

# Spinal Cord

## *Objectives:*

To understand basic spinal cord anatomy and be able to differentiate among different spinal cord levels

To identify functional areas of the gray and white matter

To identify spinal arteries and the areas they supply

## *Specimens needed:*

Plastinated spinal cord

Spinal cord model

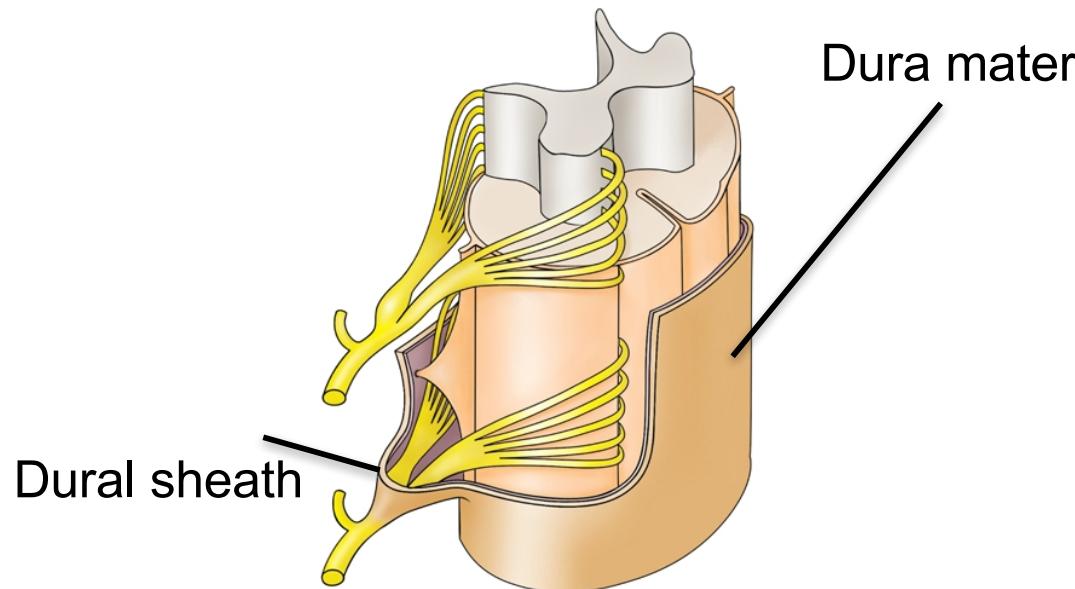


# Spinal Cord

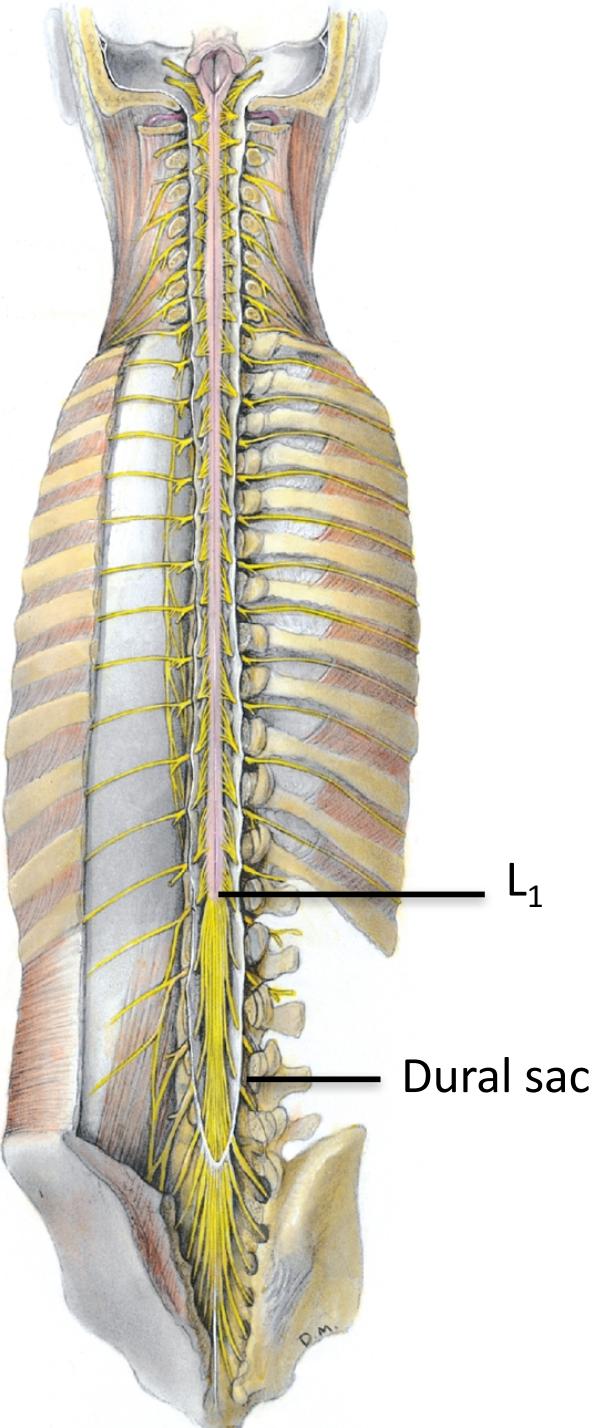
The spinal cord begins at the base of the brain stem and continues within the vertebral column to  $\sim L_1$ .

The spinal cord is covered by the same three meningeal layers as the brain.

The dura mater extends beyond the end of the spinal cord and forms the dural sac.

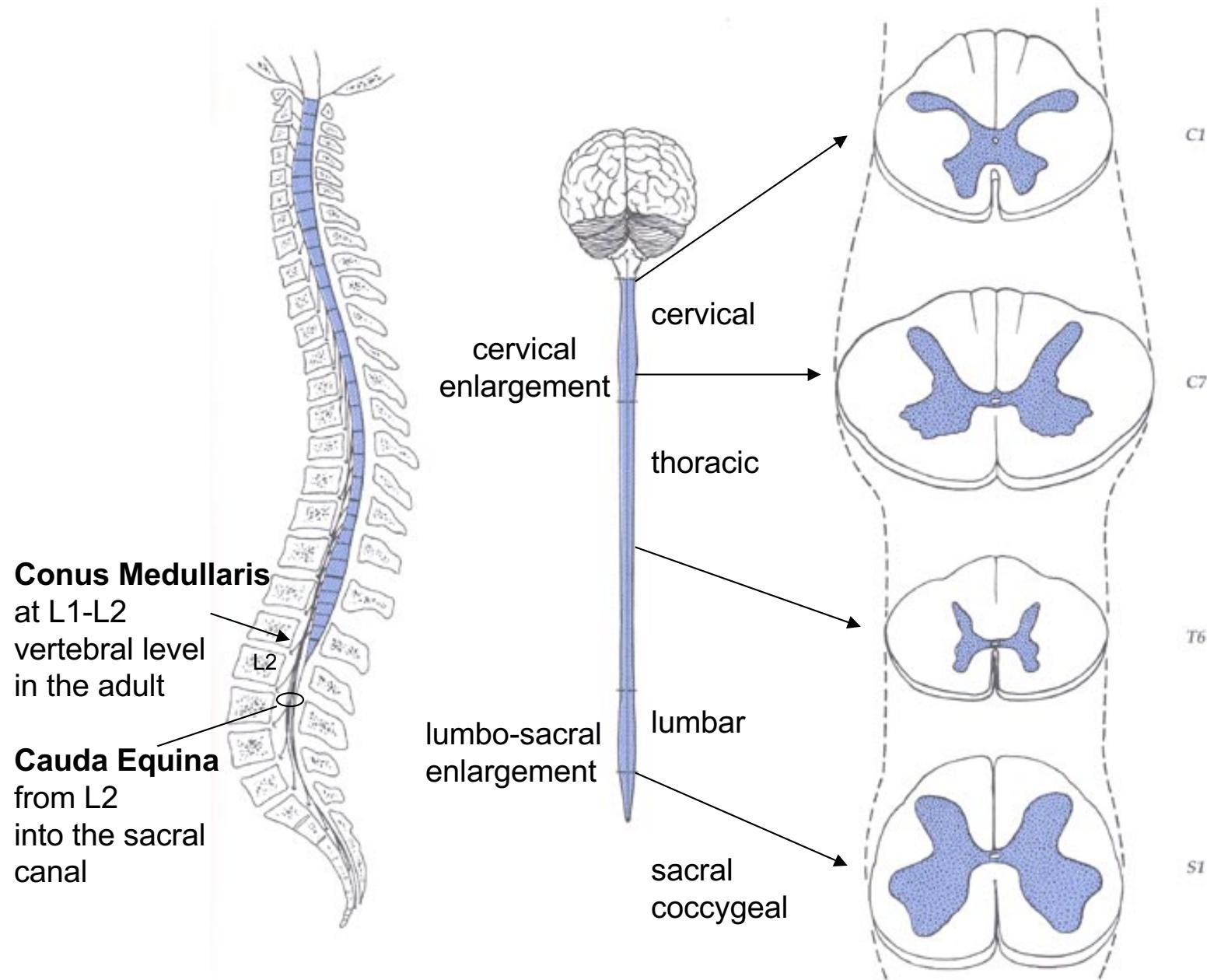


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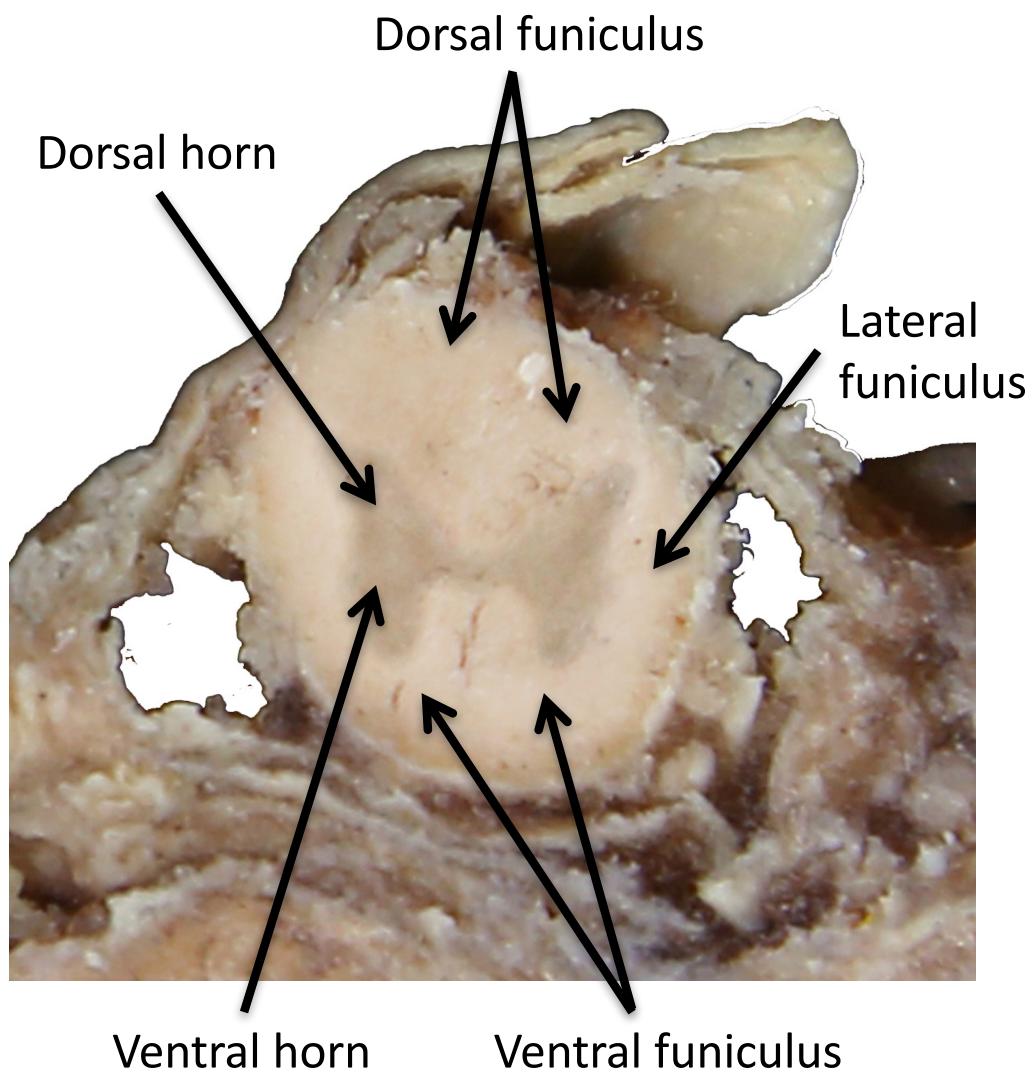


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# Regions and Enlargements

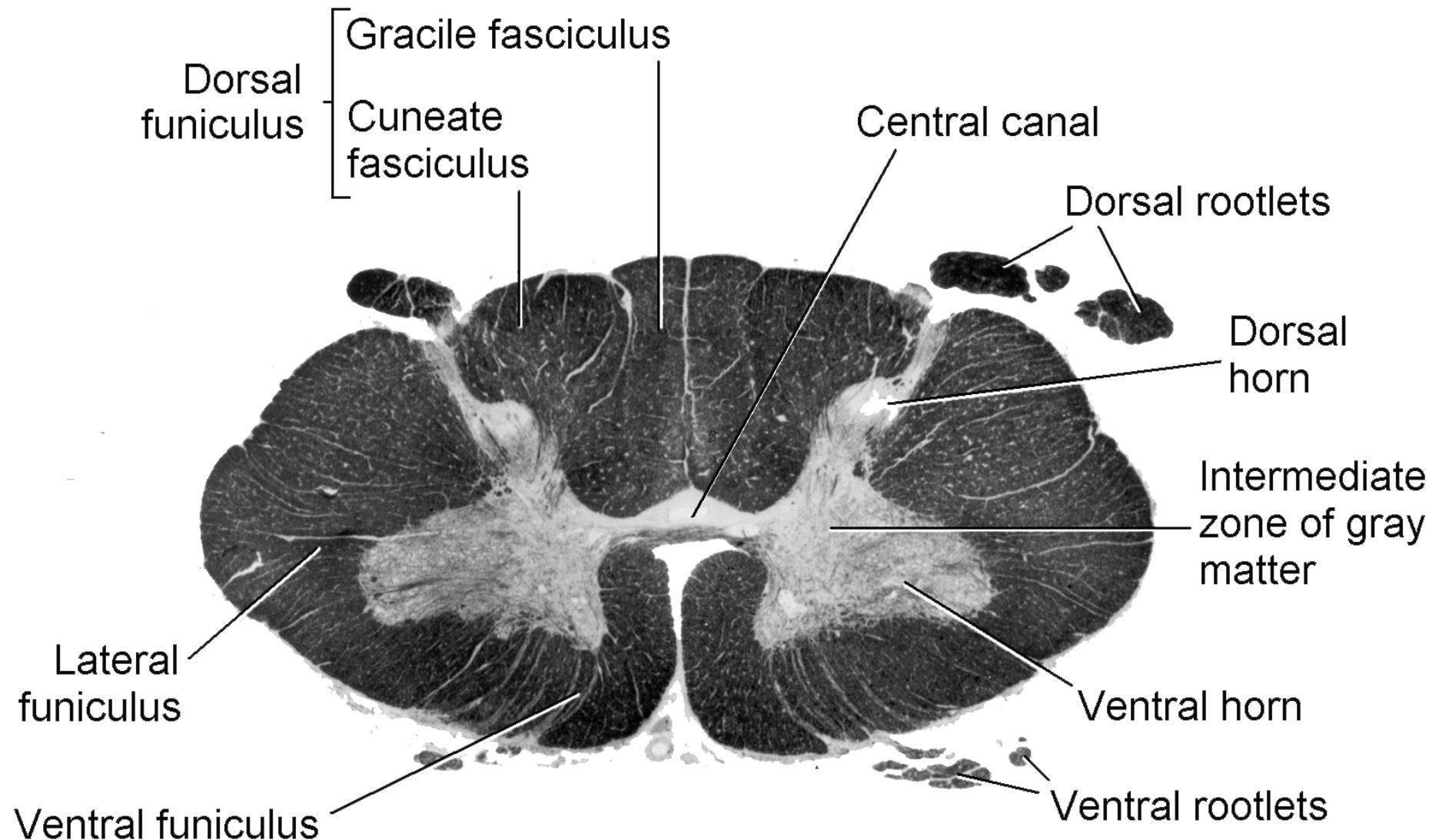


# Spinal Cord In Situ



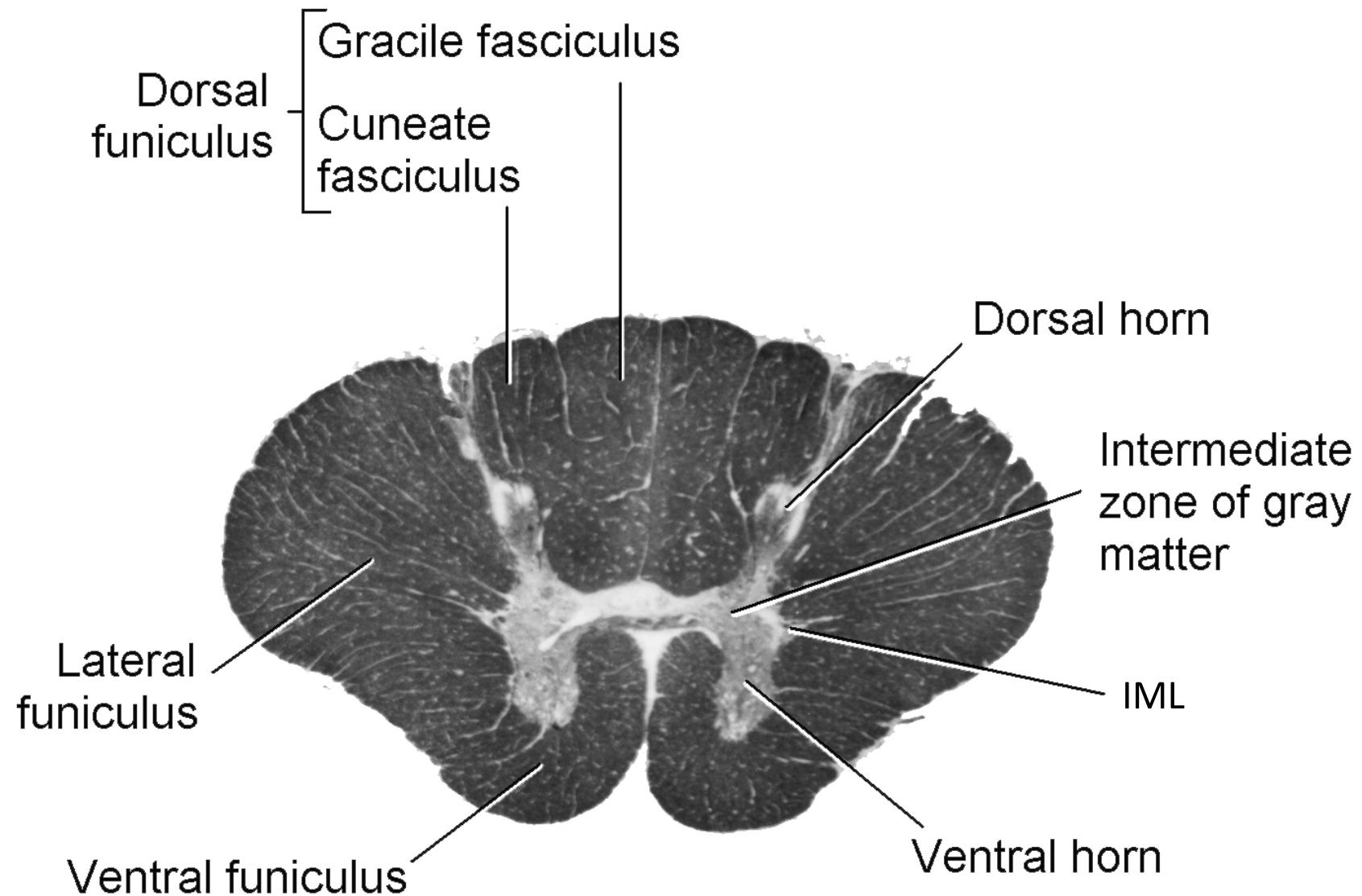
# Spinal Cord

The cervical spinal cord is characterized by the cervical enlargement and a relatively large amount of white matter



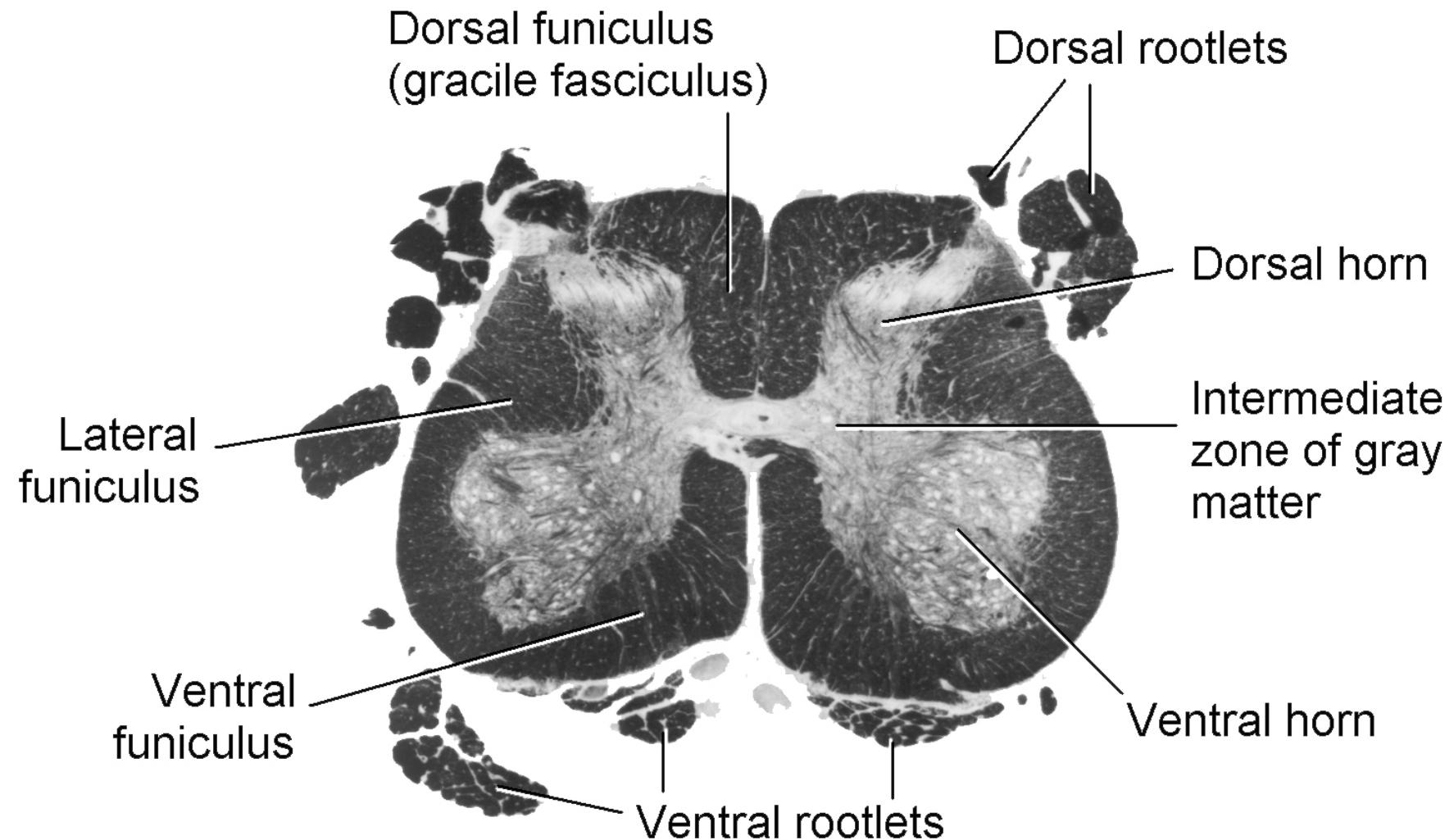
# Spinal Cord

The thoracic spinal cord has less gray matter and the intermediolateral (IML) cell column is visible.

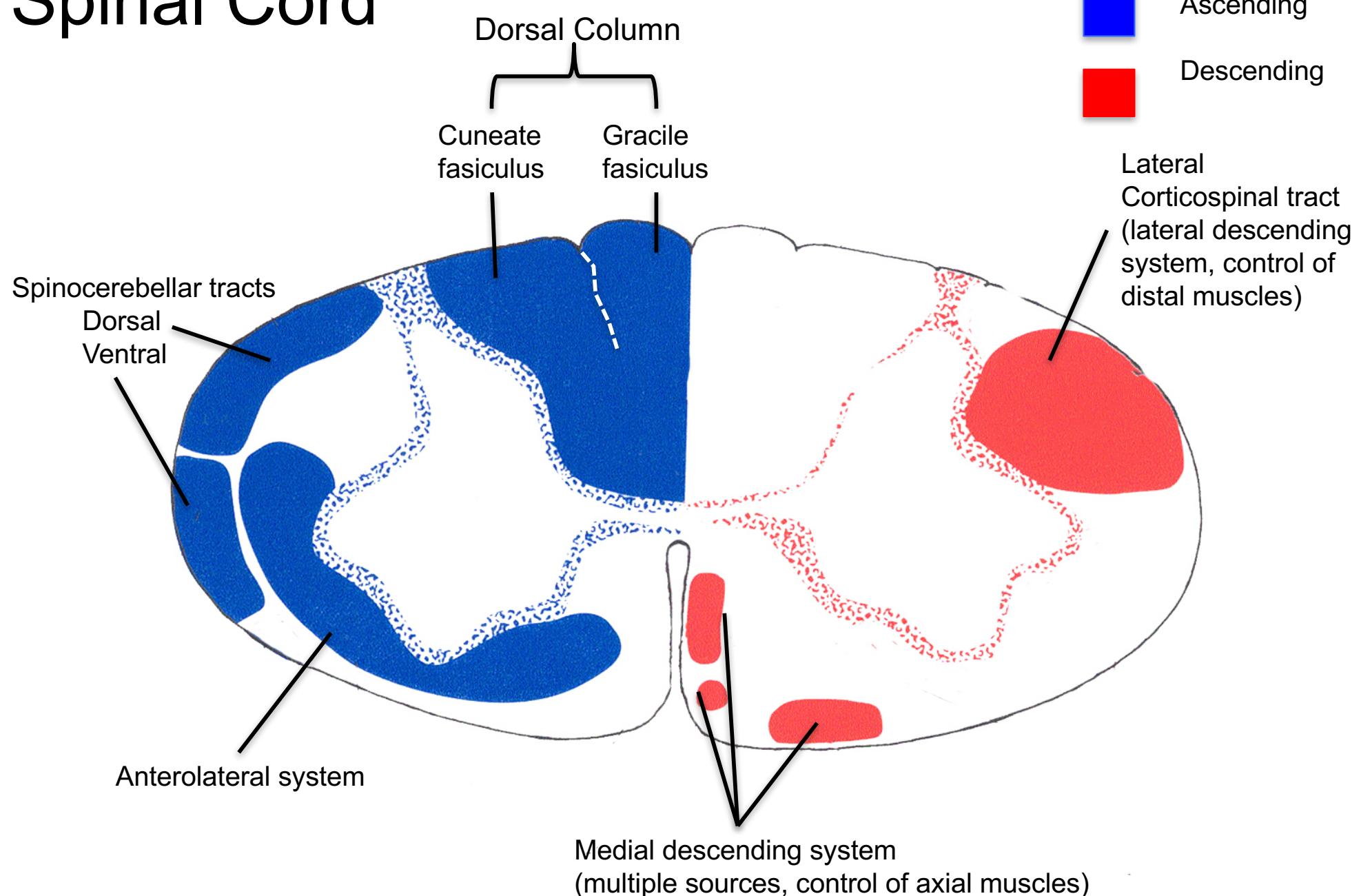


# Spinal Cord

The lumbar spinal cord is characterized by the lumbar enlargement and a relatively small amount of white matter



# Spinal Cord



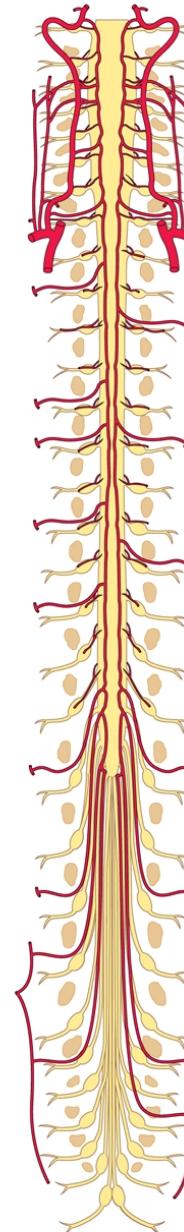
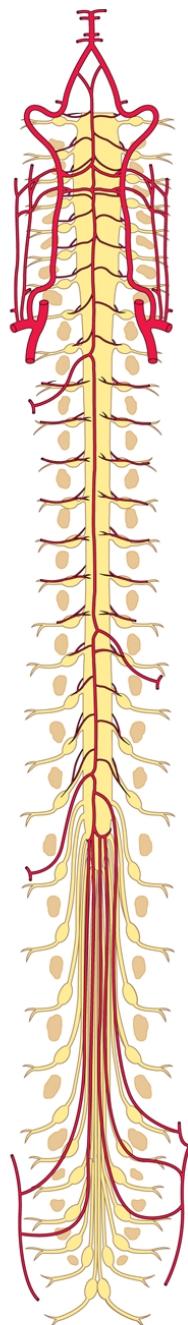
# Spinal Cord

Ventral (anterior)

1 spinal artery

Source: Vertebral a.

Dorsal and ventral  
spinal arteries are  
supplemented by  
branches from the  
aorta



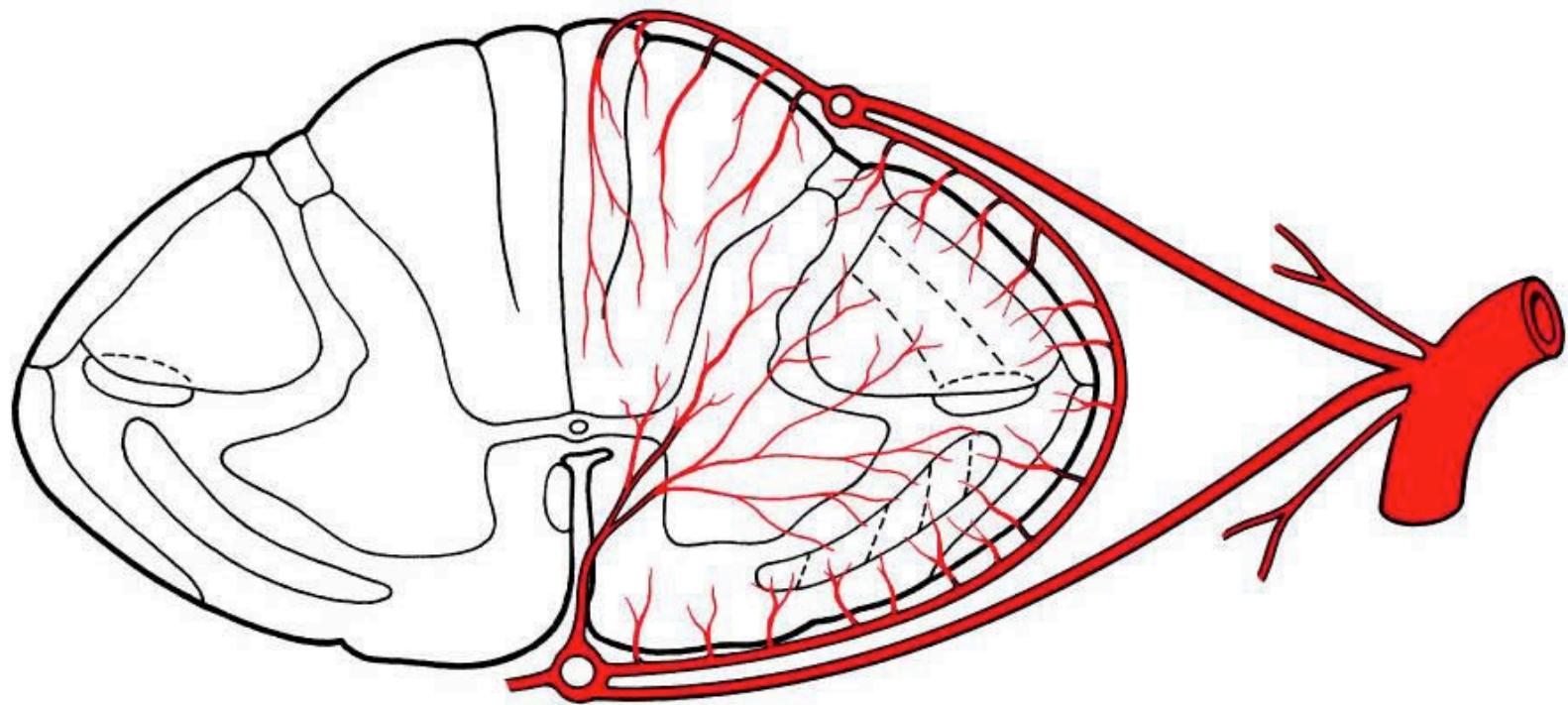
Dorsal (posterior)

2 spinal arteries

Source: Vertebral a. or  
Posterior inferior cerebellar a.

# Spinal Cord

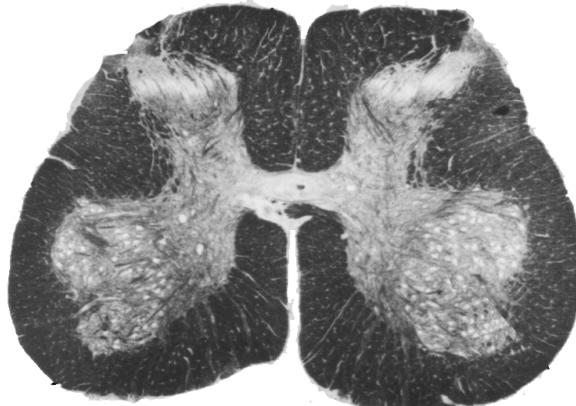
Areas served by the dorsal and ventral spinal arteries



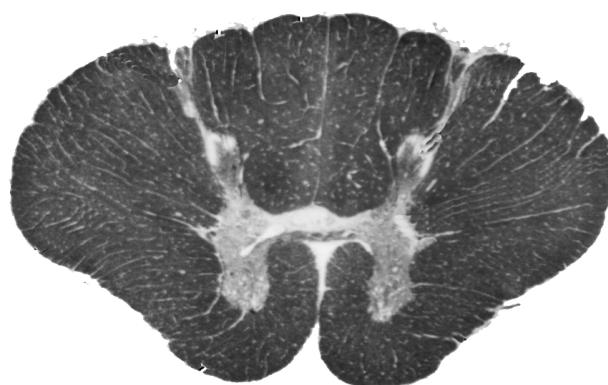
# Question 1

1. Which level(s) contain both the fasciculus cuneatus and gracilis?
2. Which level(s) contain the intermediolateral cell column?
3. Which level(s) contain the lumbar enlargement?
4. Which level(s) contain the cervical enlargement?

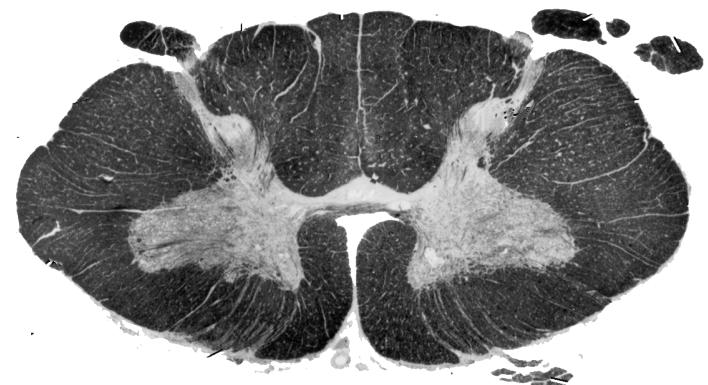
A



B



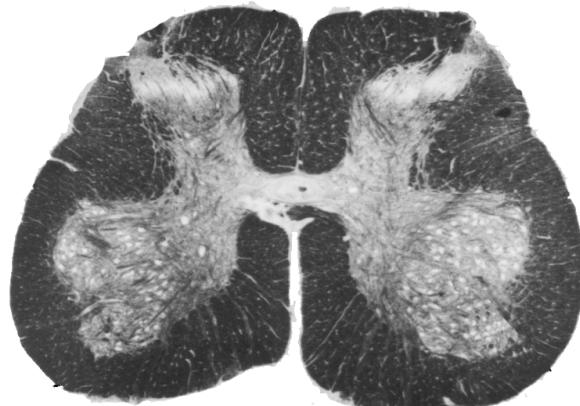
C



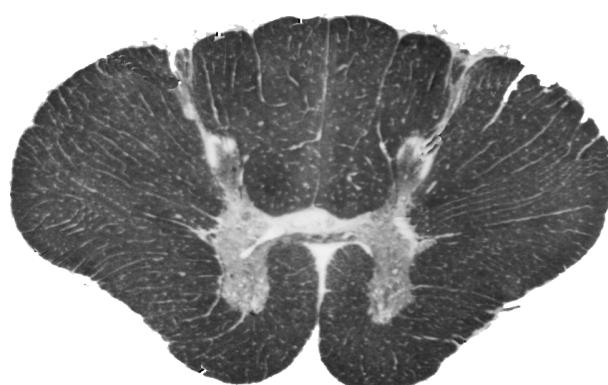
# Answers

1. B and C (the section below represents the upper thoracic cord)
2. B
3. A
4. C

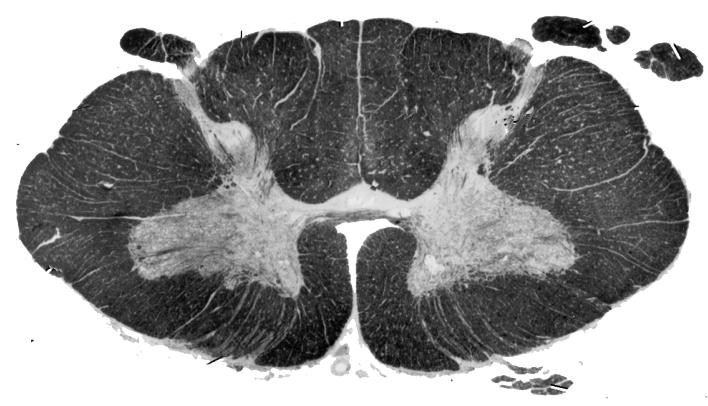
A



B



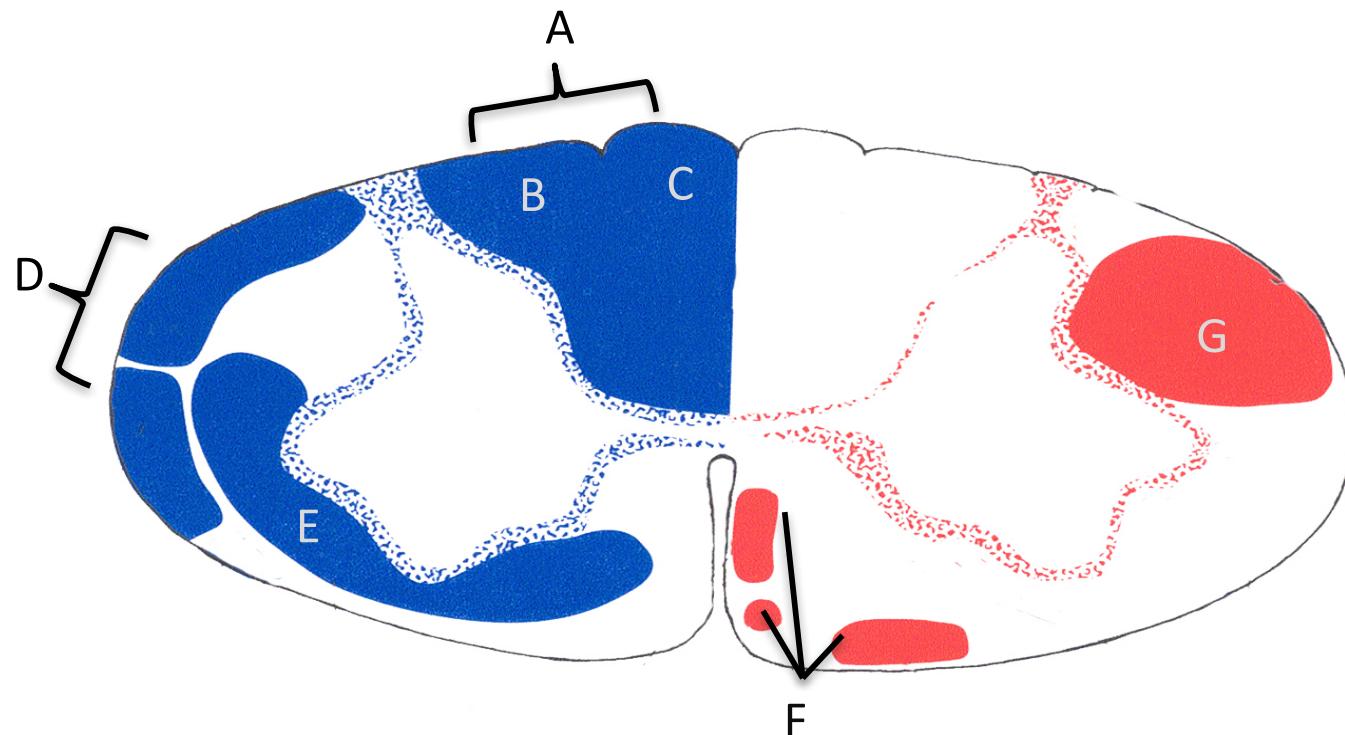
C



# Question 2

Match the letters below to the following structures, letters may be used more than once.

1. Anterolateral system
2. Dorsal column
3. Fasciculus cuneatus
4. Fasciculus gracilis
5. Lateral corticospinal tract
6. Medial descending system
7. Spinocerebellar tracts



# Answers

1. E
2. A
3. B
4. C
5. G
6. F
7. D

