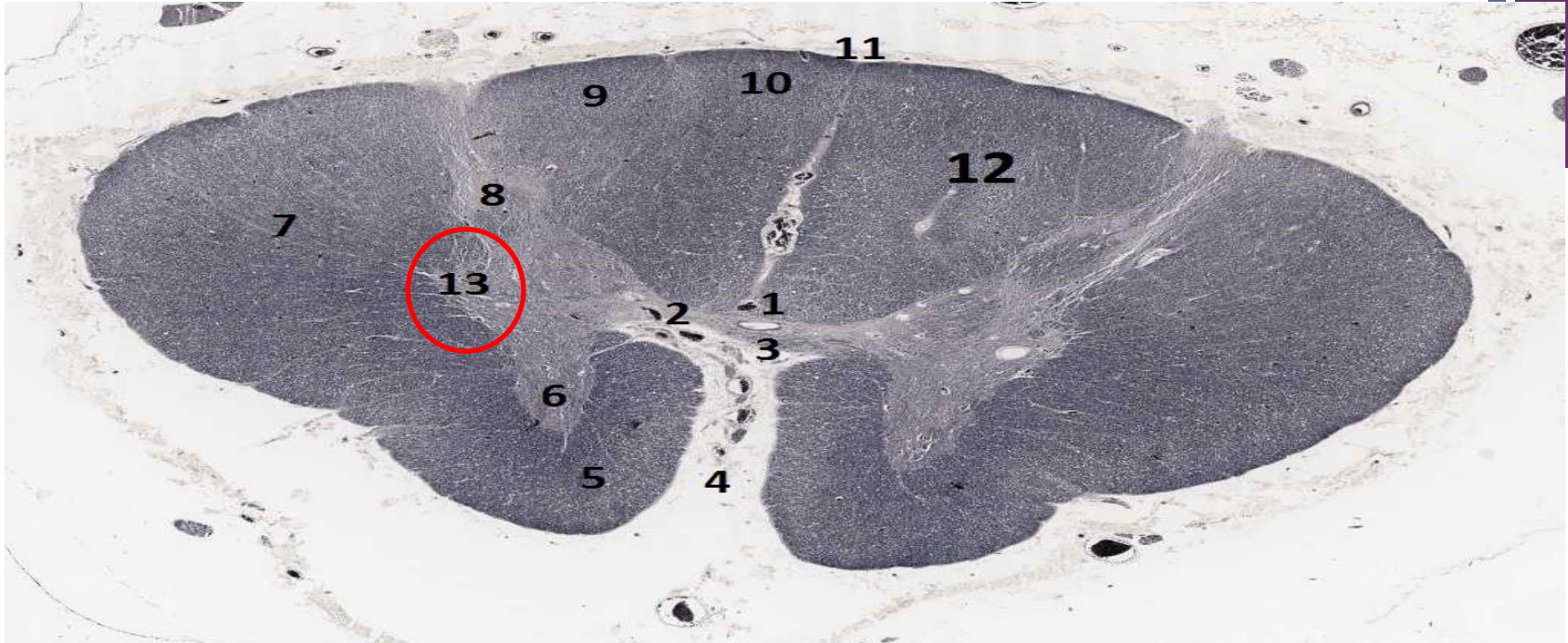
- **Features:**

1. Oval in shape
2. Wide ventral horn
3. Thin dorsal horn





Thoracic Spinal Cord



- 1- central canal
- 2- gray commissure
- 3- anterior white commissure
- 4- ventral median fissure
- 5- anterior white column
- 6- anterior gray horn
- 7- lateral white column
- 8- posterior gray horn
- 9- cuneate tract
- 10- gracile tract
- 11- dorsal median sulcus
- 12- posterior white column
- 13- lateral gray horn

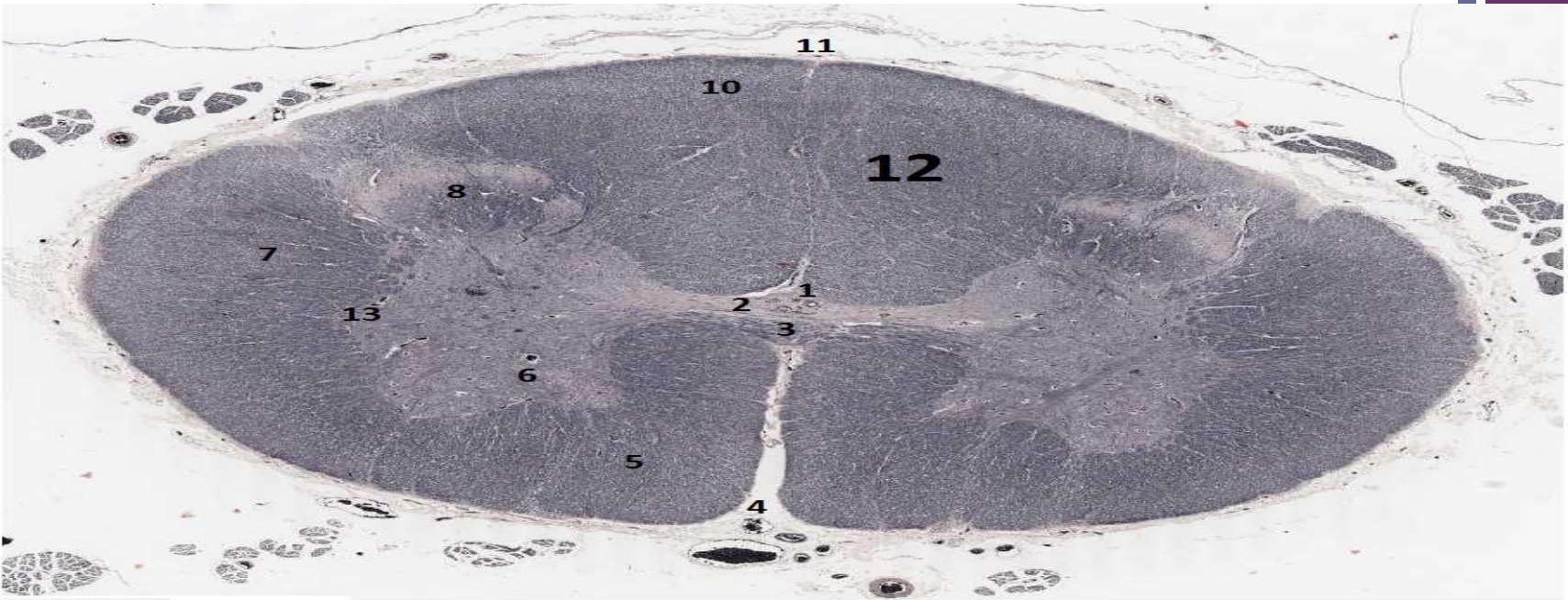
Thoracic Spinal Cord

- Feature

1. Ventral & Dorsal horns are thin
2. It has a lateral horn (13 in picture)

You have to memorize them all

Lumbar Spinal Cord



Lumbar Spinal Cord

- 1- central canal
- 2- gray commissure
- 3- anterior white commissure
- 4- ventral median fissure
- 5- anterior white column
- 6- anterior gray horn
- 7- lateral white column
- 8- posterior gray horn
- 9- cuneate tract "not found at this level"
- 10- gracile tract
- 11- dorsal median sulcus
- 12- posterior white column
- 13- lateral gray horn

You have to memorize them all

- **Features:**

1. Ventral & Dorsal horn are wide
2. IT has NO Cuneate Tract

Note: All spinal segment end in L2 in adults



Tracts



Questions:

- Identify the label?
- Mention the function of this tract?

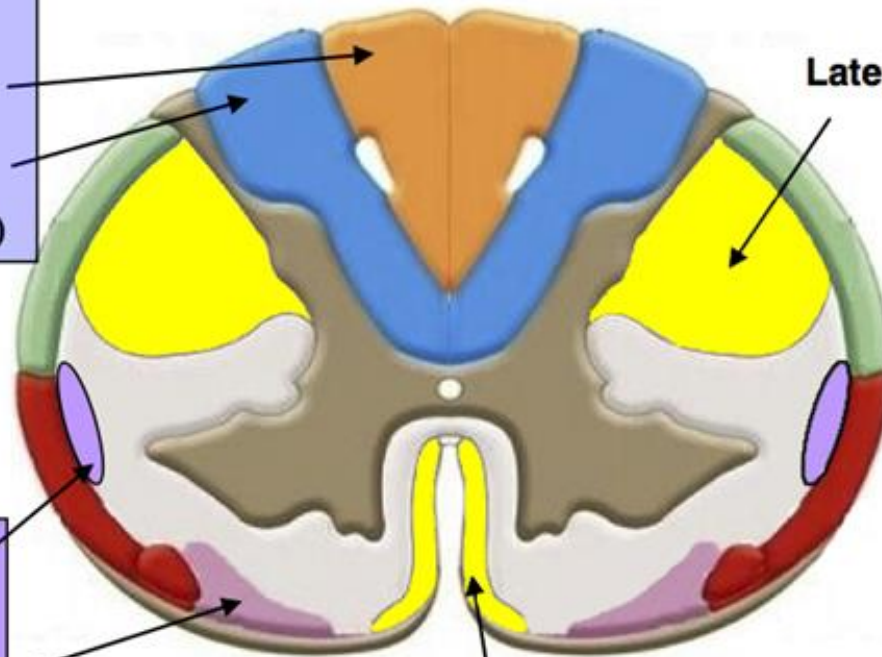
sensory tracts

motor tracts

touch,
pressure,
kinesthesia
pathways

Dorsal
(posterior)
columns:
Gracilis (from leg)
Cuneate (from arm)

Lateral corticospinal tract



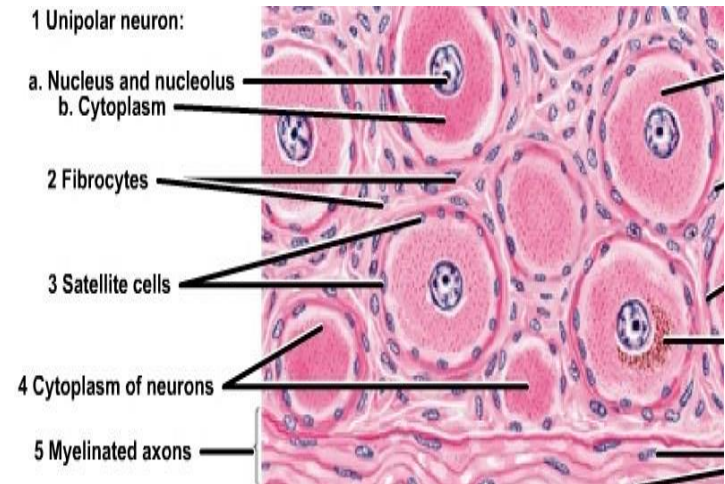
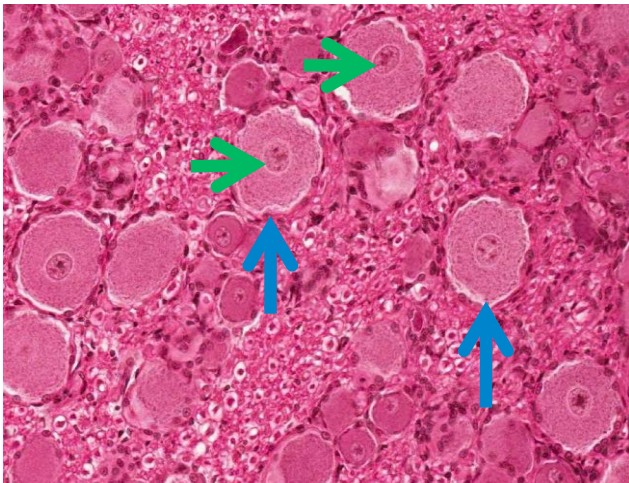
Anterior corticospinal tract

nociceptive
(pain)
pathways

Spinothalamic
tracts:
lateral
anterior

+ Unipolar (pseudounipolar) Neurons

- Questions:
 - Identify the structure:
or What's the type of this neuron?
 - Location:

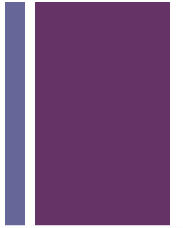


- **Located in:**
 1. Spinal ganglion
 2. Mesencephalic nucleus of 5th CN

- **Contains:**
 1. Cell body of Unipolar neurons.
 2. Nucleus and Nucleolus.

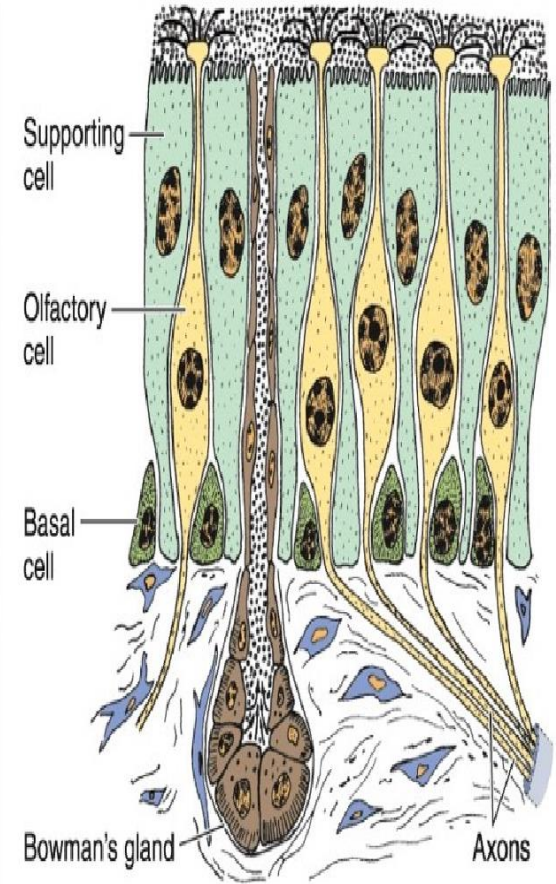


Bipolar Neurons



- **Located in:**

1. Olfactory epithelium
2. Retina



Bipolar neurons (in olfactory epithelium) (diagram)

- Questions:
 - Identify the structure:
 - What's the type of this neuron?

- Location:



Multipolar Neurons

- Questions:
 - Identify the structure:
 - or What's the type of this neuron?
 - Location:

1- Stellate

Located in:

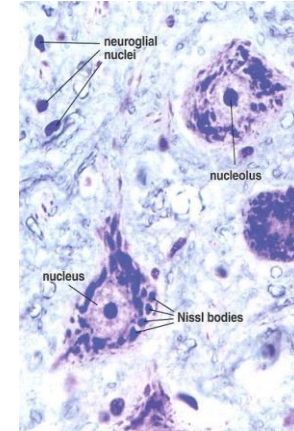
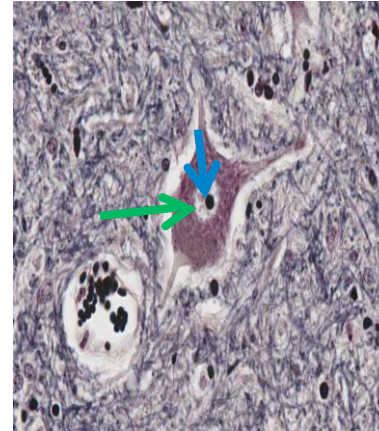
1. Anterior horn cells of spinal cord.

Contains:

Nucleus.

Nucleolus.

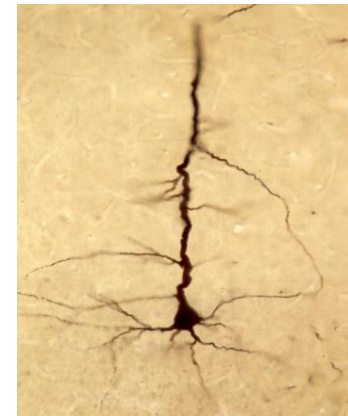
Nissle bodies.



2- Pyramidal

Located in:

1. Cerebrum





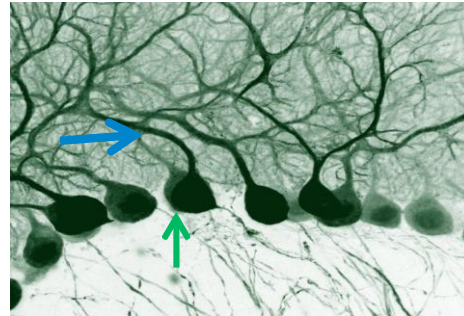
Multipolar Neurons



3- Pyriform

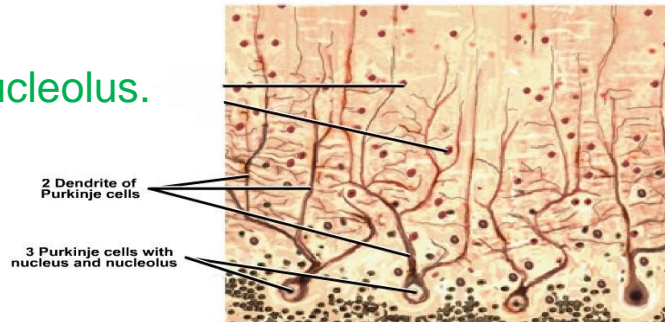
Located in:

1. Purkinje cells of Cerebellum.



Contains:

- 1- Purkinje cells with Nucleus & Nucleolus.
- 2- Dendrites of Purkinje cells.



- Questions:
 - Identify the structure:
or What's the type of this neuron?
 - Location: