

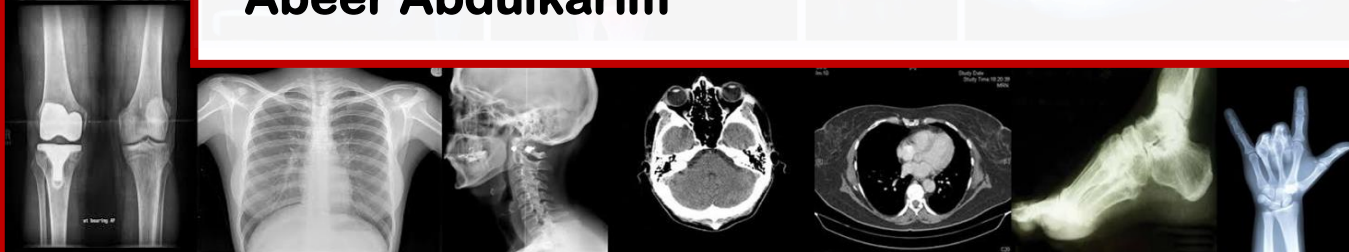


# Radiology Team

## Interactive Lecture (Neuroradiology)

Make sure you check the [Correction File](#)  
before going through the lecture!

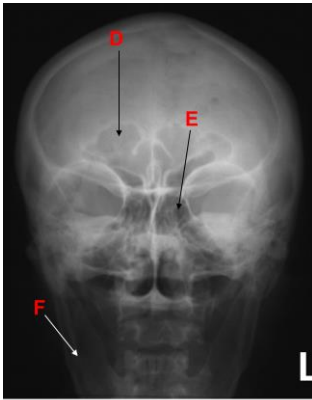
**Done by:  
Abeer Abdulkarim**



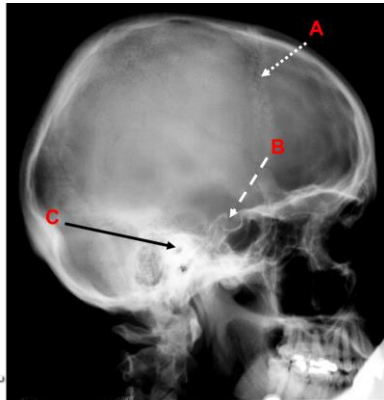
### Color Index:

- **Important**
- **Females' notes**
- **Males' notes**
- Explanations
- **433 & 432 Teamwork**

# Name the structures

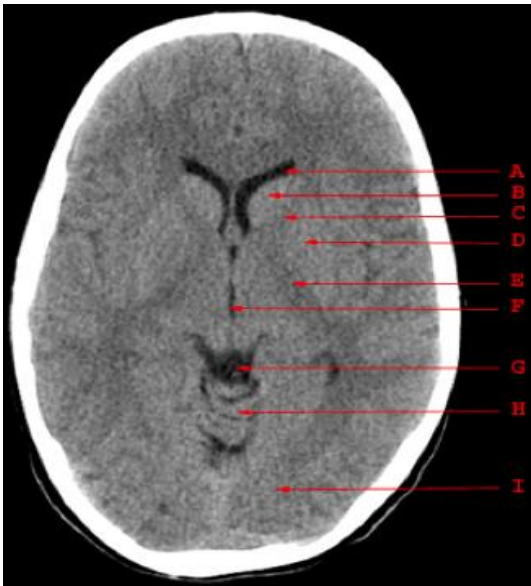


SKULL PA VIEW

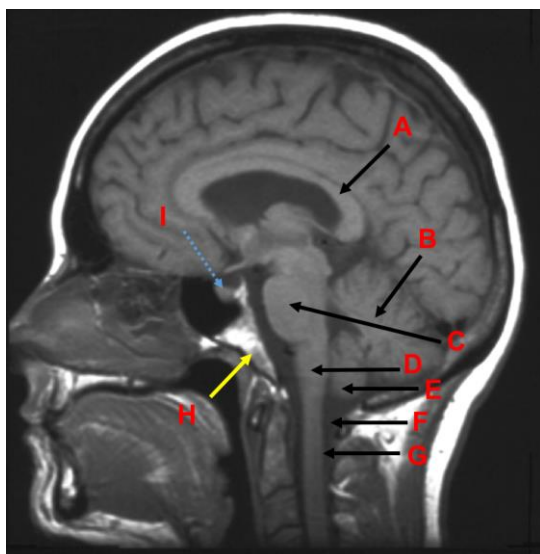


Skull X-RAY LAT. VIEW

- A. Coronal suture
- B. Sella turcica
- C. External acoustic meatus
- D. Frontal sinus
- E. Ethmoidal sinus
- F. Mandible



- A. Anterior Horn of the Lateral Ventricle
- B. Caudate Nucleus
- C. Anterior Limb of the Internal Capsule
- D. Putamen and Globus Pallidus (lentiform nucleus)
- E. Posterior Limb of the Internal Capsule
- F. Third Ventricle
- G. Quadrigeminal Plate Cistern
- H. Cerebellar Vermis

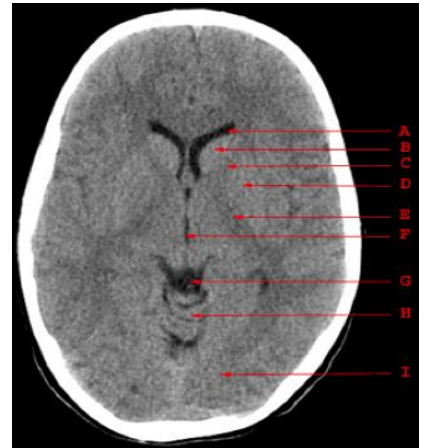


- I. Occipital Lobe (left)
  - A. Corpus callosum (body)
  - B. Superior vermis of cerebellum
  - C. Pons
  - D. Medulla
  - E. Cerebellar tonsils
  - F. 4th ventricle
  - G. Spinal cord
  - H. Clivus
  - I. Pituitary

# MCQs

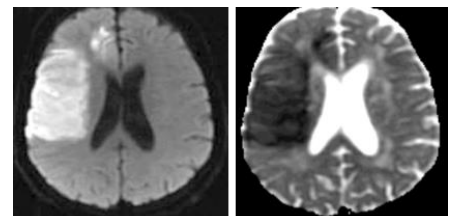
Which is true on this brain CT regarding anatomy:

- A. Internal capsule
- B. **Caudate head**
- C. Cerebral peduncle
- D. **Putamen**
- E. Thalamus
- F. 4<sup>th</sup> ventricle



MRI diffusion (DWI) is particularly helpful in assessment of all the following **EXCEPT**:

- A. Brain infarction (diffusion will be low)
- B. Brain abscess
- C. Brain tumors
- D. **Hydrocephalus** (not helpful in CSF disorders)



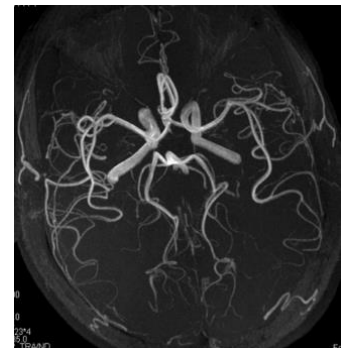
DWI

ADC map

MR diffusion is very helpful in the assessment of early brain **infarction**, Brain abscess & Certain types of brain tumor.

Which of the following is true?

- A. This is CTA study (no bone seen)
- B. **This is MRA study**
- C. This can only be done with contrast (TOF angiography)
- D. This is good to diagnose cerebral venous thrombosis



Contraindication of MRI include all the following **EXCEPT**:

- A. cardiac pacemaker
- B. cochlear implants
- C. metal close to the eye
- D. neurostimulators

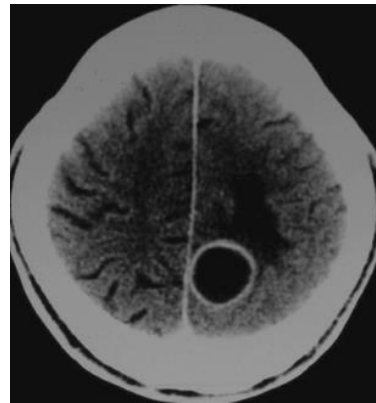
**E. pregnancy (3<sup>rd</sup> trimester)**  
Which is true in **CT**?

- A. Bone is black
- B. **CSF is black**
- C. Gray matter is darker than white matter
- D. Gray and white matter can not be differentiated (This happens in ischemia or edema)

# MCQs

The lesion on this CT is:

- A. Meningioma
- B. Abscess** (ring enhancing)
- C. Multiple sclerosis
- D. Glioblastoma multiforme



This CT shows:

- A. Subdural hematoma
- B. Subarachnoid hemorrhage
- C. Intraventricular hemorrhage
- D. All of the above**



This CT shows:

- A. Acute PCA infarct**
- B. Chronic ACA infarct
- C. Subarachnoid bleeding
- D. Meningioma
- E. Abscess



The hematoma pointed by the arrow is:

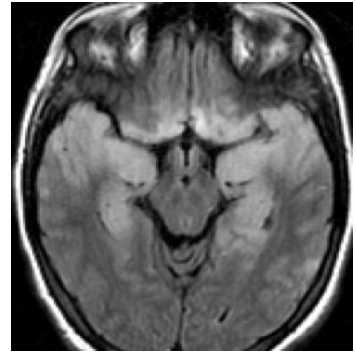
- A. Acute epidural**
- B. Chronic epidural
- C. Acute subdural
- D. Chronic subdural
- E. None of the above



# MCQs

The abnormalities on this MRI are due to:

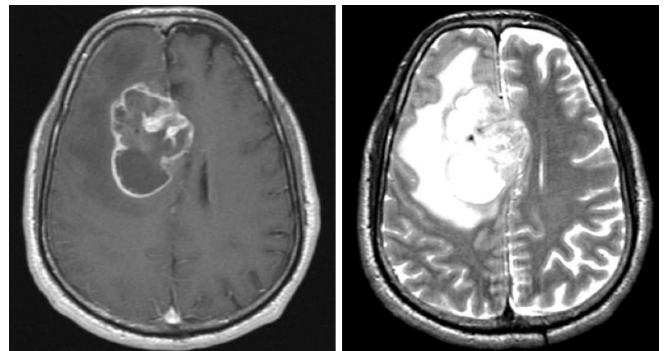
- A. Multiple sclerosis
- B. Meningitis
- C. Brain tumor
- D. Encephalitis**



An MRI showed **intra-axial lesion that is necrotic, irregular, strongly enhancing, and crossing midline.**

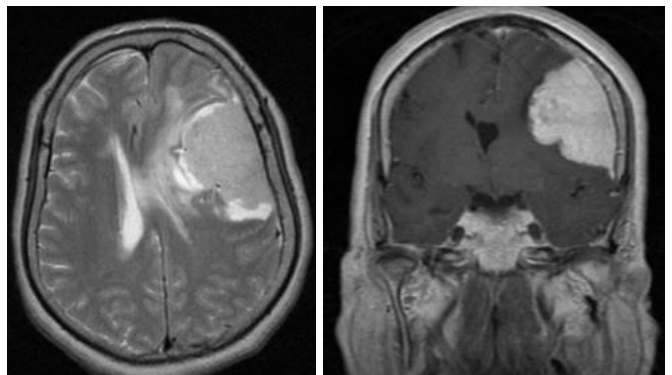
This lesion is most likely:

- A. Meningioma (extra-axial)
- B. Infarction (usually hypointense)
- C. Multiple sclerosis
- D. Glioblastoma multiforme**



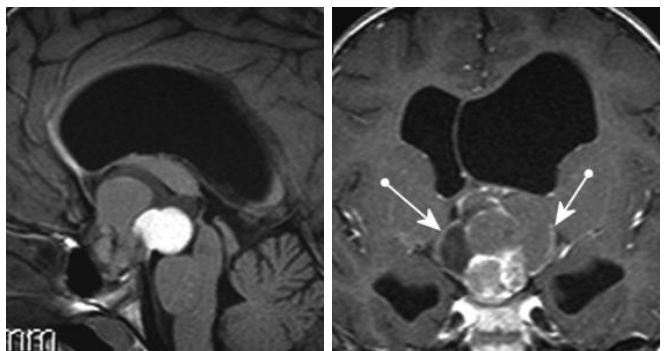
The lesion on this MRI is:

- A. Meningioma (extra-axial)**
- B. Infarction
- C. Metastasis
- D. Abscess

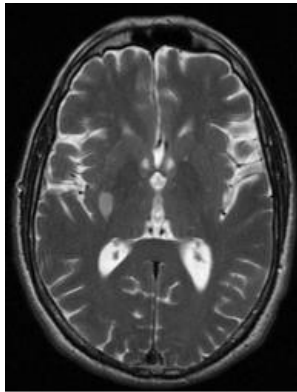


The lesion on this MRI is:

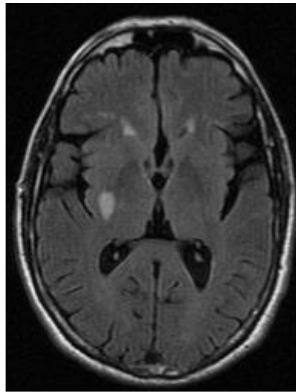
- A. Pituitary adenoma
- B. Craniopharyngioma (multi-cystic)**
- C. Meningioma
- D. Glioblastoma multiforme



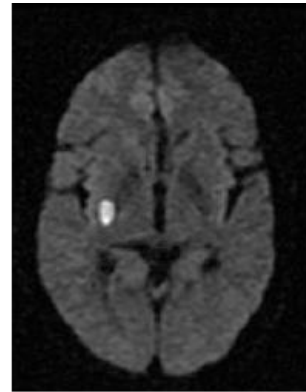
# MCQs



T2WI



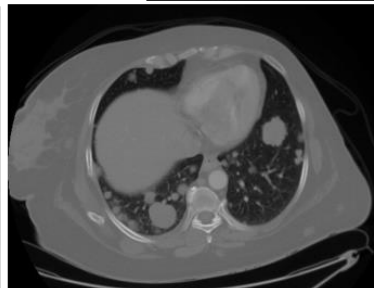
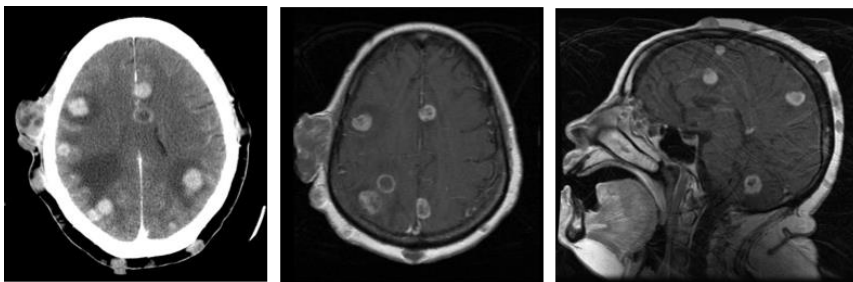
FLAIR



DWI

This MRI shows an infarction in the right basal ganglia.

- The infarction is:
  - a. Acute (recent)** bright in all MRI sequence
  - b. Chronic (old) hypodense in flair
  - c. Hemorrhagic
  - d. In PCA territory
- This patient is most likely to have:
  - a. Left monoplegia
  - b. Left hemiplegia**
  - c. Diplegia
  - d. No symptoms

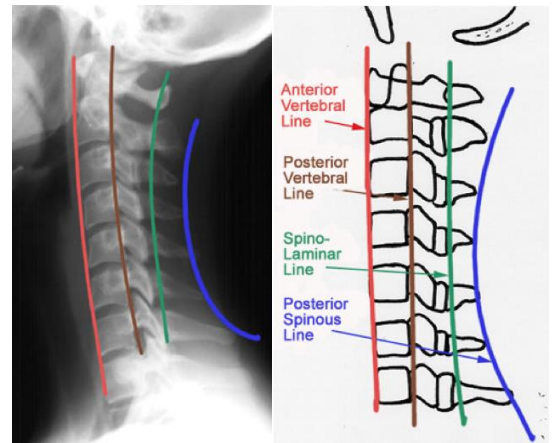


**Brain metastasis** from lung cancer  
(Well defined hyperenhancing lesion intra & extra-axial)

# MCQs

Which of the following is true about the lines of the cervical spine?

- A. Red is intervertebral line
- B. Brown is posterior spinous line
- C. Green is spinolaminar line**
- D. Blue is posterior vertebral line



What is the difference?

Degenerative changes of the spine  
**(Cervical spondylosis)**

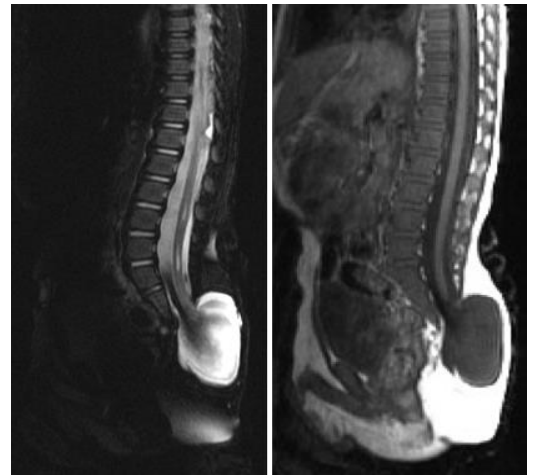


Normal control

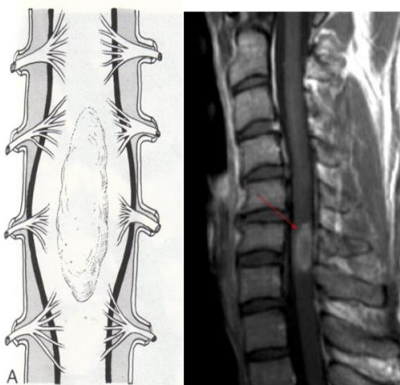
Patient

This MRI of the spine shows:

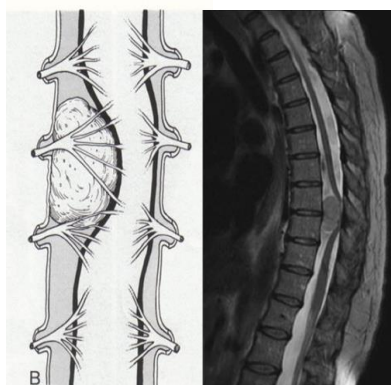
- A. Meningocele**
- B. Extradural tumor
- C. Discitis
- D. Vertebral fusion



**Spinal cord lesions (tumors):**



**intramedullary (T1)**



**Intradural extramedullary**



**Extradural**