

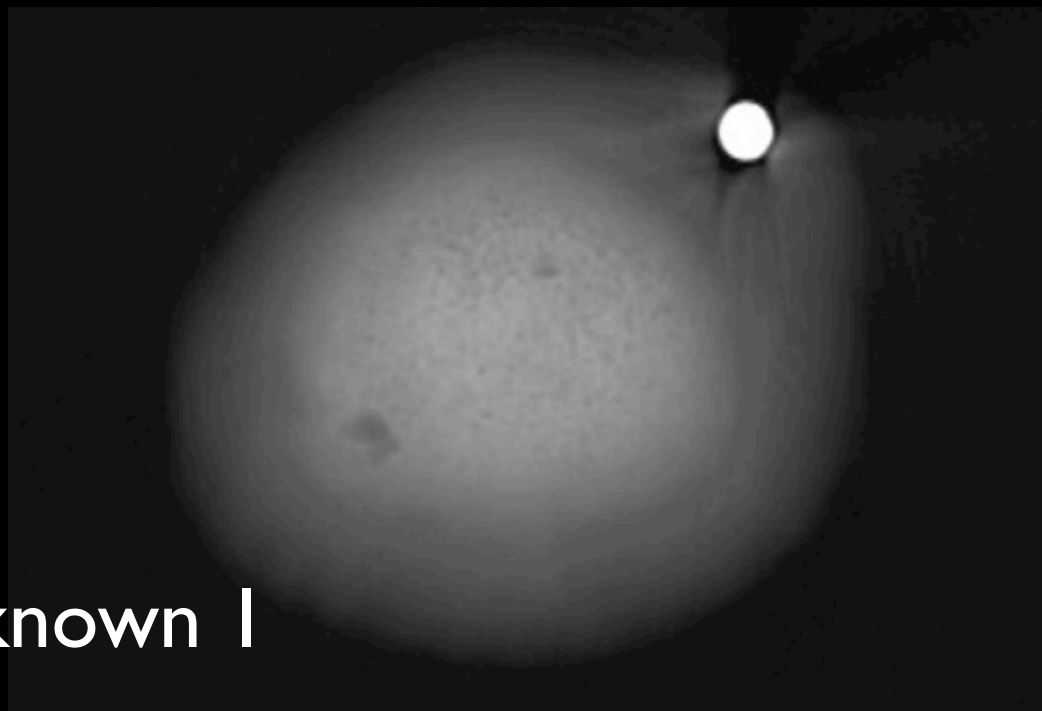
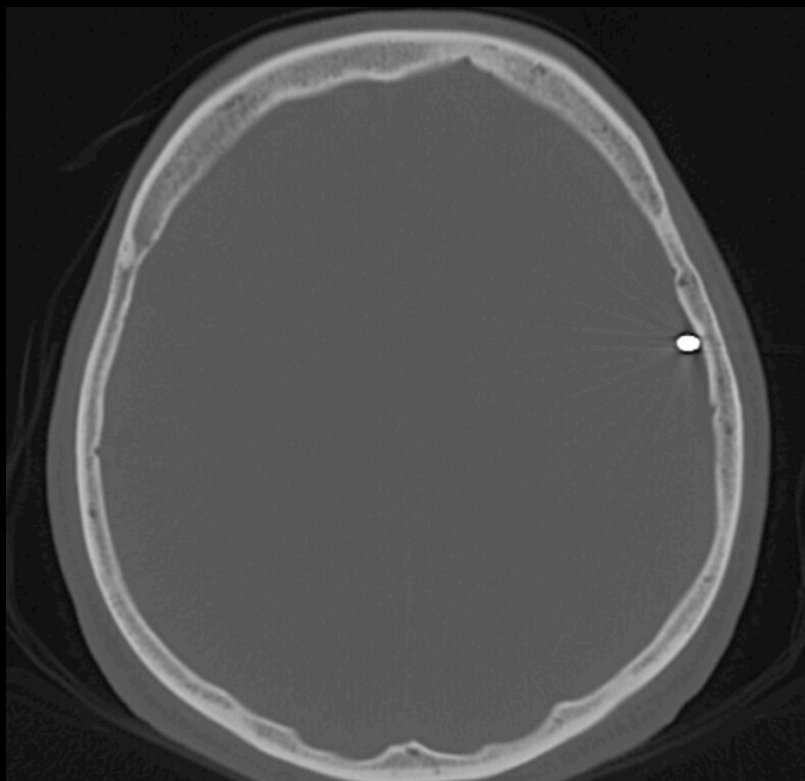
Unknowns: Neuro and Neck Radiology

Peter Clarke MD
Associate Clerkship Director for Radiology
Harvard Medical School
Brigham and Women's Hospital
Dana Farber Cancer Institute

Case 1: “Rookie” 25 year old carpenter with “work-related” injury

- Do you see a foreign body? What features tell you its composition and shape?
- What accounts for the radiating “star-like” appearance?
- What evidence is there that this object is both intra and extracranial?
- Why do the top two images look so different from the lower two?
- Given the history, what is this object?

Unknown 1

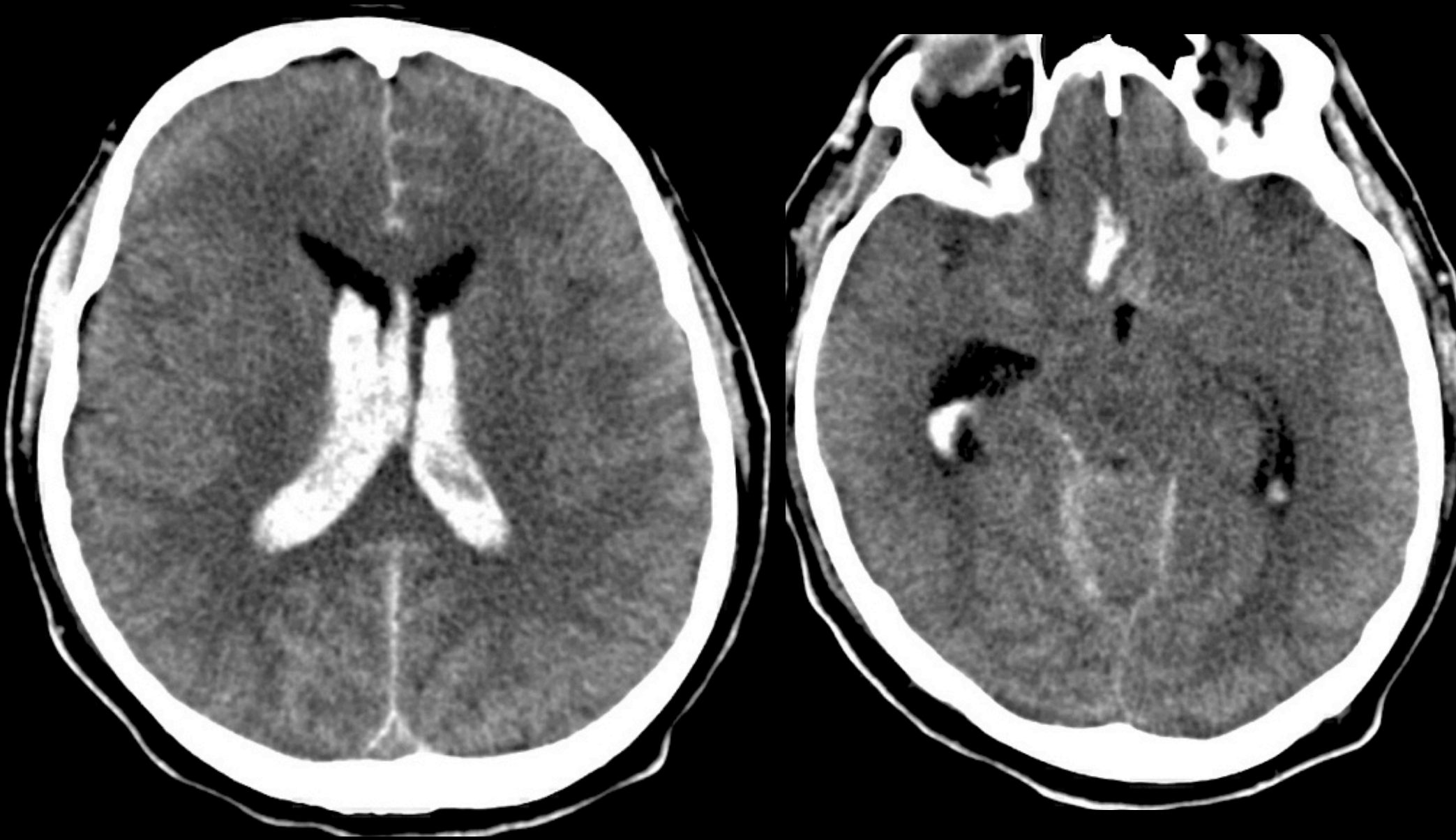


Unknown I

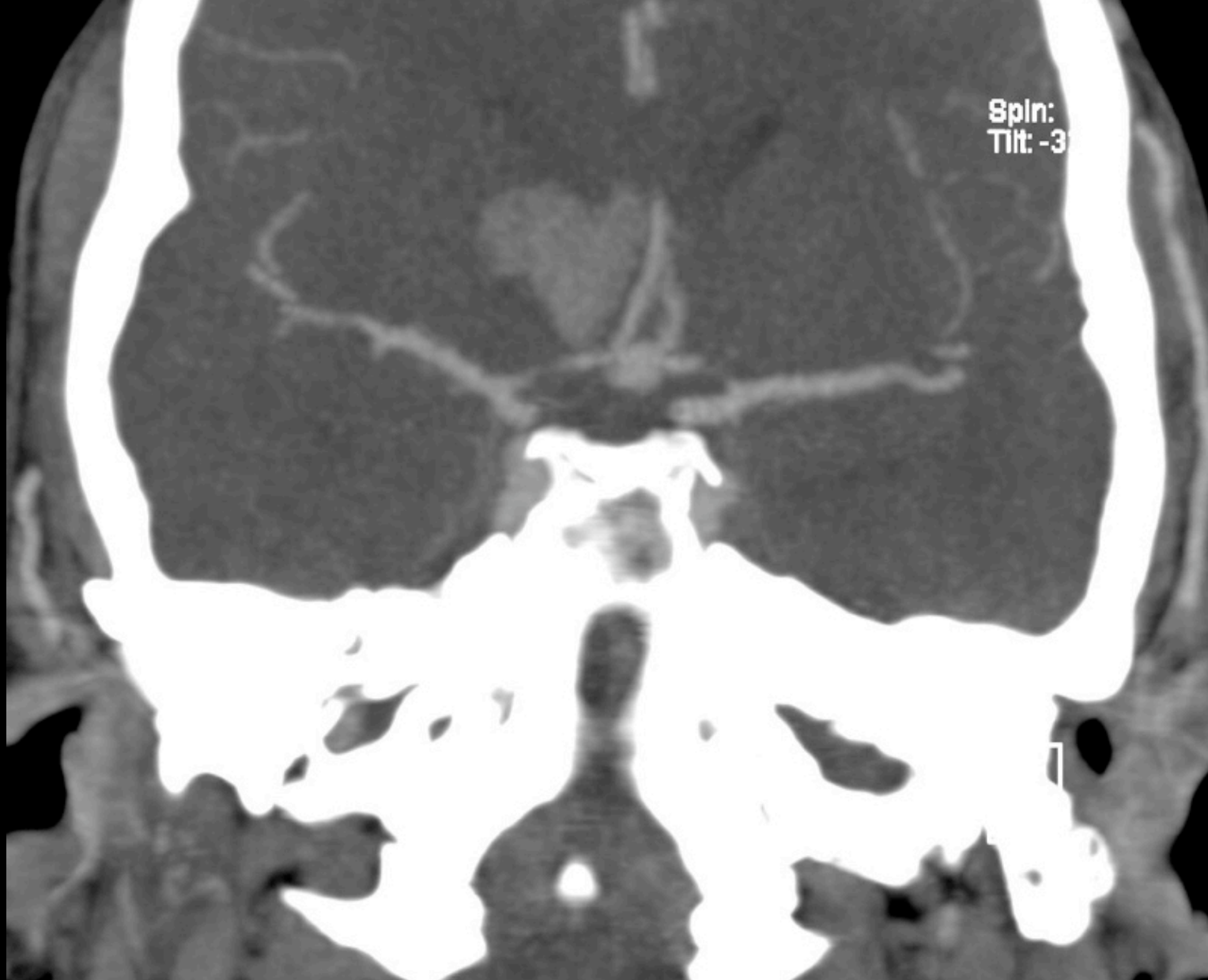
Case 2: Mia Grane, a 50 year old woman with the “worst headache of her life,” after a heated argument with her teenage son.

- Was the initial study done with or without intravenous iodine, and why?
- Identify 3 sets of cerebral ventricles. What is the high attenuation material within them?
- Name 4 possible causes for these findings.

Unknown 2



Unknown 2



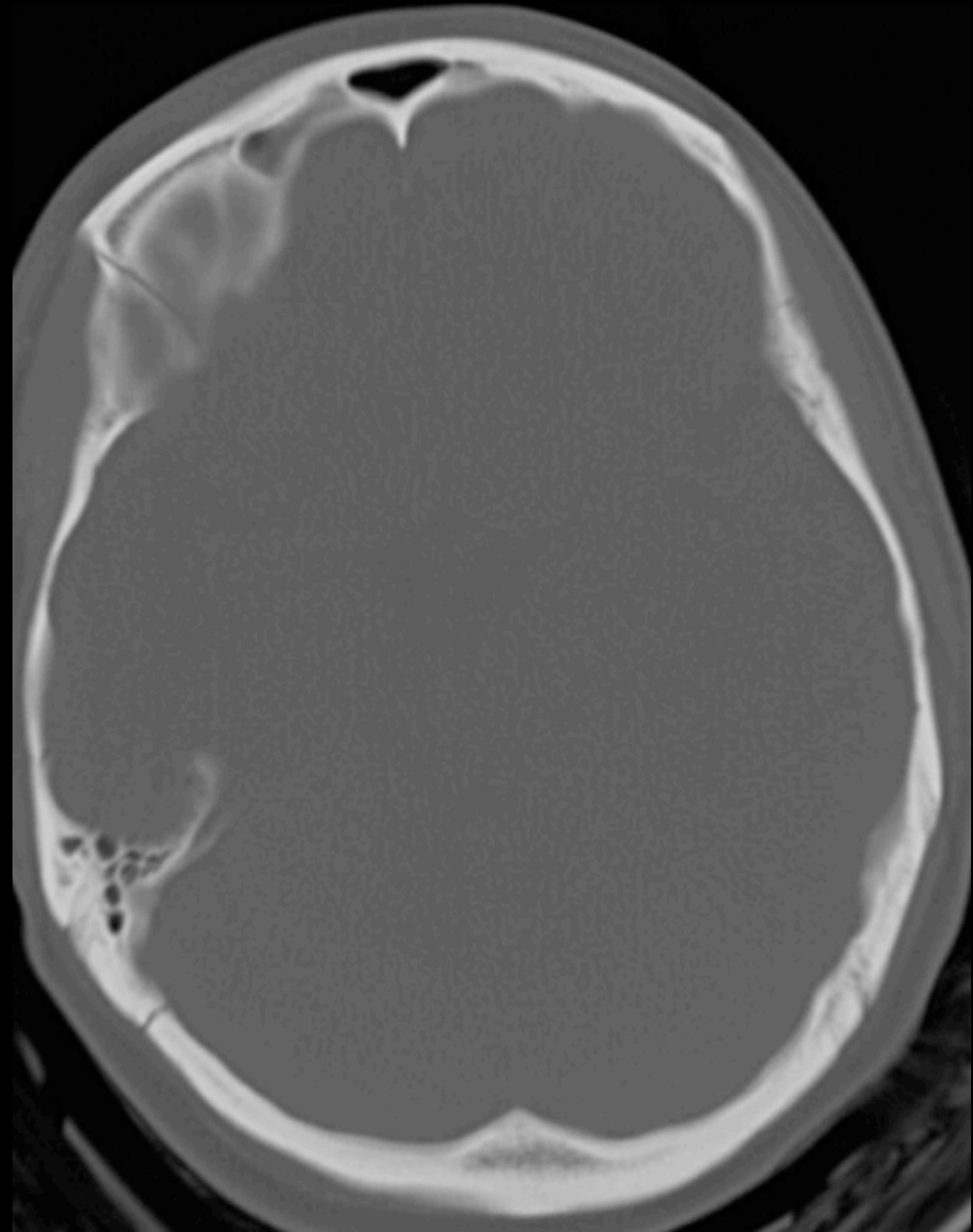
She immediately went on to this additional exam. How was it performed? What plane are we seeing? Identify 3 sets of vessels.

Unknown 2

Case 3: 29 year old construction worker who fell 10 feet from a scaffold

- Can you point out the skull fracture?
- Why can you see it on one image, and not the other, even though they are at the same level?
- What accounts for the higher attenuation of the abnormality seen here?
- How does the shape of the abnormality help localize it anatomically relative to the dura?

Unknown 3

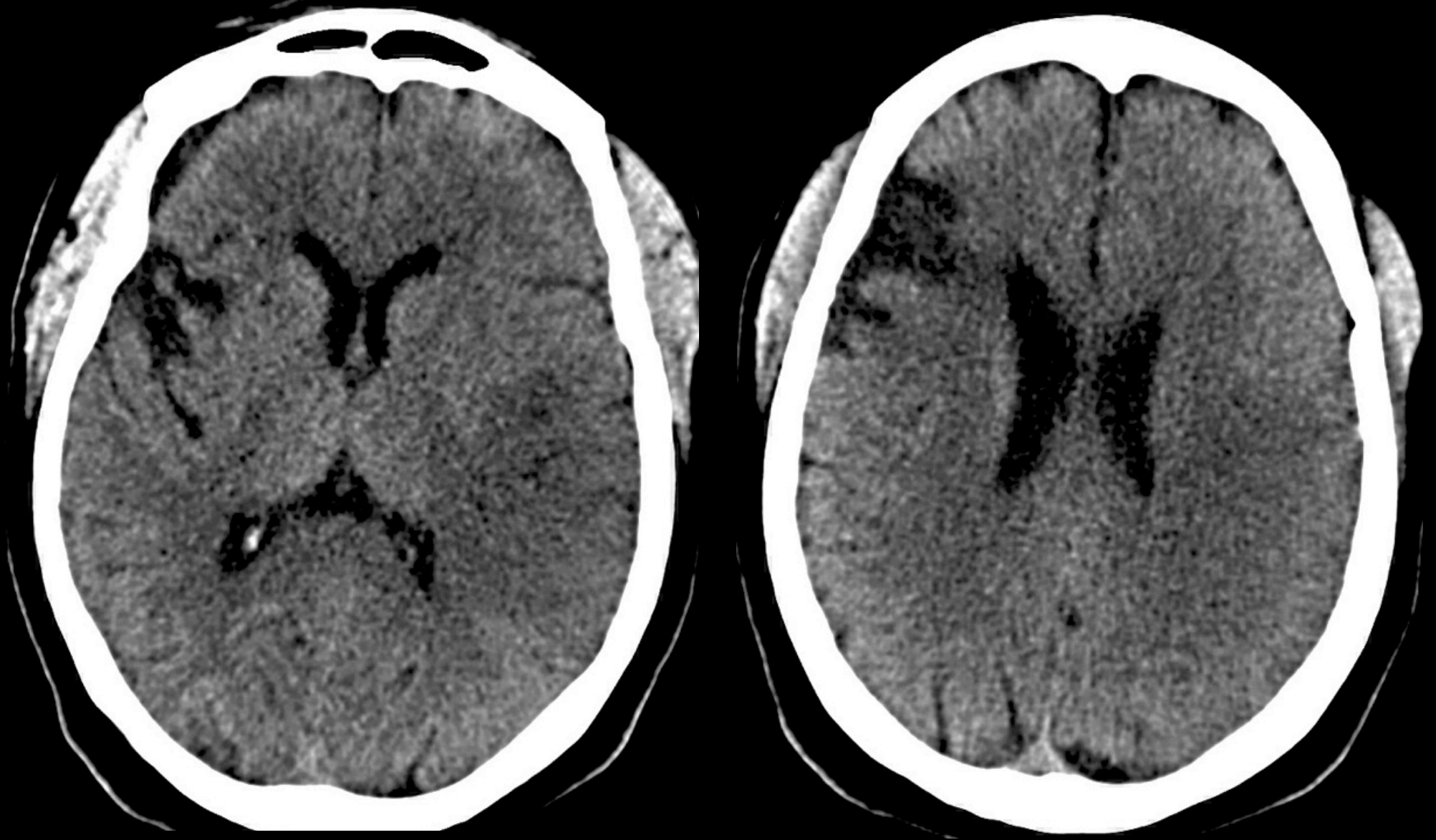


Unknown 3

Case 4: 75 year old woman with sudden unilateral weakness and aphasia

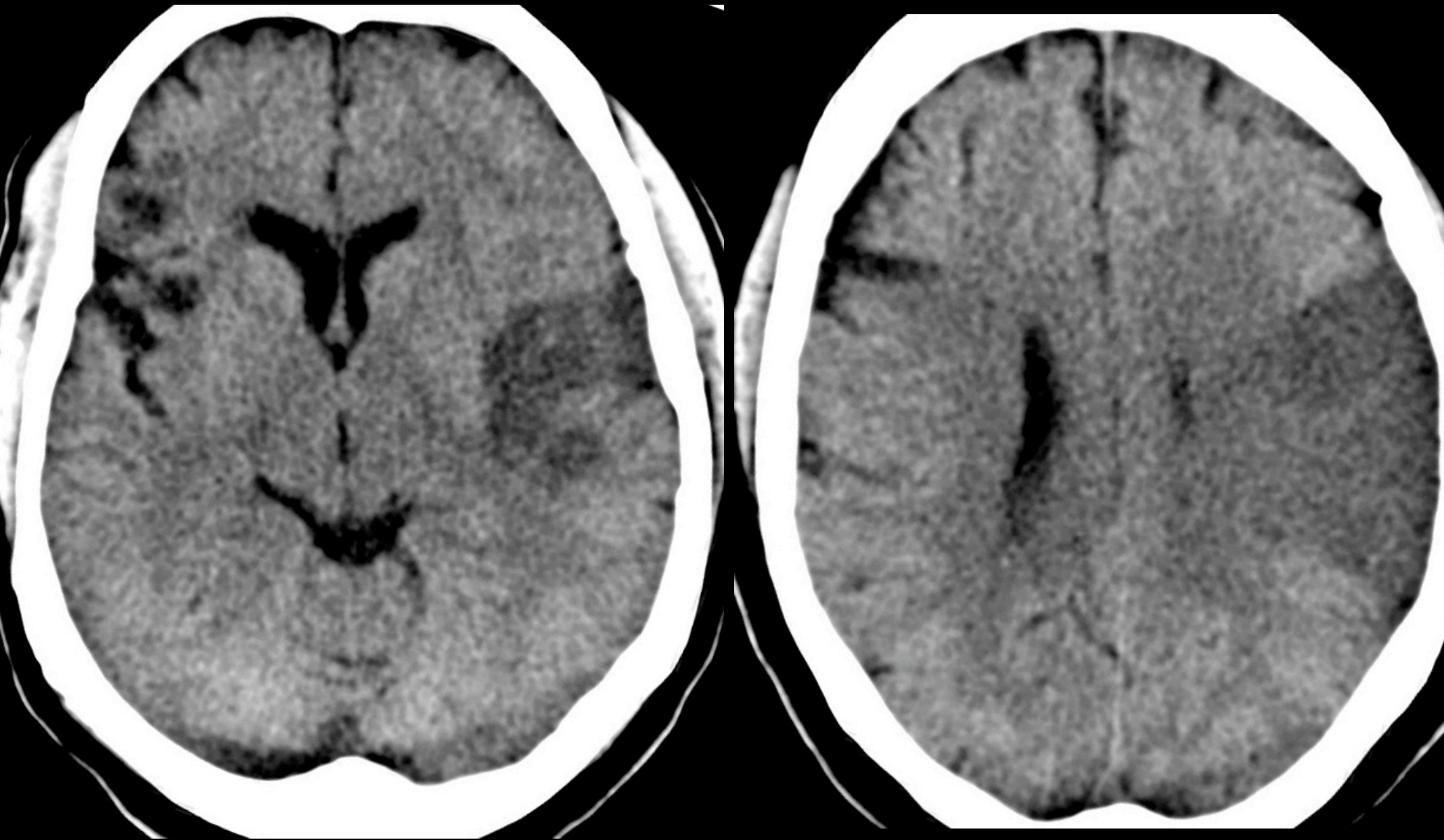
- The study was obtained 4 hours after the “ictus.”
- What is your differential diagnosis?
- Where would you locate the lesion? How does this relate to the patient’s symptoms?
- Point out the sulci and explain any asymmetry.
- Why is the lesion easier to see the next day?

Unknown 4



4 hours after onset of symptoms. The findings are subtle!

Unknown 4



The following day at the same levels: The findings are more obvious - compare with the day before on the next slide. Can you explain the interval change?

Unknown 4

earlier

Here they
are, side
by side!

Unknown 4

the next day



Case 5: 40 year old man with altered mental status

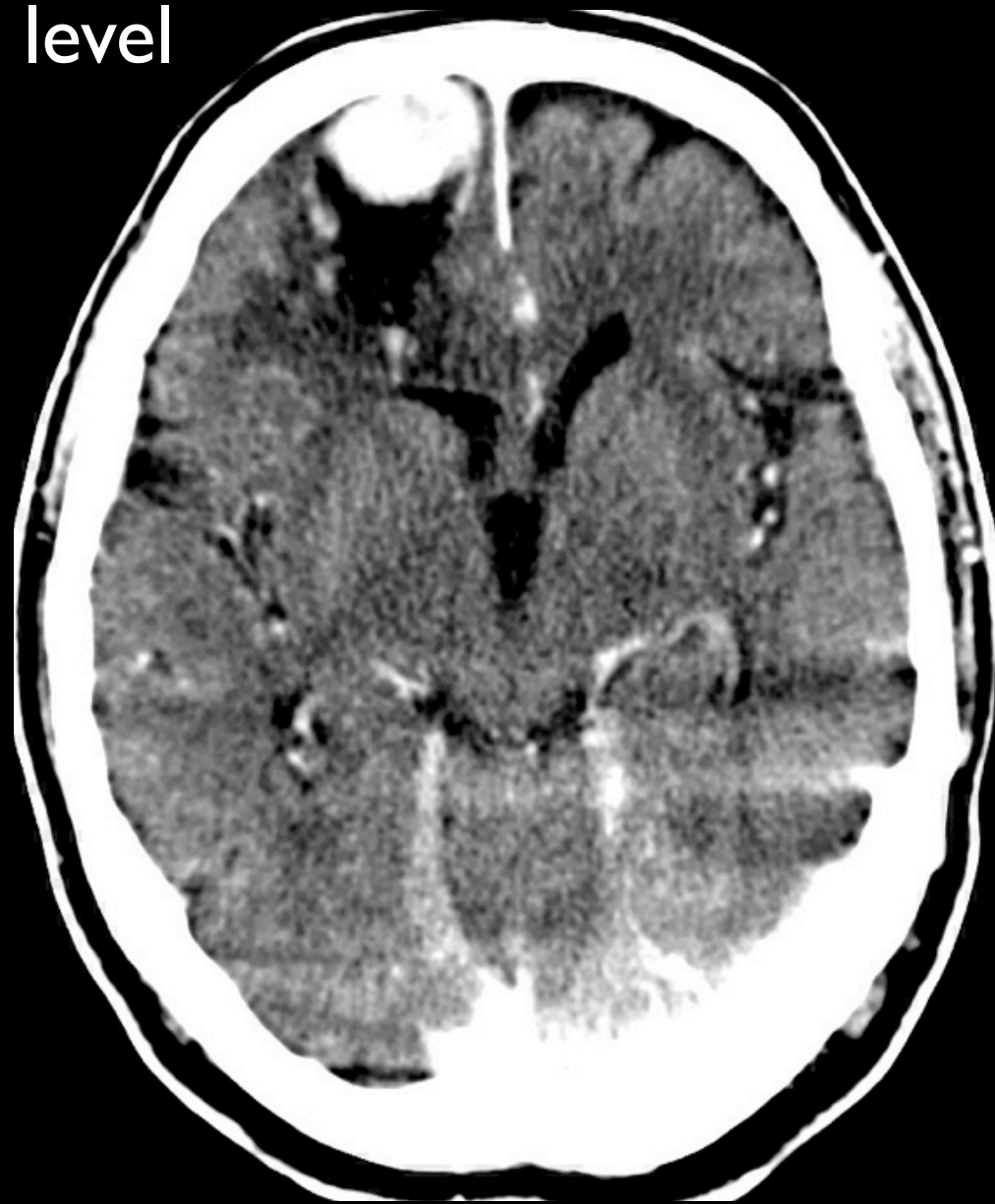
- The patient underwent a two-part exam. What's the difference between the two parts?
- How does having both methods of scanning help in interpreting the study?
- What causes the low attenuation around the lesions?
- Account for any difference in the sulci from one side to another.

Unknown 5

same level



part one



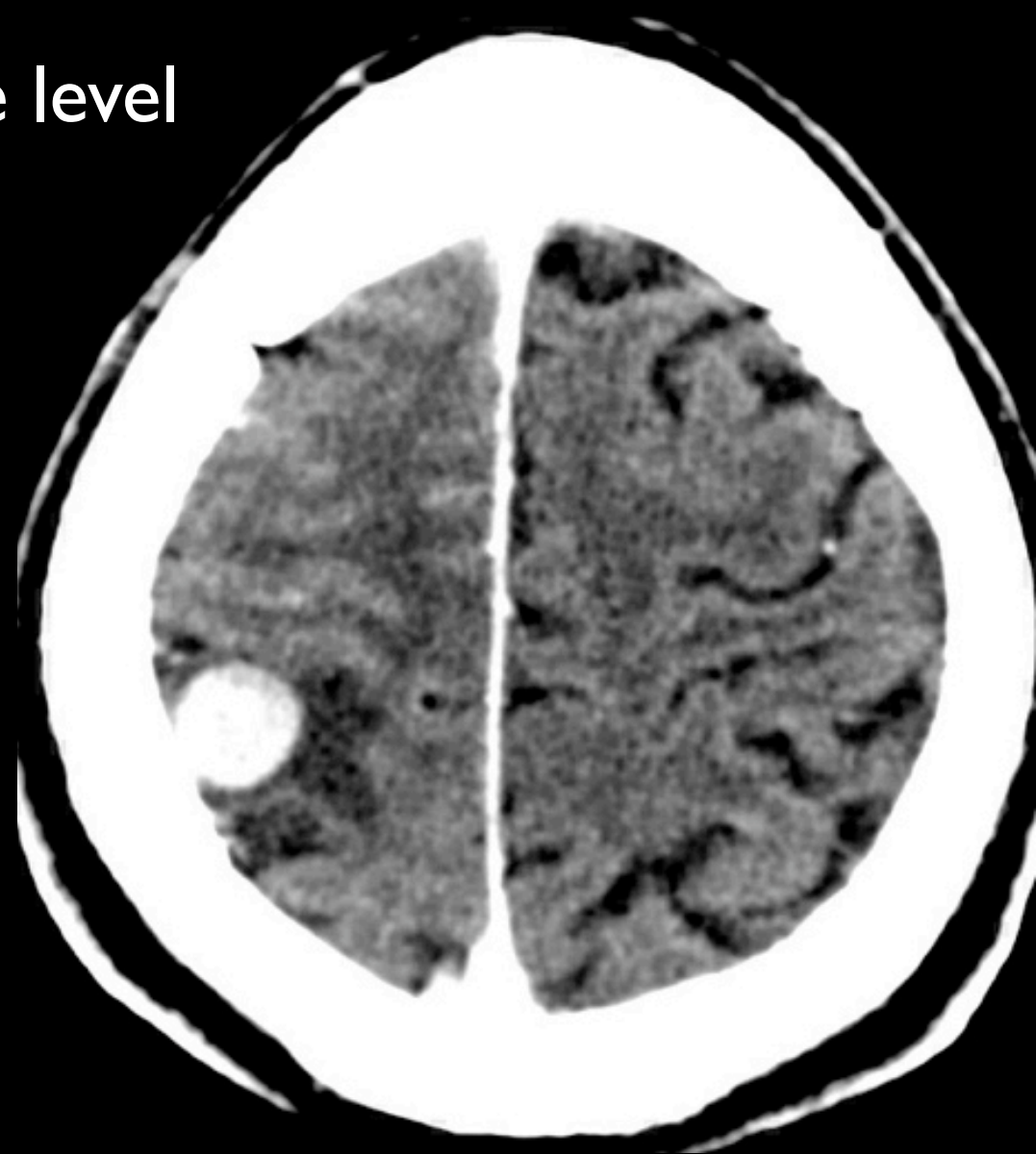
part two

Unknown 5

same level



part one



part two

Unknown 5

Case 6: 42 year old unrestrained driver in high speed motor vehicle accident (MVA)

- What is the radiographic abnormality? Can you point out the 3 lines to be checked for alignment of the spine?
- What structure would you be most concerned for injury?
- What signs and symptoms would you expect with a lesion at this level?



Unknown 6

The patient went for an additional study. Can you name it? Why was it performed?

Identify the spinal canal. Is there any narrowing?



Identify any “life support” devices.

Unknown 6

Case 7: 25 year old male with “sore throat” and dyspnea.

- What is your differential diagnosis?
- One of the two following radiographs is normal, the other is our patient. Can you identify which is which (patient A or B)?
- Point out the abnormality.



Patient A



Unknown 7

Patient B

Case 8: Swallowed a fish bone...throat pain!

- Identify the prevertebral soft tissues, and trachea.
- Can you point out the level of the vocal cords?
- Where would the esophagus begin? Can you identify the fish bone? Why is the bone caught at this location?



Unknown 8