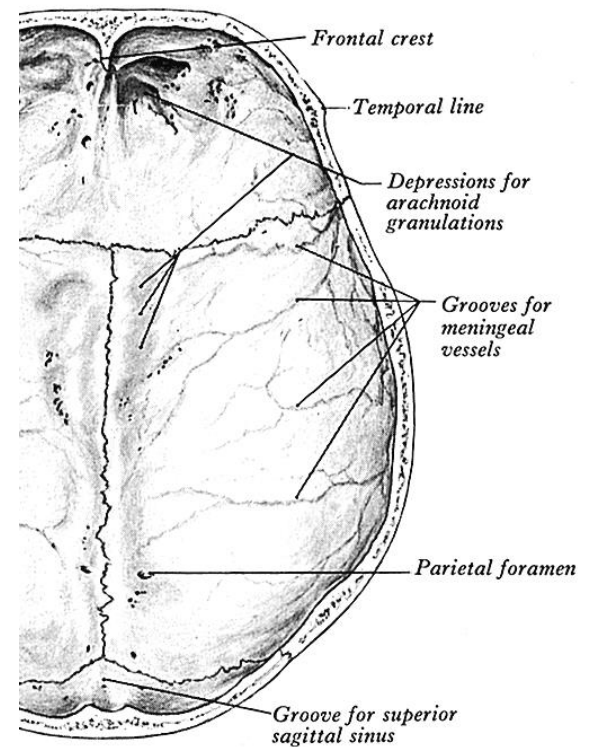
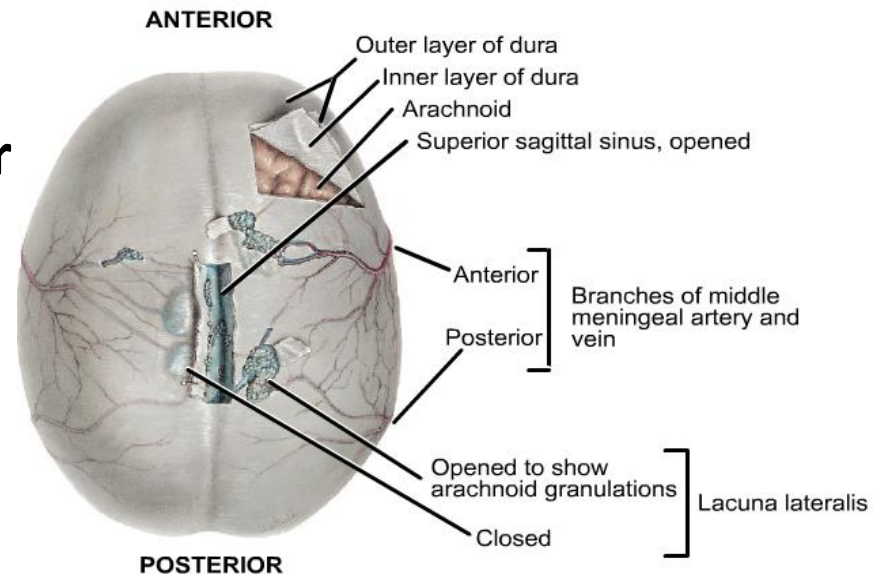


Cranial fossa's

Vault (Calva) of the skull



- Calva :includes most of the frontal and parietal bones and the upper occipital squama and hence the coronal, sagittal and lambdoid sutures unless fusion
- numerous **vascular furrows** (اخدود) and cerebral **grooves**. Superior Sagittal groove (for superior sagittal sinus.)
- Granular pits : (lateral lacunae) for arachnoids granulation
- Grooves for middle meningeal vessels



ANTERIOR

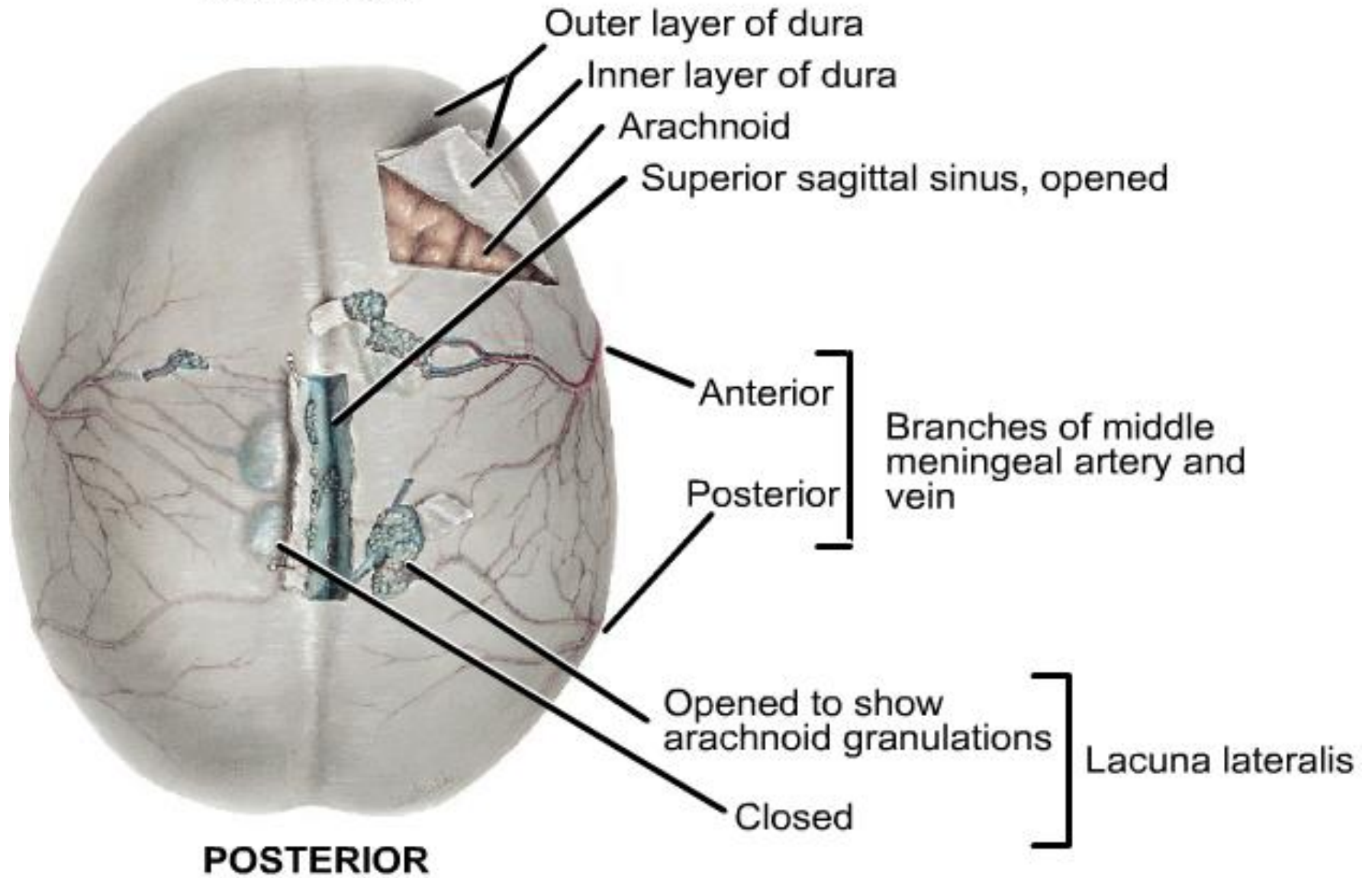
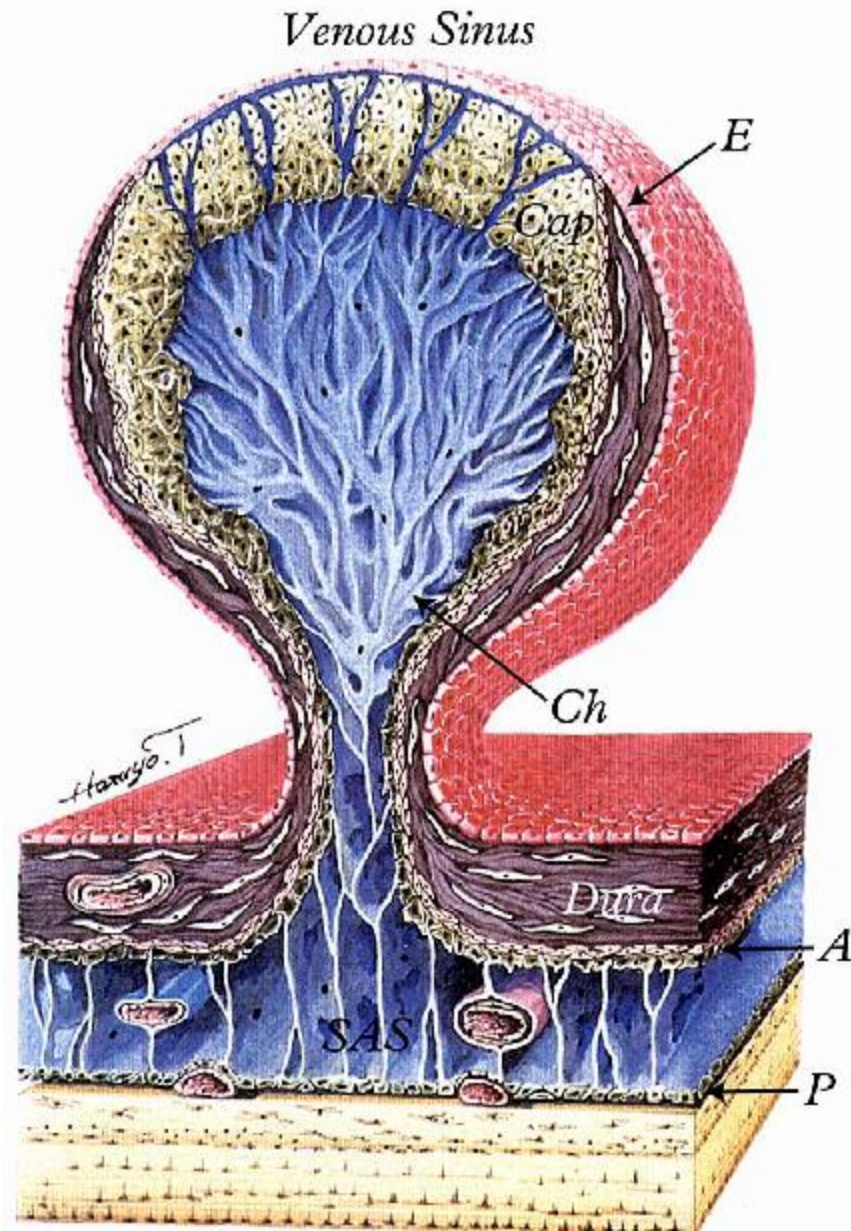


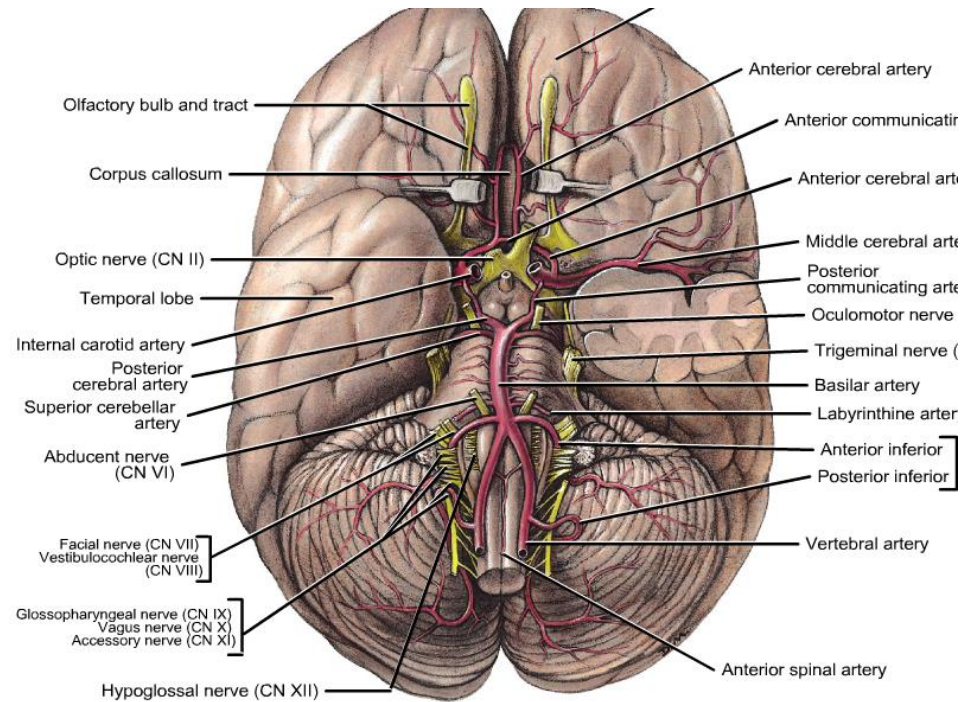
Diagram of an arachnoid granulation.

- The subarachnoid space (SAS) between
- the arachnoid (A) and pia mater (P) is highly trabeculated and is continuous with
- the channel (Ch) in the centre of the granulation. Narrow channels traverse the cap region of the granulation to come into contact with the endothelium (E) of the
- venous sinus. It is through the endothelium that the fluid finally drains.



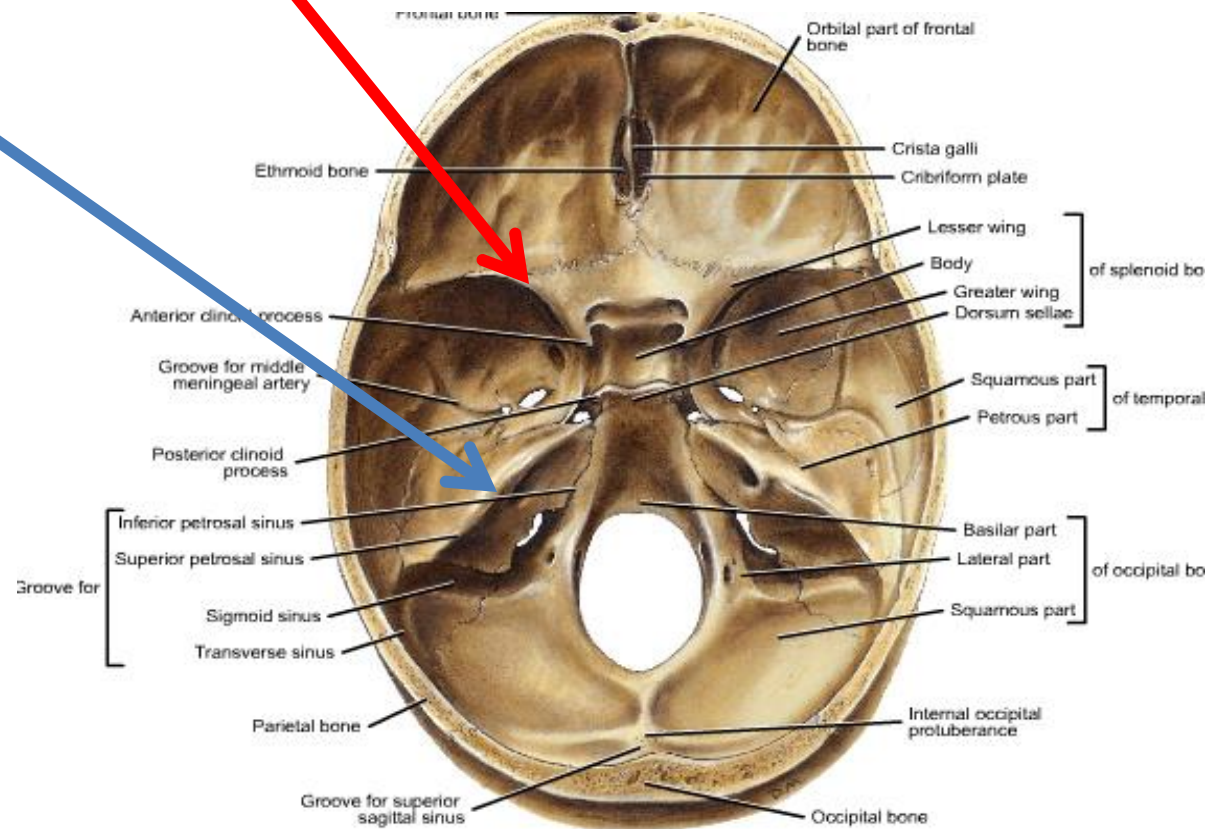
Vault

- ***Cranial cavity***
- **Surrounding meninges**
- **Brain**
- **Cranial nerves**
- **Arteries**
- **Veins**
- **Venous sinuses**



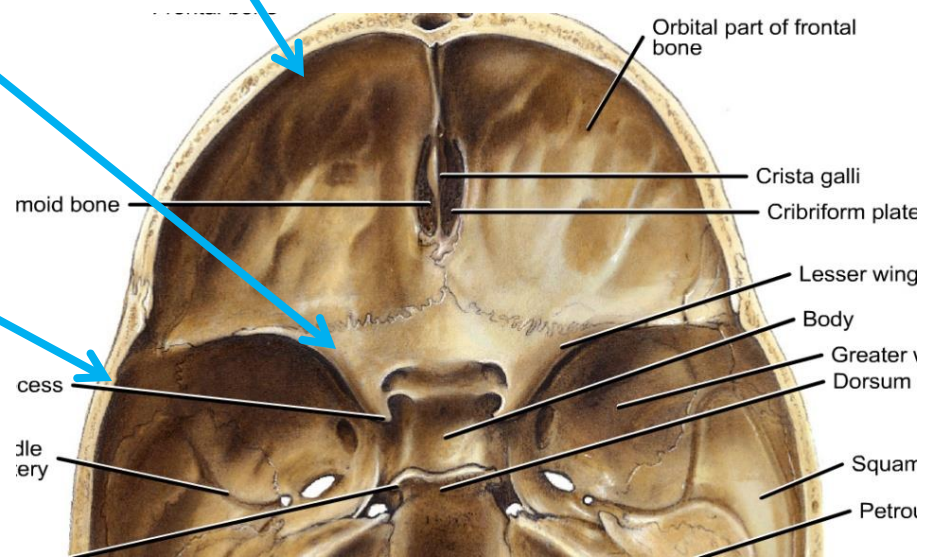
Base of the skull

- Divided by the :-
- Lesser wing of sphenoid bone
- Petrous part of temporal bone

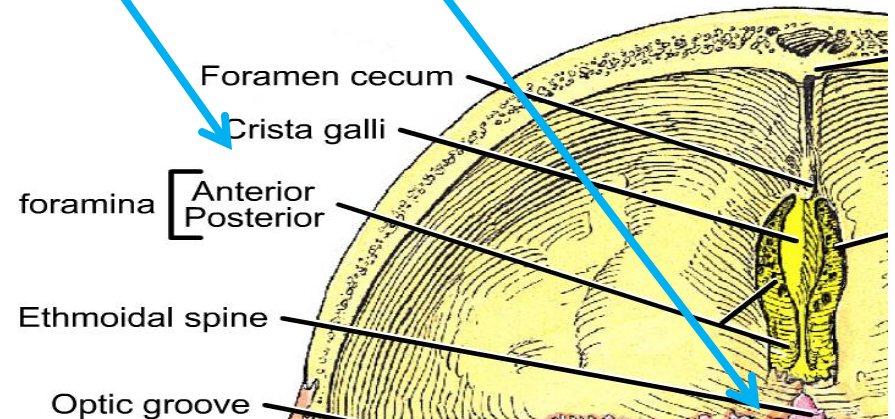


Anterior cranial fossa

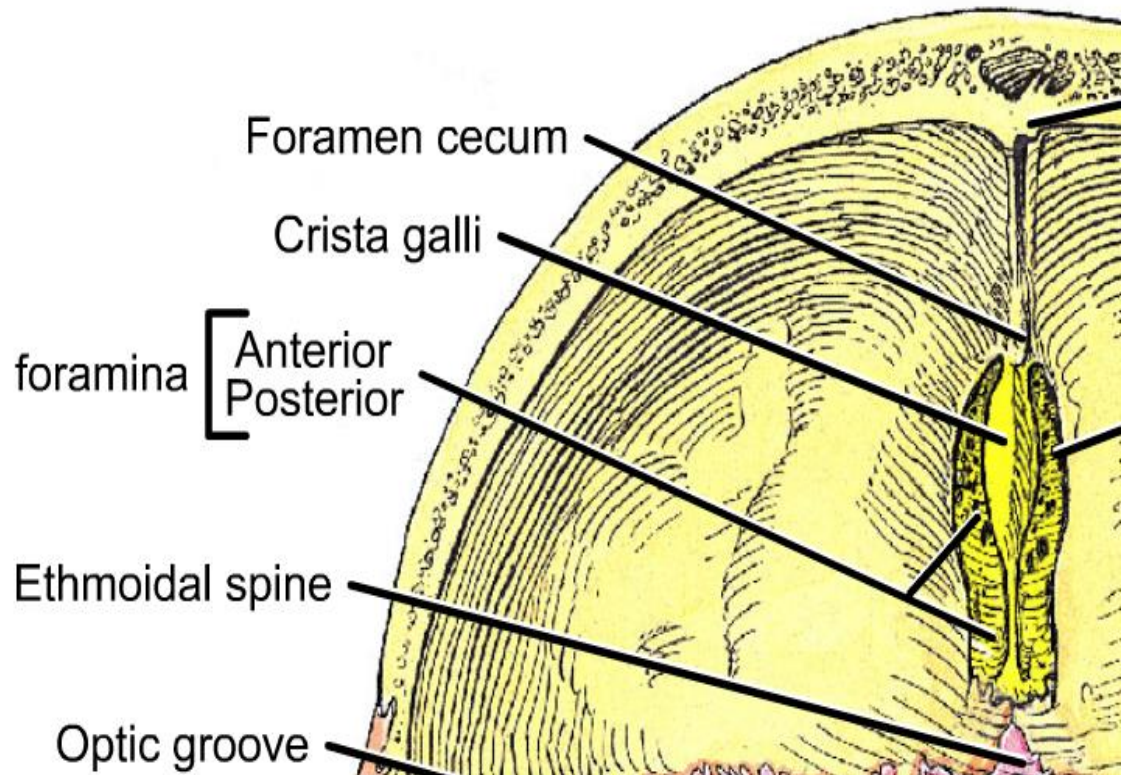
- Lodges frontal lobe of cerebral hemisphere
- Surrounded :-
 - inner surface of the **frontal** bone
 - **lesser wing** of sphenoid bone (end laterally by **pttrion** the anteroinferior angle of parietal)

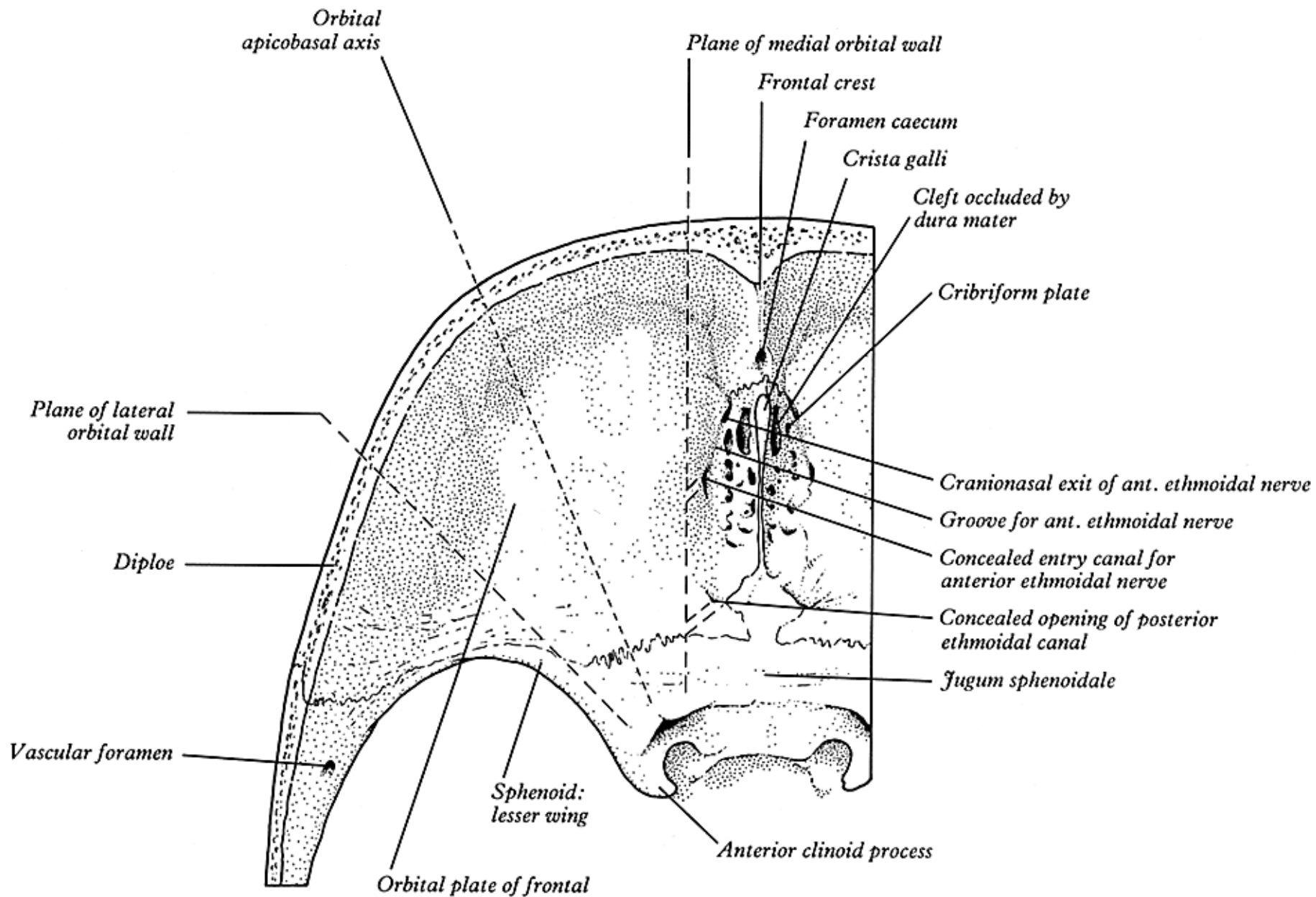


- **Crista galli** : (ethmoidal)for attachment of falx cerebri ,
- **Anterior clinoid process**: medial end of lesser w. give attachment for tentorium cerebelli
- Posteriorly limited by groove for optic chizma
- Floor :frontal bone and ethmoid
- Foramen cecum: in front crista galli (vein from nose to superior Sagital sinus)



- Two foramina : anterior and posterior ethmoid
- Olfactory bulbs : on two cribriform plate



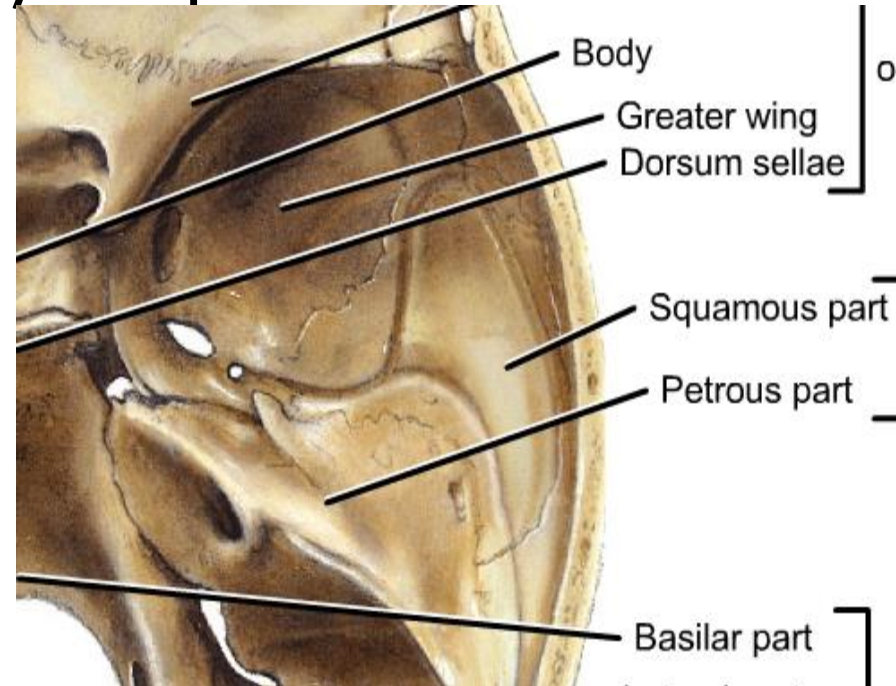


Middle cranial fossa

Middle

Formed of two portions :-

- ❑ Small median part : by body of sphenoid
- ❑ Expanded lateral part :
Squamous temporal and
greater wing



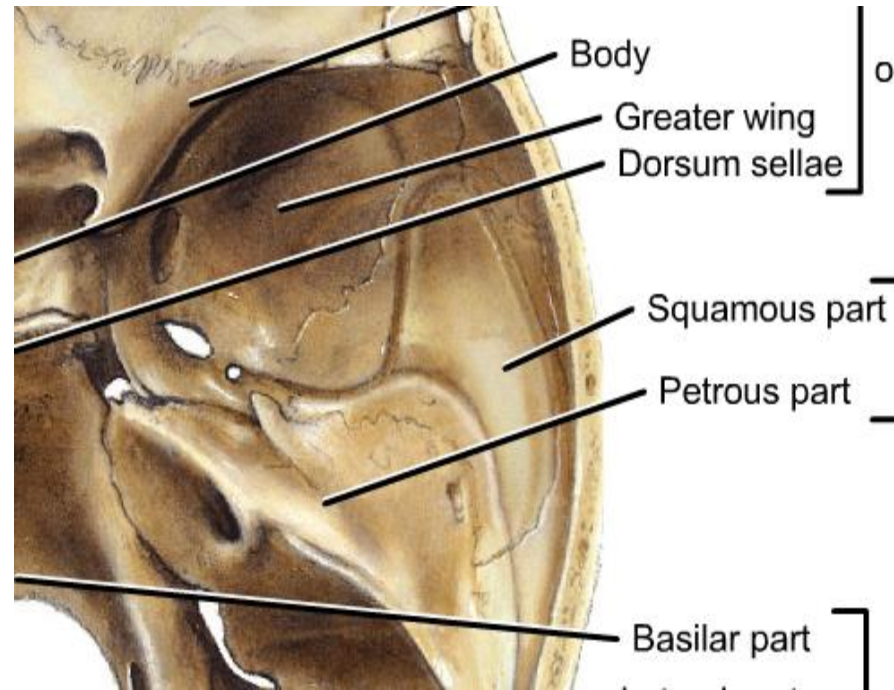
Boundaries :

- ❖ **Anteriorly : Lesser wing of sphenoid**
- ❖ **Posteriorly: Petrous part of temporal bone :**

❖ floor :-Squamous of greater wing of sphenoid + temporal bone

Middle

❖ medially :Body of sphenoid:
bound fossa

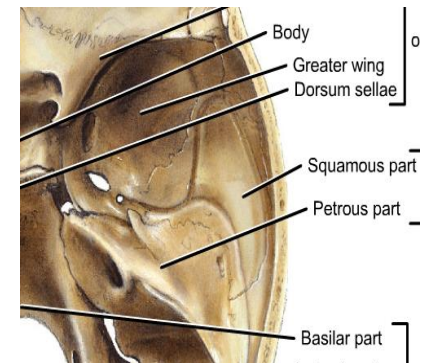


Lodges temporal lobes

Hypophysis cerebra

Foramenae :

- **Rotundum: maxillary**
 - **Ovale : mandibular n.lesser petrosal n., meningeal branch of mandibular**
 - **Spinosum : middle meningeal artery**
 - **Lacerum: small vessels**
- + cartilage + fibrous tissue + gr. Petrosal n.**
- =form medial wall of temporal fossa**
- Infra temporal crest in its inferior surface**



Foramen lacerum: between **Petrous**, and **sphenoid** bone

- Carotid canal: from inferior of Petrous temporal bone, superior to foramen lacerum .
transmit internal carotid artery
- Impression for trigeminal ganglion



■ *Arcuaet emmenence:*

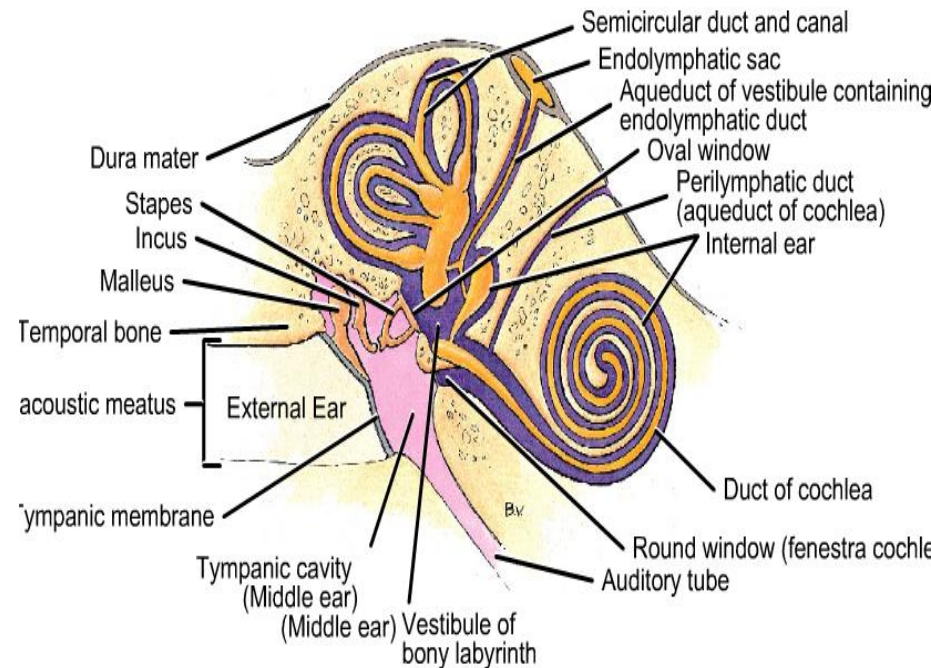
Small elevation on anterior surface of petrous bone

caused by superior semicircular canal

■ *Tegmen tympani:*

Is a bony plate

covers mastoid untrum



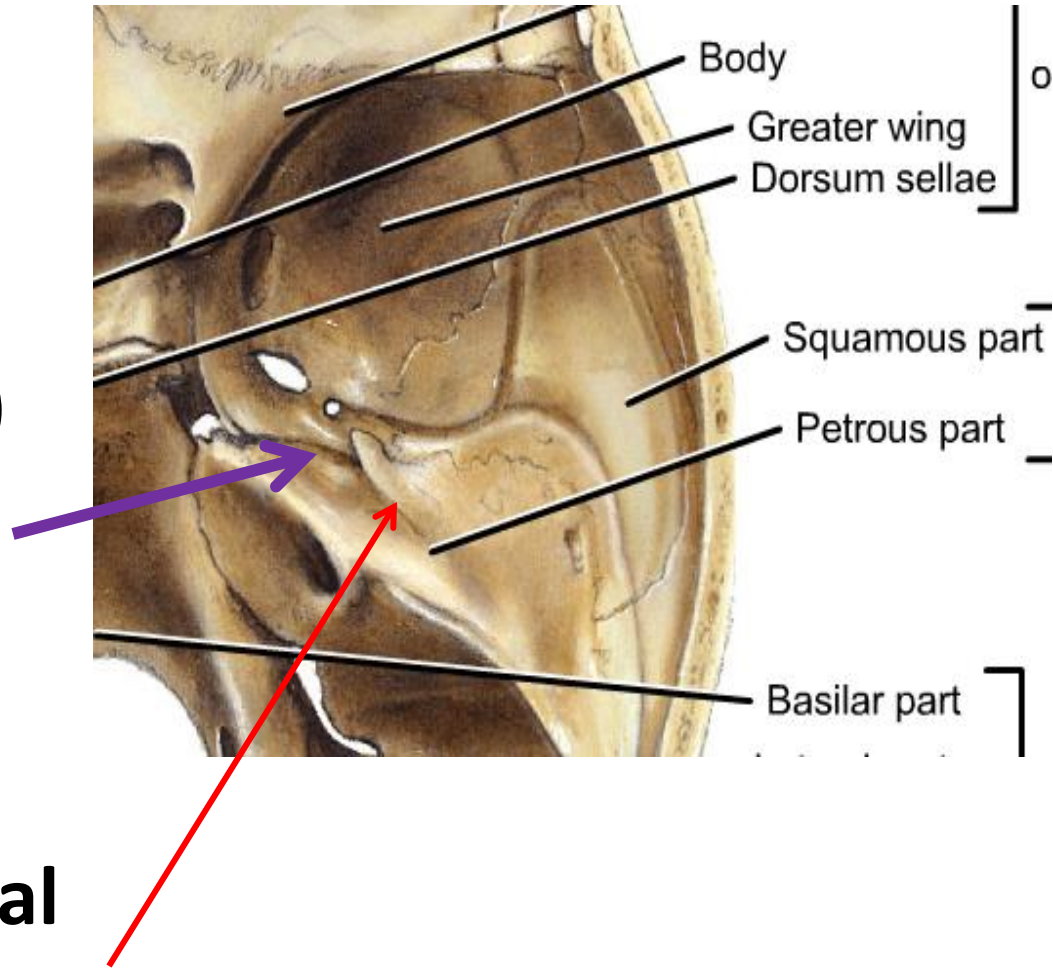
- **Grove for greater**

Petrosal nerve
medially

Br. Of facial n. (paras)
inter to for. Lacerum

Join deep petrosal
nerve (symp) to form
Nerve of ptregoid canal

- **Grove for lesser petrosal n. to**
foramen ovale

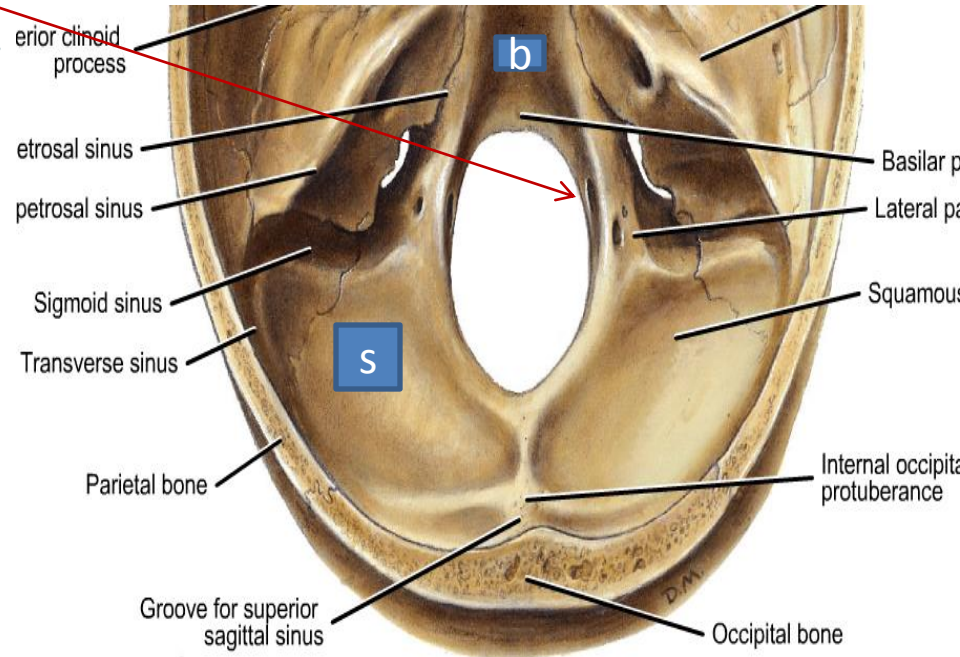


Posterior cranial fossa:

- ❖ Lodges hind brain (cerebellum, pons + medulla oblongata,
- ❖ Foramen magnum : for medulla oblongata, meninges, vertebral a. + spinal accessory n.
- ❖ Hypoglossal canal : superior medial to magnum
- ❖ Jugular foramen : between Occipital condyl + petrous

Jugular foramen transmit:

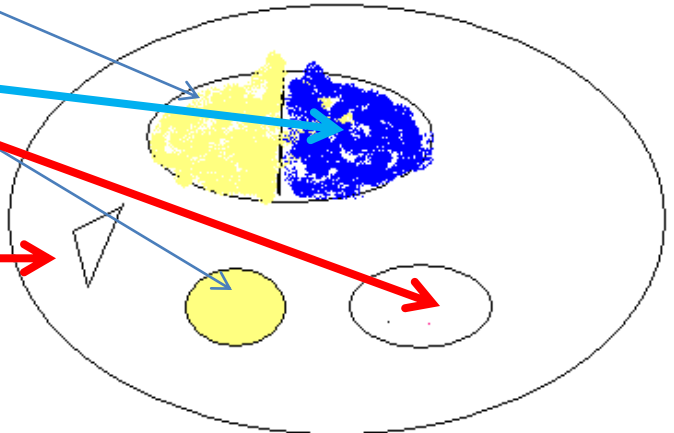
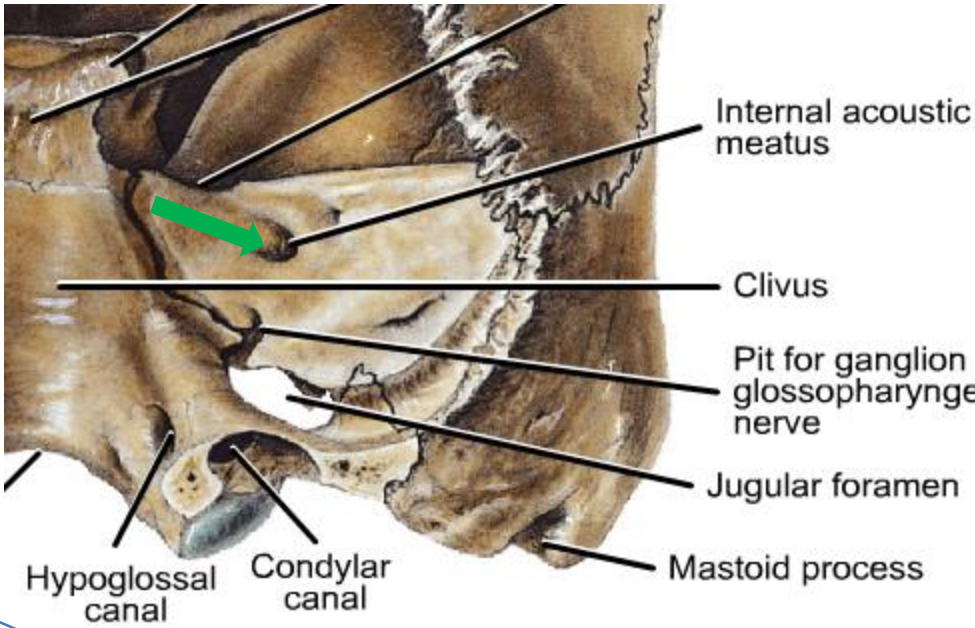
- inferior petrosal sinus
- ix, x, xi cranial nerves
- sigmoid sinus , become Sigmoid inside foramen



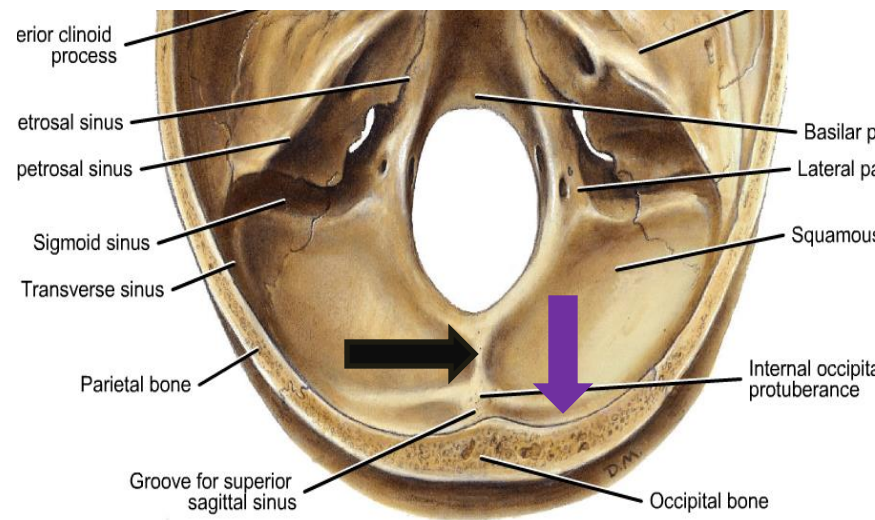
Internal acoustic meatus : posterior surface to Petrous bone ;

transmit :

- a. Vestibul+
- b. cochler nerve
- c. Facial sensory and motor
- C- labyrinthine artery

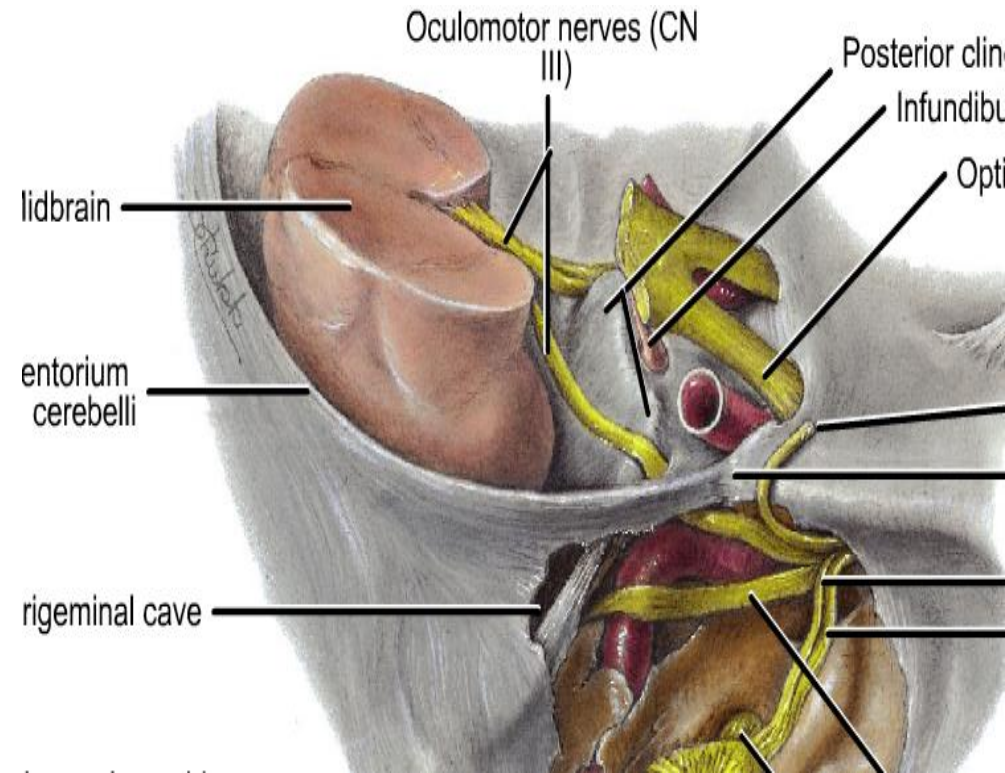
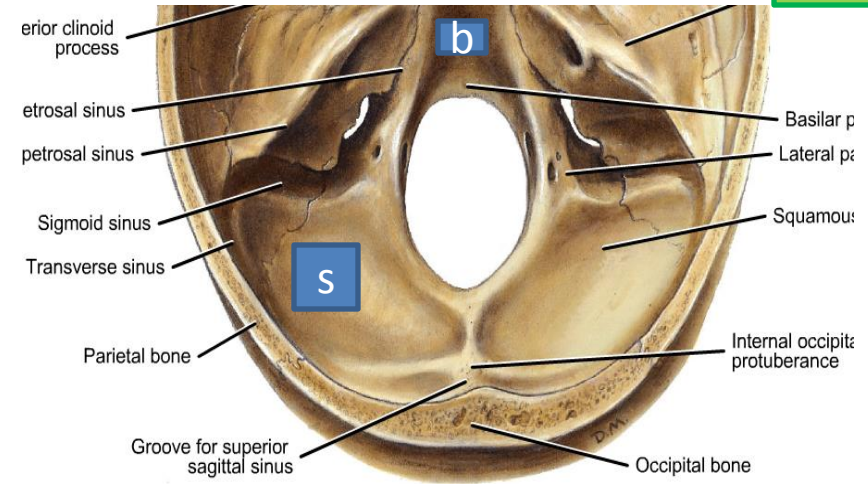


- ❑ **Internal occipital crest**
to it attach falx cerebelli
covered by occipital
sinus
- ❑ **Transverse sinus groove :**
become
sigmoid at mastoid process
to drain to internal jugular
vein.



Boundaries :-

- **Anteriorly: Petrous temporal bone**
- **Posteriorly : Squamous of occipital b.**
- **Floor : Squamous, basilar, and condylar of occipital b.**
- **Roof : tentorium cerebelli**



• ***Prof. Dr. Talib***

Jawad