

# Anatomy

## Lec. 4

Dr. Afrah Majeed

### The Temporal Bones:

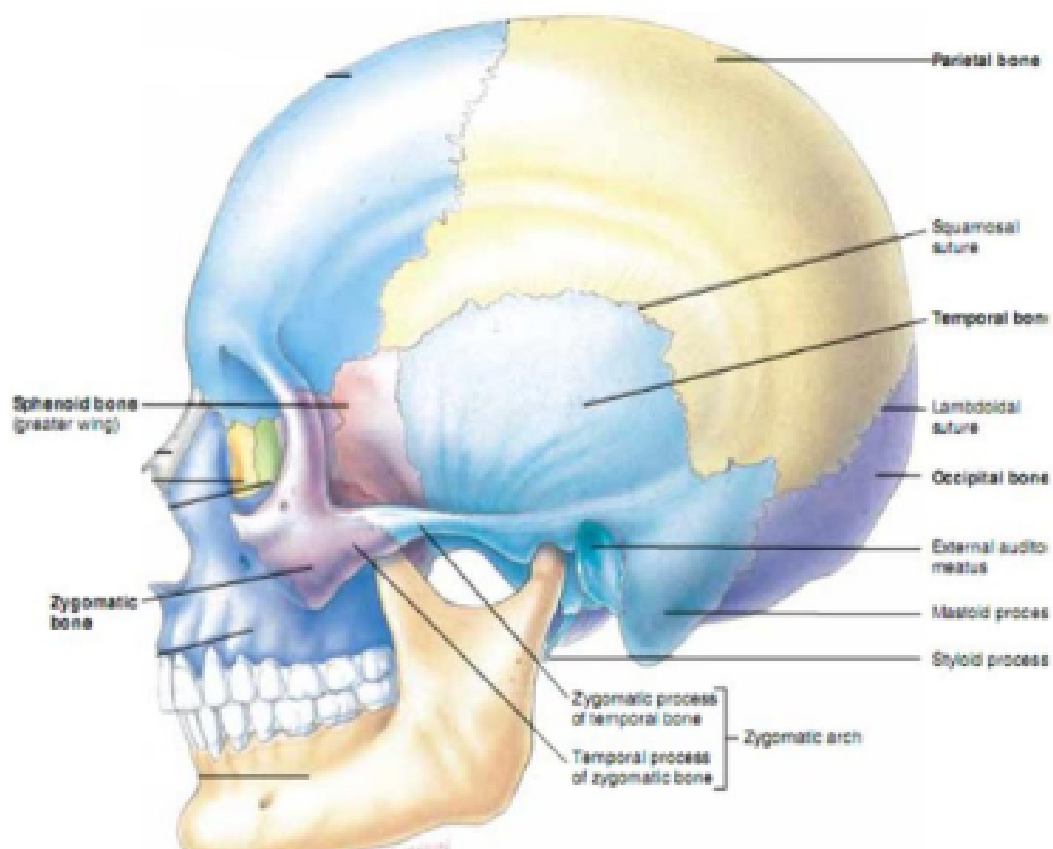
The two temporal bones are located on the lateral surface of the skull. They lie inferior to the parietal bones and meet them at the **squamous sutures**. The temporal bones form the inferolateral aspects of the skull and parts of the cranial floor.

- Each temporal bone has a complicated shape and has four major areas:

The squamous, tympanic, mastoid, and petrous regions.

### Articulation of the temporal bones:

- **Superiorly** : articulates with parietal bone at squamous suture.
- **anteriorly**: It has a bar-like zygomatic process that meets the zygomatic bone.
- **Posteriorly**: articulates with occipital bone by occipitomastoid suture.

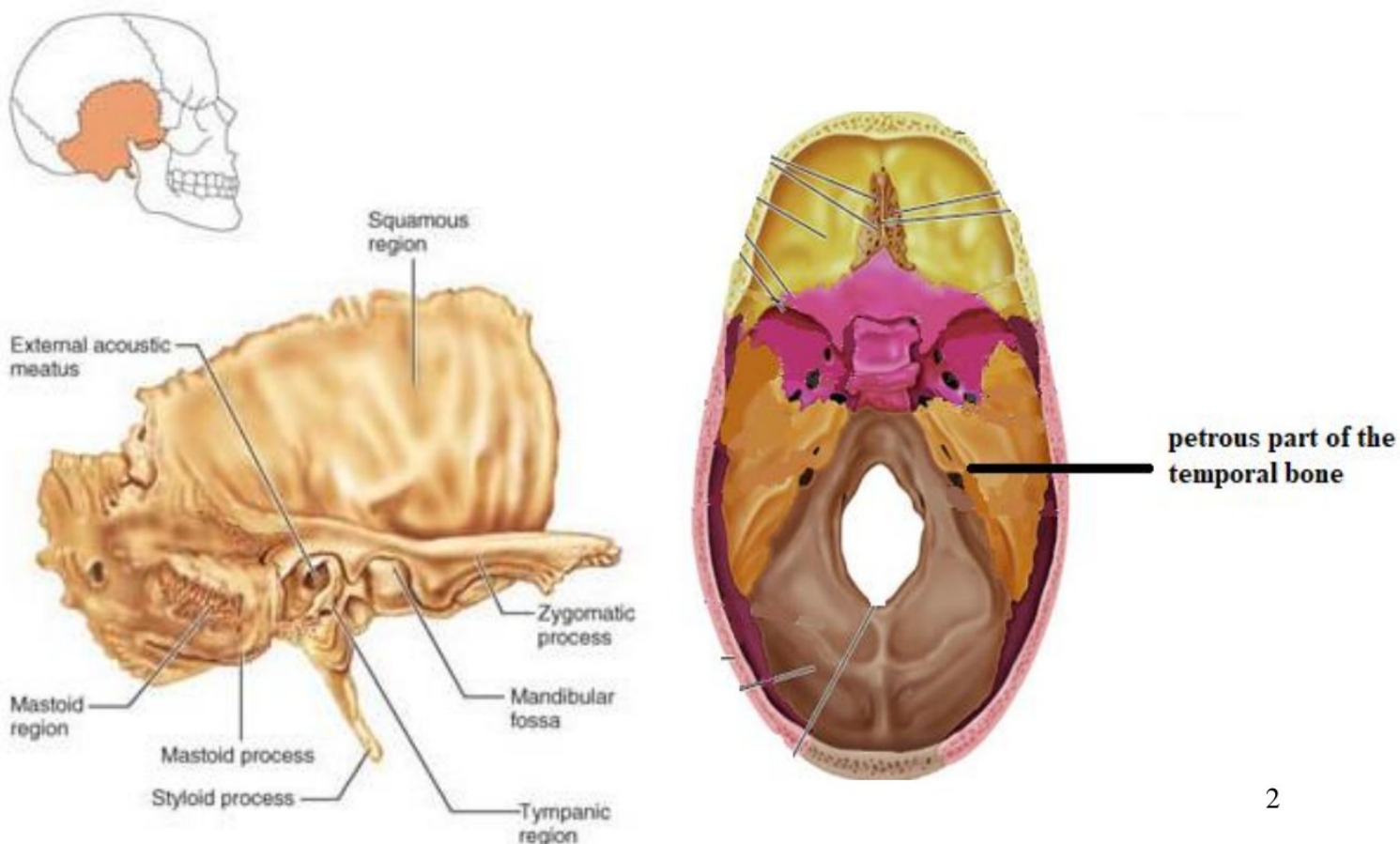


**The squamous region of temporal bone** has the squamous suture. Zygomatic process articulates with temporal process of the zygomatic bone to form the zygomatic arch. The small, oval mandibular fossa on the inferior surface of the zygomatic process receives the condyle of the mandible forming the movable temporomandibular joint.

**The tympanic region of the temporal bone** surrounds the external acoustic meatus, or external ear canal, through which sound enters the ear. Below the external acoustic meatus is the needle-like process called the **styloid process**, where an attachment point for several tongue and neck muscles and for a ligament that connect the hyoid bone of the neck to the skull

**The mastoid region of the temporal bone** exhibits the mastoid process, an anchoring site for some neck muscles. The mastoid process located posterior to the ear. The stylomastoid foramen, between the styloid and mastoid processes, allows cranial nerve VII (the facial nerve) to leave the skull.

**The petrous part of the temporal bone** contributes to the cranial base. It looks like a mountain ridge between the occipital bone posteriorly and the sphenoid bone anteriorly.



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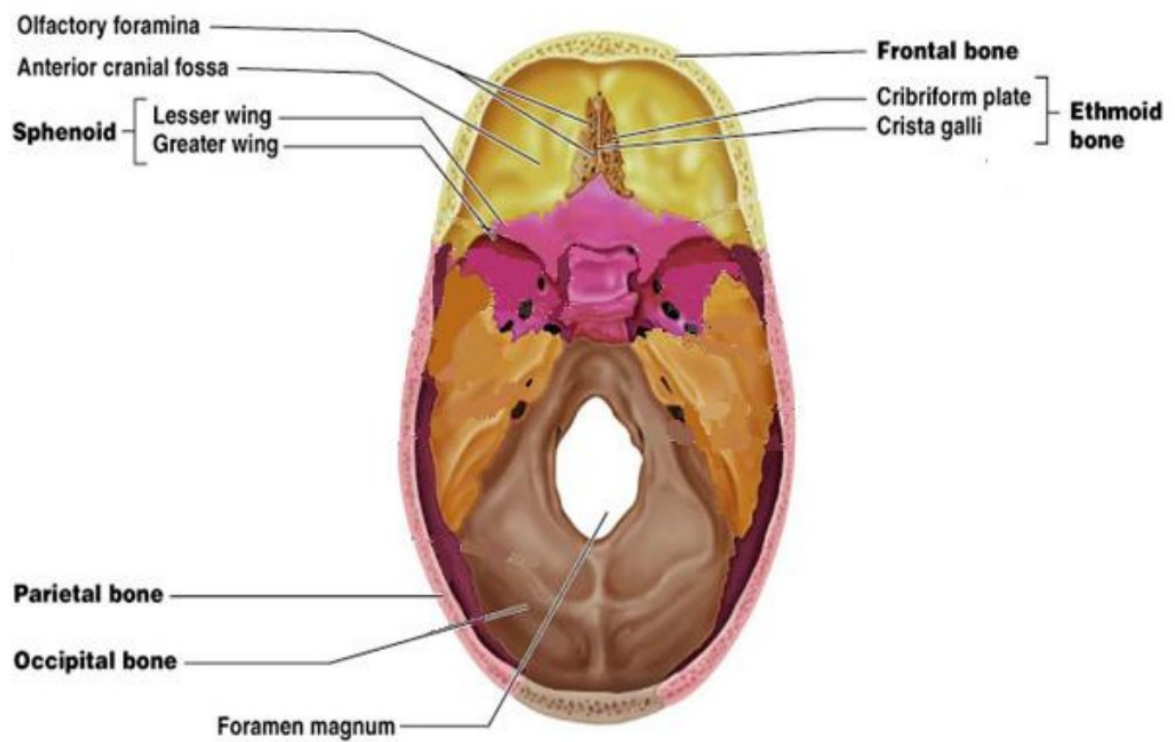
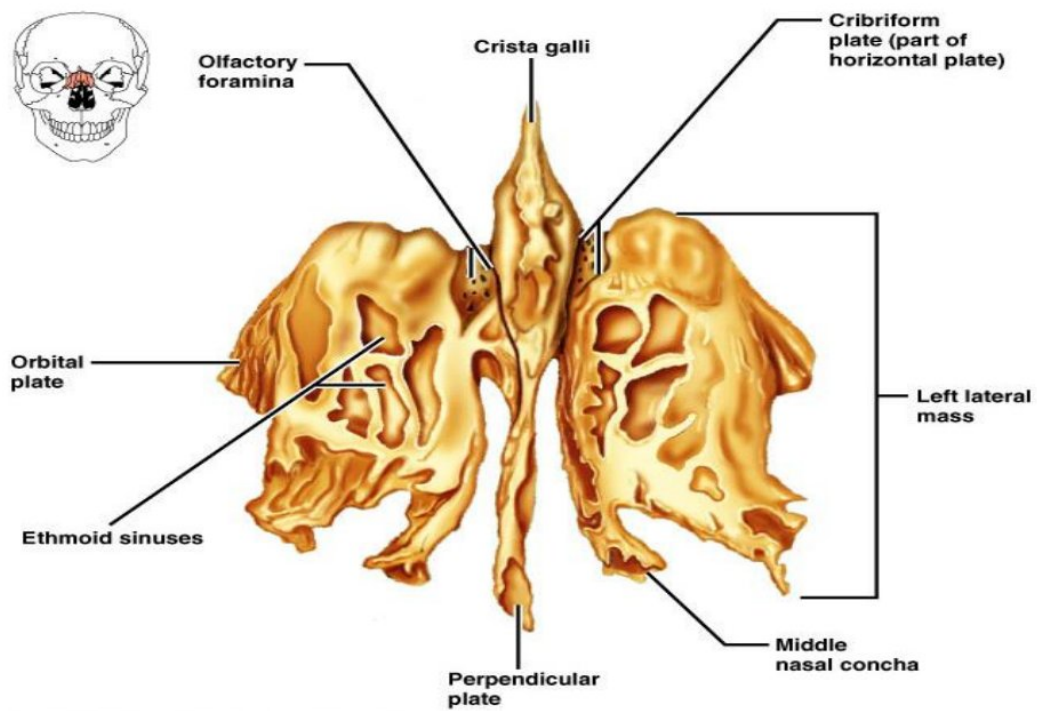
Lec. 5

Dr. Hawraa Khalid

## The Ethmoid bone:

It is one of cranial bones of the skull lies between the sphenoid and nasal bones and forms most of the bony area between the nasal cavity and the orbits. The ethmoid bone look like a desk which has oblong box on either side. The board of the desk represents the **cribriform plate** of the ethmoid bone which is a fragile bone and looks like sieve and form the roof of the nasal cavity, while the boxes on each side represents the **ethmoidal labyrinth**. In the middle of the desk there is vertical plate that across with the board of the desk, the part of the vertical plate above the desk called **crista galli** which is thick triangular bone, while the part of the board below the board of the desk called **perpendicular plate of ethmoid bone** which form the posterior third of the nasal septum.

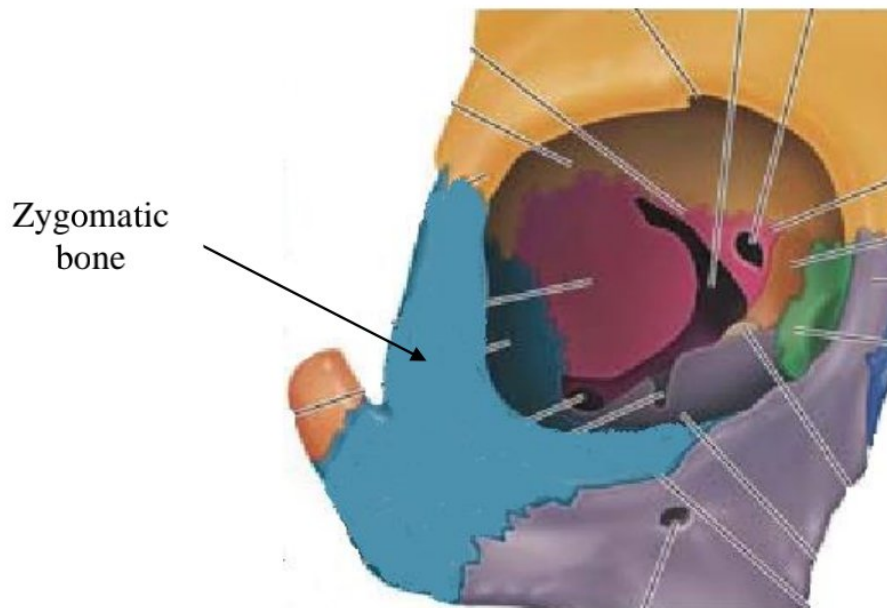
**The ethmoidal labyrinth:** it represents the boxes of desk on each side of the ethmoid bone which consist of 10-12 air cells called ethmoidal sinuses that open medially into nasal cavity and laterally it has smooth fragile wall called orbital plate of ethmoid bone. The posterior surface of the ethmoidal labyrinth articulates with anterior surface of the sphenoid bone. There are two pairs of nasal concha (**superior and middle nasal conchae**) which are parts of the ethmoidal labyrinth.





## Zygomatic bones:

The zygomatic bone is irregular in shape and commonly is called the cheekbone. The zygomatic bone forms the prominence of the cheek and articulates the maxillary bones anteriorly and the zygomatic process of the temporal bone posteriorly. It forms the lateral wall and floor of the orbit.



### Articulations of the zygomatic bone:

1. Medially: articulates with the maxilla.
2. Laterally: articulates with zygomatic process of the temporal bone and form the zygomatic arch.
3. Superiorly: it articulates with zygomatic process of frontal bone.

