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MRAD 281

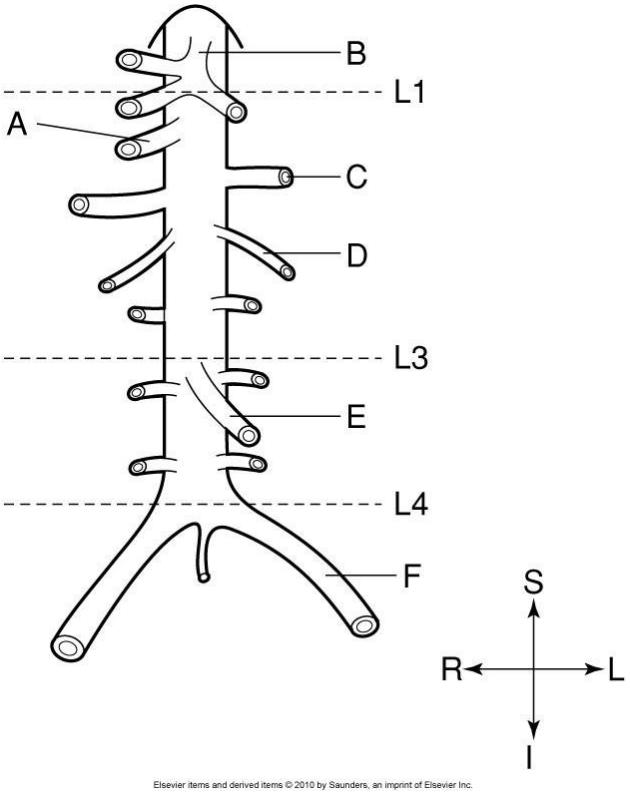
CT Imaging of the Abdomen & Pelvis
CT Imaging of the Spine

Part 1 – Anatomy

1. Describe the major artery supplying blood to the abdominal organs and list its identifiable braches.

2. Describe the major vein draining blood of the abdominal organs and list its identifiable branches.

3. Label the branches of the abdominal aorta:



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4. At L4, the abdominal aorta bifurcates into which two vessels?

5. At what vertebral level does the IVC pass from the abdomen into the mediastinum? What is this opening called?

6. What two vessels join to form the IVC?

7. At the level of the origin of the SMA, what is the SMA's relationship to the splenic vein? To the left renal vein?

8. What term is used to describe the location of organs in the abdominal cavity that have peritoneum only on the anterior surface?

9. What anatomical structure marks the division between the right and left lobes of the liver?

10. What separates the posterior caudate lobe from the more anterior quadrate lobe?

11. What vessel supplies the liver with oxygenated blood?

12. Describe the relationship of the gall bladder to the liver.

13. Describe the regions of the stomach and their relationships (ie – which is most superior, anterior, etc.)

14. List and describe the segments of the small intestine.

15. List and describe the segments of the colon.

16. Where is the spleen located?

17. The splenic vein is usually easy to see on an axial CT image. Where does it sit?

18. The pancreas extends between which two organs?

19. Which portion of the pancreas is the most superior and posterior?

20. Describe the relationship of the IVC to the abdominal aorta.

22. Label

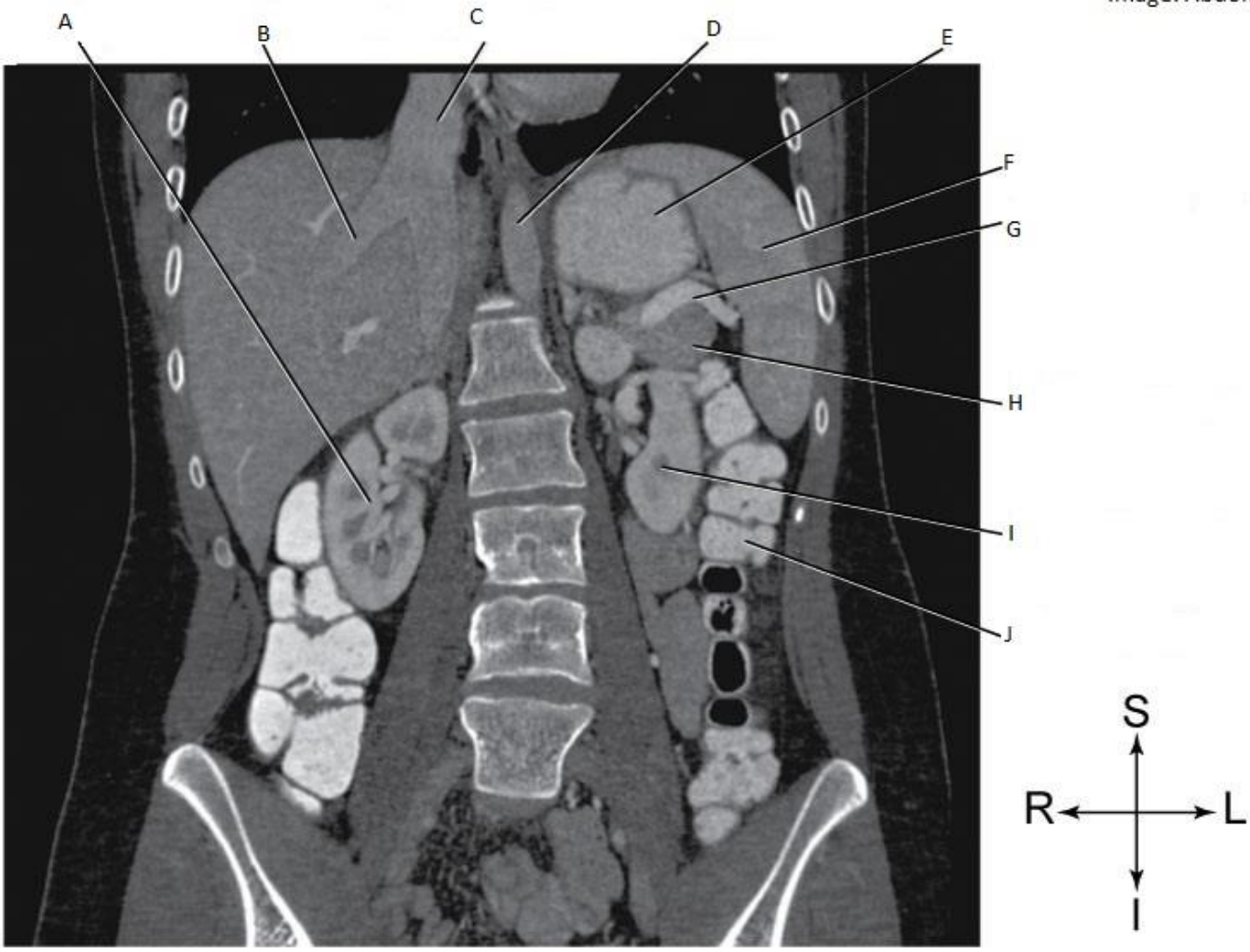
Image: Abdomen1



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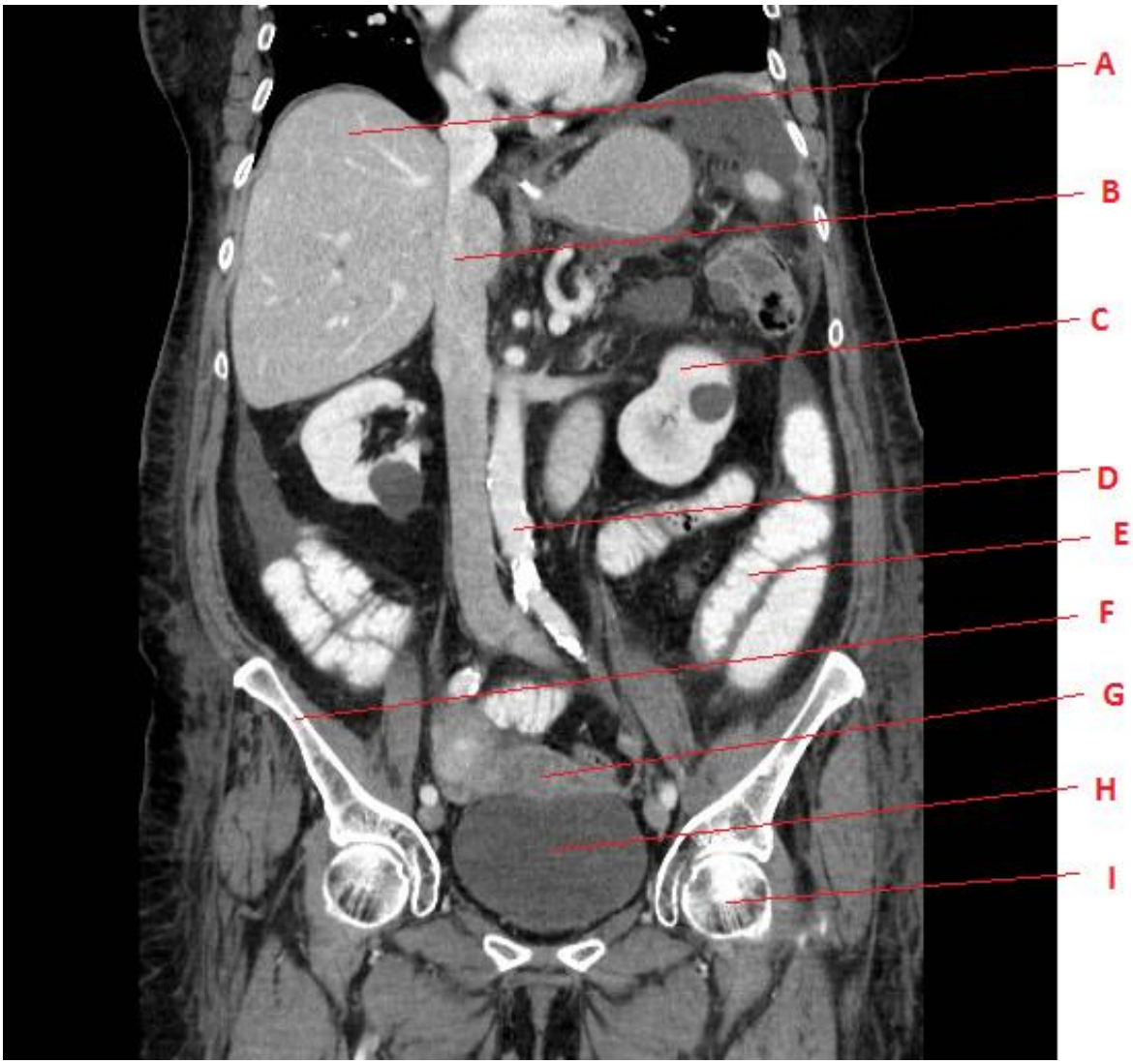
23. Label

Image: Abdomen3

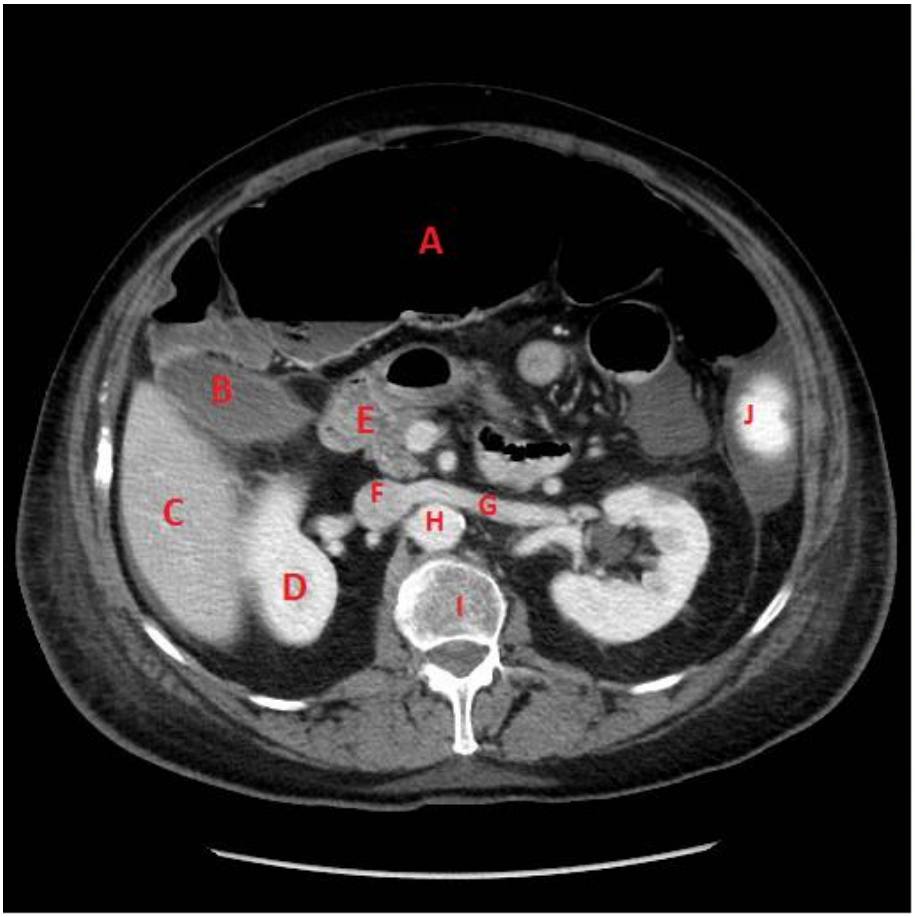


(Modified from Bo WJ et al: *Basic atlas of sectional anatomy: with correlated imaging*, ed 4, St Louis, 2007, Elsevier/Saunders.)

24. Label:



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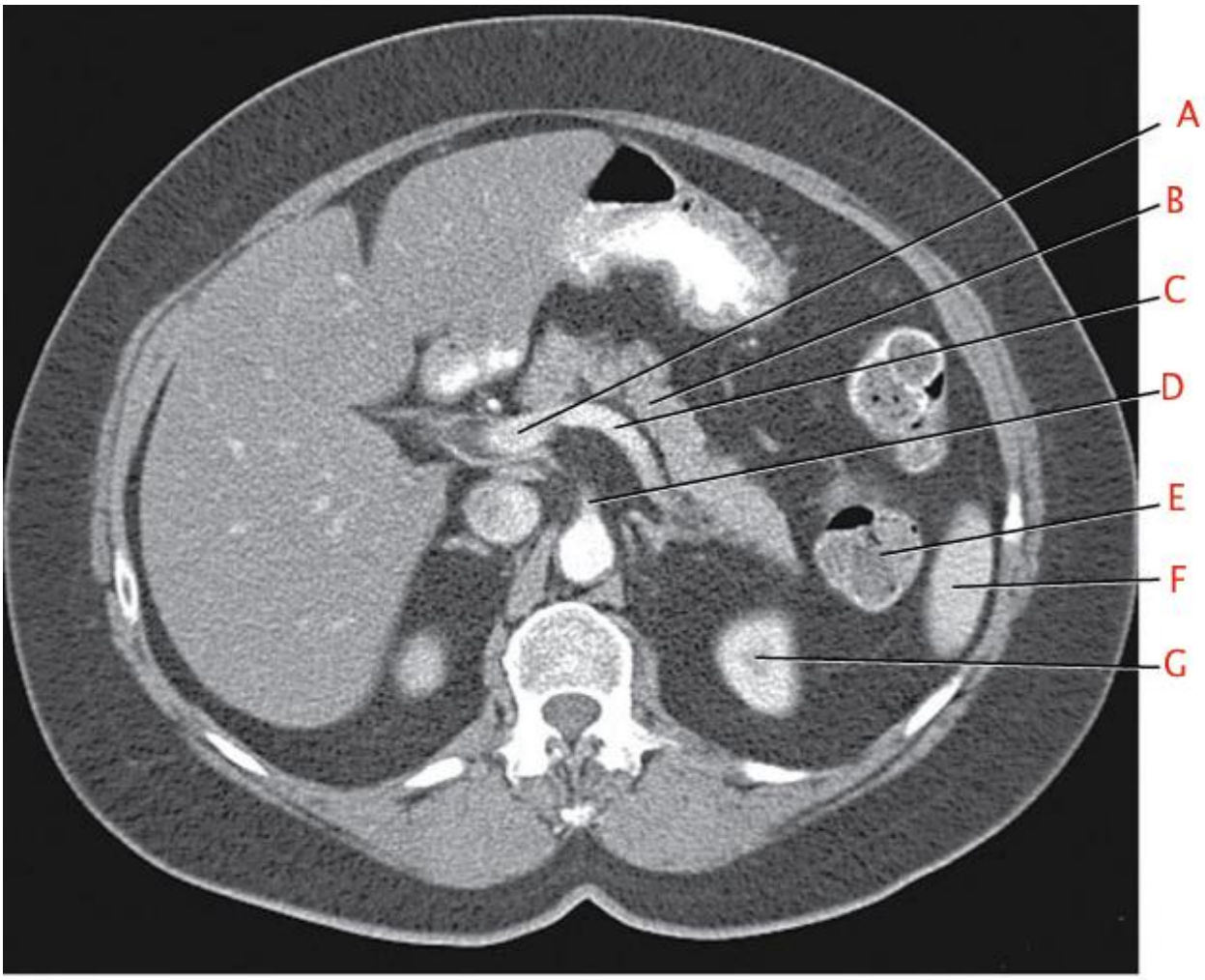
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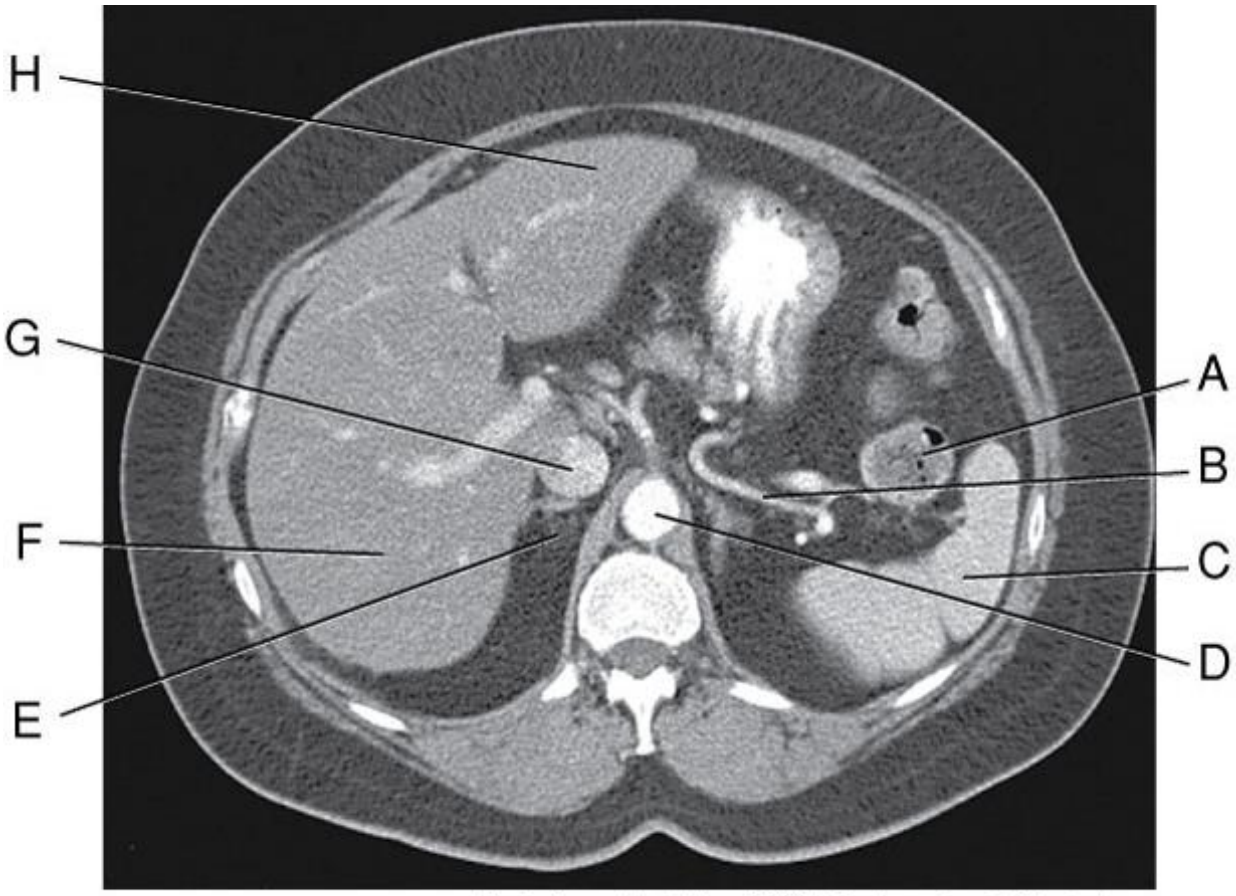
26. Label the image:



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27. Label the image:



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28. What are the unique features that distinguish each type of vertebra?

29. What special names are given to C1 and C2?

30. What are the two parts of an intervertebral disc? Which is the inner portion and which is the outer portion?

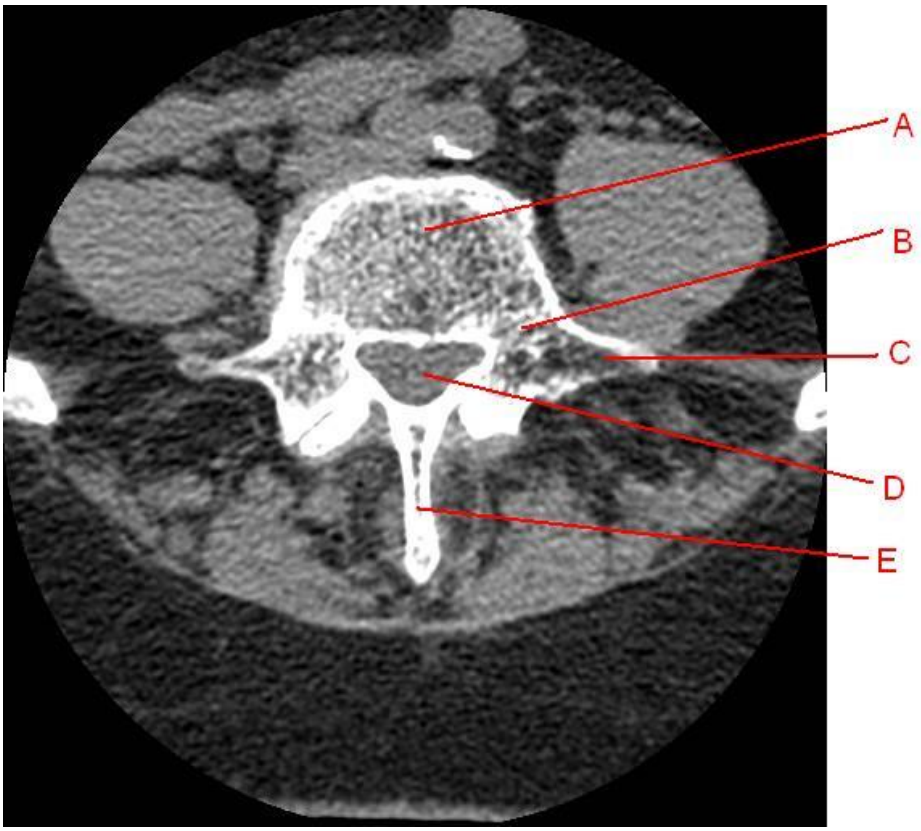
31. What is the purpose of curvatures in the vertebral column?

32. At what level does the spinal cord terminate infereiorly? What structure(s) are present in the vertebral canal inferior to the spinal cord?

33. What is in the subarachnoid space around the spinal cord?

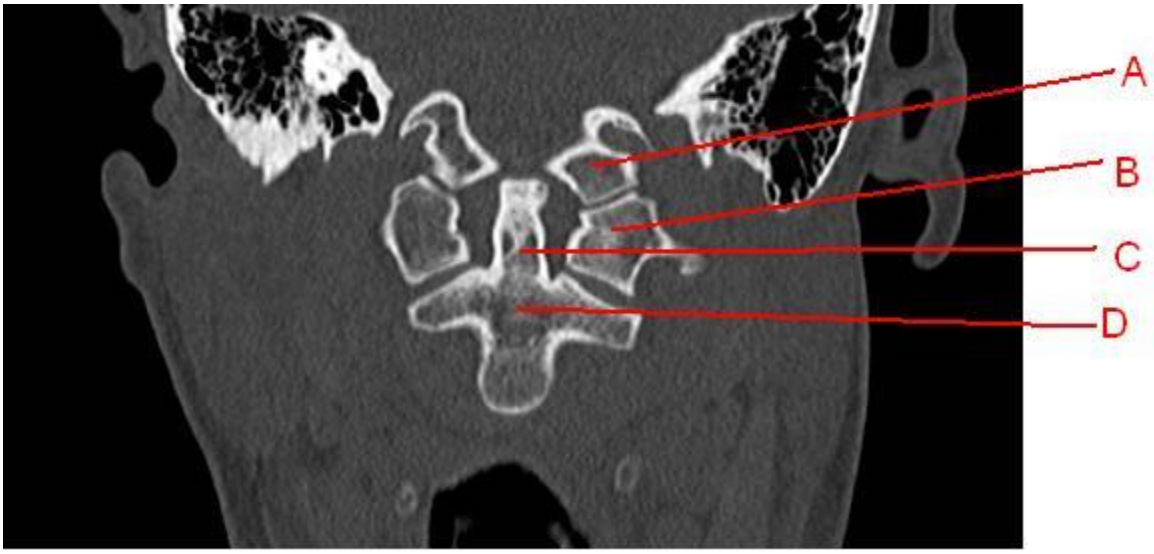
34. What type of tissue makes up the spinal cord?

35. A) Label the image:



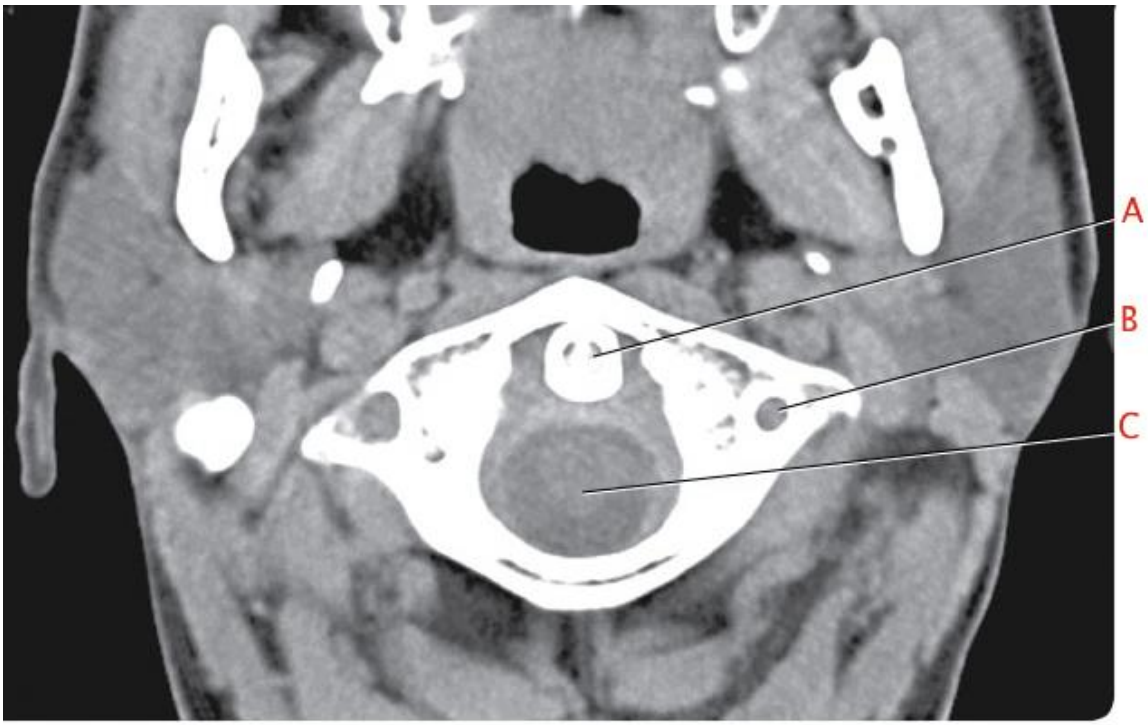
B) In what plane is this image? What section of the spine is this? (C, T, L)?

36. Label the image:



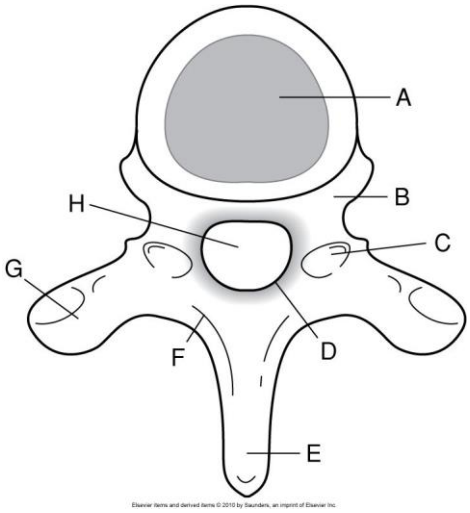
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37. Label the image:

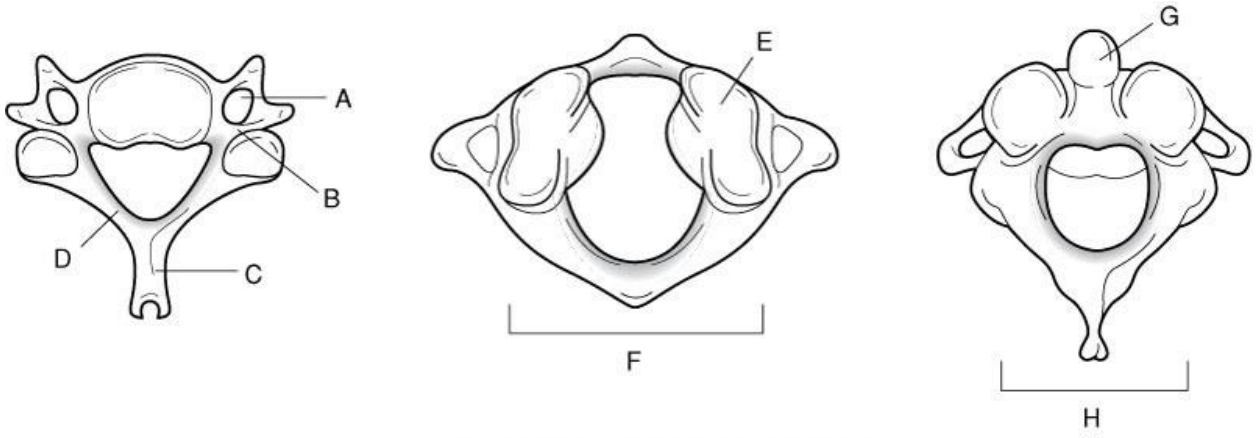


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38. Label the image:



39. Label the images:



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Part 2 – Procedures

1. List at least 3 benefits of using oral contrast for a CT Abdomen & Pelvis.

2. How much oral contrast should be given for a CT Abdomen & Pelvis?

3. What low-attenuation contrast agents are commonly used for CT Abdomen & Pelvis? Describe their use.

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18. List 3 indications for a RAP.

19. List 3 indications for a CAP.

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21. List one indication (and an example of the clinical history) for an NECT Abdomen & Pelvis (or CT KUB).

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24. Describe CT myelography

25. List 2 indications for CT myelography.

26. What anatomy should be included for a NECT cervical spine?

27. What anatomy should be included for a NECT thoracic spine?

28. What anatomy should be included for a NECT Lumbar spine?

29. What SFOV should be used for CT spine?

30. What is the advantage of performed helical scans of the spine?

31. What are the bone window settings for CT spine?

32. What mA setting is used for the cervical spine? Why?

33. What is a contraindication for CT spine?

Name:

MRAD 281

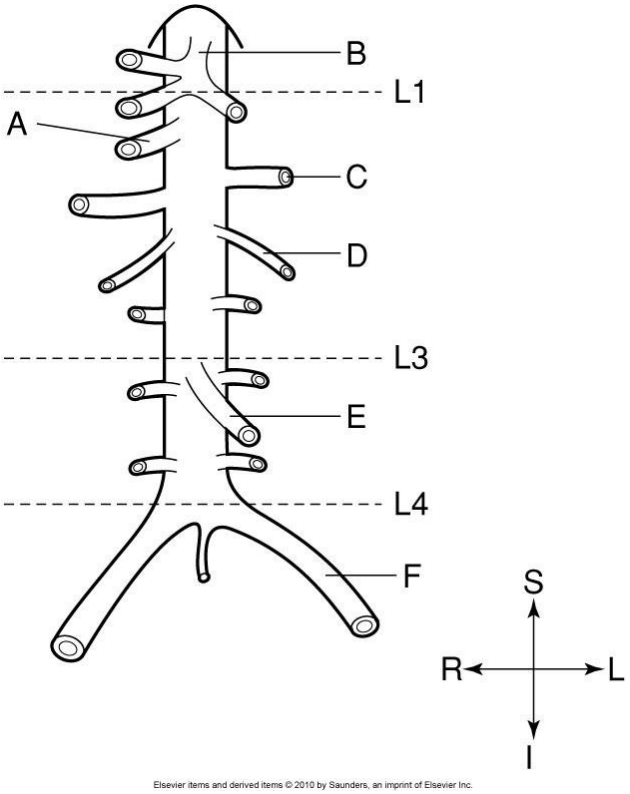
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22. Label

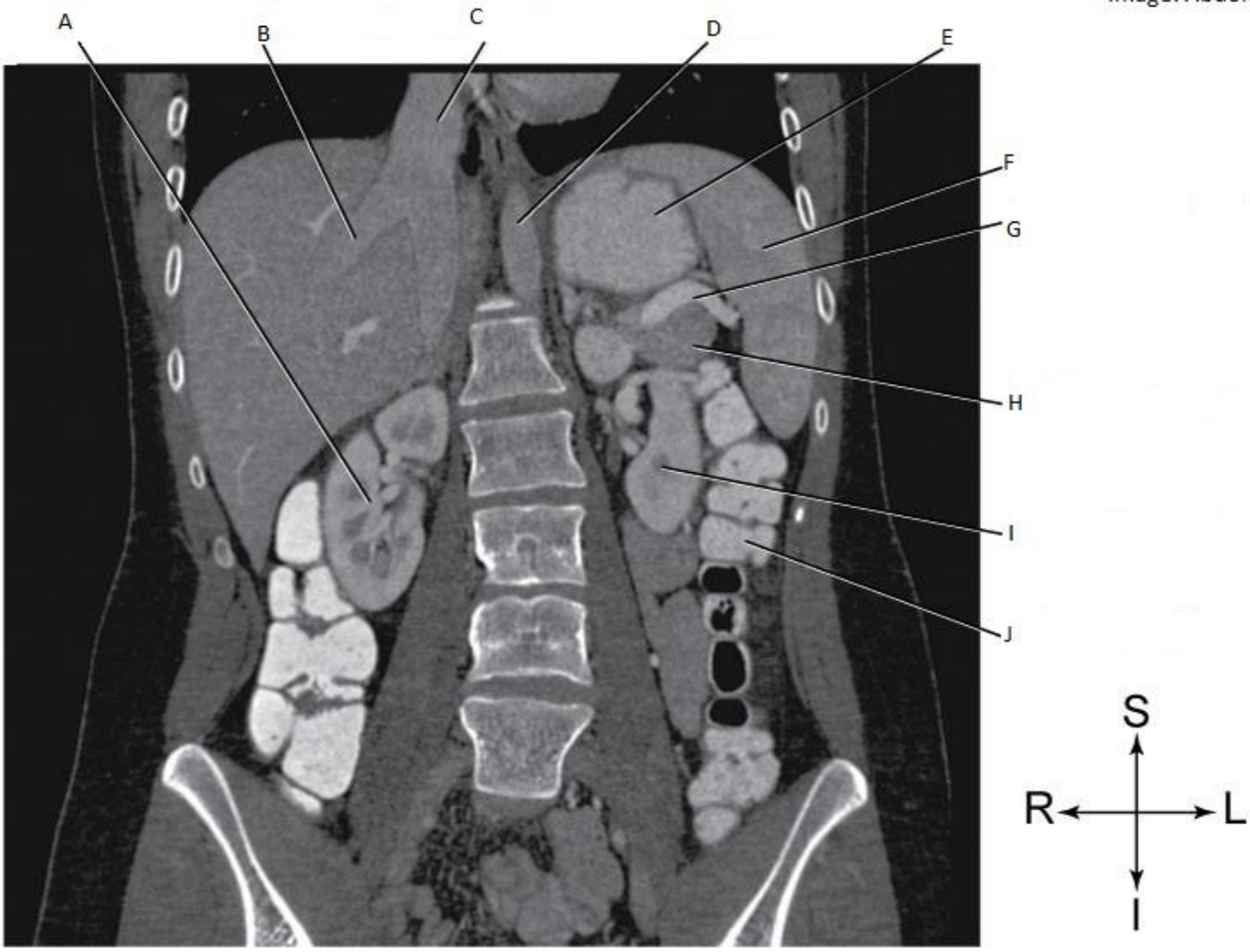
Image: Abdomen1



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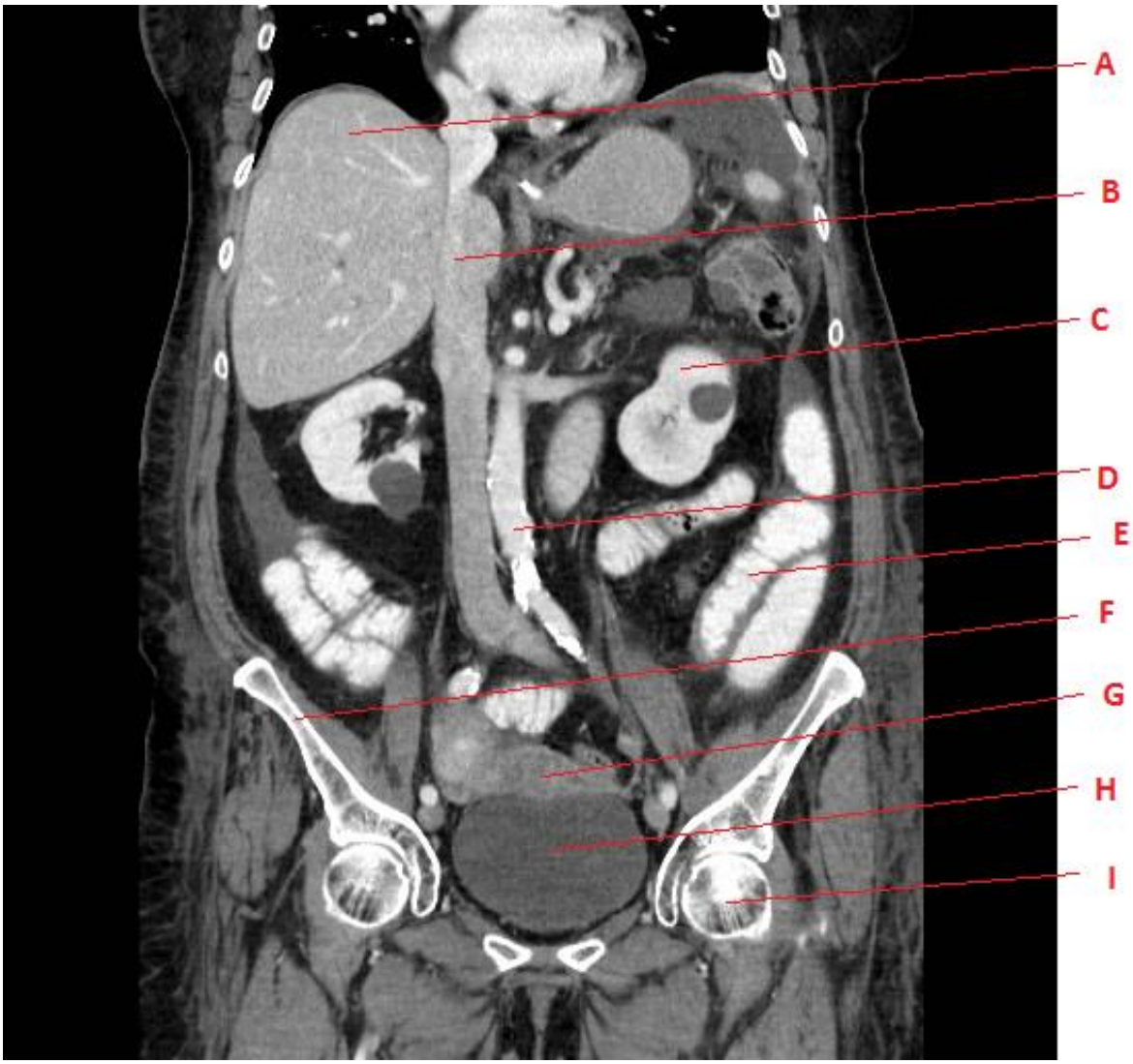
23. Label

Image: Abdomen3

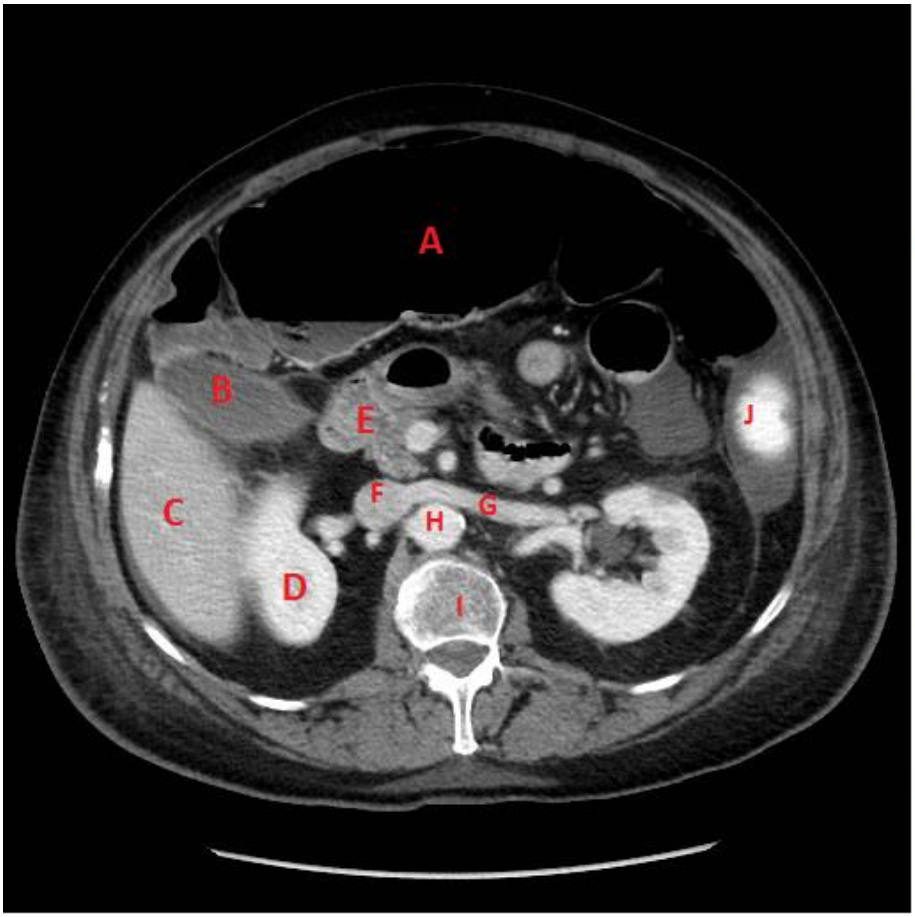


(Modified from Bo WJ et al: *Basic atlas of sectional anatomy: with correlated imaging*, ed 4, St Louis, 2007, Elsevier/Saunders.)

24. Label:



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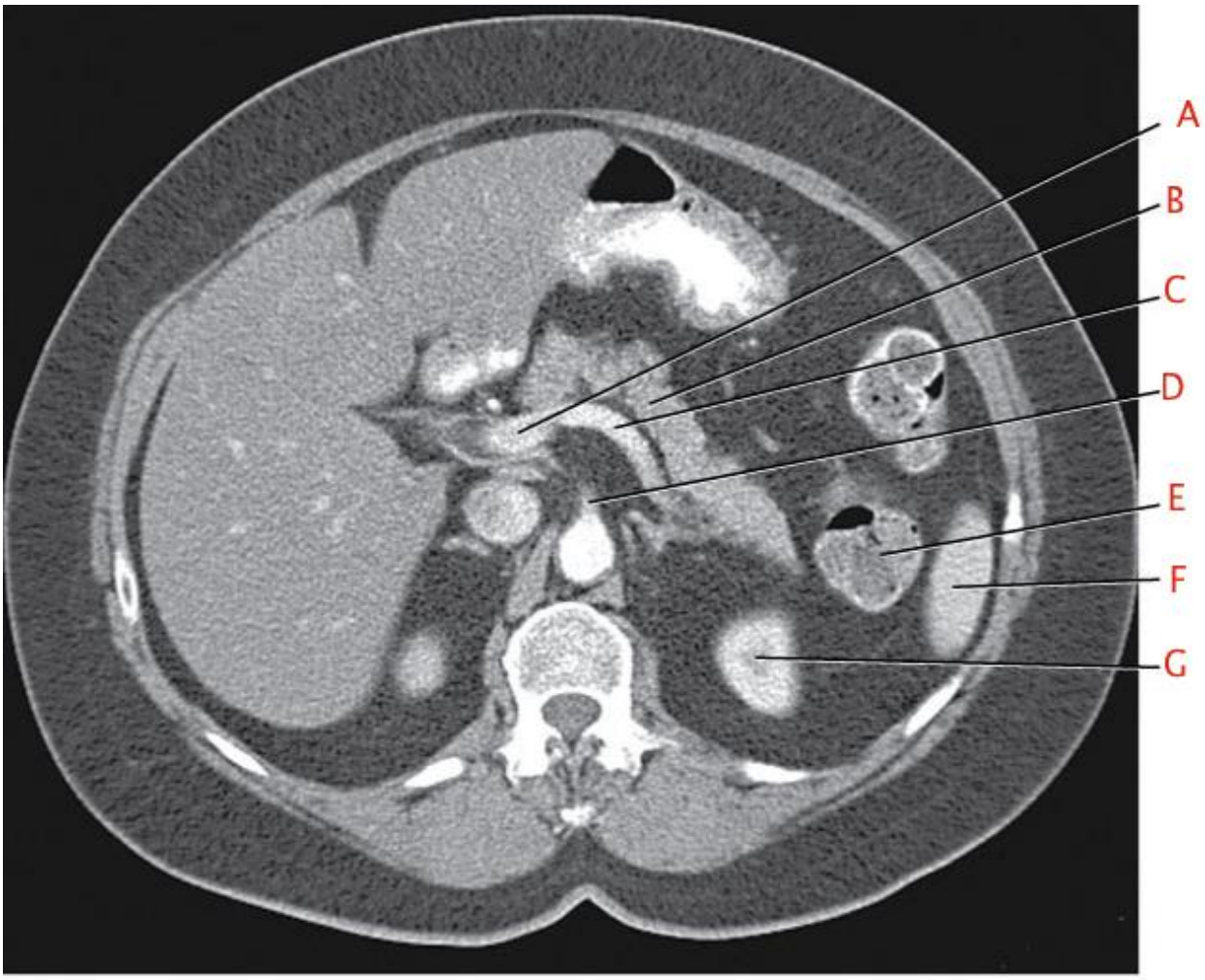
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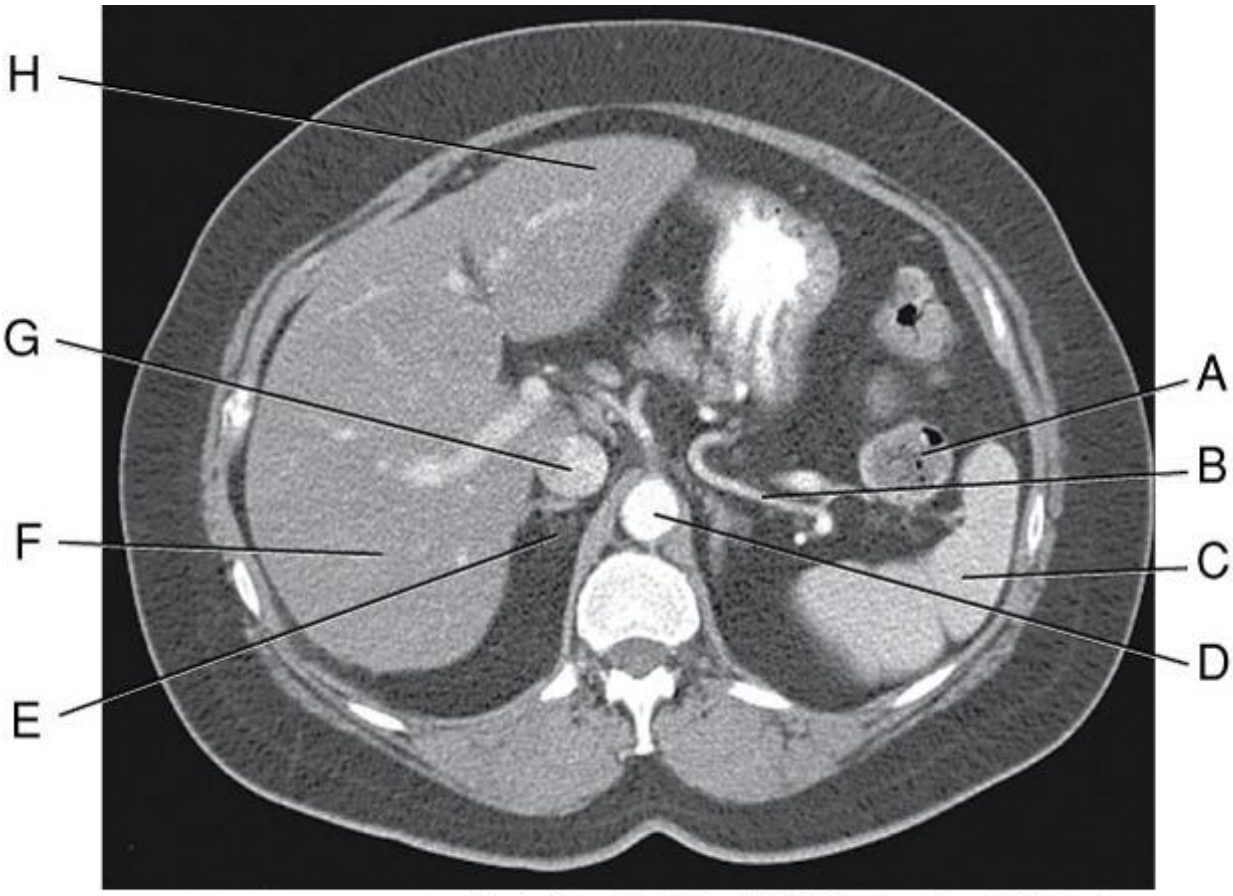
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26. Label the image:



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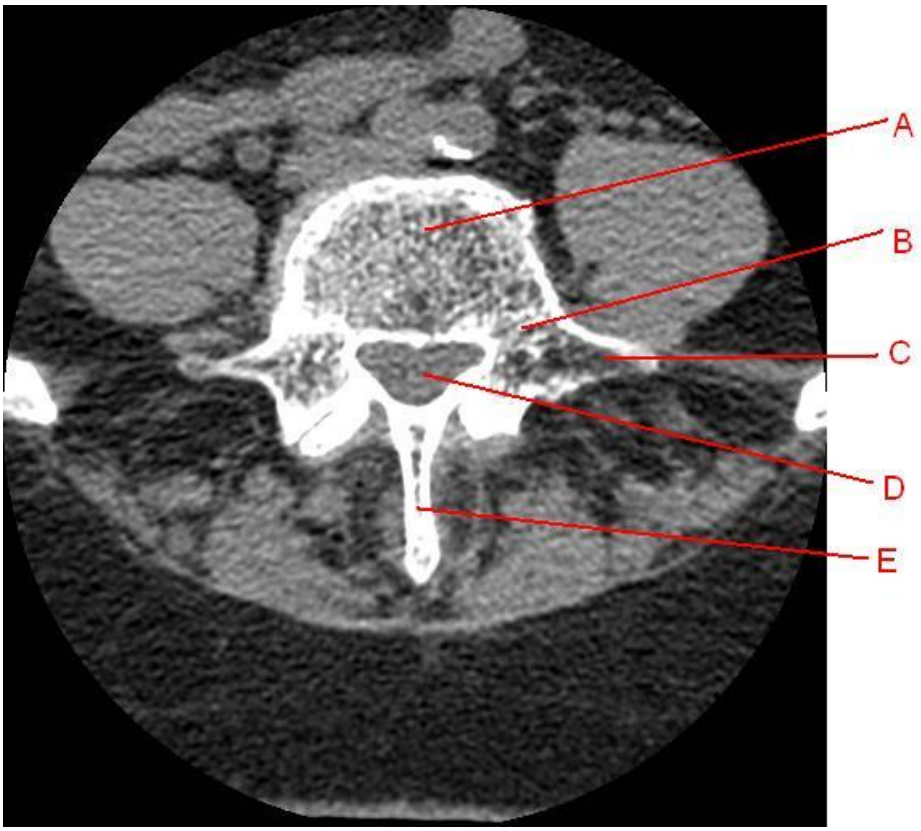
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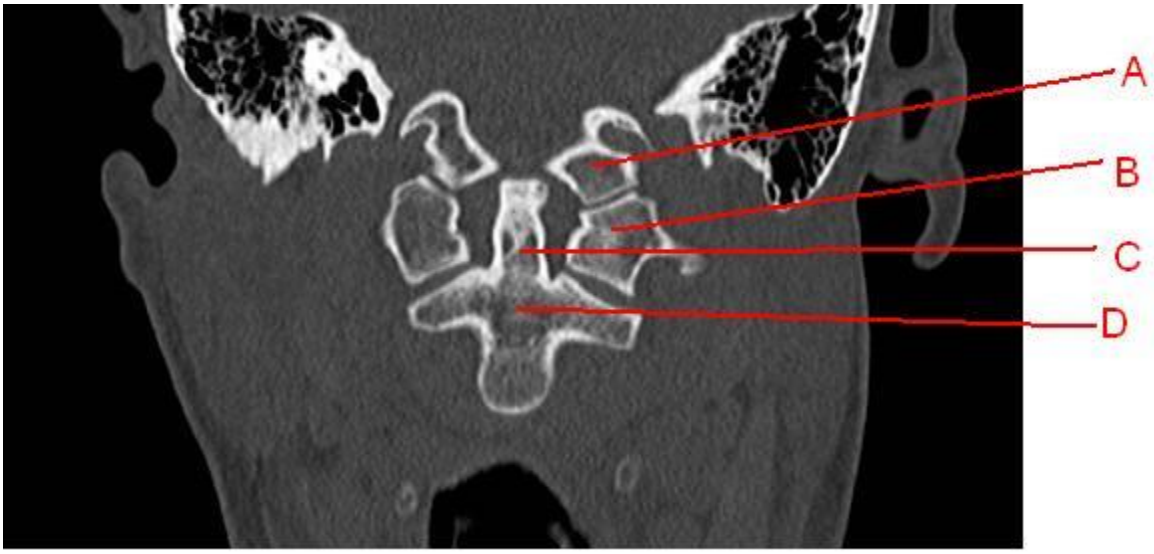
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35. A) Label the image:



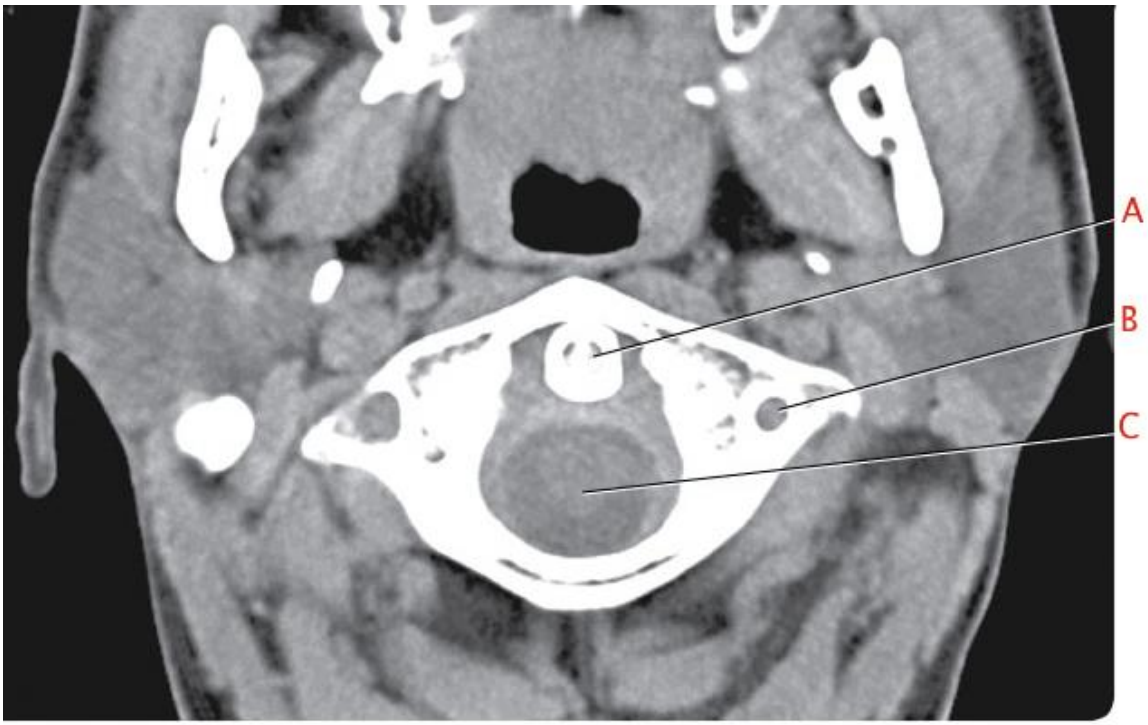
B) In what plane is this image? What section of the spine is this? (C, T, L)?

36. Label the image:



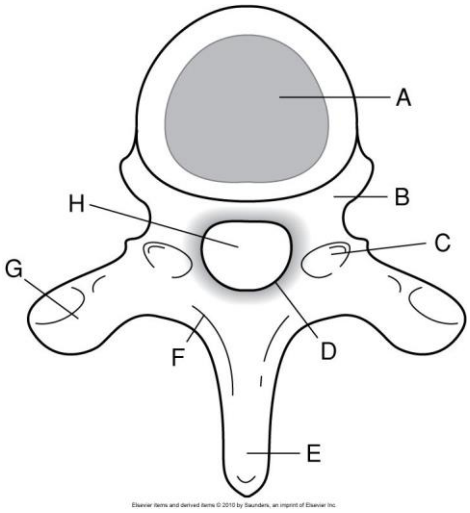
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37. Label the image:

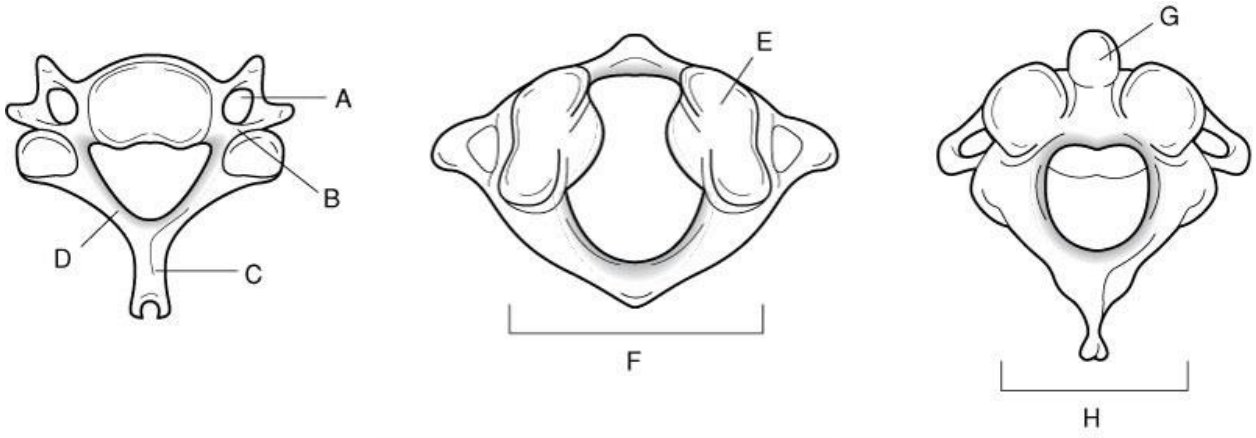


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38. Label the image:



39. Label the images:



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30. What is the advantage of performed helical scans of the spine?

31. What are the bone window settings for CT spine?

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33. What is a contraindication for CT spine?

MRAD 281 – Computed Tomography Theory 2 – Course Reading List

Course Texts:

Kelley, L, & Petersen, C. (2018). Sectional anatomy for imaging professionals (4th ed.). Philadelphia, PA: Elsevier.

Romans, L. (2019). Computed Tomography for technologists: A comprehensive text (2nd ed). Baltimore, MD: Lippincott, Williams & Wilkins.

Outcome	Reading
Intro.	**Romans, L** Chapter 1: Basic Principles of CT, pages 3 – 13 Chapter 11: Patient Preparation, pages 114 - 119 (Including Patient Education & Informed Consent) Chapter 13: Injection Techniques, pages 148-170 **Kelley, L. & Petersen, C** Chapter 1: Introduction to Sectional Anatomy, pages 1-12
1 Abdomen	**Romans, L** Chapter 17: Abdominopelvic Anatomy, pages 222 – 231 Chapter 21: Abdomen & Pelvis Imaging Procedures, pages 307 - 340 **Kelley, L. & Petersen, C** Chapter 7: Abdomen, pages 399 – 491 **Exclude lymph nodes, and muscles of the abdominal wall*

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2 Chest	**Romans, L** Chapter 16: Thoracic Anatomy, pages 212 – 221 Chapter 20: Thoracic Imaging Procedures, pages 273 – 279 **Exclude Cardiac CT* **Kelley, L. & Petersen, C** Chapter 6: Thorax, pages 309 – 327; pages 351 – 368 **Exclude lymphatic system, heart and vasculature, coronary circulation, off-axis cardiac imaging, azygous venous system, muscles, and breast.*
3 Head	**Romans, L** Chapter 15: Neuroanatomy, pages 191 – 205 Chapter 19: Neurologic Imaging Procedures, pages 247 – 272

	Kelley, L. & Petersen, C Chapter 2: Cranium & Facial Bones, pages 13 – 85 ** Exclude structures of the external, middle and inner ear, sutures, fontanels, temporomandibular joints, and soft-tissue structures of the eye* Chapter 3: Brain, pages 89 – 171 **Exclude the limbic system and cranial nerves*
4 Neck	**Romans, L** Chapter 15: Neuroanatomy, pages 206 – 208 Chapter 19: Neurologic Imaging Procedures, pages 249 – 259; page 266-267 (COW/Carotid); page 268 (Neck Soft Tissue) **Kelley, L. & Petersen, C** Chapter 5: Neck, pages 250 – 277; pages 302 – 308 (Vascular Structures) **Exclude cervical lymph nodes, fascial planes and spaces, muscles*
5 Pelvis	**Romans, L** Chapter 17: Abdominopelvic Anatomy, pages 222 - 231 Chapter 21: Abdomen & Pelvis Imaging Procedures, pages 307 - 340 **Kelley, L. & Petersen, C** Chapter 8: Pelvis, pages 497 – 565 **Exclude muscles, and lymph nodes*

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6 Spine	**Romans, L** Chapter 15: Neuroanatomy, pages 209 – 211 Chapter 19: Neurologic Imaging Procedures, page 250; pages 269- 271 **Kelley, L. & Petersen, C** Chapter 4: Spine, pages 172 – 191; 210-228; **Exclude ligaments, muscles, plexuses, and vasculature*
7 Extremities	**Romans, L** Chapter 18: Musculoskeletal Anatomy, pages 232 – 243 Chapter 22: Musculoskeletal Imaging Procedures, pages 341-350 **Kelley, L. & Petersen, C** Chapter 9: Upper Extremity, pages 569-575; pages 606-611; pages 626-633 Chapter 10: Lower Extremity, pages 660-664; pages 687-694; pages 719-727 **Focus on Bony Anatomy only*

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MRAD 281 – Computed Tomography Theory 2

Course Schedule – see last page for marks breakdown

(schedule may change as required)

Day	Delivery	Topic	Self-Study Activities	Quizzes/Exams
1	Class and Online	Welcome to MRAD 281 Student Resources and Answer Keys Introduction to CT Scanning and Learning Activities Outcome 3: Explain CT imaging for an examination of the head. **Continued in day 2.**	Textbook Readings Refer to MRAD 281 Reading List D2L Learning Activities **and continued in day 2.** Anatomical Planes & Cross-Sectional Terminology ➢ Cross-Sectional Anatomy Identification – Head Self-Test – Introduction to CT Scanning Self-Test – Head Anatomy	
2	Class and Online	Outcome 3 continued: Explain CT imaging for an examination of the head. Image Review – CT Head Assignment #1 Review & Preparation	Textbook Readings Refer to MRAD 281 Reading List D2L Learning Activities ➢ Cross-Sectional Anatomy Identification – Head Self-Test – Head Anatomy	
3	Class and Online	Review of course materials for Introduction to CT Scanning and Head	Review of course materials for Introduction to CT Scanning and Head	Assignment #1: Introduction to CT Scanning and Head 30%

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4	Class and Online	Outcome 4: Explain CT imaging for an examination of the neck. Image Review – CT Neck	Textbook Readings Refer to MRAD 281 Reading List D2L Learning Activities ➢ Cross-Sectional Anatomy Identification – Neck Self-Test – Neck Anatomy	
5	Class and Online	Outcome 2: Explain CT imaging for an examination of the chest. Image Review – CT Chest Assignment #2 Review and Preparation	~~Textbook Readings~~ Refer to MRAD 281 Reading List D2L Learning Activities ➢ Cross-Sectional Anatomy Identification – Chest Self-Test – Chest Anatomy	
6	Class and Online	Review of course materials for Head, Neck and Chest	Review of course materials for Head, Neck and Chest	Assignment #2: Head, Neck and Chest 35%
7	Class and Online	Outcome 1: Explain CT imaging for an examination of the abdomen. Outcome 5: Explain CT imaging for an examination of the pelvis. Image Review – CT Abdomen and Pelvis	Textbook Readings Refer to MRAD 281 Reading List D2L Learning Activities o Cross-Sectional Anatomy Identification – Abdomen o Cross-Sectional Anatomy Identification – Pelvis Self-Test – Abdomen and Pelvis Anatomy	

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8	Class and Online	Outcome 6: Explain CT imaging for an examination of the spine. Outcome 7: Explain CT imaging for an examination of the extremities.	<u>Textbook Readings</u> Refer to MRAD 281 Reading List <u>D2L Learning Activities</u> ○ Cross-Sectional Anatomy Identification – Spine ○ Cross-Sectional Anatomy Identification – Extremities Self-Test – Spine Anatomy Self-Test – Extremities Anatomy	
9	Class and Online	Review of course materials for: Head, Neck, Chest, Abdomen, Pelvis, Spine and Extremities	Review of course materials for: Head, Neck, Chest, Abdomen, Pelvis, Spine and Extremities	
10	Class and Online	Final Exam		Final Exam 35%

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Grading Scheme – Marks Breakdown

Assessment Type	Weight (%)
Assignment #1 • Introduction to CT scanning • Outcome 3: Explain CT imaging for an examination of the head.	30%
Assignment #2 • Outcome 3: Explain CT imaging for an examination of the head. • Outcome 4: Explain CT imaging for an examination of the neck. • Outcome 2: Explain CT imaging for an examination of the chest.	35%
Final Exam (Cumulative) Approximately 25% of the Exam Questions • Outcome 3: Explain CT imaging for an examination of the head. • Outcome 4: Explain CT imaging for an examination of the neck • Outcome 2: Explain CT imaging for an examination of the chest. Approximately 75% of the Exam Questions • Outcome 1: Explain CT imaging for an examination of the abdomen. • Outcome 5: Explain CT imaging for an examination of the pelvis. • Outcome 6: Explain CT imaging for an examination of the spine. • Outcome 7: Explain CT imaging for an examination of the extremities	35%

Exam Details

- Final exam is completed in D2L Brightspace.

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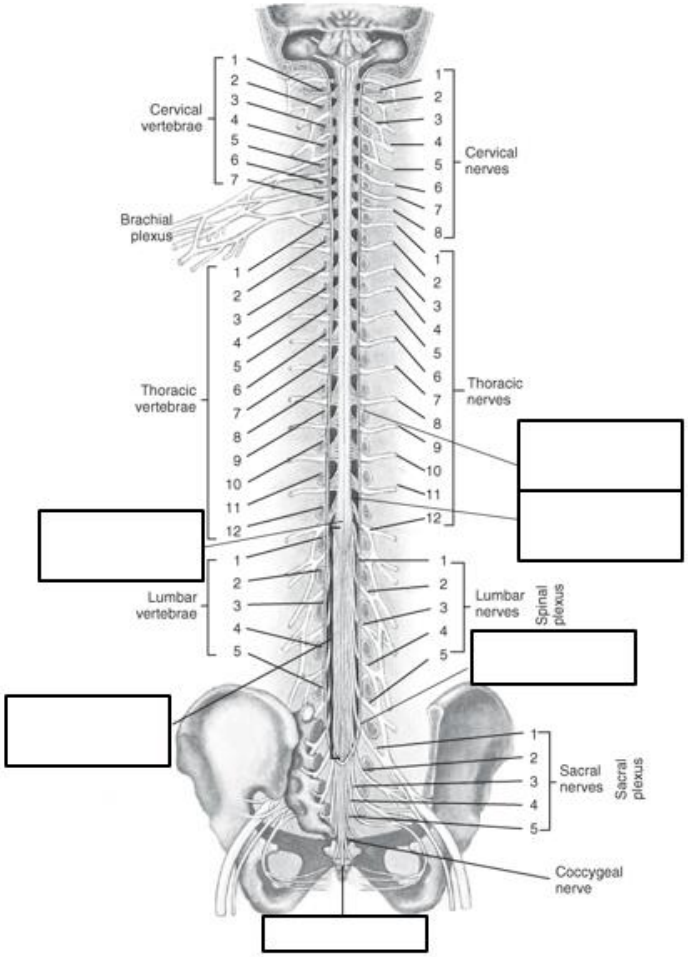


FIGURE 4.69 Posterior view of spinal meninges, thecal sac, and spinal cord.

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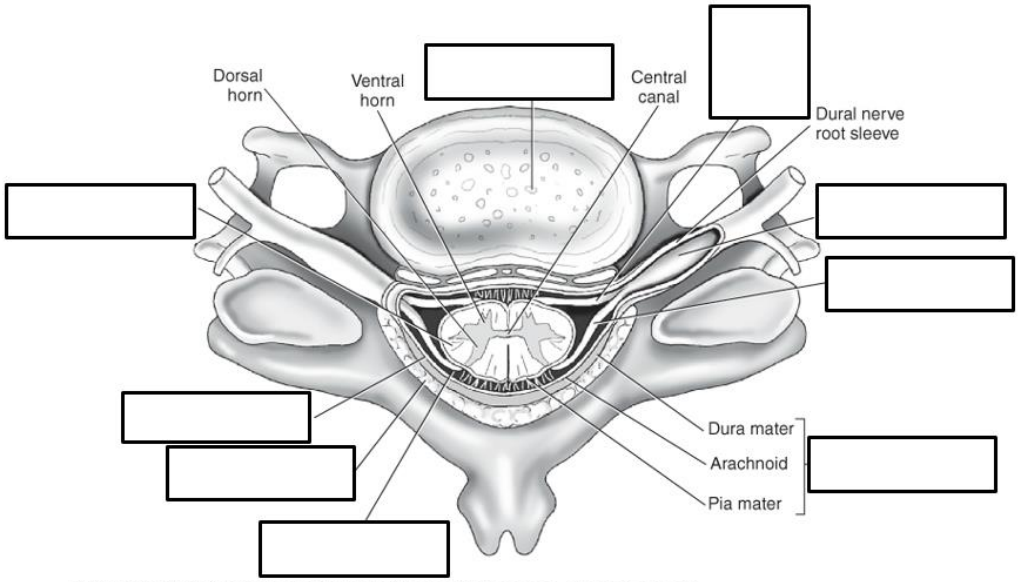


FIGURE 4.73 Axial view of spinal meninges, dural spaces, and spinal cord.

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Name:

Gross Anatomy Review

Label anatomical structures of the spine

The following activity will help you review and assess your knowledge of the course content. Using your course textbook, Kelley, L, & Petersen, C. (2013). *Sectional anatomy for imaging professionals* (3rd ed.). Philadelphia, PA: Elsevier., label the images below.

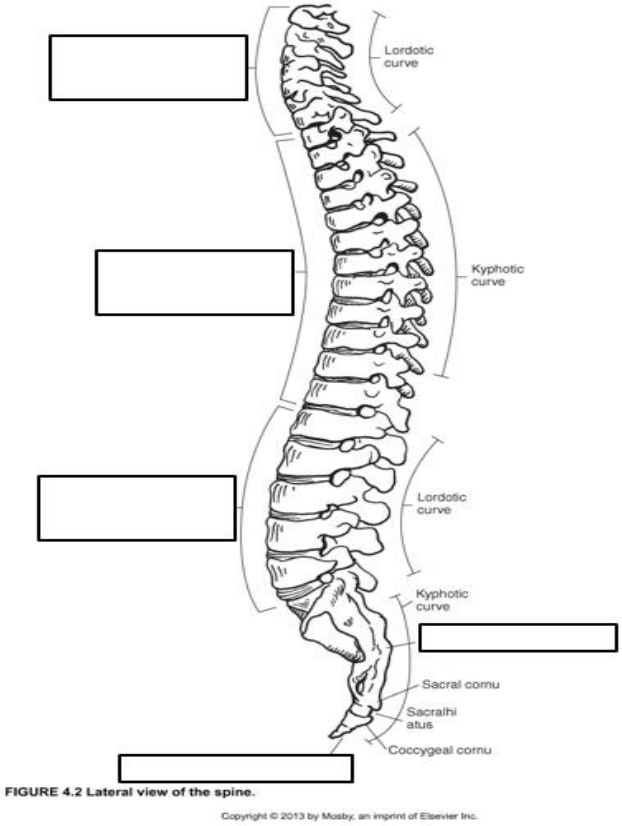


FIGURE 4.2 Lateral view of the spine.

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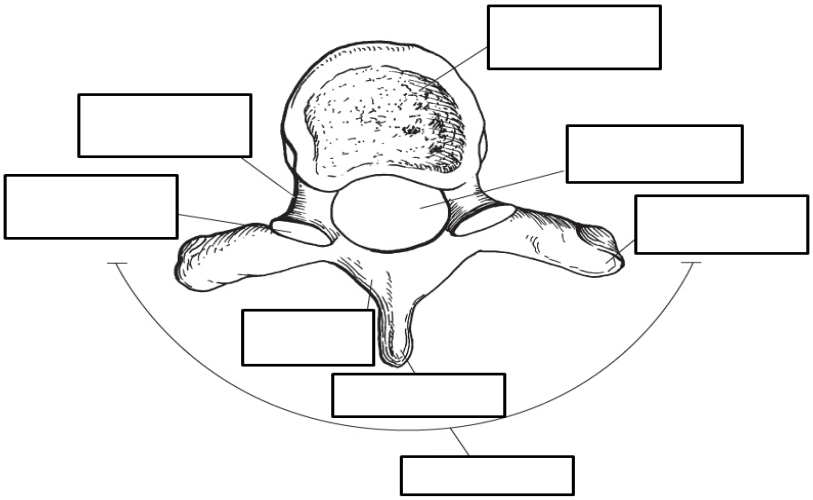


FIGURE 4.3 Superior view of the typical vertebra.

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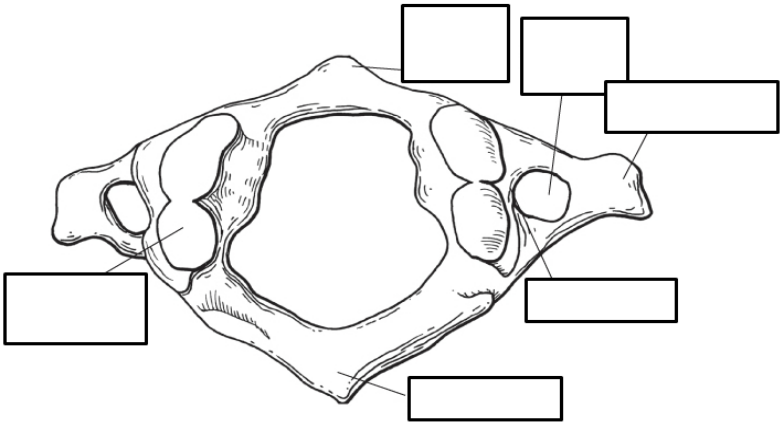


FIGURE 4.13 Superior view of C1 (atlas).

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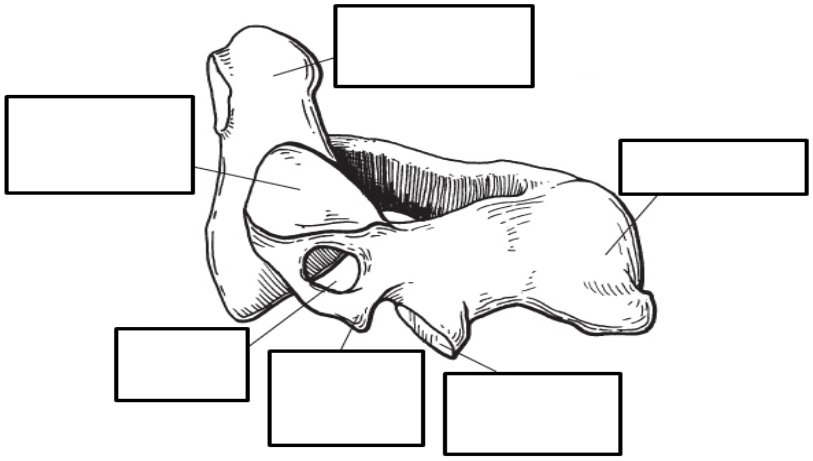


FIGURE 4.21 Lateral view of C2 (axis).

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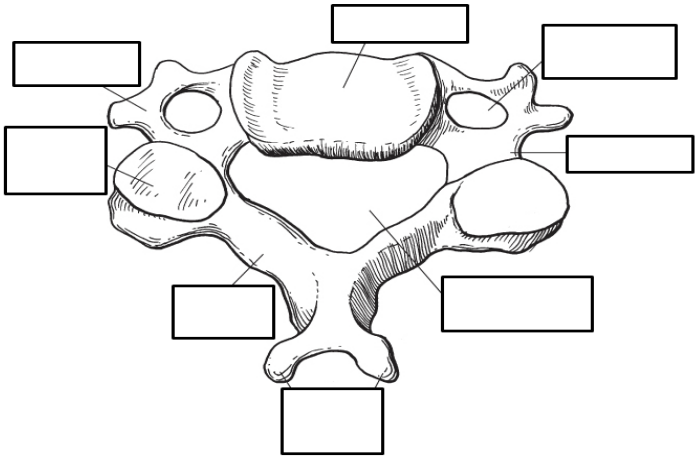


FIGURE 4.22 Superior view of cervical vertebra with bifid spinous process.

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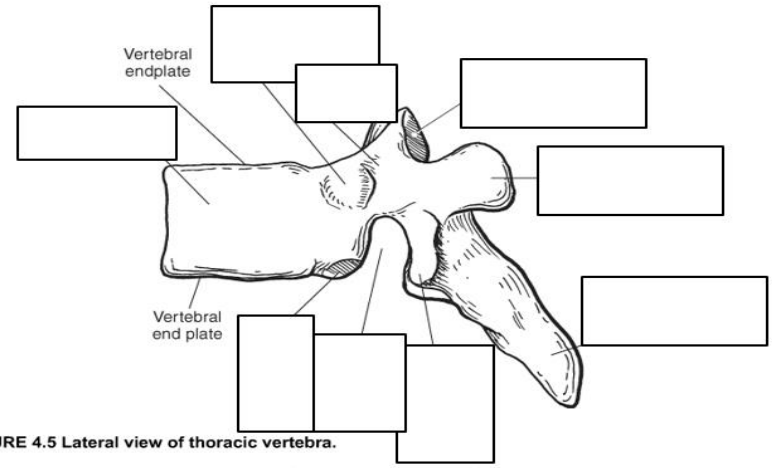


FIGURE 4.5 Lateral view of thoracic vertebra.

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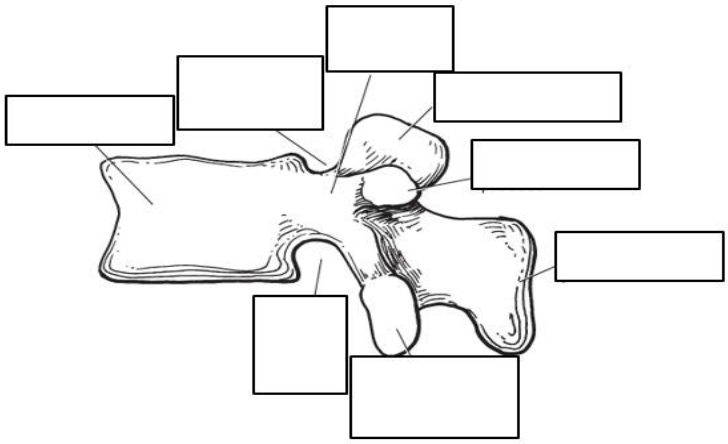


FIGURE 4.32 Lateral view of lumbar vertebra.

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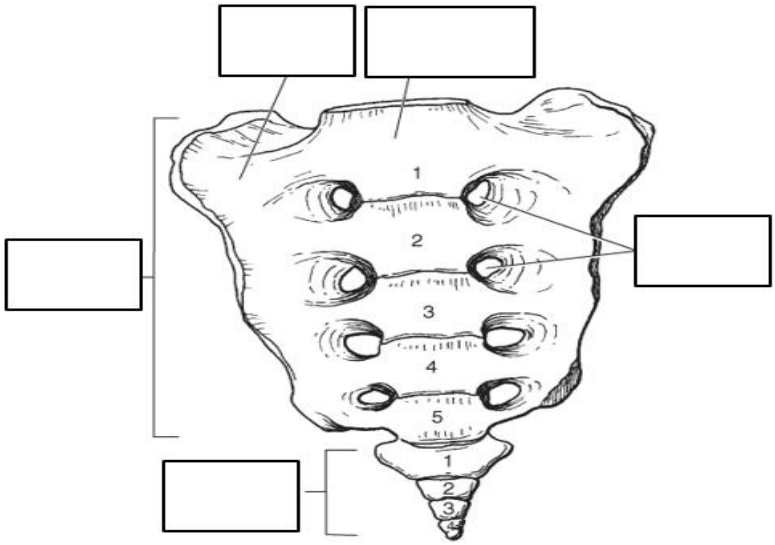


FIGURE 4.36 Anterior view of sacrum and coccyx.

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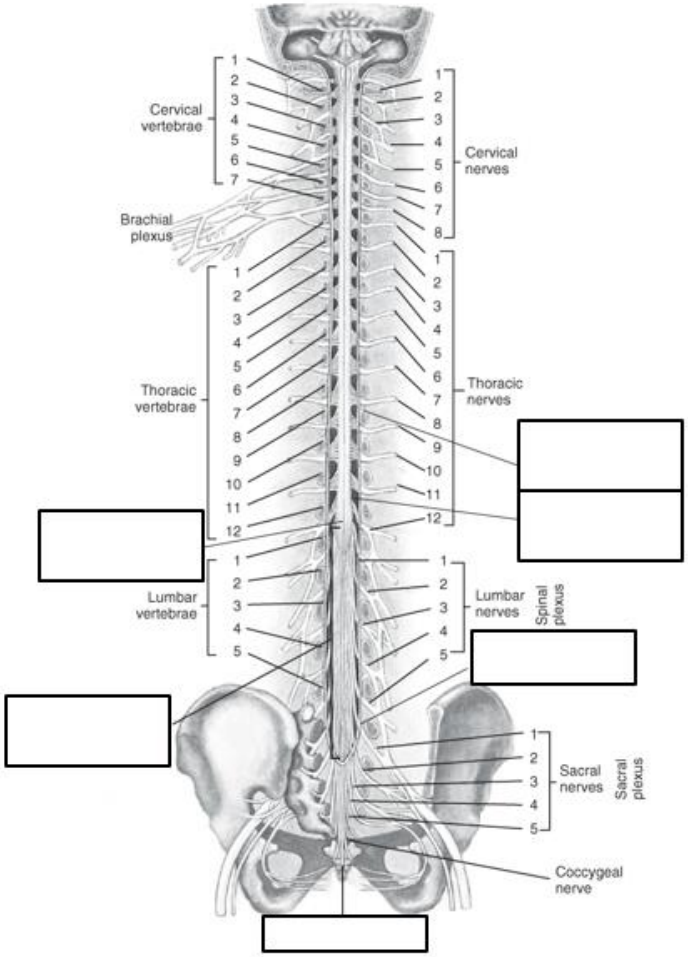


FIGURE 4.69 Posterior view of spinal meninges, thecal sac, and spinal cord.

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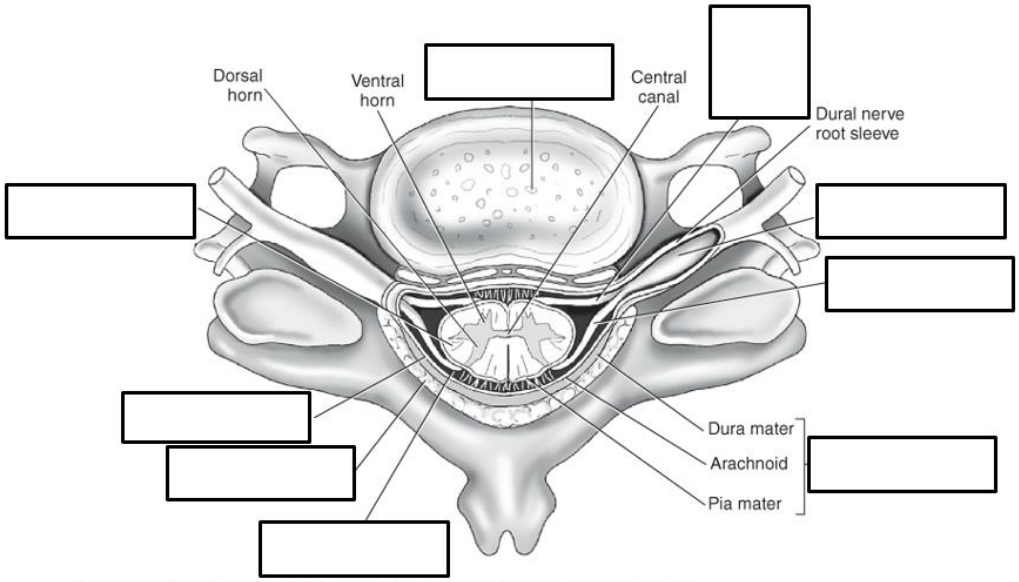


FIGURE 4.73 Axial view of spinal meninges, dural spaces, and spinal cord.

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Name:

CT Imaging of the Head
Review Activity

Activity - Part 1 – ANATOMY

1. Match the definition or description with the correct term or structure.

_____ Cerebral Aqueduct

_____ Corpus Callosum

_____ Dura Mater

_____ Falx Cerebri

_____ Middle Cerebral Artery

_____ Perpendicular plate of ethmoid

_____ Pons

_____ Posterior Cerebral Artery

_____ Sigmoid Sinus

_____ Thalamus

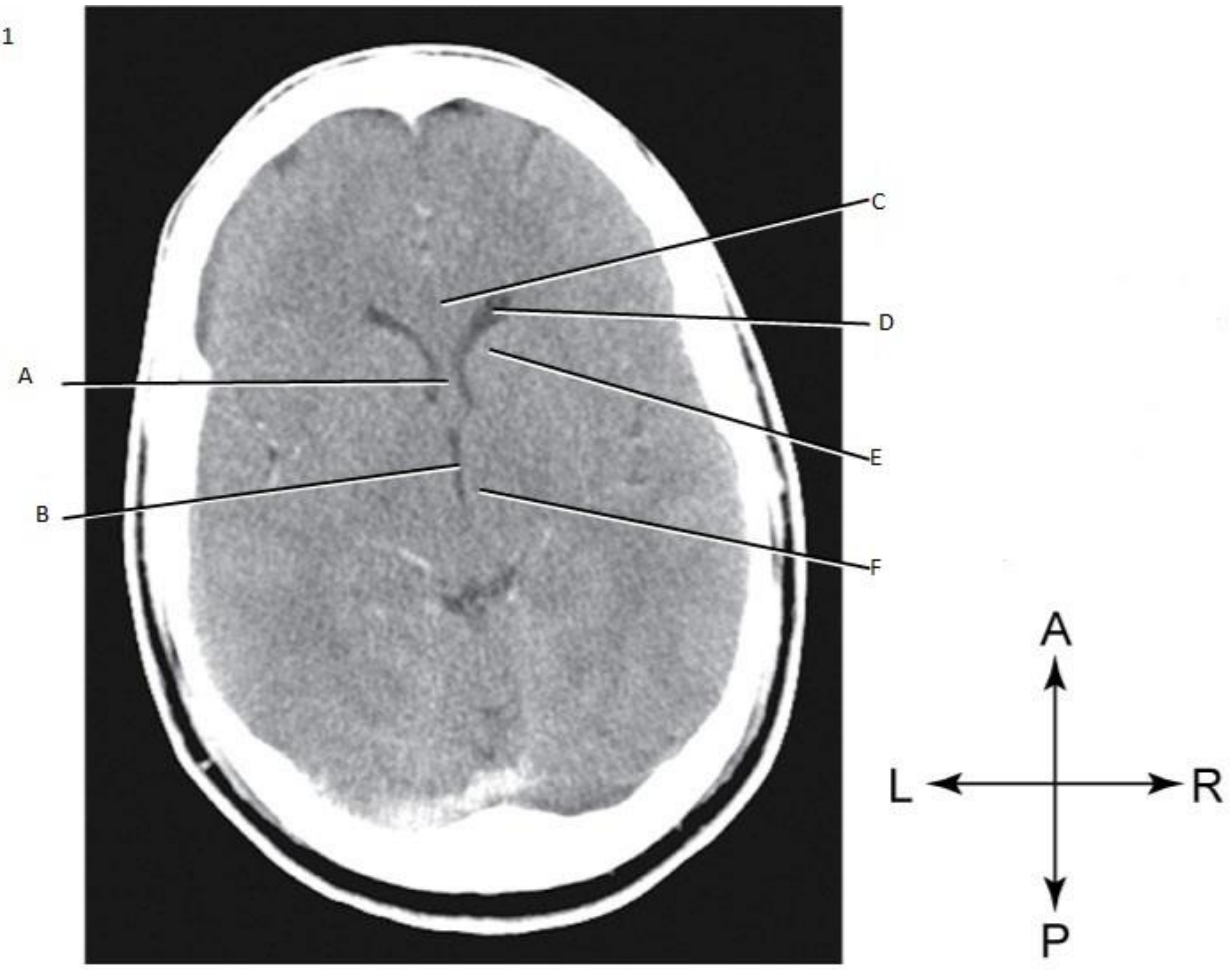
_____ Vertebral artery

A. Ascends in transverse foramen
B. Part of the nasal septum
C. Drains into the internal jugular vein
D. Branch of the basilar artery
E. Branch of the internal carotid artery
F. Passes through the midbrain
G. Part of the white matter of the brain
H. Outermost layer of the meninges
I. Middle region of the brainstem
J. Part of the diencephalon
K. Located between the cerebral hemispheres

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2. Label the image below:

Image: Head 1



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A. Septum pellucidum
B.
C.
D.
E. Head of caudate nucleus
F.

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3. Label the image below:



Image: Head 4

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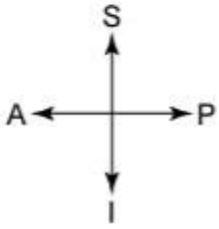
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A.
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4. Label the image below:



Image: Head 5



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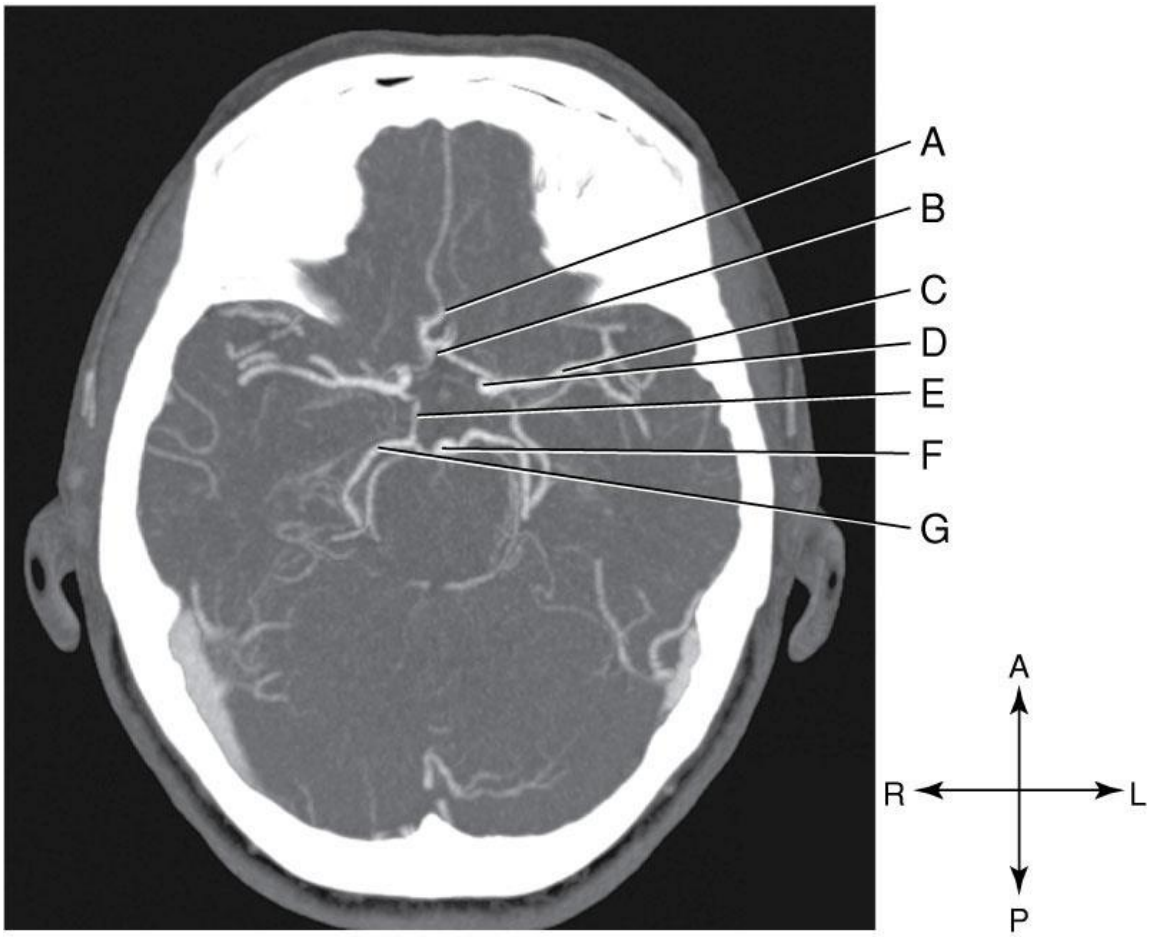
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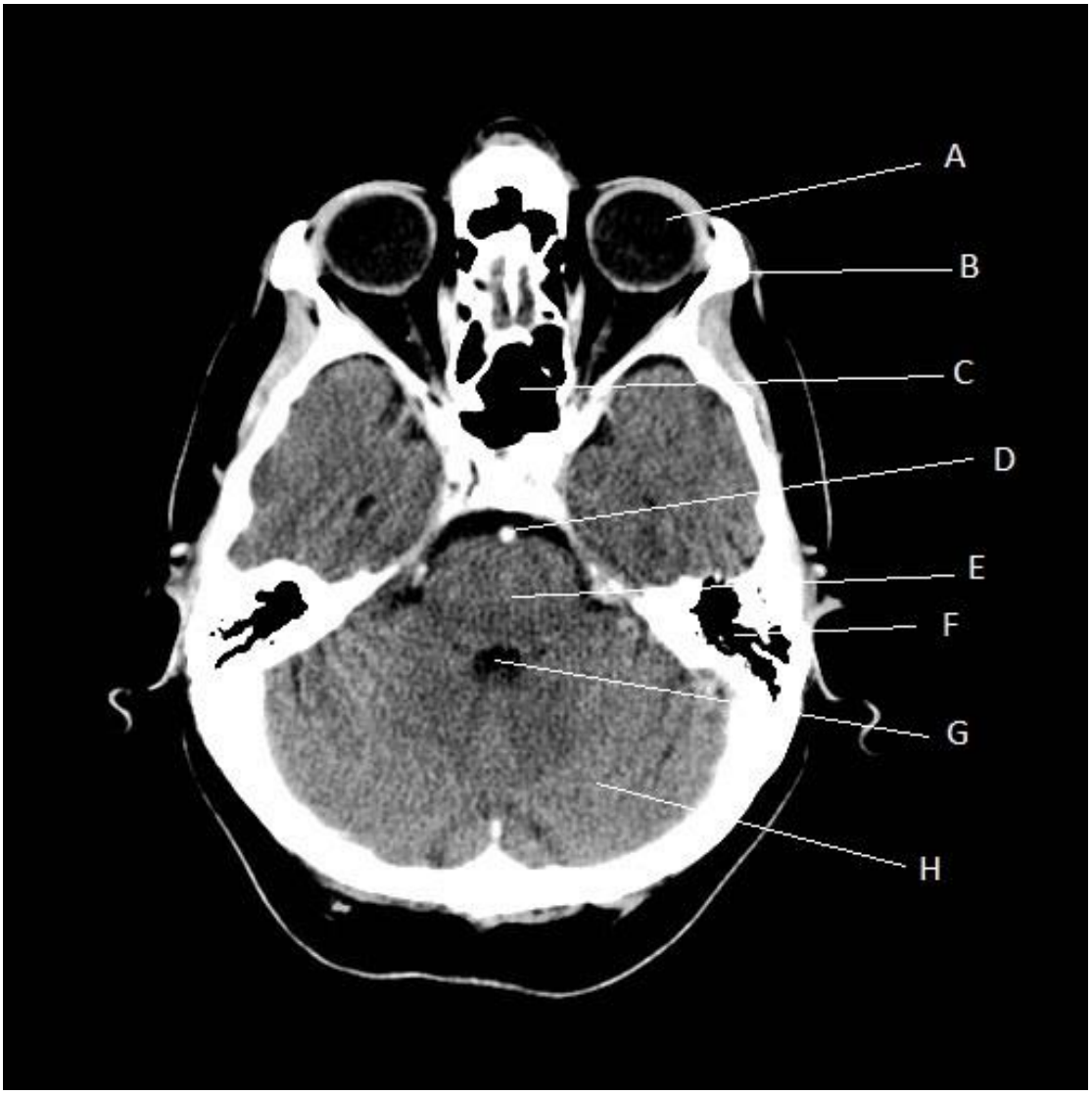


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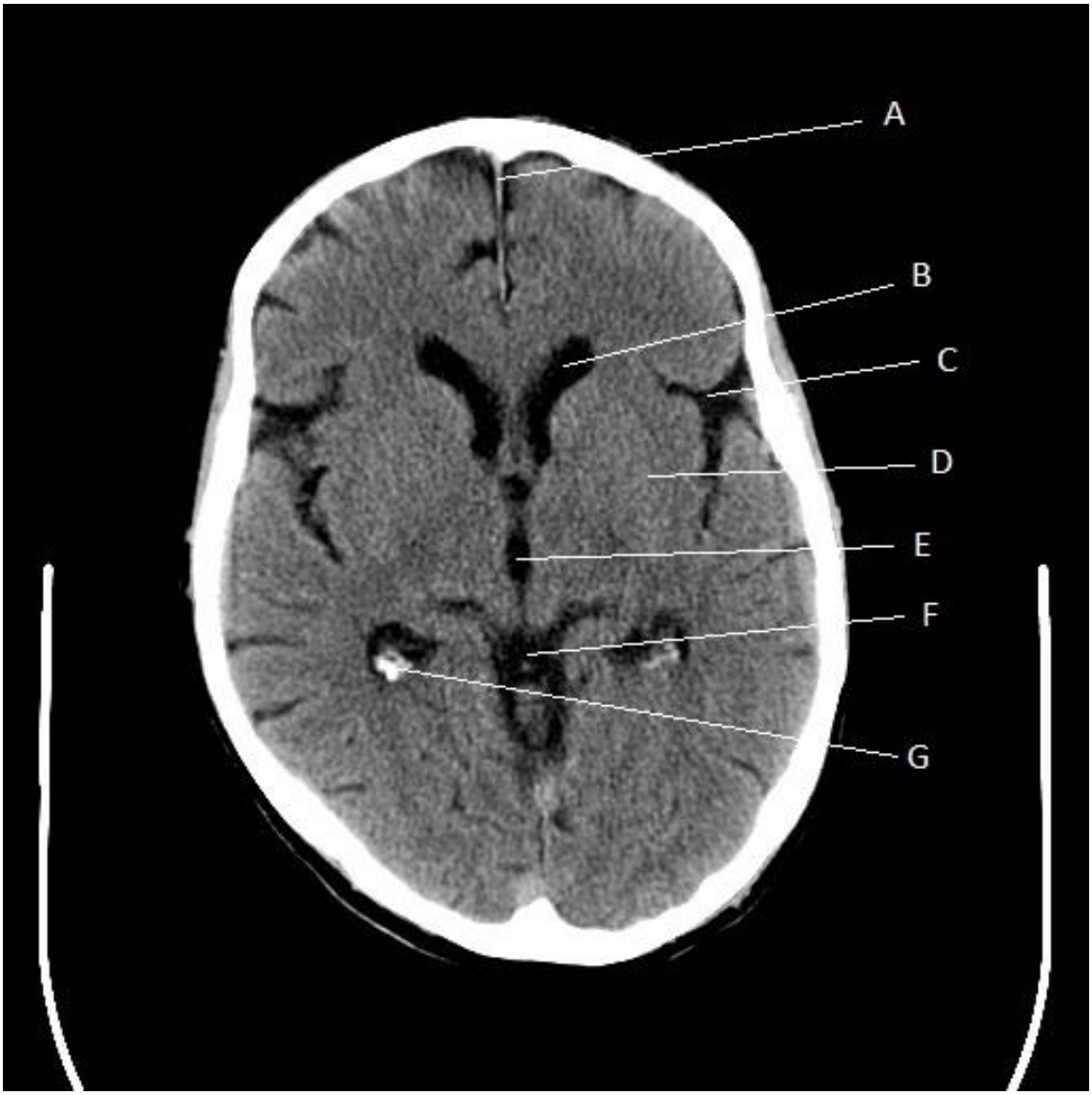
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7. Label the image below:



A.
B.
C.
D.
E.

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F.

8. List the ventricles of the brain.

9. Which ventricle sits the most inferiorly?

10. What are the choroid plexus and how does it appear on CT images?

11. List the meninges and their relationships? (ie – which layer is the outermost layer -> innermost layer)

12. List the lobes of the cerebrum

13. What is the corpus callosum?

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16. What is the falx cerebri?

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17. The temporal lobes are seen on axial CT images at the level of what?

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20. What venous sinus is shaped like an S and is continuous with the internal jugular vein?

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Part 2 – Imaging Procedures

1. Describe the patient & anatomy position for a CT Head

2. How can the technologist position the patient to reduce radiation dose?

3. Determine which of the following statements describe helical scanning (H), conventional (C) scanning, or both (H, C)

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a. Short acquisition time
b. Improved detail
c. Improved spatial resolution
d. Allows gantry tilt
e. Reduced radiation dose
f. Capable of MPR
g. Capable of 3D reconstructions

4. How can you reduce beam-hardening artifact in the posterior cranial fossa?

5. What is a reasonable Soft-Tissue window for viewing images of the head?

6. What is a reasonable bone window for viewing images of the head?

7. Define, and describe the radiographic appearance of:
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    b. Subdural hematoma
    c. Subarachnoid hemorrhage
    d. Intracerebral hemorrhage

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9. List 3 common indications for CECT head.

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13. What is the contrast protocol for CTA head?

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14. List 3 indications for CT sinuses.

15. List 3 indications for CT facial bones.

16. List 2 indications for NECT orbits.

17. List 3 indications for CECT orbits.

18. What is the contrast protocol for CECT orbits?

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_____ Perpendicular plate of ethmoid

_____ Pons

_____ Posterior Cerebral Artery

_____ Sigmoid Sinus

_____ Thalamus

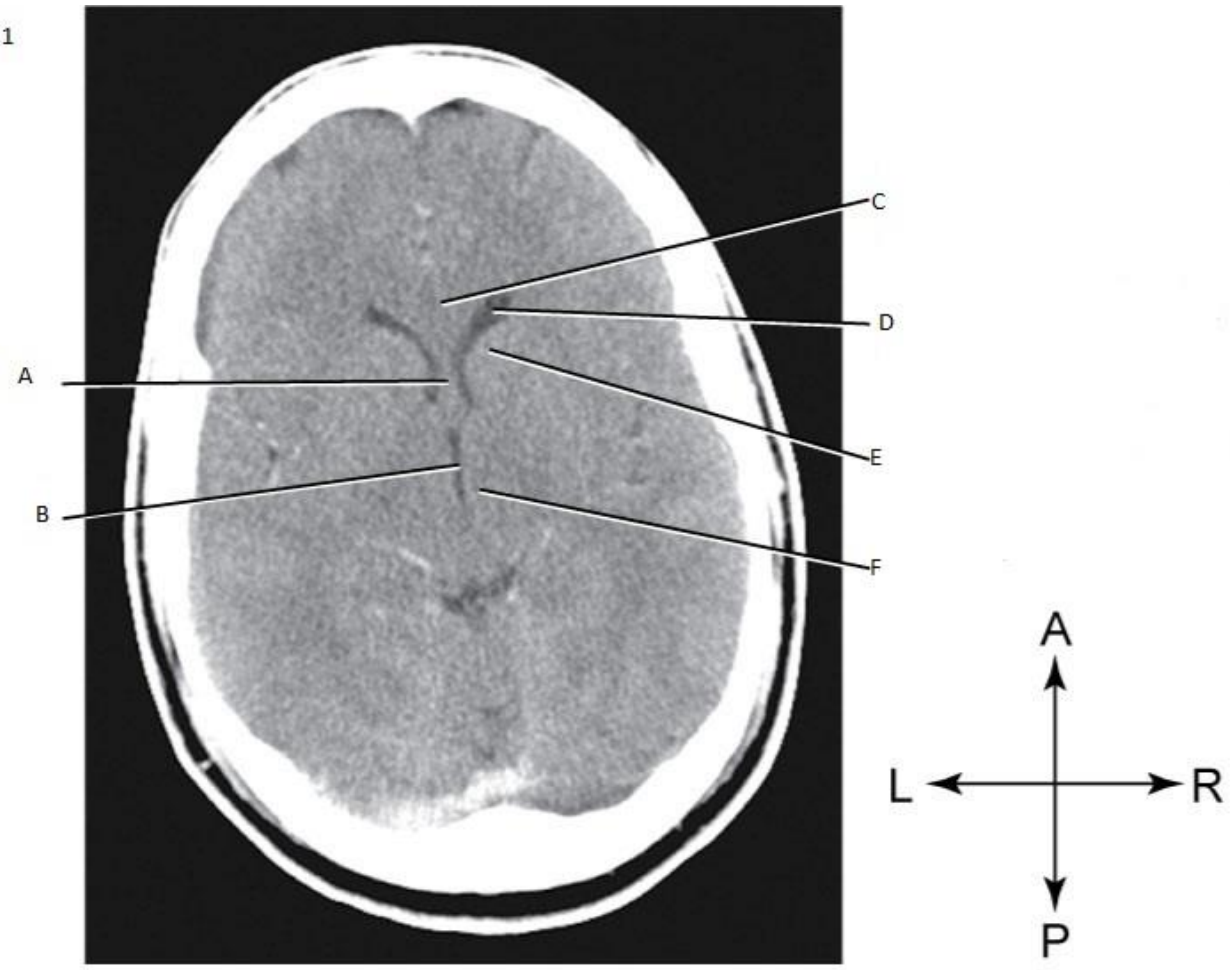
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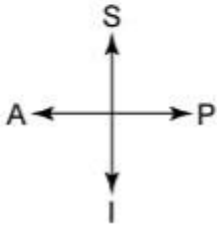
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4. Label the image below:



Image: Head 5



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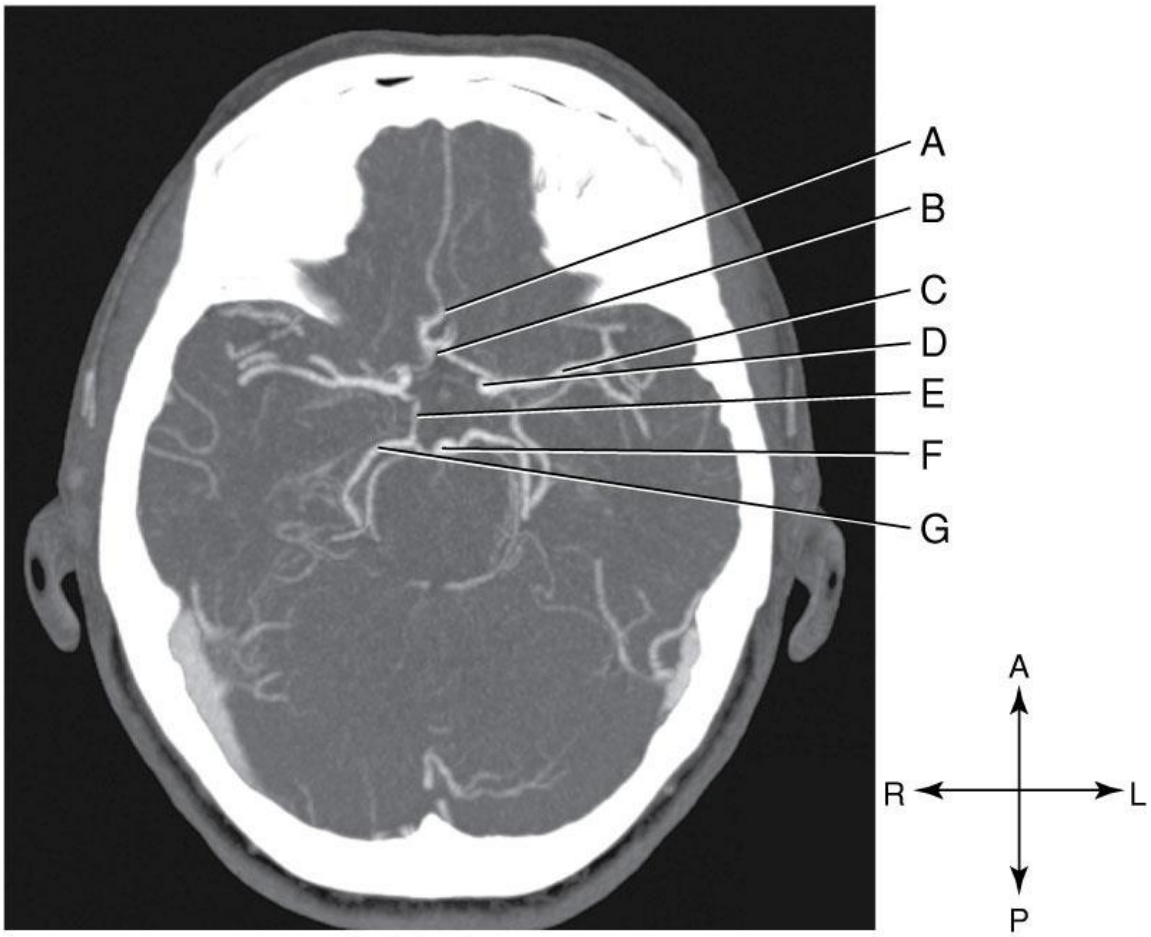
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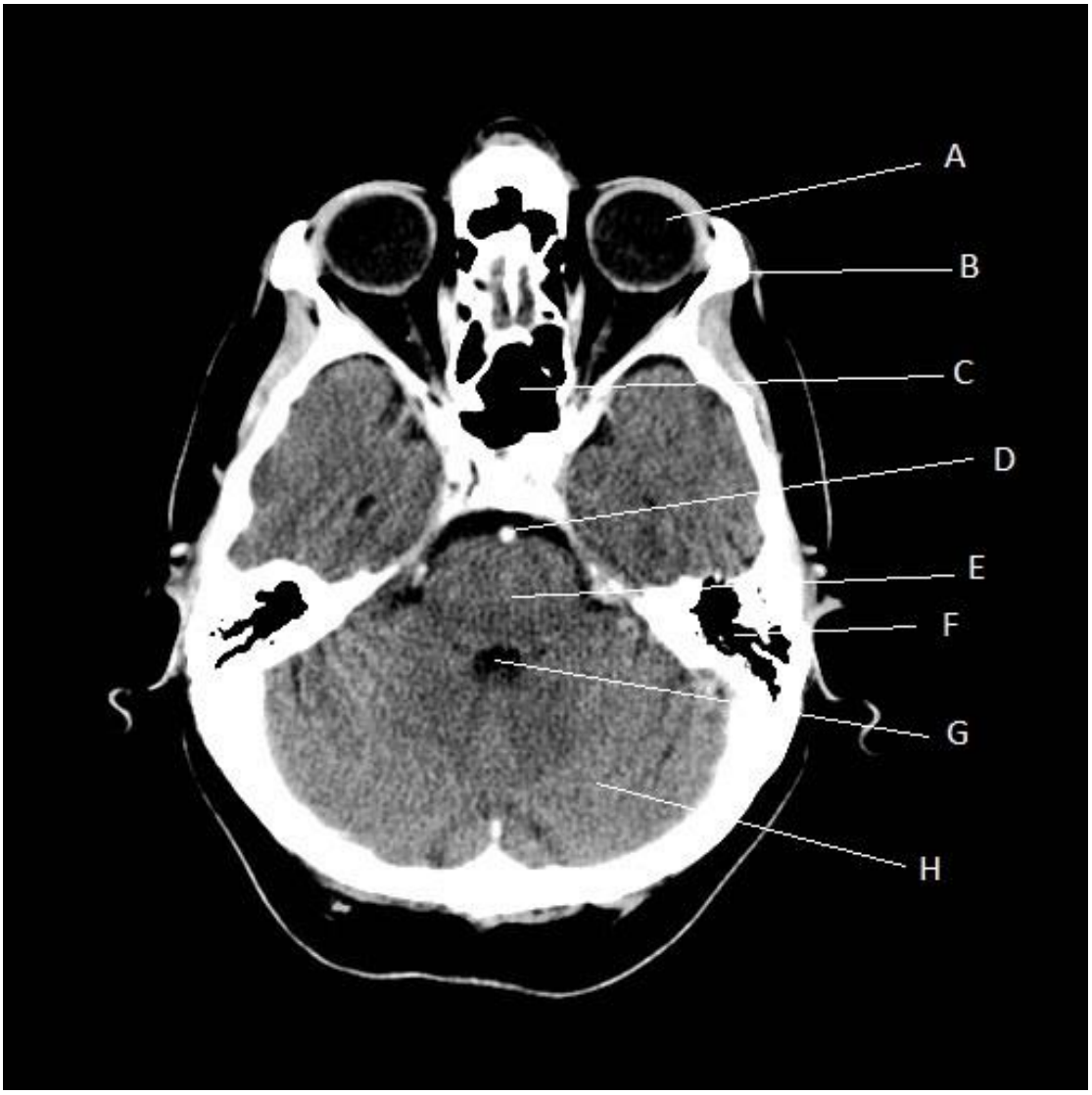


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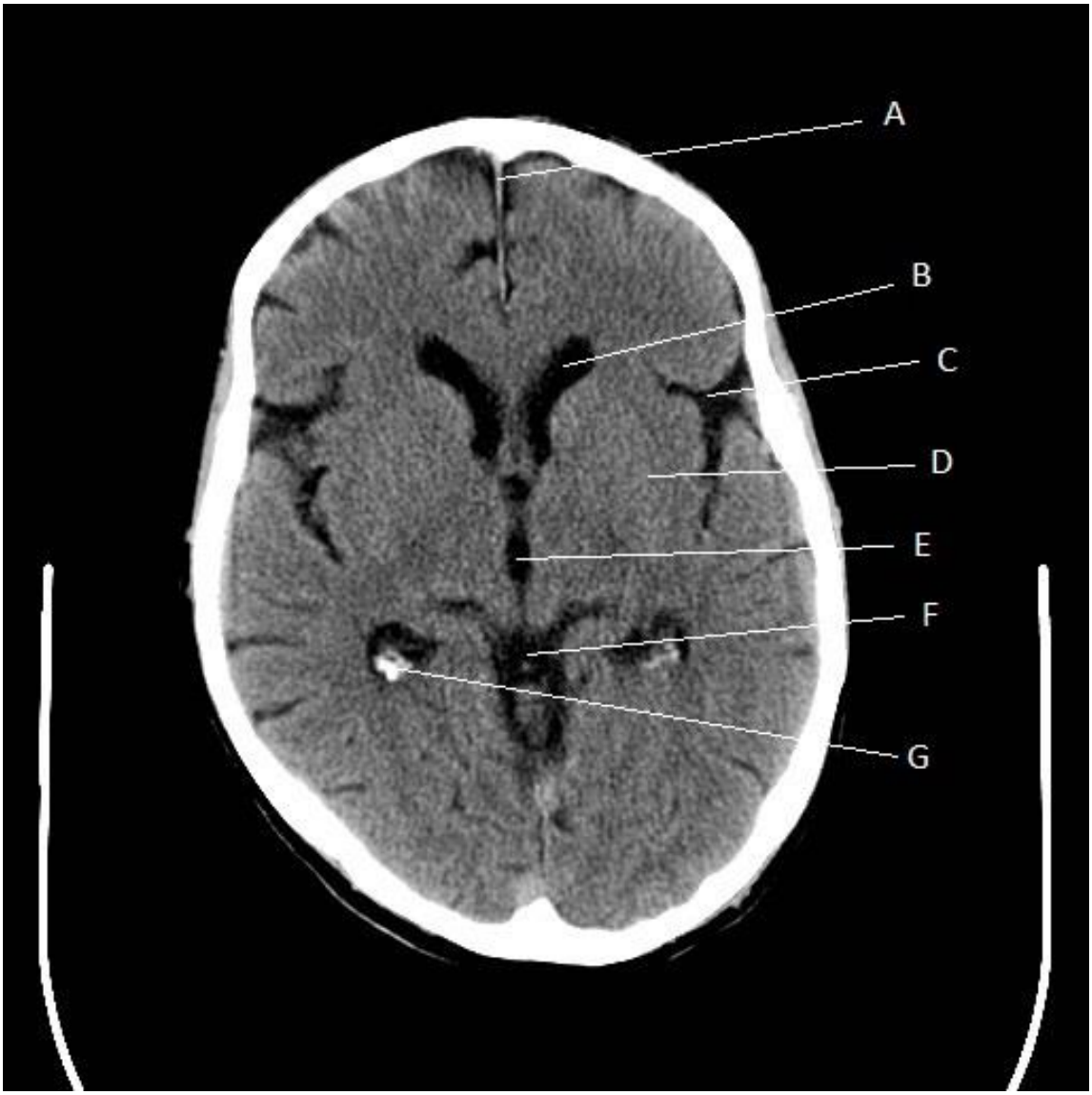
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17. List 3 indications for CECT orbits.

18. What is the contrast protocol for CECT orbits?

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Name: **MRAD 281**

CT Imaging of the Neck
CT Imaging of the Chest

Part 1 – Anatomy

1. What are the 3 sections of the pharynx, superior to inferior?
2. What are the 3 pieces of cartilage that make up the larynx?
3. Which is anterior, the trachea or the esophagus?
4. At what vertebral level does the trachea bifurcate?
5. What is this bifurcation called, and what does it bifurcate into?
6. What is the structure that joins the right and left lobe of the thyroid gland?
7. Name the 3 pairs of salivary glands.
8. Where are the parotid glands located?
9. From left to right, name the arterial branches off the aortic arch.
10. The _____ artery branches into the right subclavian artery and the right common carotid artery.
11. The carotid arteries sit _____ to the jugular veins.
12. The external carotid arteries sit (anterior/posterior) to the internal carotid arteries.
13. Just above the level of bifurcation, the external carotid artery is (medial/lateral) to the internal carotid arteries.
14. As it ascends the neck, at a higher level, the external carotid artery is (medial/lateral) to the internal carotid arteries.
15. What arteries travel through the transverse foramina of the cervical vertebrae?

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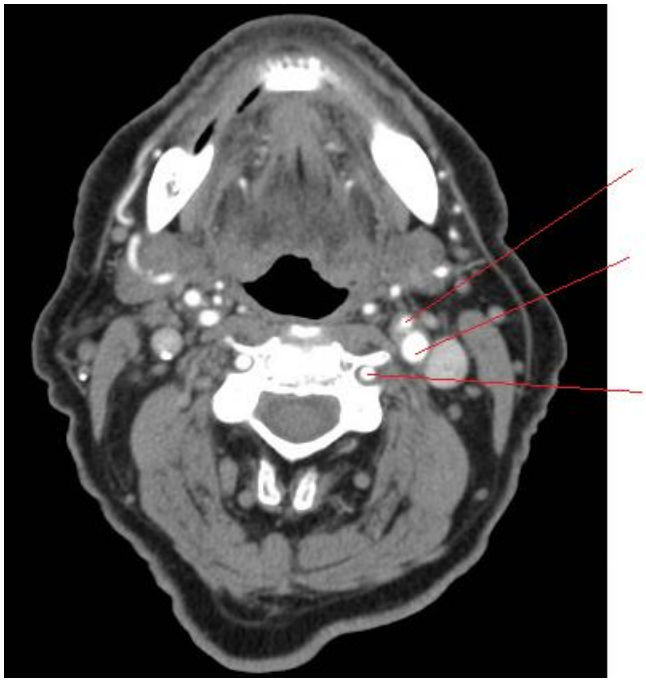
16. What are typically the largest blood vessels in the neck?

17. The internal jugular veins sit _____ to the carotid arteries.

18. What 2 vessels appear circled on the image?



19. Label the anatomical structures on the image below:



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20. Describe the differences between the right and left lungs.

21. List the fissures and segments of each lung.

22. What is the pleura? List and describe the 2 pleural layers.

23. What is the hilum? List some of the structures that pass through the hilum.

24. What structures are contained within the mediastinum?

25. List and describe the 4 chambers of the heart.

26. The aortic arch lies _____to the pulmonary arteries.

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27. The aortic arch corresponds to approximately which vertebral level?

28. The thoracic aorta sits _____ to the vertebral column.

29. The pulmonary trunk arises from which chamber of the heart?

30. The IVC enters which chamber of the heart?

31. Name the 3 branches of the aortic arch.

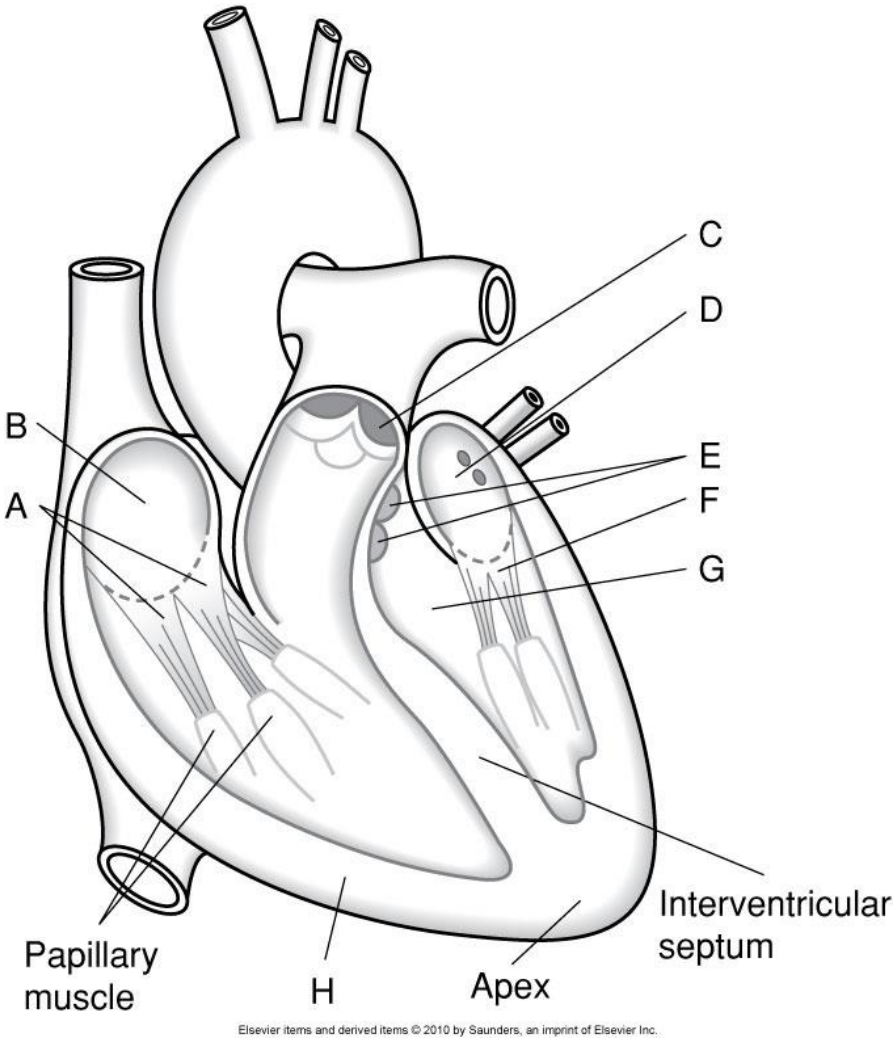
32. The brachiocephalic trunk divides into which two arteries?

33. The right brachiocephalic veins are forms by the union of the:

34. The left brachiocephalic vein sits _____ to the branches of the aorta.

35. The right and left brachiocephalic veins unite to form the _____.
36. Label the image below:

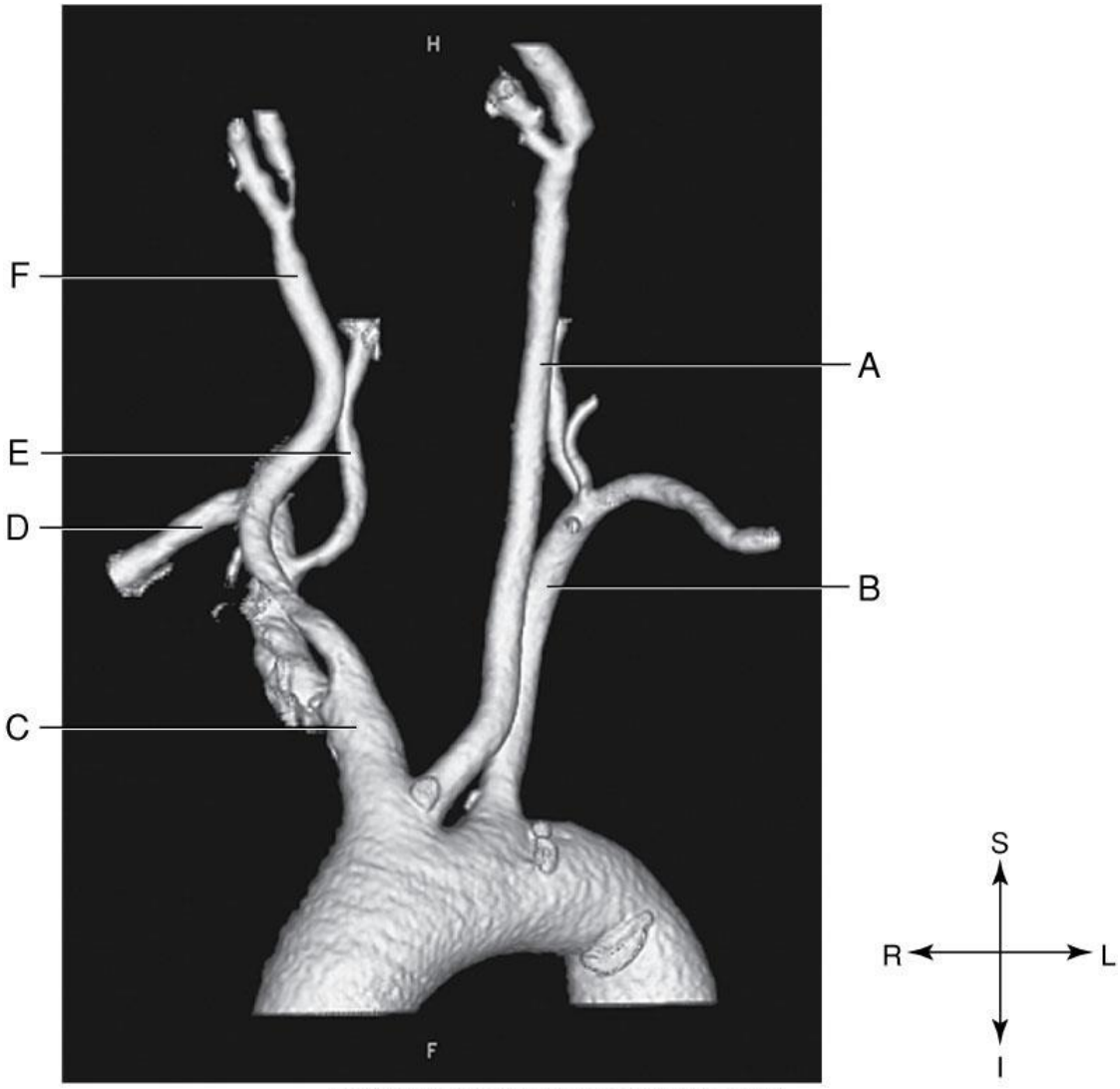
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37. Label the image below:

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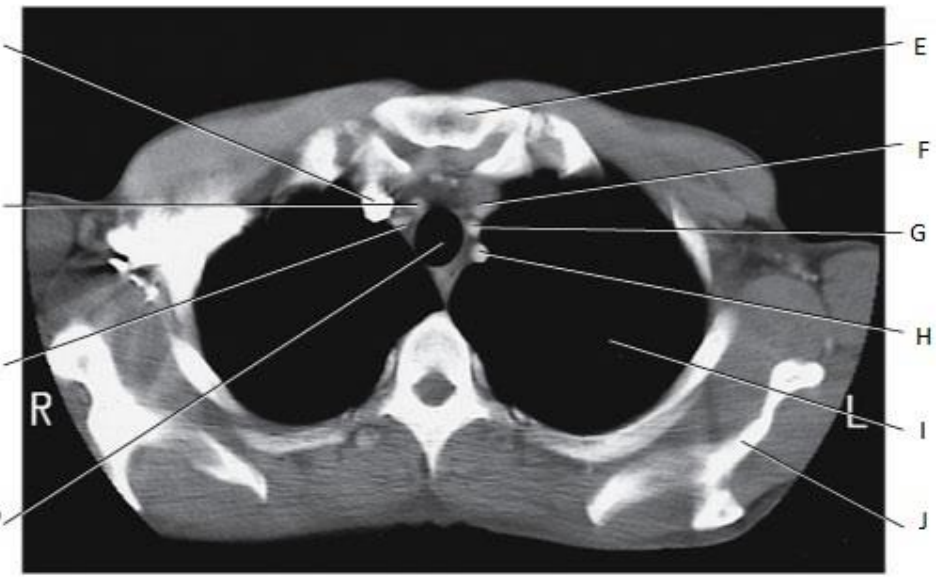


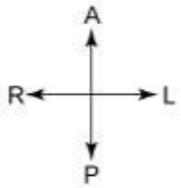
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38. Label the image. What vertebral level is this slice taken at? How can you tell?

Image: Thorax1





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29. Label the image. What vertebral level is this slice taken at? How can you tell?

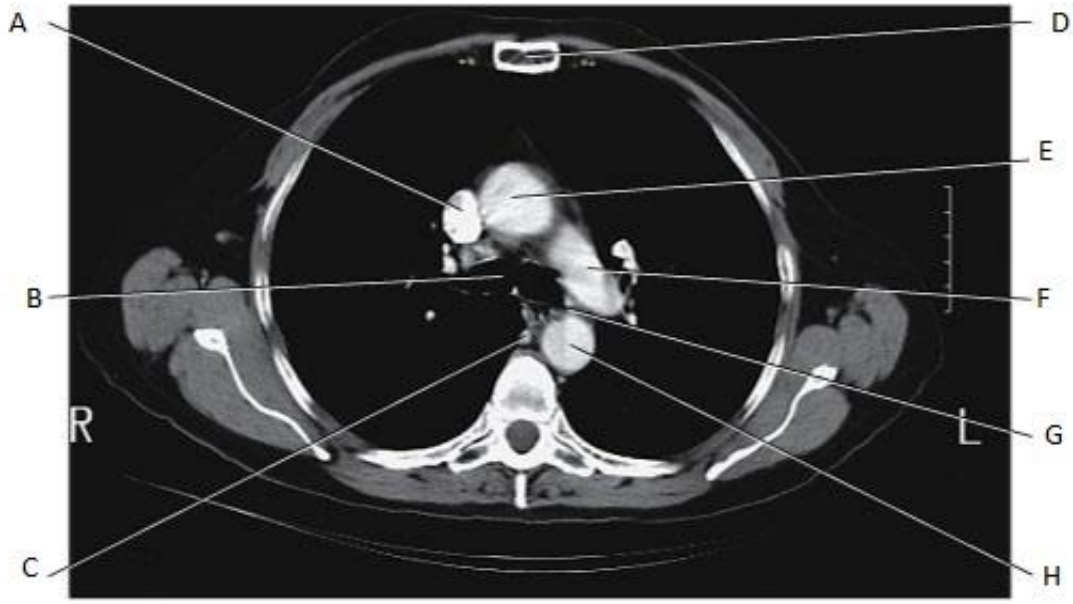
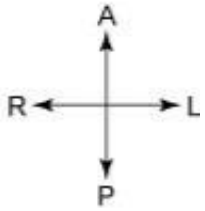


Image: Thorax 2



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Part 2 – Imaging Procedures

1. What window width & window level are commonly used to display standard (soft-tissue) algorithm of the neck?

2. What is the advantage of using a soft algorithm for a CECT neck?

3. List at least 3 indications for a CECT neck.

4. List one indication for a NECT neck.

5. Describe the most common type of stroke

6. List 5 clinical indications for stroke / TIA that would prompt a CT neck/head scan.

7. What anatomy should be included on a CECT neck?

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8. What is the approximate kVp / mA used for a CECT neck?

9. Describe the contrast protocol for a CECT neck.

10. What anatomy should be included on a CTA neck CoW & Carotids?

11. What is the approximate kVp / mA used for a CTA neck?

12. CTA CoW and Carotids usually include MIP reconstructions.
    a. Describe MIP Maximum Intensity Projection.

    b. What is the appropriate WW and WL?

13. What is the contrast protocol for CTA Cow & Carotids?

14. How does an emboli appear on CT?

15. List 2 challenges in scanning the patient's chest, and how you as the technologist could manage this challenge.

16. What is an appropriate lung window width & window level?

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17. List 3 indications for a NECT chest.

18. When is contrast indicated for a CT scan of the chest?

19. What anatomy should be included for a CECT chest?

20. For Chest CT, a pitch of greater than 1 may be used. What are the advantages and disadvantage of this setting?

21. What is the contrast protocol for CECT chest?

22. What filter/algorithm can be applied to NECT chest for lung nodule reformats?

23. What 3 scans are often done as part of a HRCT chest protocol?

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CT Imaging of the Neck
CT Imaging of the Chest

Part 1 – Anatomy

1. What are the 3 sections of the pharynx, superior to inferior?
2. What are the 3 pieces of cartilage that make up the larynx?
3. Which is anterior, the trachea or the esophagus?
4. At what vertebral level does the trachea bifurcate?
5. What is this bifurcation called, and what does it bifurcate into?
6. What is the structure that joins the right and left lobe of the thyroid gland?
7. Name the 3 pairs of salivary glands.
8. Where are the parotid glands located?
9. From left to right, name the arterial branches off the aortic arch.
10. The _____ artery branches into the right subclavian artery and the right common carotid artery.
11. The carotid arteries sit _____ to the jugular veins.
12. The external carotid arteries sit (anterior/posterior) to the internal carotid arteries.
13. Just above the level of bifurcation, the external carotid artery is (medial/lateral) to the internal carotid arteries.
14. As it ascends the neck, at a higher level, the external carotid artery is (medial/lateral) to the internal carotid arteries.
15. What arteries travel through the transverse foramina of the cervical vertebrae?

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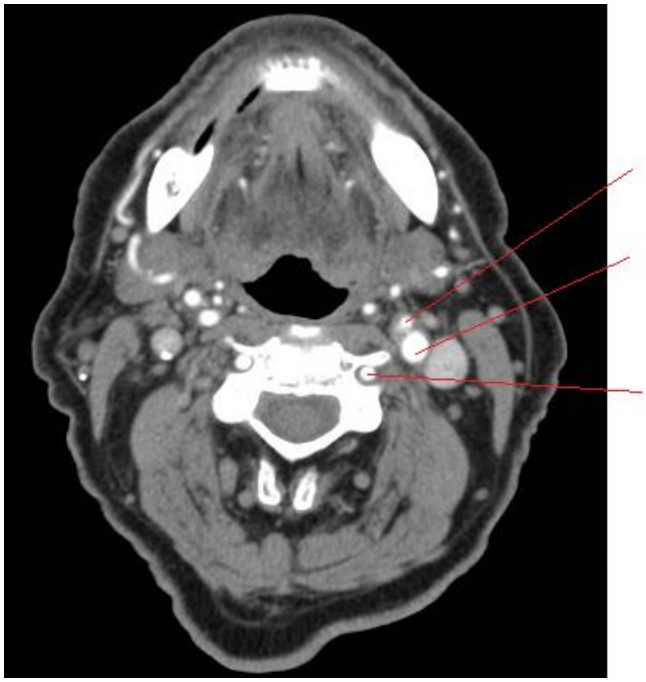
16. What are typically the largest blood vessels in the neck?

17. The internal jugular veins sit _____ to the carotid arteries.

18. What 2 vessels appear circled on the image?



19. Label the anatomical structures on the image below:



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20. Describe the differences between the right and left lungs.

21. List the fissures and segments of each lung.

22. What is the pleura? List and describe the 2 pleural layers.

23. What is the hilum? List some of the structures that pass through the hilum.

24. What structures are contained within the mediastinum?

25. List and describe the 4 chambers of the heart.

27. The aortic arch corresponds to approximately which vertebral level?

28. The thoracic aorta sits _____ to the vertebral column.

29. The pulmonary trunk arises from which chamber of the heart?

30. The IVC enters which chamber of the heart?

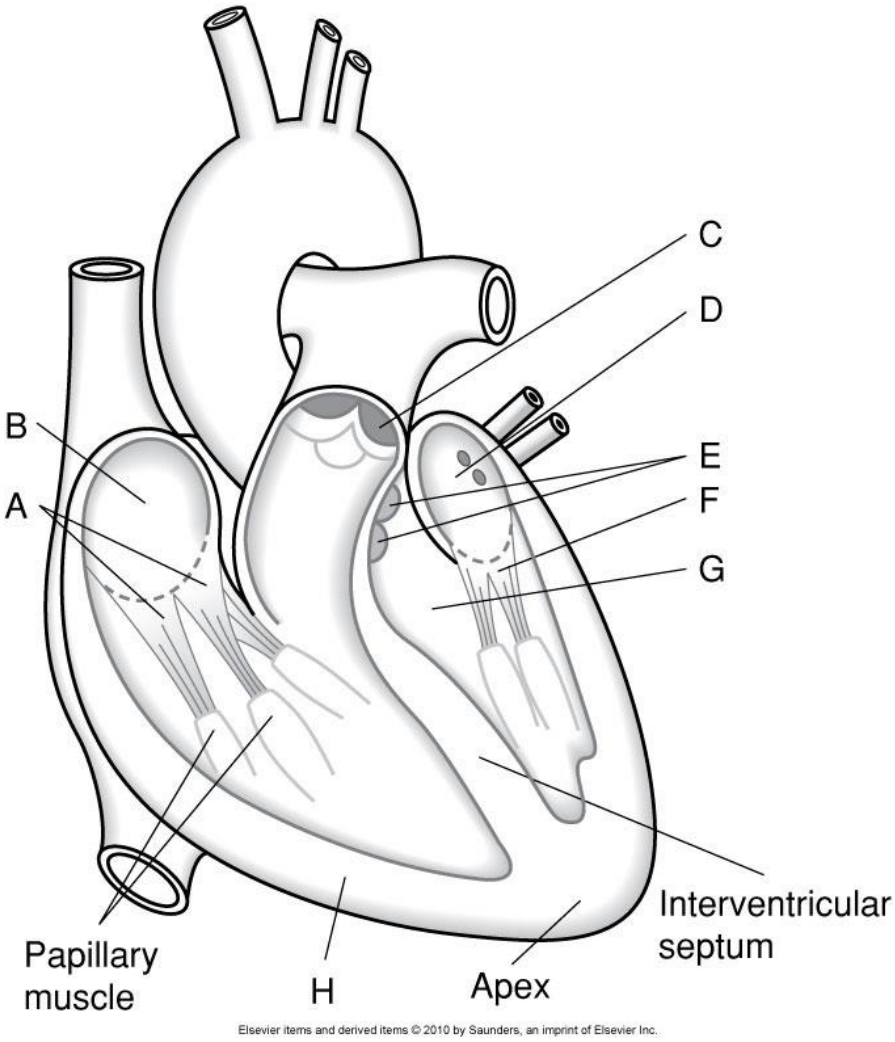
31. Name the 3 branches of the aortic arch.

32. The brachiocephalic trunk divides into which two arteries?

33. The right brachiocephalic veins are forms by the union of the:

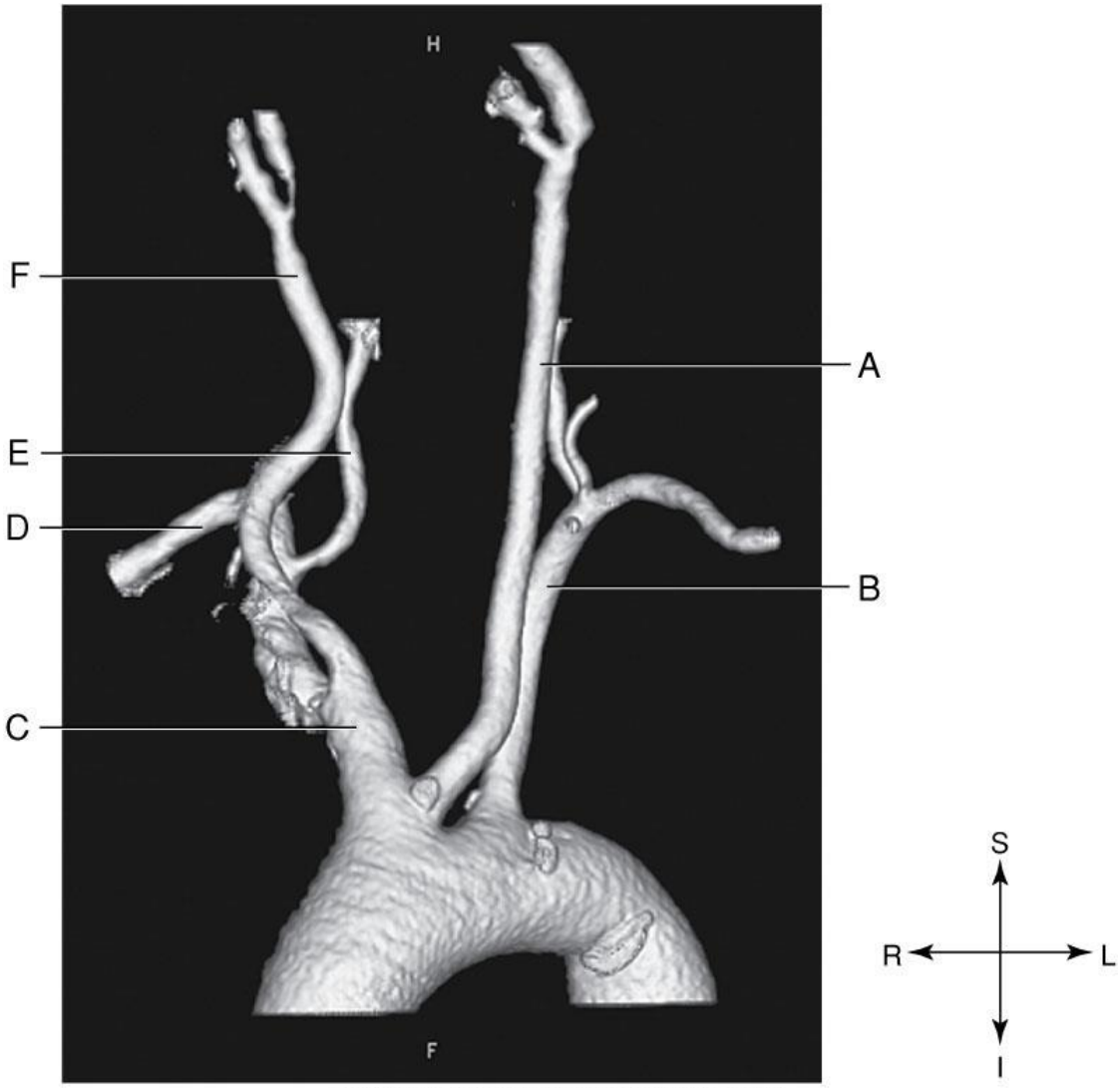
34. The left brachiocephalic vein sits _____ to the branches of the aorta.

35. The right and left brachiocephalic veins unite to form the _____.
36. Label the image below:



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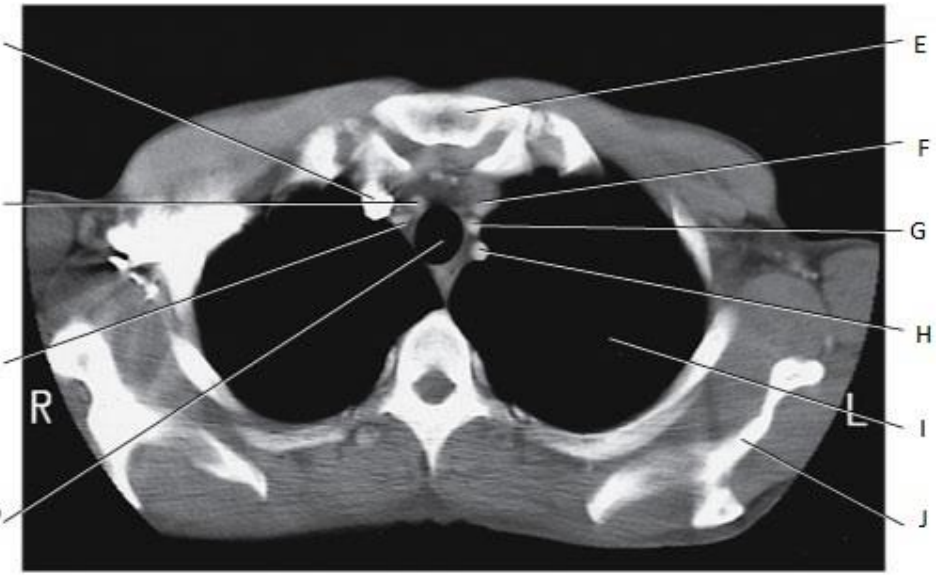
37. Label the image below:

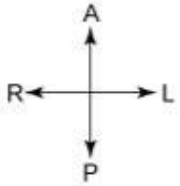


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38. Label the image. What vertebral level is this slice taken at? How can you tell?

Image: Thorax1





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29. Label the image. What vertebral level is this slice taken at? How can you tell?

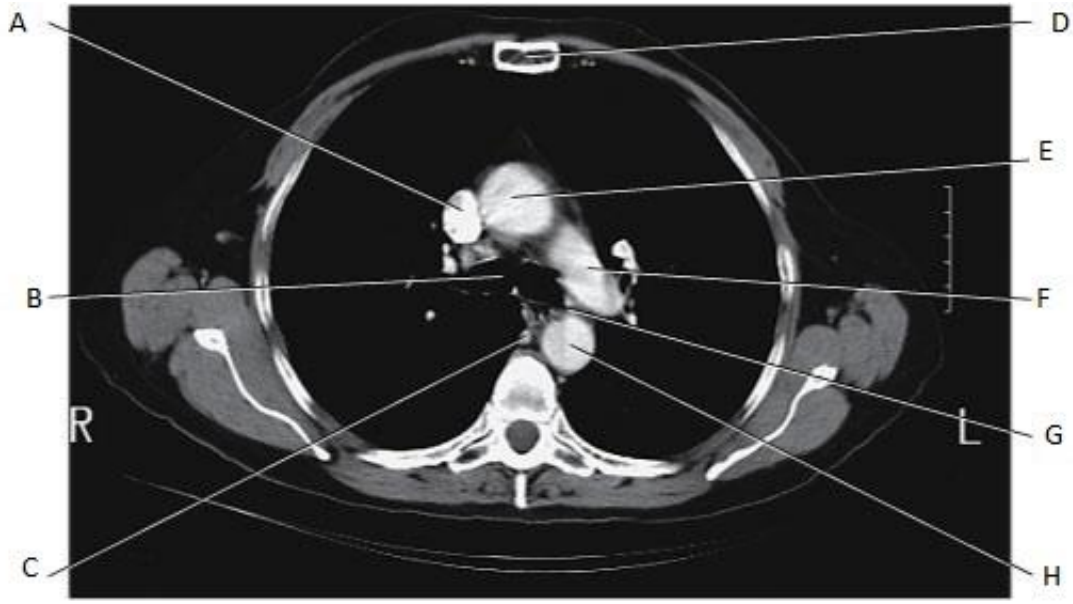
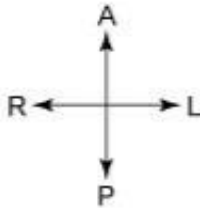


Image: Thorax 2



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Part 2 – Imaging Procedures

1. What window width & window level are commonly used to display standard (soft-tissue) algorithm of the neck?

2. What is the advantage of using a soft algorithm for a CECT neck?

3. List at least 3 indications for a CECT neck.

4. List one indication for a NECT neck.

5. Describe the most common type of stroke

6. List 5 clinical indications for stroke / TIA that would prompt a CT neck/head scan.

7. What anatomy should be included on a CECT neck?

8. What is the approximate kVp / mA used for a CECT neck?

9. Describe the contrast protocol for a CECT neck.

10. What anatomy should be included on a CTA neck CoW & Carotids?

11. What is the approximate kVp / mA used for a CTA neck?

12. CTA CoW and Carotids usually include MIP reconstructions.
    a. Describe MIP Maximum Intensity Projection.

    b. What is the appropriate WW and WL?

13. What is the contrast protocol for CTA Cow & Carotids?

14. How does an emboli appear on CT?

15. List 2 challenges in scanning the patient's chest, and how you as the technologist could manage this challenge.

16. What is an appropriate lung window width & window level?

17. List 3 indications for a NECT chest.

18. When is contrast indicated for a CT scan of the chest?

19. What anatomy should be included for a CECT chest?

20. For Chest CT, a pitch of greater than 1 may be used. What are the advantages and disadvantage of this setting?

21. What is the contrast protocol for CECT chest?

22. What filter/algorithm can be applied to NECT chest for lung nodule reformats?

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