



# Radiology

Subject:

Axial Brain CT

Group no:

C5

Done by:

Deena Salah



هَذَا خَلَقَ اللَّهُ فَأَرْوَيْ مَاذَا خَلَقَ الَّذِينَ مِنْ دُونِهِ بَلِ الظَّالِمُونَ فِي ضَلَالٍ مُبِينٍ

# Axial Brain CT anatomy

↓  
مقطع أفقي

\* اسم الصورة :

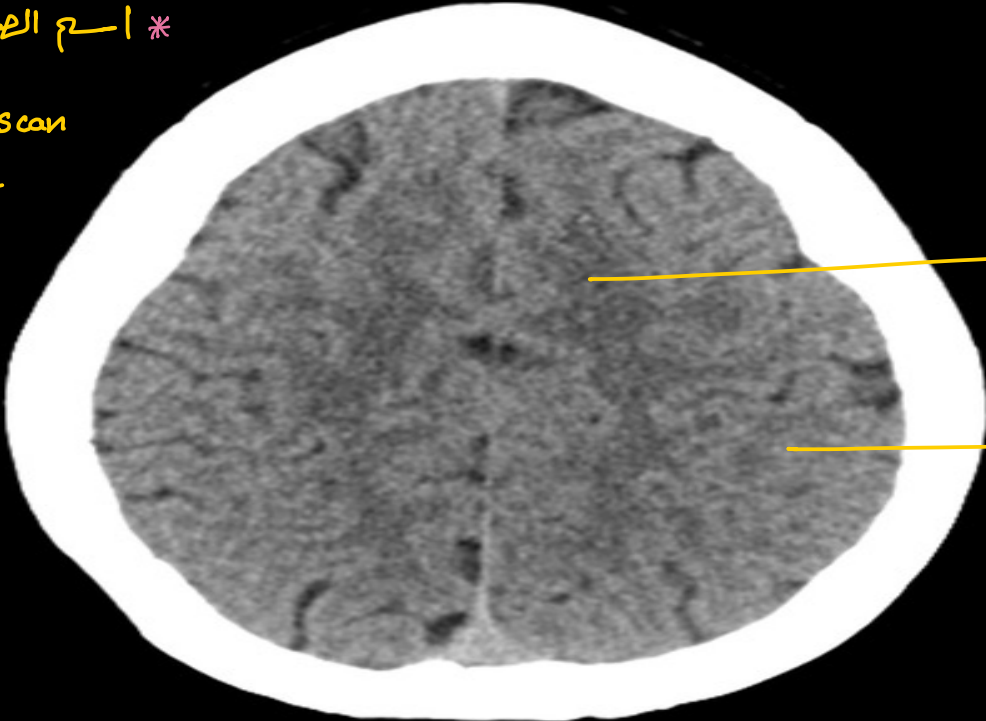
\* Brain CT scan

\* Axial cut

\* Soft tissue  
window



يعني الأنسجة والعضلات



→ White  
matter

myelinated يتكون  
عشان هيك أغلفة

→ Gray matter

قريبك من ال cortex

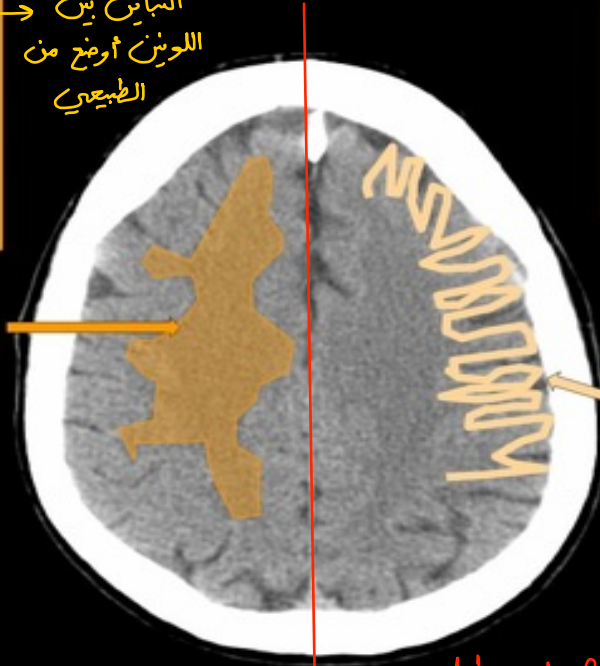


لازم نطور غيظ بين ال white و gray و التباين باللون بينهم يكون طبيعي (اختلاف بسيط)

Is there accentuation of the gray-white differentiation? Think vasogenic edema related to an underlying mass etc.

التباين بين  
اللونين أوضح من  
الطبيعي

White Matter



Is there blurring of the gray-white differentiation? Think cytotoxic edema related to a stroke.

ما في تباين بينهم  
(مثل الدماغ لون واحد)

Gray Matter

→ No shift of midline

## 4 Pairs of Lobes

frontal      parietal      temporal      occipital

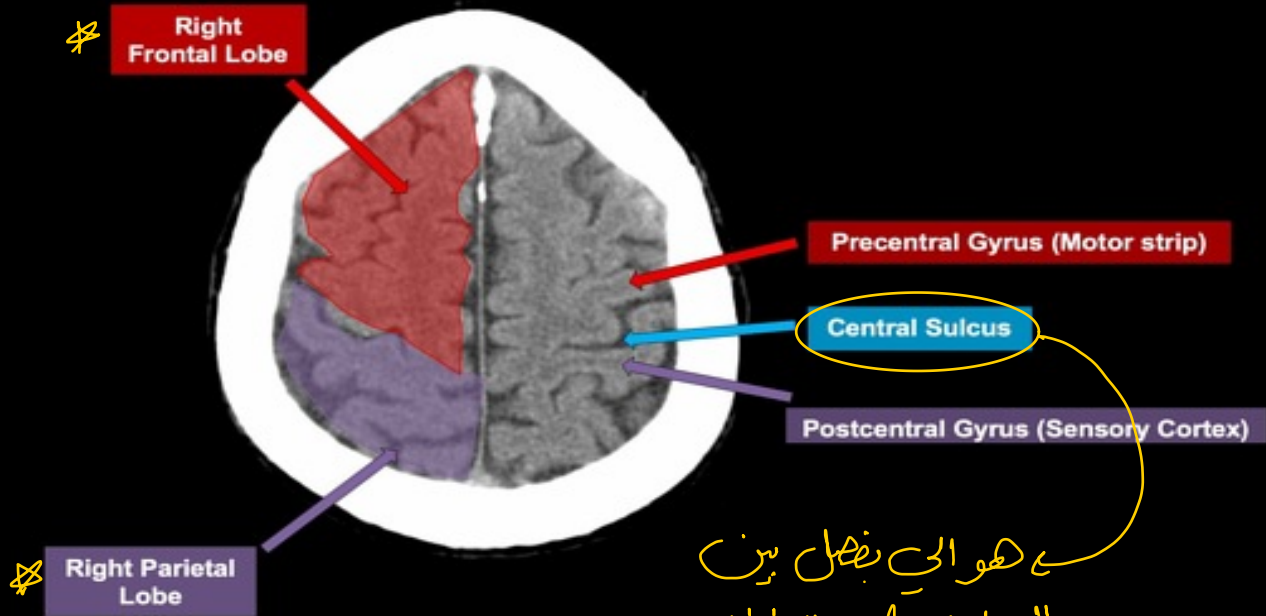
RL

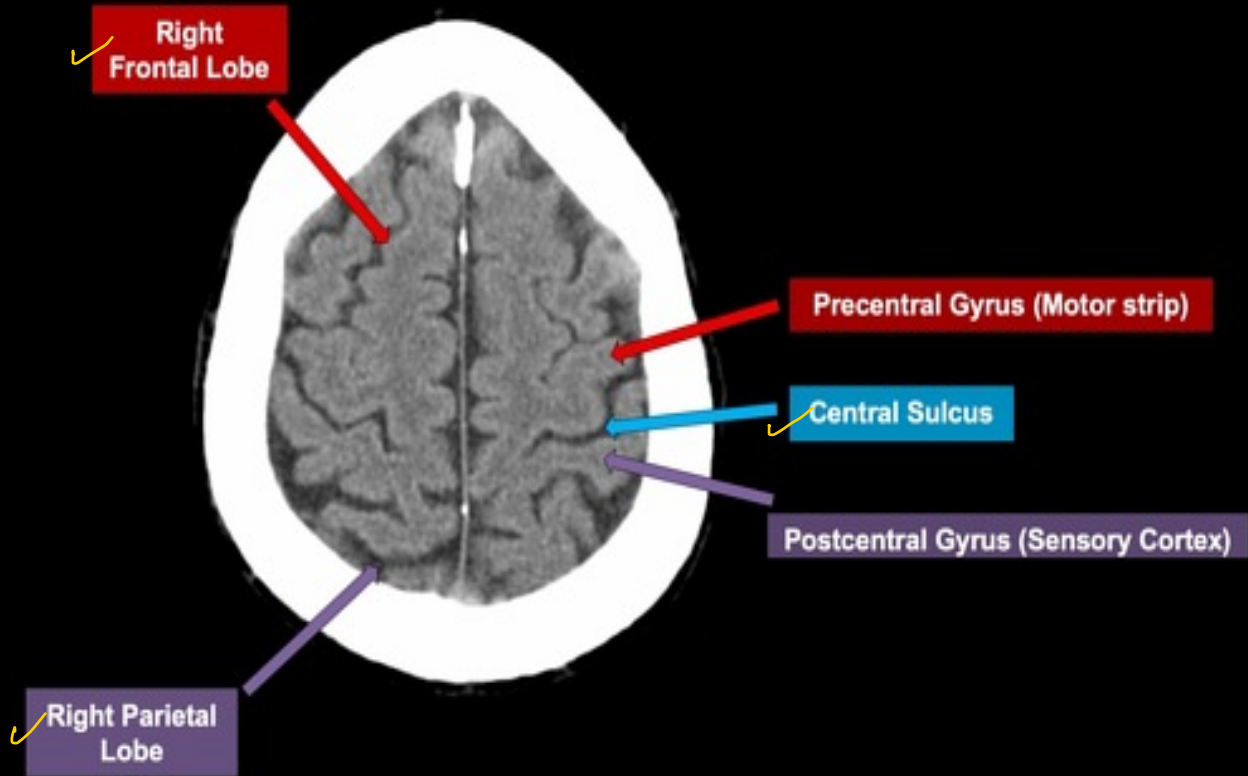
Right Frontal Lobe

- Biggest Lobe
- anterior

Superior Sagittal Sinus



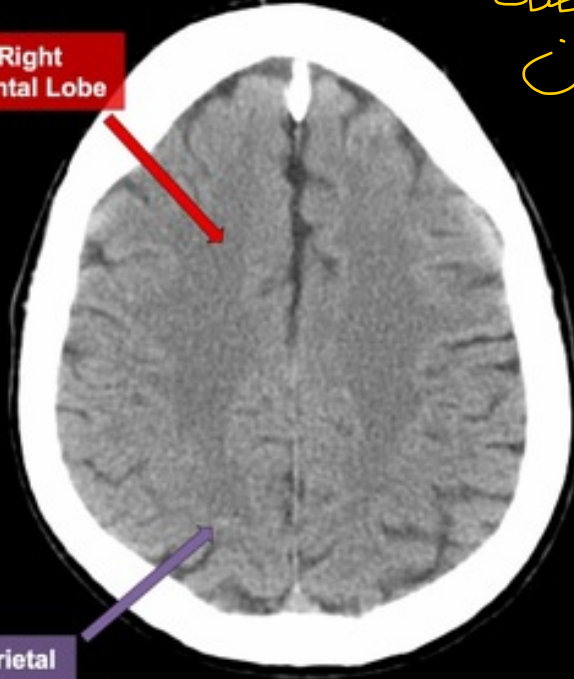




كمون نزلنا مستوي حجاب  
بالدماغ ومش كثير بيش

Right  
Frontal Lobe

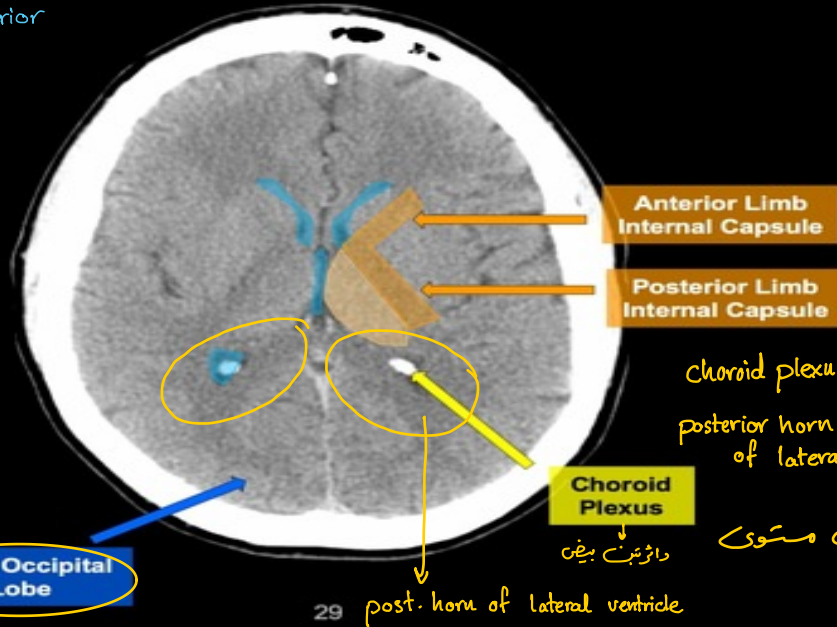
Right Parietal  
Lobe



ما ننزل لكتب بالصورة

بين ال occipital lobe

- smallest lobe
- for vision
- posterior

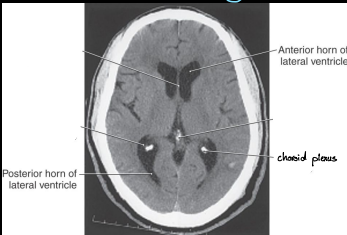


أول ما أشوف ال choroid plexus  
البي يكون داخل ال posterior horn  
of lateral ventricle

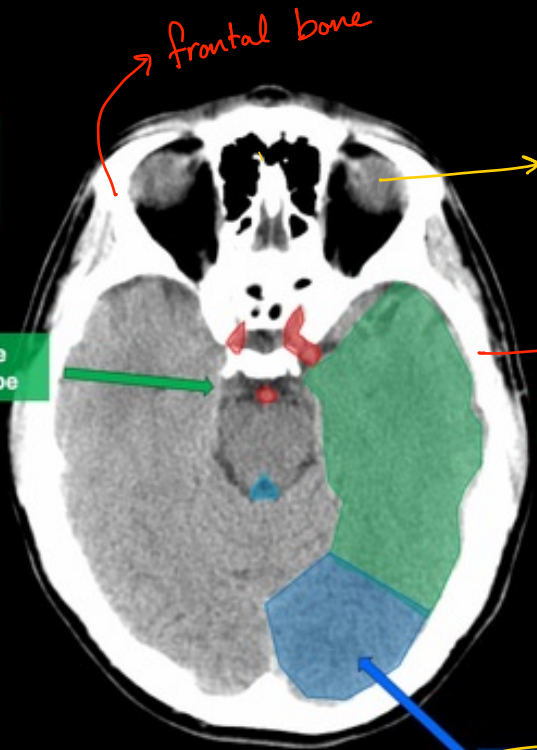
معناها يكون وصلت مستوى  
ال occipital lobe

دا ثبت بيض

صورة للتوضيح:



Is there uncal  
herniation?



أول ما نشوف العيون  
بكون بين معنا  
temporal lobe

temporal bone

Left Temporal Lobe

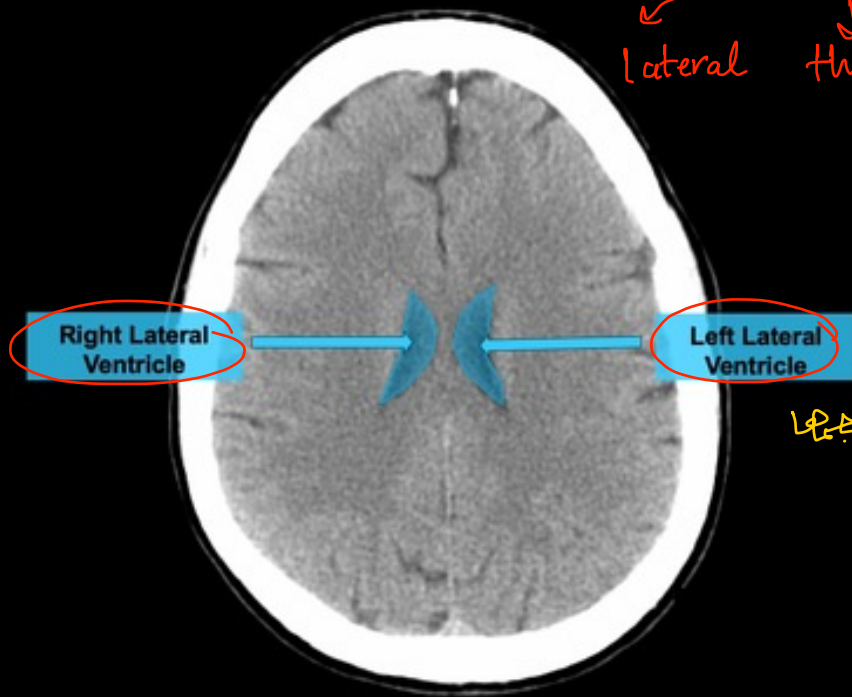
in the middle cranial  
fossa

Left Occipital  
Lobe

3 ventricles of brain

CSF سائل

lateral third fourth



أهم شيء يكون طبيعي  
طبيعي

Largest White matter, binds the 2 cerebral hemispheres  
between the 2 lateral ventricles

Corpus  
Callosum  
Anterior Genu

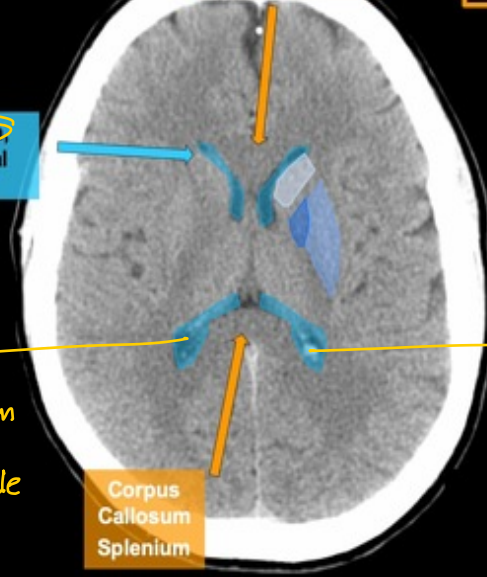
Is there an abnormality  
that crosses midline via  
the corpus callosum?

Frontal Horn  
Right Lateral  
Ventricle

posterior  
horn / occipital horn  
of lateral ventricle

Corpus  
Callosum  
Splenum

choroid plexus



Basal ganglia   
 is gray matter

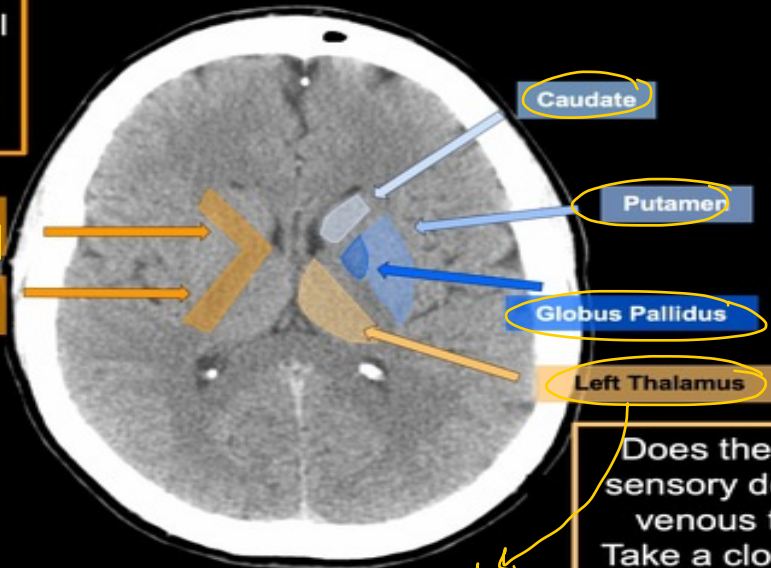
- caudate nucleus
- lentiform nucleus
  - putamen
  - globus pallidus

Does the patient focal weakness without cortical signs? Take a closer look at the posterior limb of the internal capsule.

white matter fibers ← Anterior Limb Internal Capsule

Posterior Limb Internal Capsule

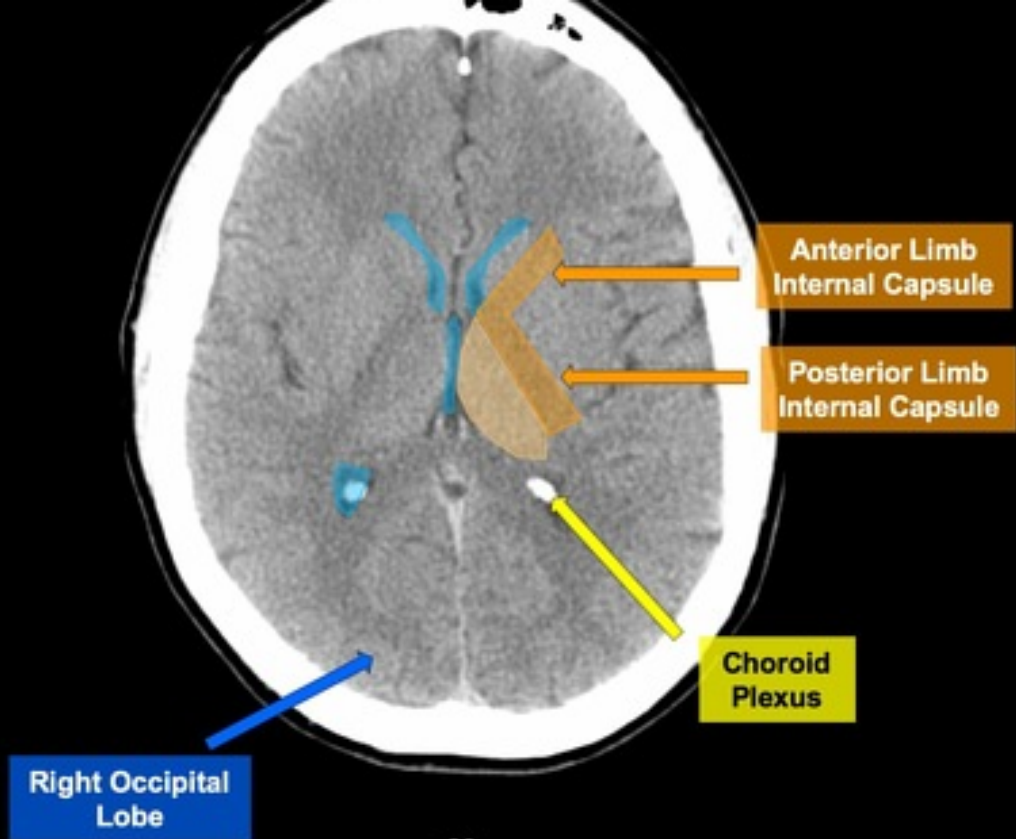
between nuclei of basal ganglia

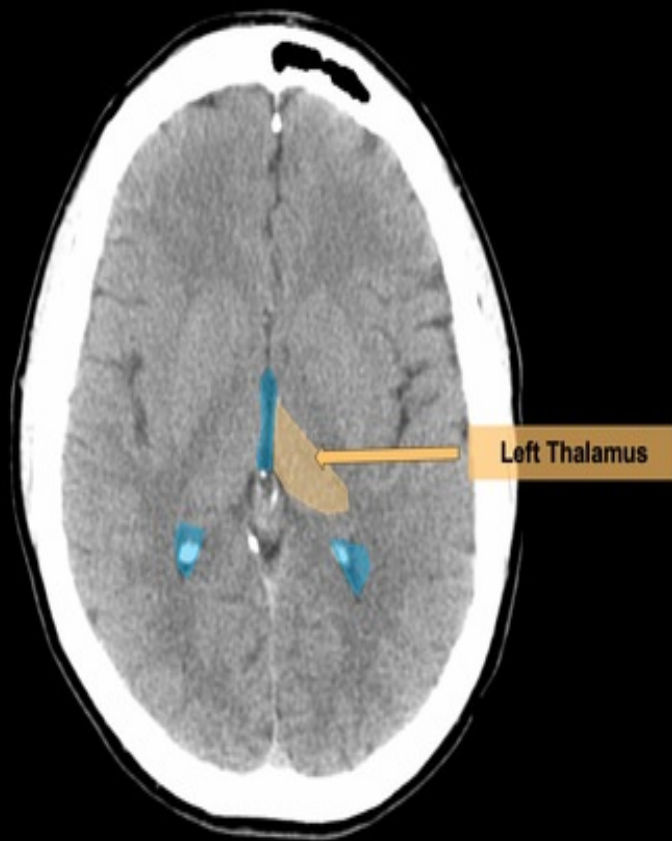


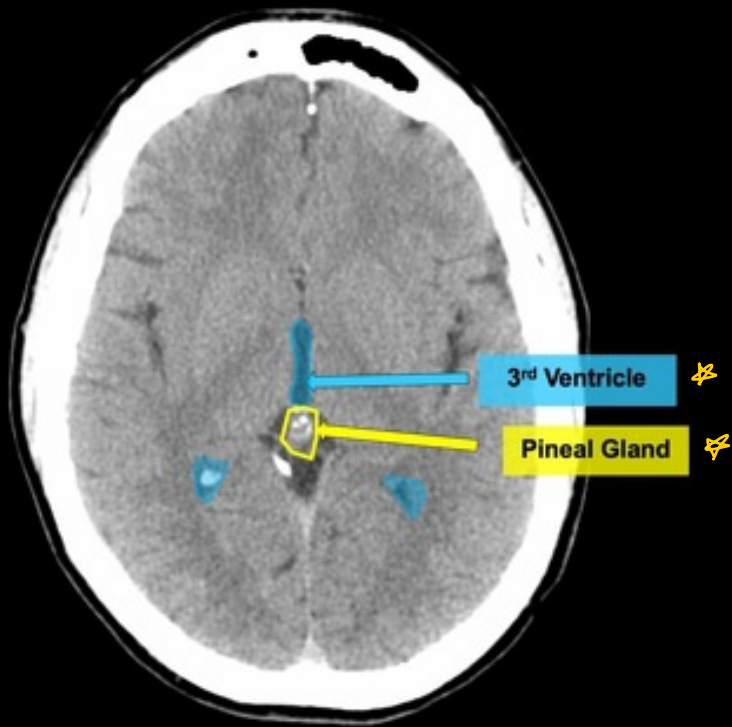
Does the patient have a movement disorder, anoxic injury or a toxic metabolic process- take a look at the basal ganglia..

Does the patient have sensory deficits or deep venous thrombosis? Take a closer look at the thalamus.

egg shaped  
is mix of gray + white matter



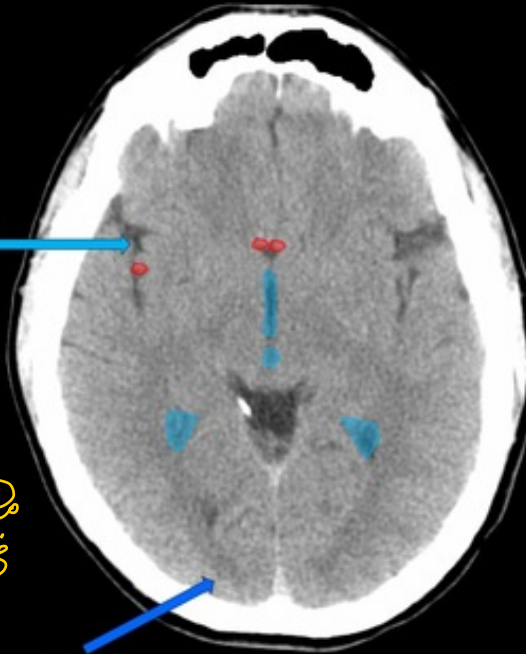




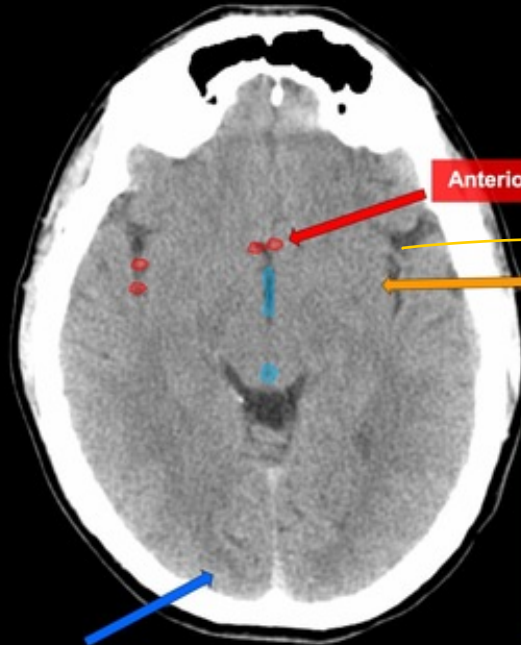
Sylvian Fissure

lateral sulcus  
يفصل ال frontal و parietal  
عن ال temporal  
مهمة في ال insula  
جوانبها

Right Occipital Lobe



Does the patient have a visual deficit in a homonymous distribution? Take a closer look at the occipital lobe



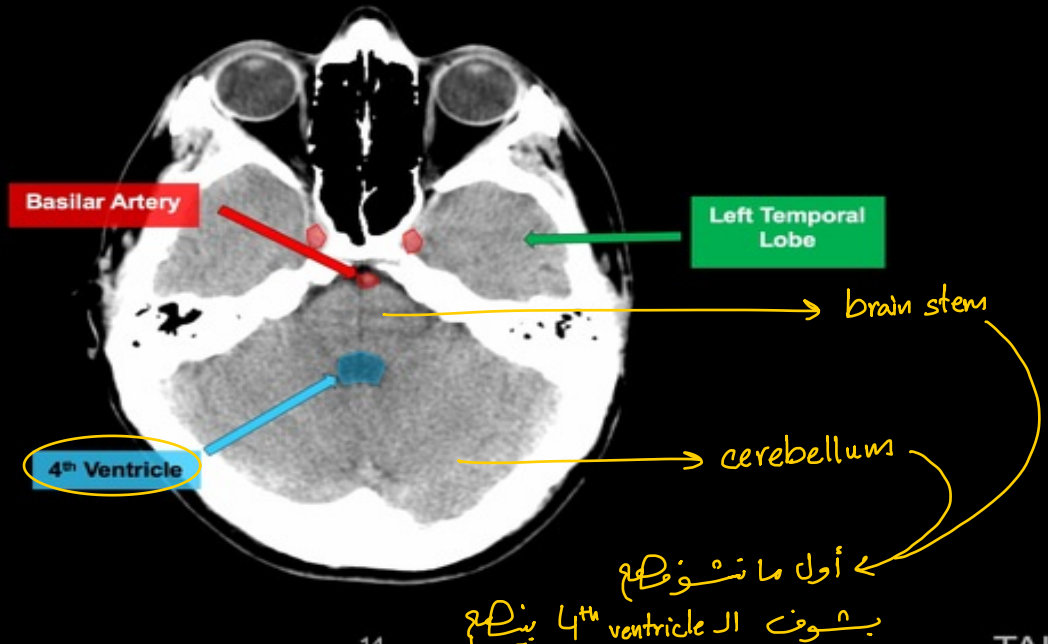
Anterior Cerebral Artery

Sylvian fissure

Insula

Right Occipital Lobe

Does the patient have an MCA infarct? The insula is commonly affected in that situation.



The temporal horns can be a good marker of detecting early hydrocephalus?

Temporal Horn,  
Right Lateral  
Ventricle

Right Posterior  
Cerebral Artery

Left Internal  
Carotid Artery

Midbrain

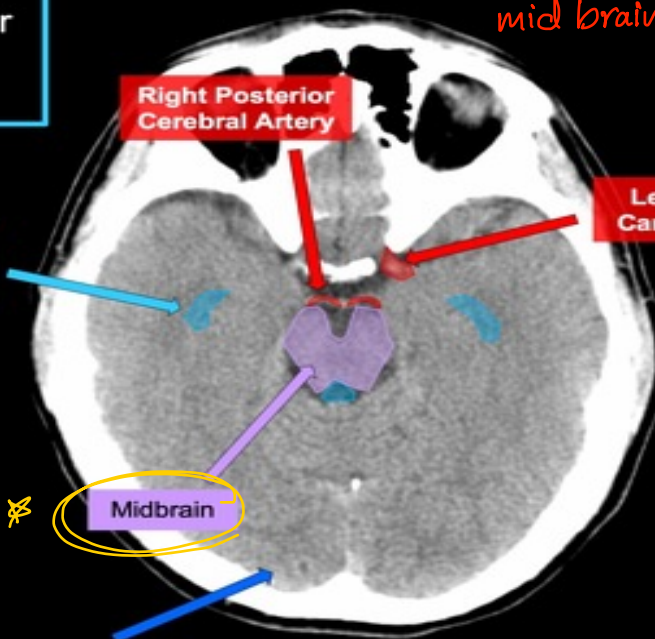
Right Occipital  
Lobe

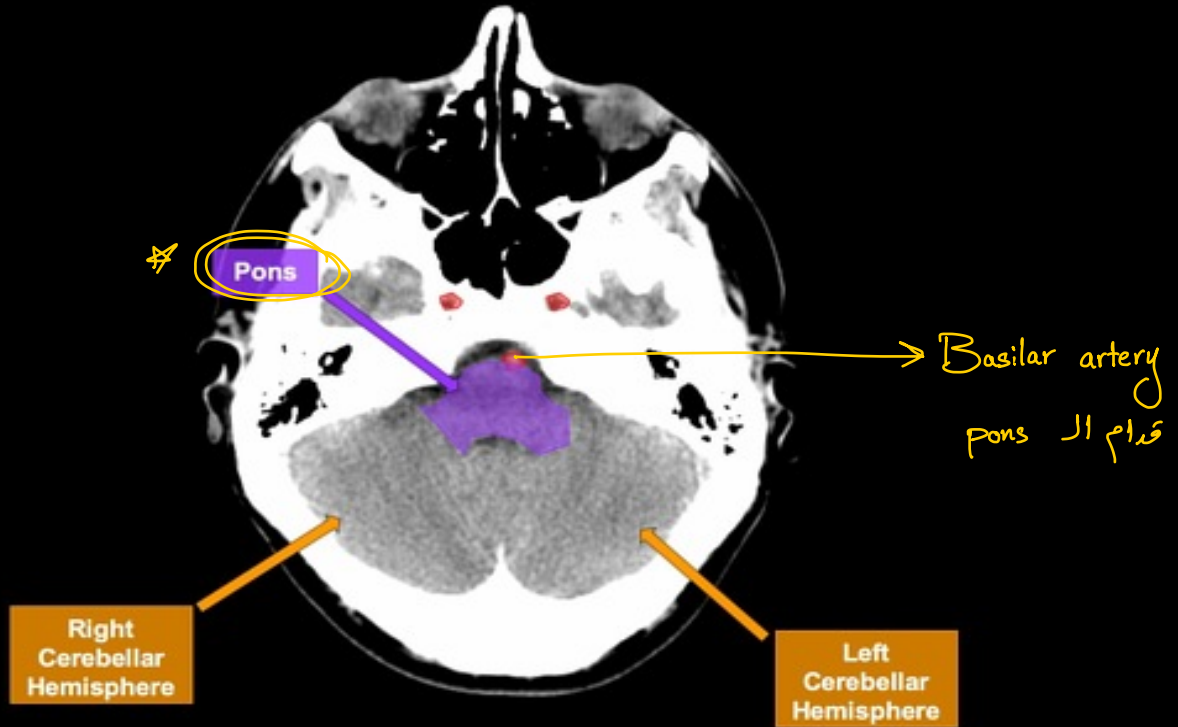
Brain stem

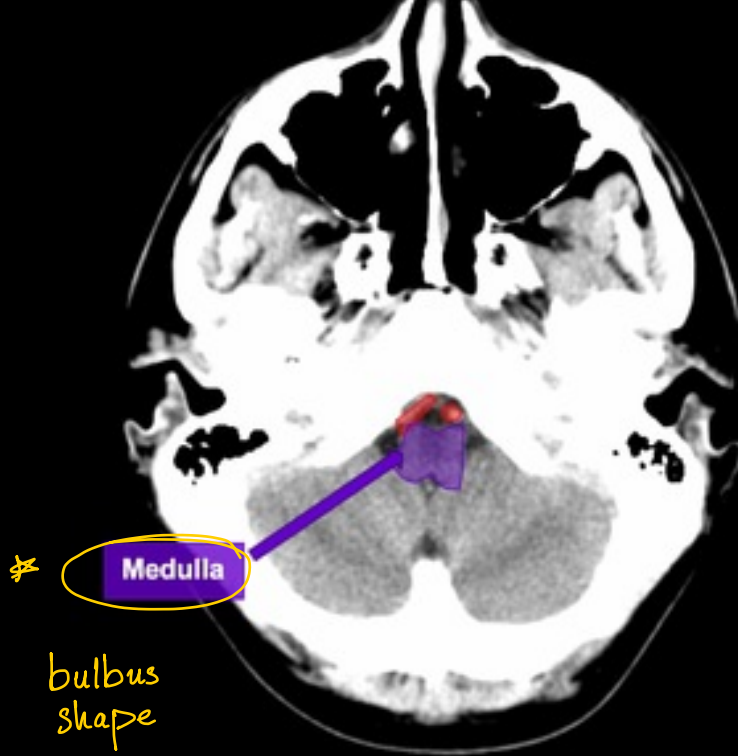
mid brain

pons

medulla







اسم الصورة :

\* Brain CT scan

\* Axial cut

\* Bone Window



يعني بهاي الصور يكون  
العظام أوضح والأشعة  
مخفية.

Bone is white on CT

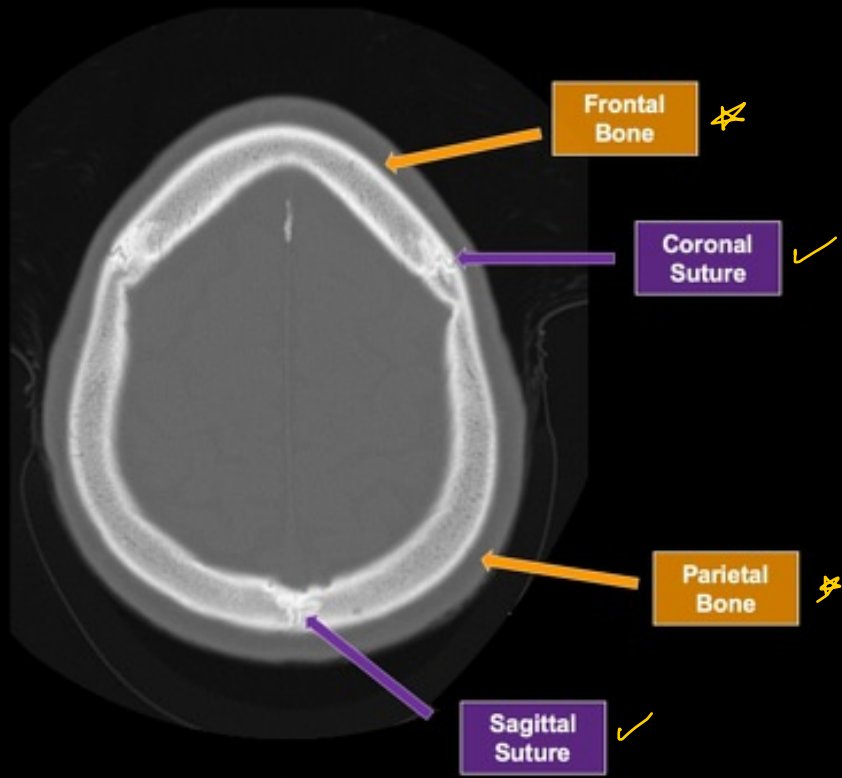


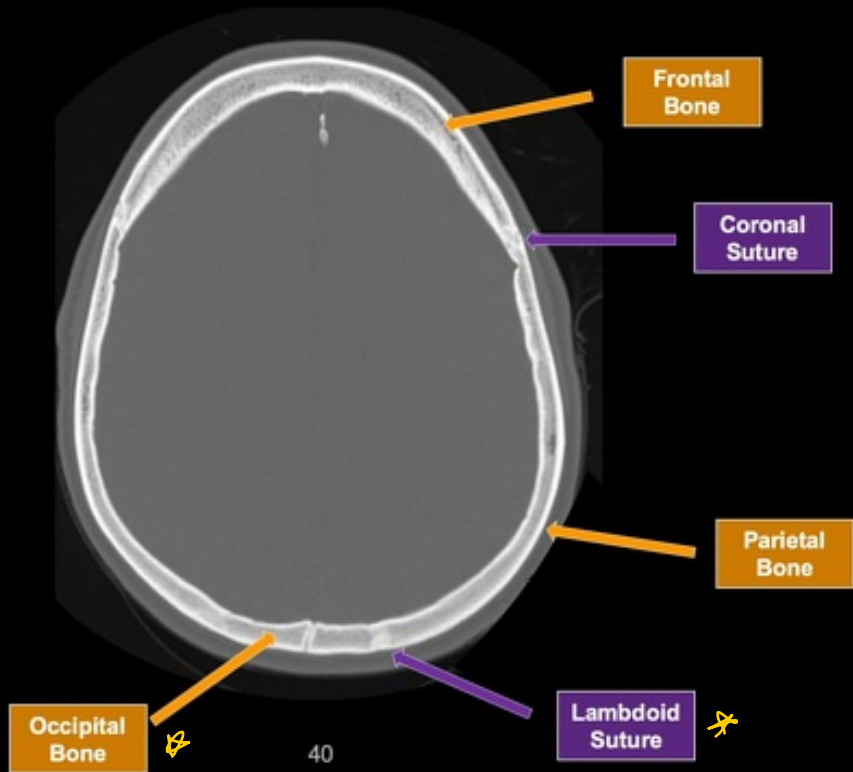
Coronal  
Suture

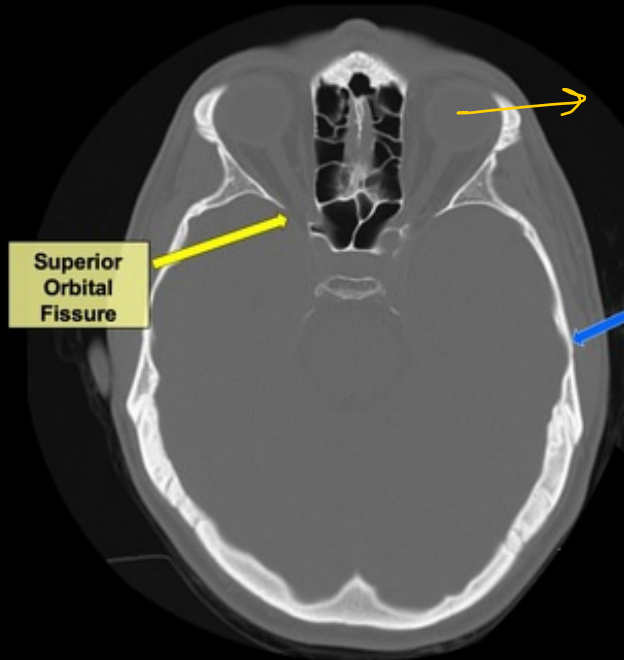


Sagittal  
Suture





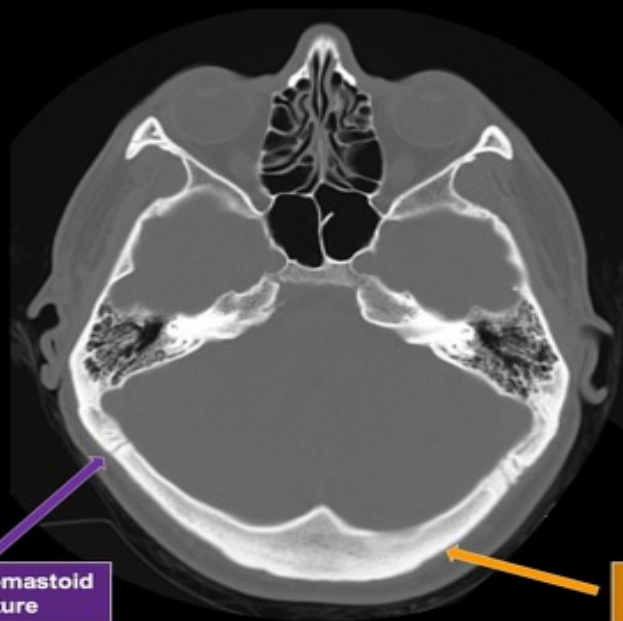




Superior  
Orbital  
Fissure

فجوة العينين  
والمخية  
temporal lobe  
+  
bone

Squamous  
Portion of  
Temporal Bone



Occipitomastoid  
Suture

Occipital  
Bone

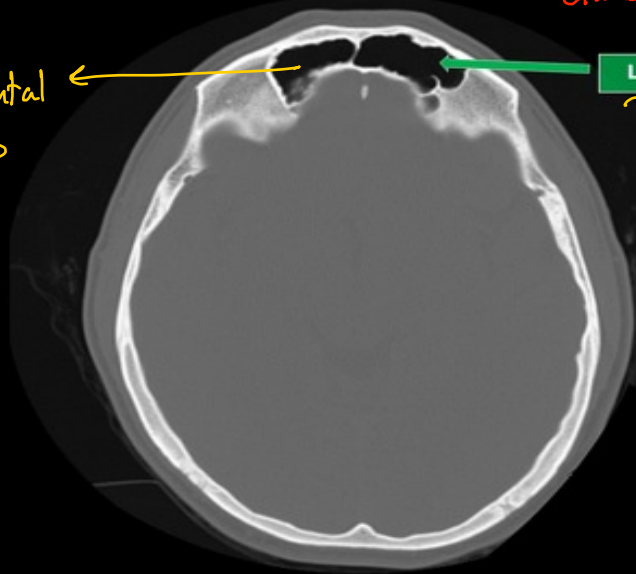


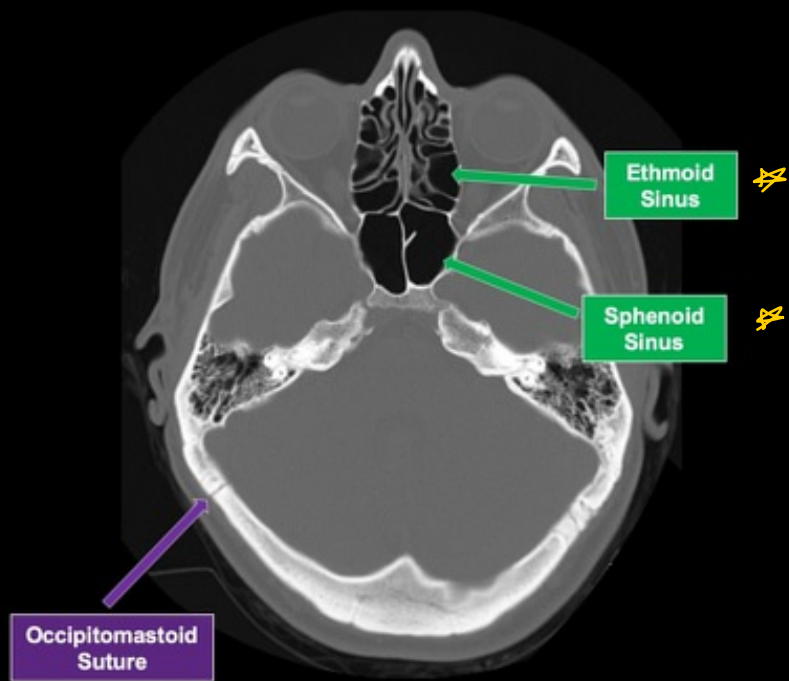
black ← air  
on  
CT

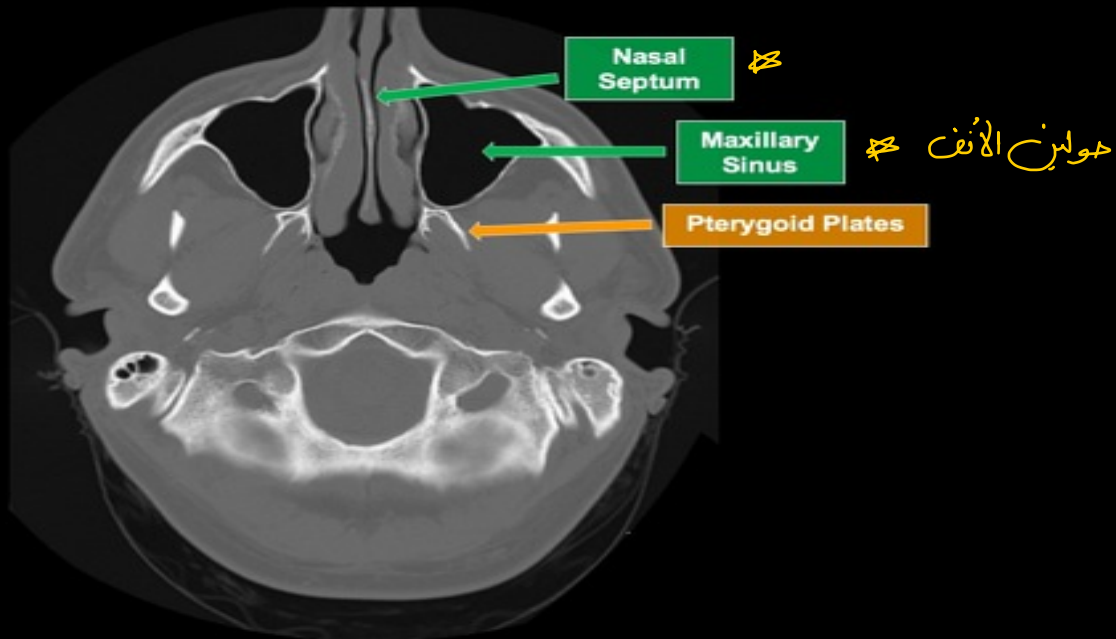
4 pairs of sinuses  
frontal ethmoid sphenoid maxillary

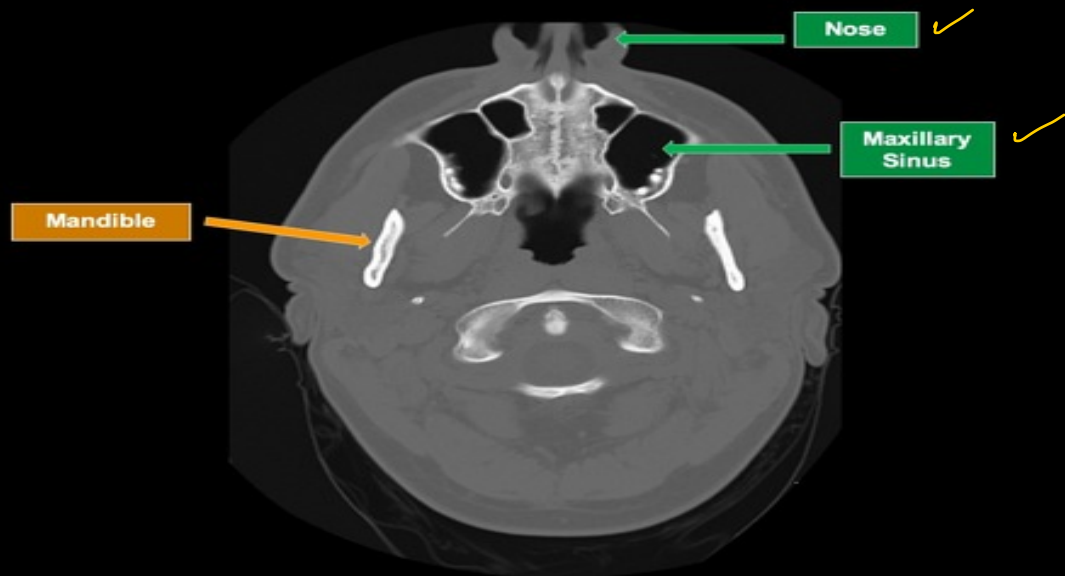
Rt. frontal  
sinus

Left Frontal Sinus

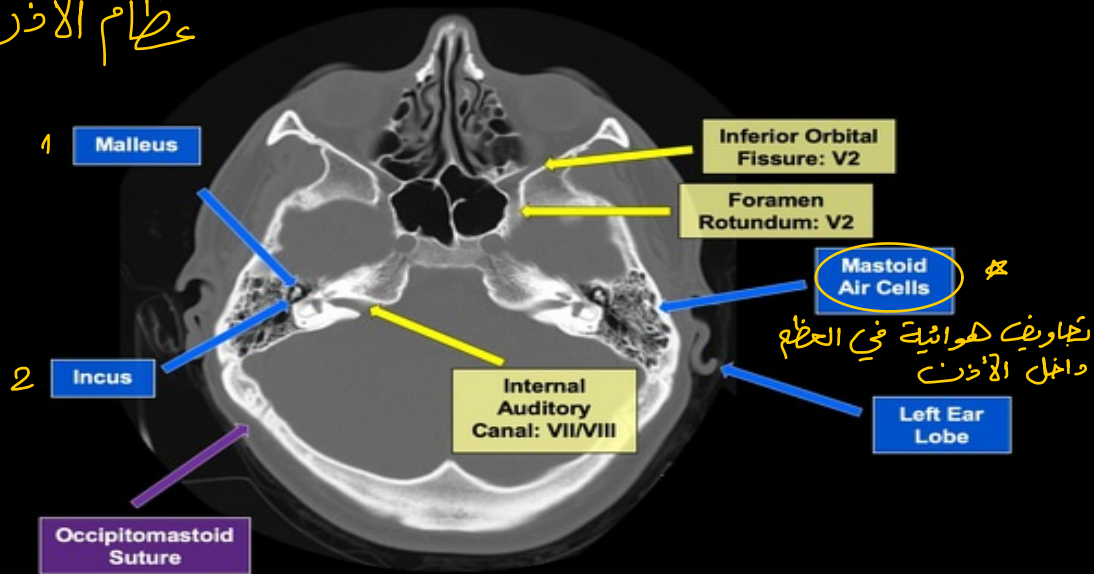


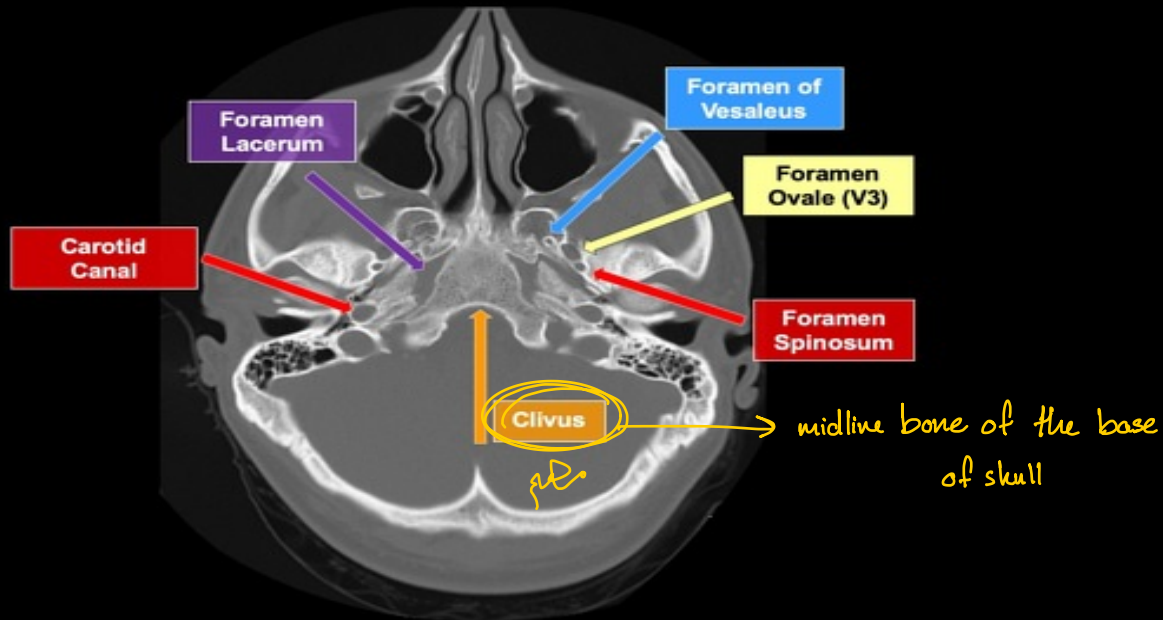




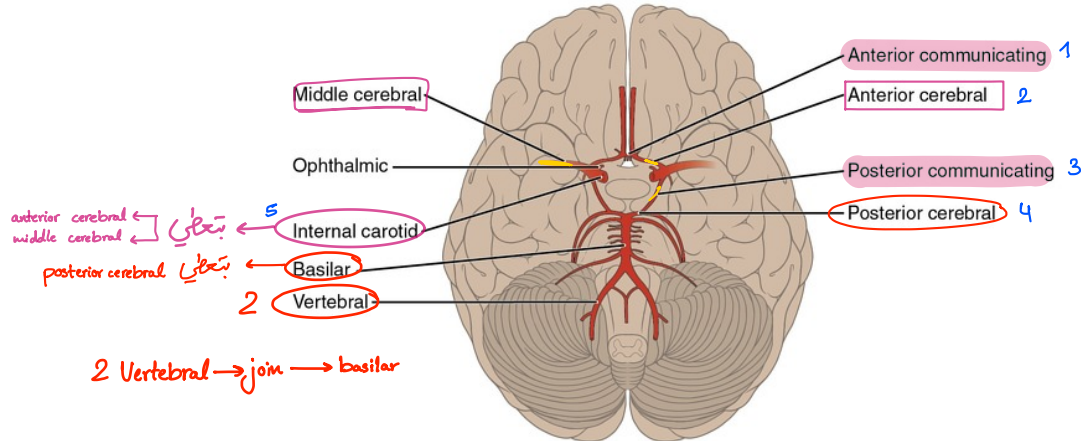


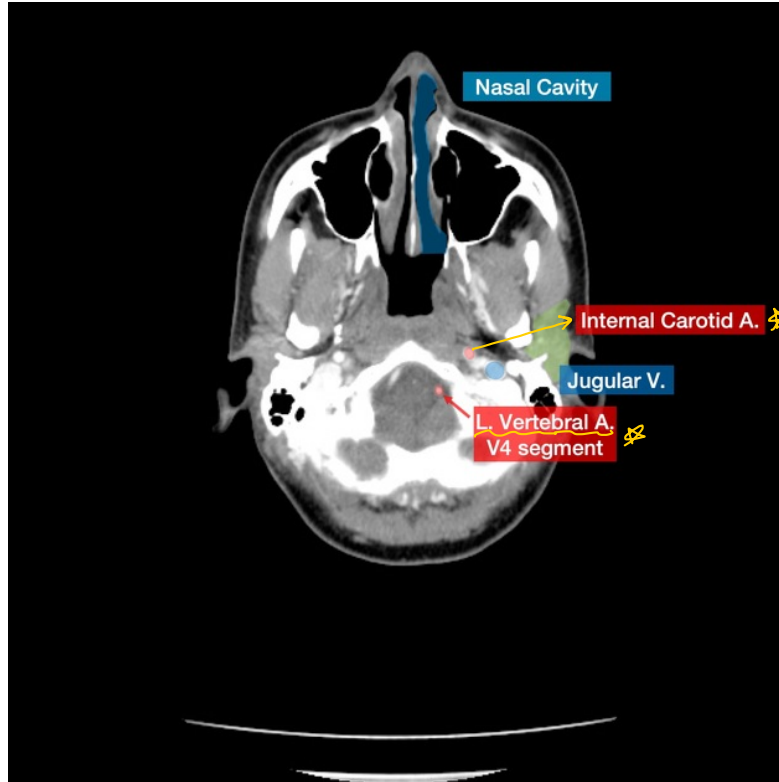
# عظام الأذن :



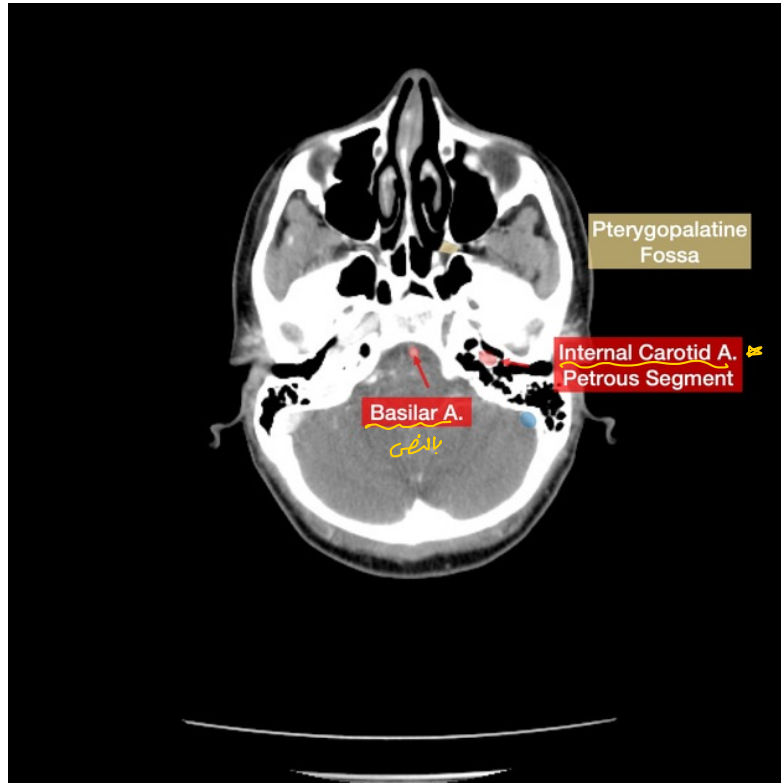


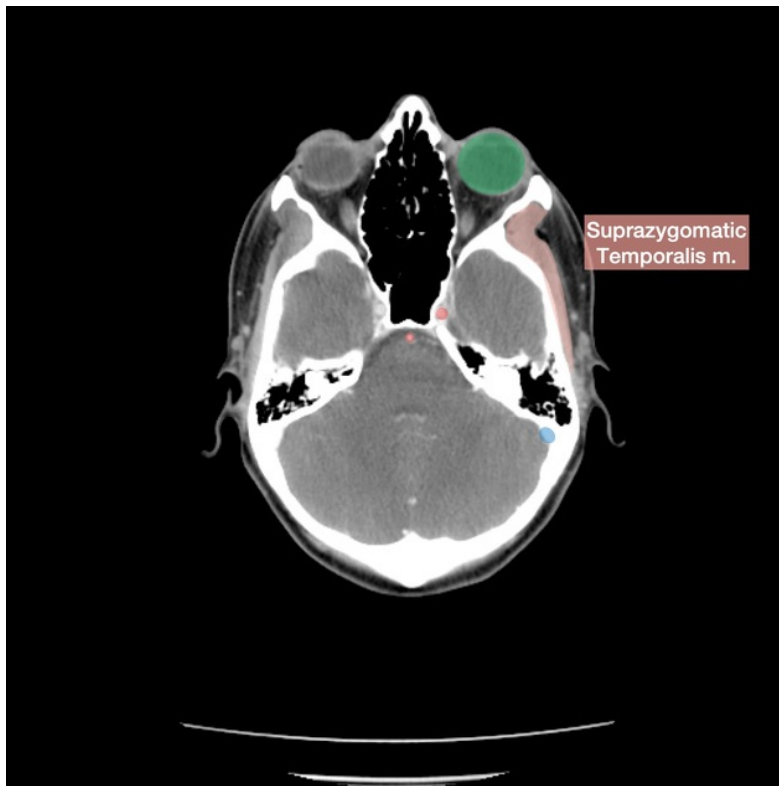
أجزاء circle of Willis :

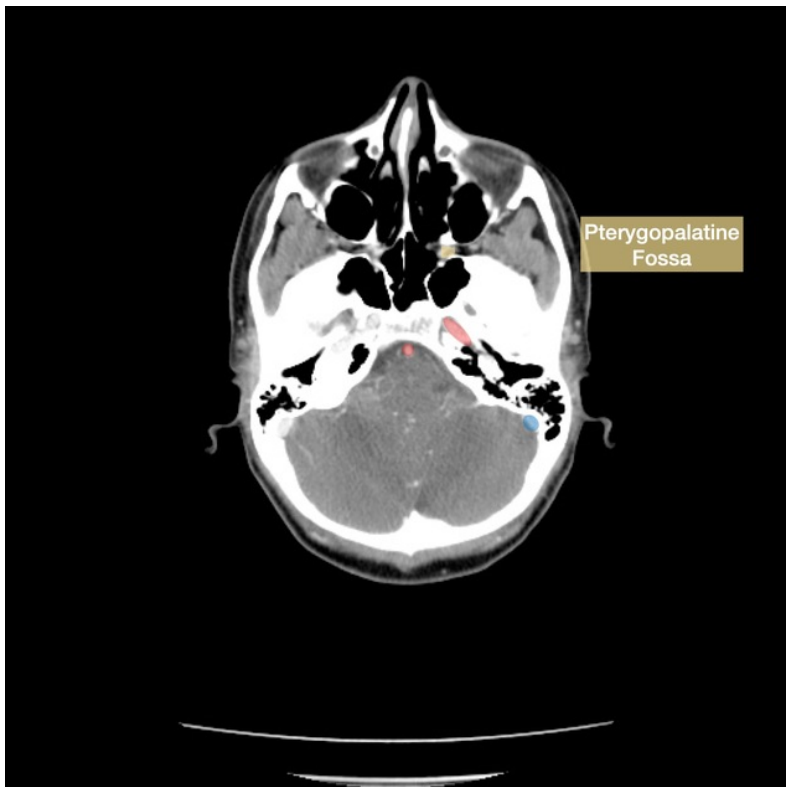




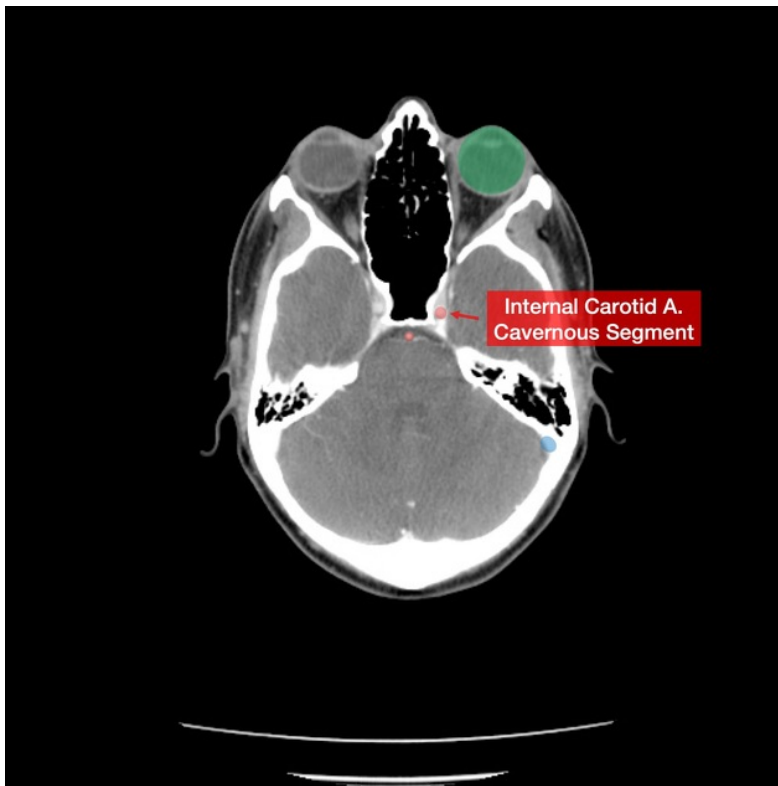
\*عقن كونٲاٲ  
عقن كونٲاٲ  
ال كونٲاٲ

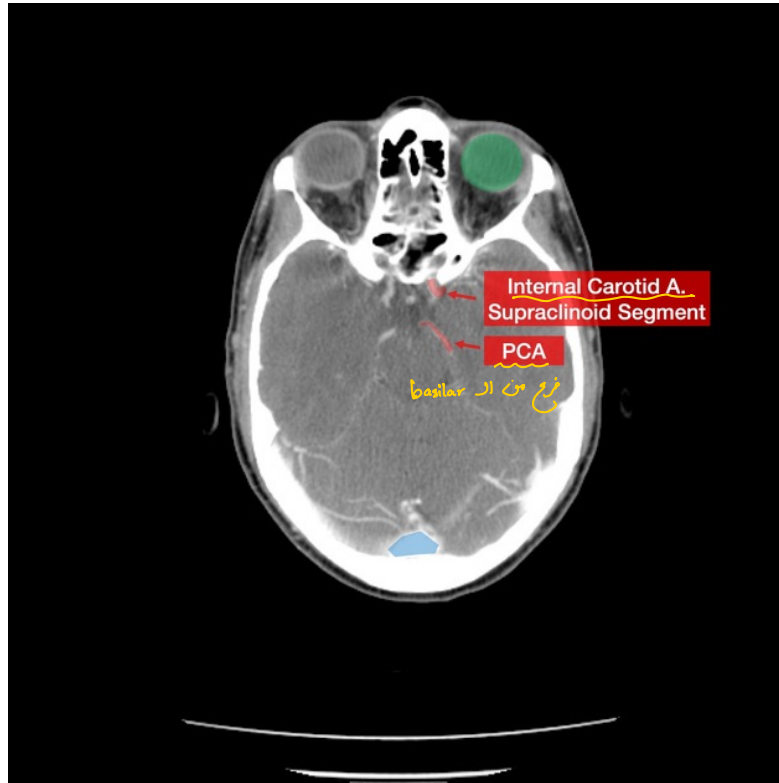


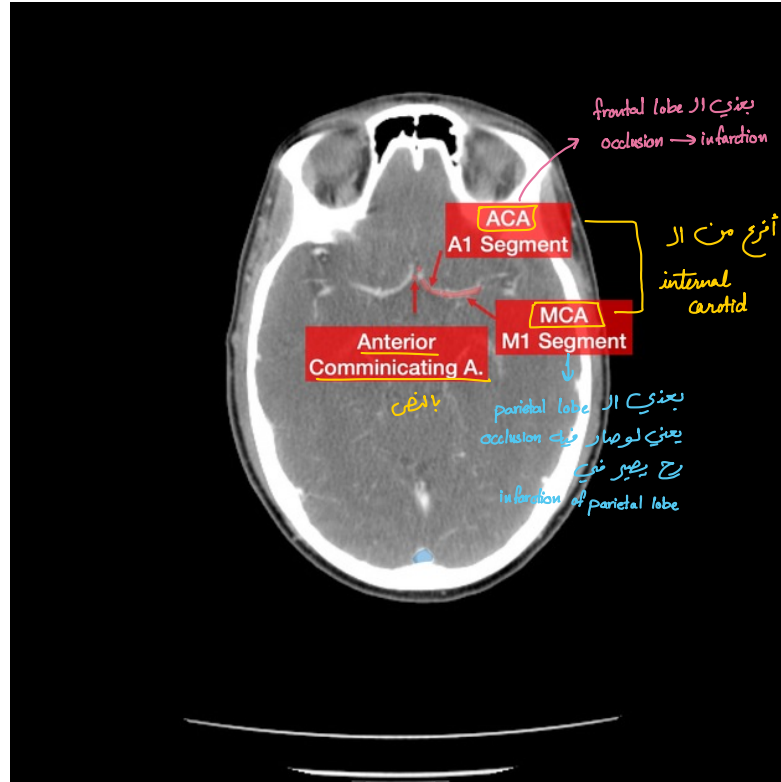


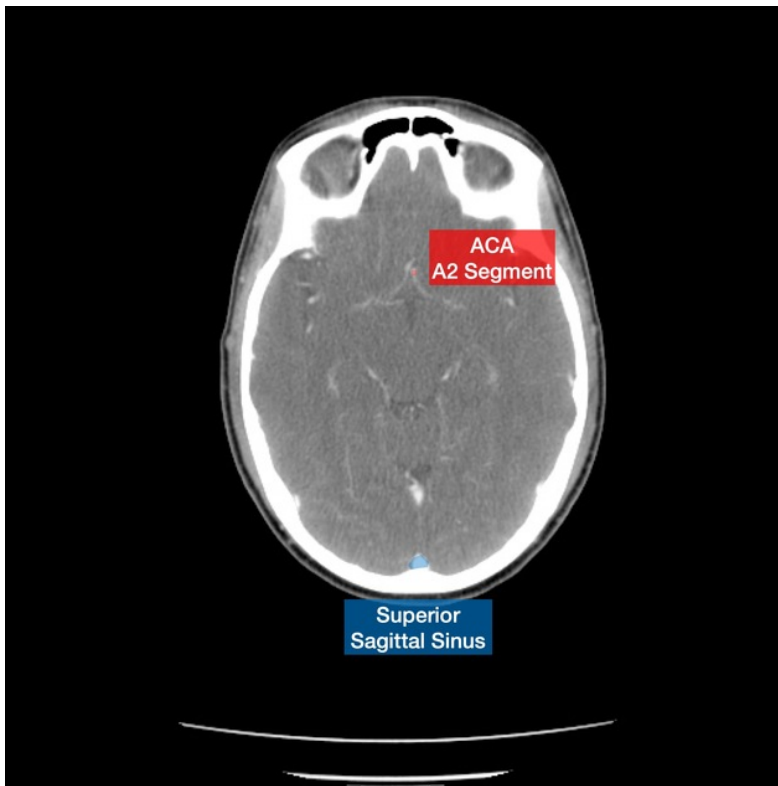


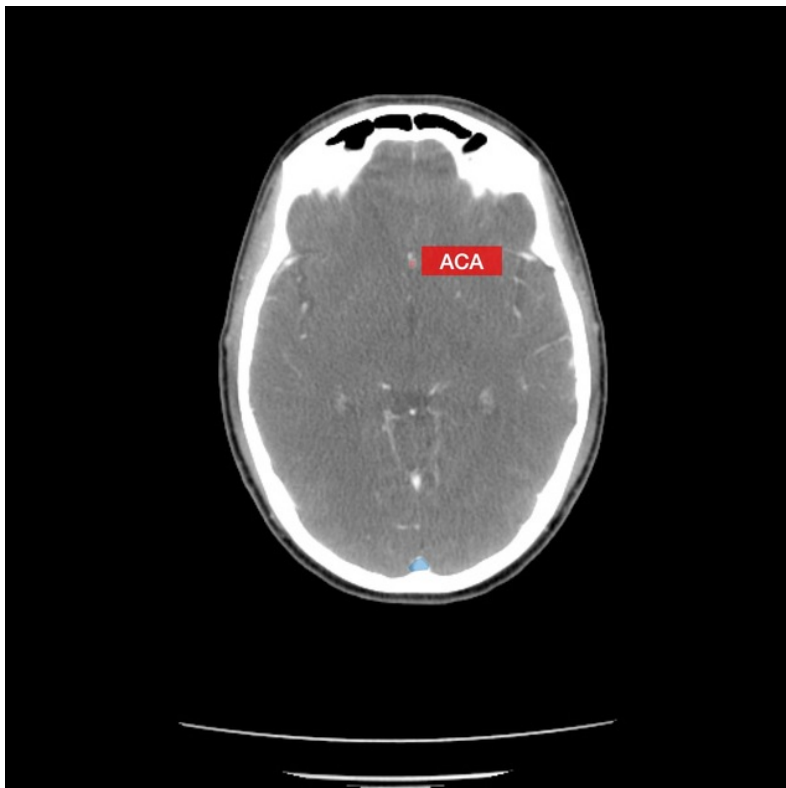
Pterygopalatine  
Fossa











# مکرر

