



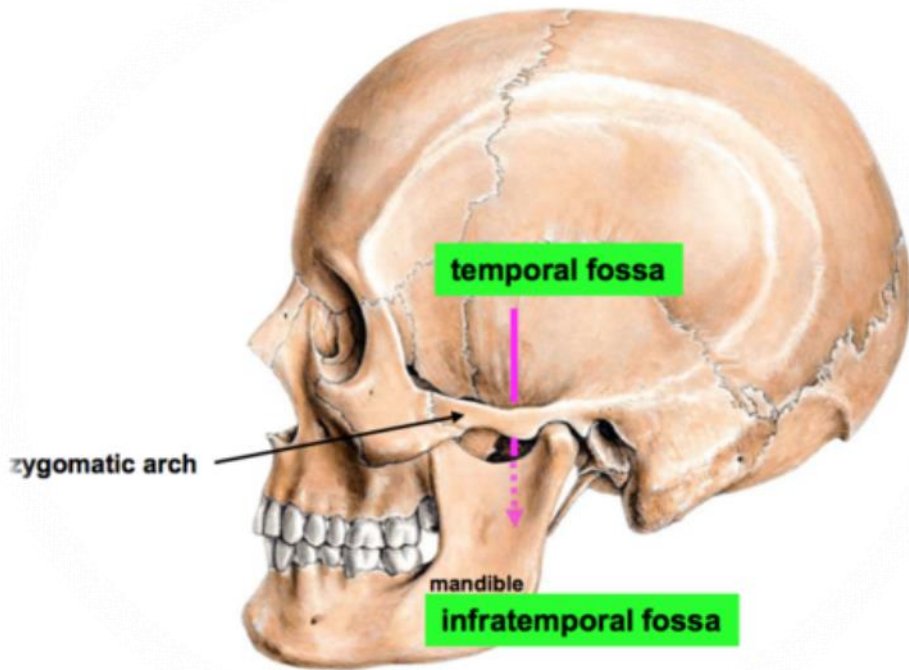
Human Anatomy -2nd year

Temporal Fossa Lecture (7)

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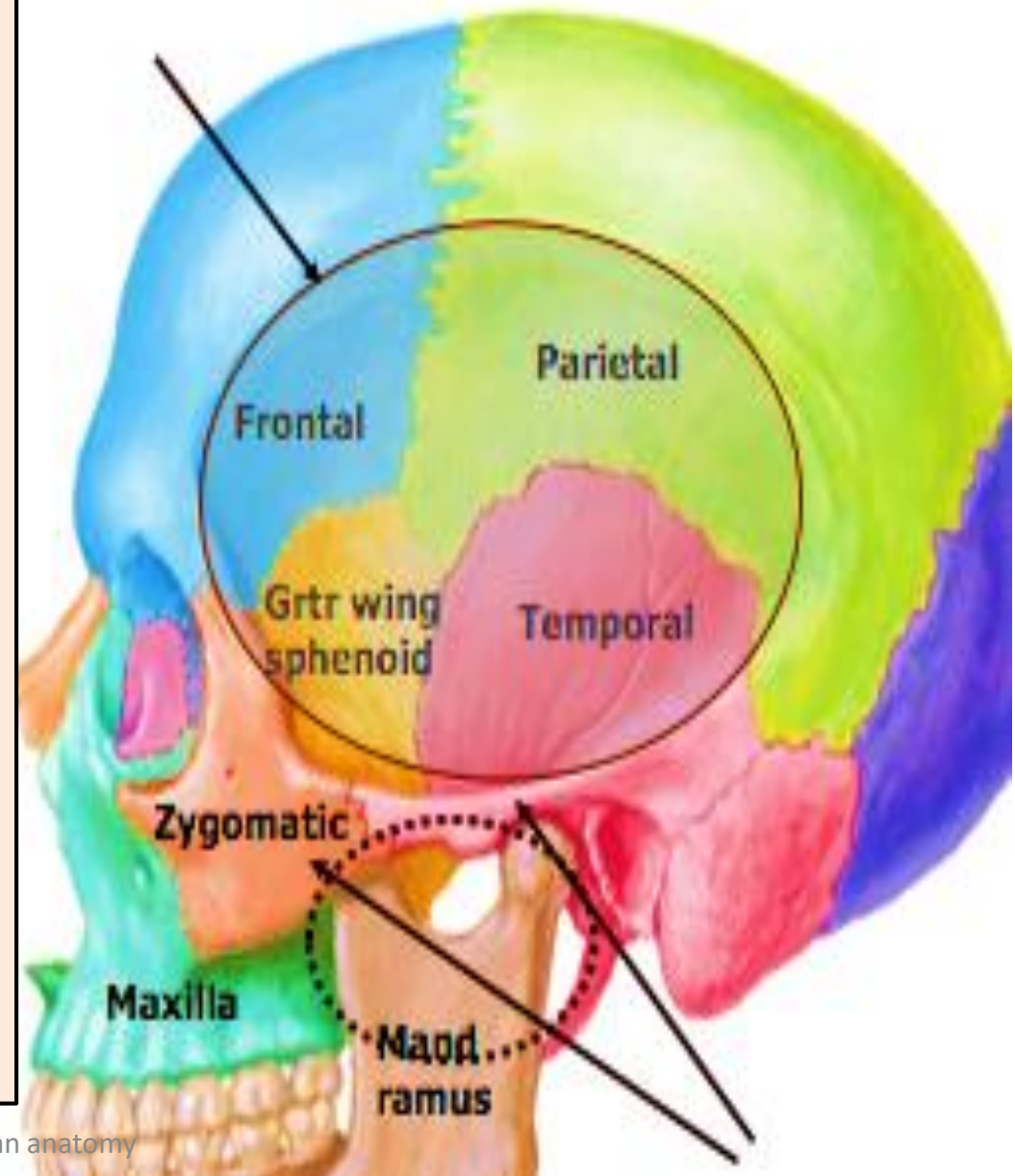
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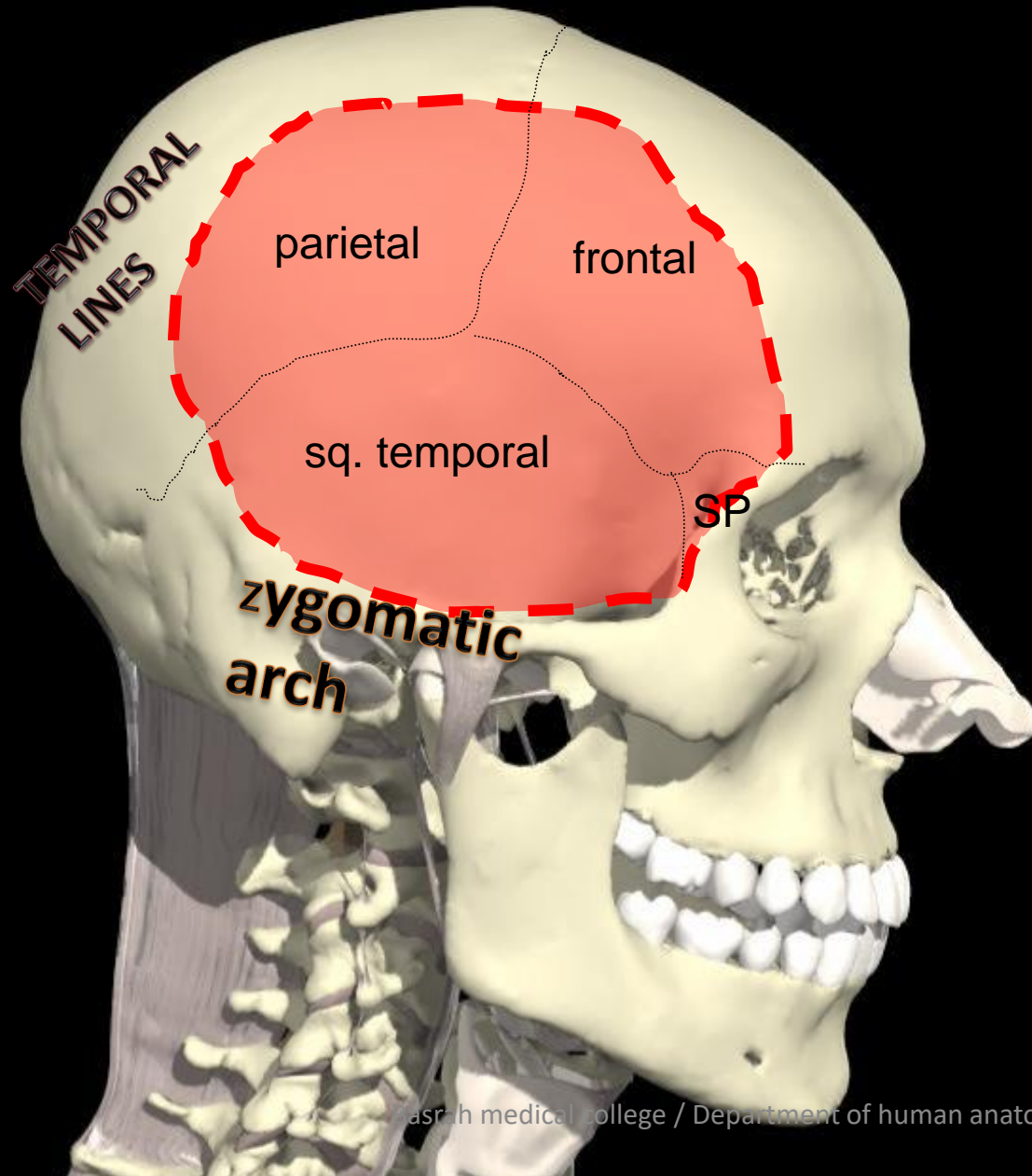
TEMPORAL FOSSA

The temporal fossa is a depression on the temporal region and one of the largest landmarks on the skull.

It is superior to the infratemporal fossa which lies beneath the zygomatic arch.



Bones Forming TEMPORAL FOSSA



***Parietal bone**

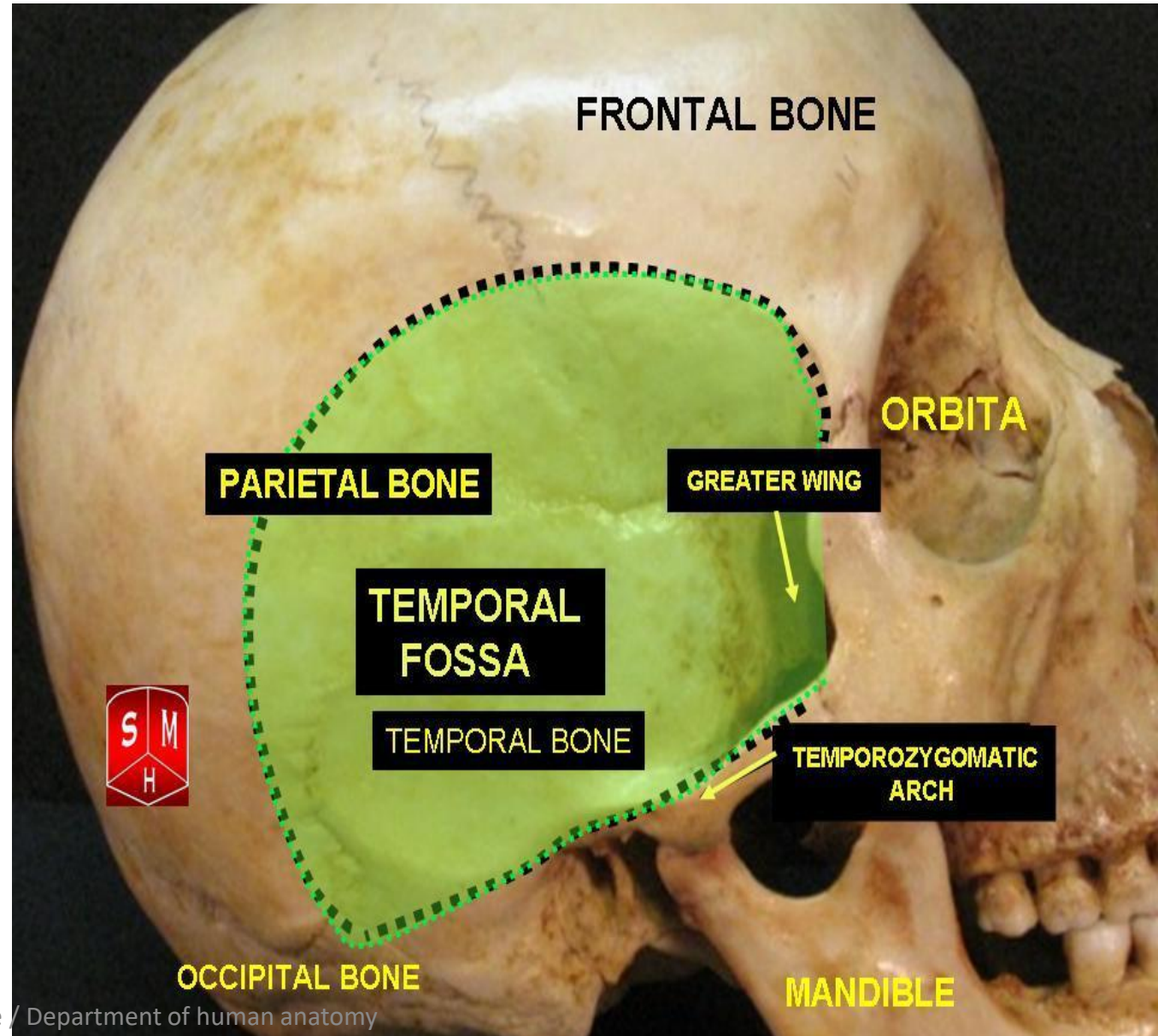
***Frontal bone**

***Temporal bone**

***Sphenoid bone**

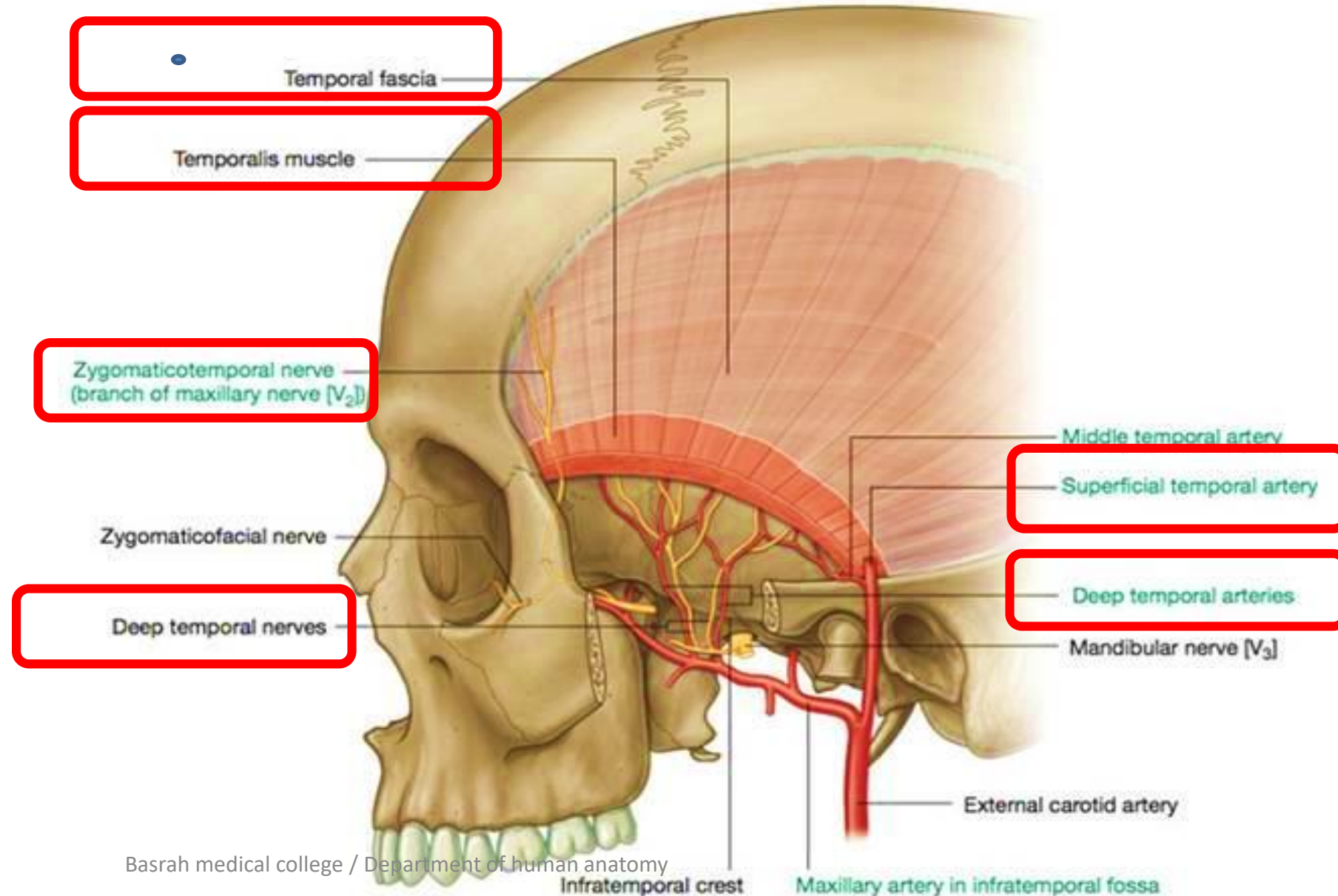
Borders

- 1. Anterior:** Zygomatic process of frontal bone + frontal process of zygomatic bone
- 2. Superior and posterior:** pair of temporal lines (superior and inferior temporal lines)
- 3. Inferiorly :**
 - A-medial-** infratemporal crest of the greater wing of the sphenoid
 - B- lateral :** zygomatic arch.
- 4. Medially:** outer surfaces of the frontal, parietal, temporal and sphenoid bones
- 5. Laterally:** temporal fascia and muscle .



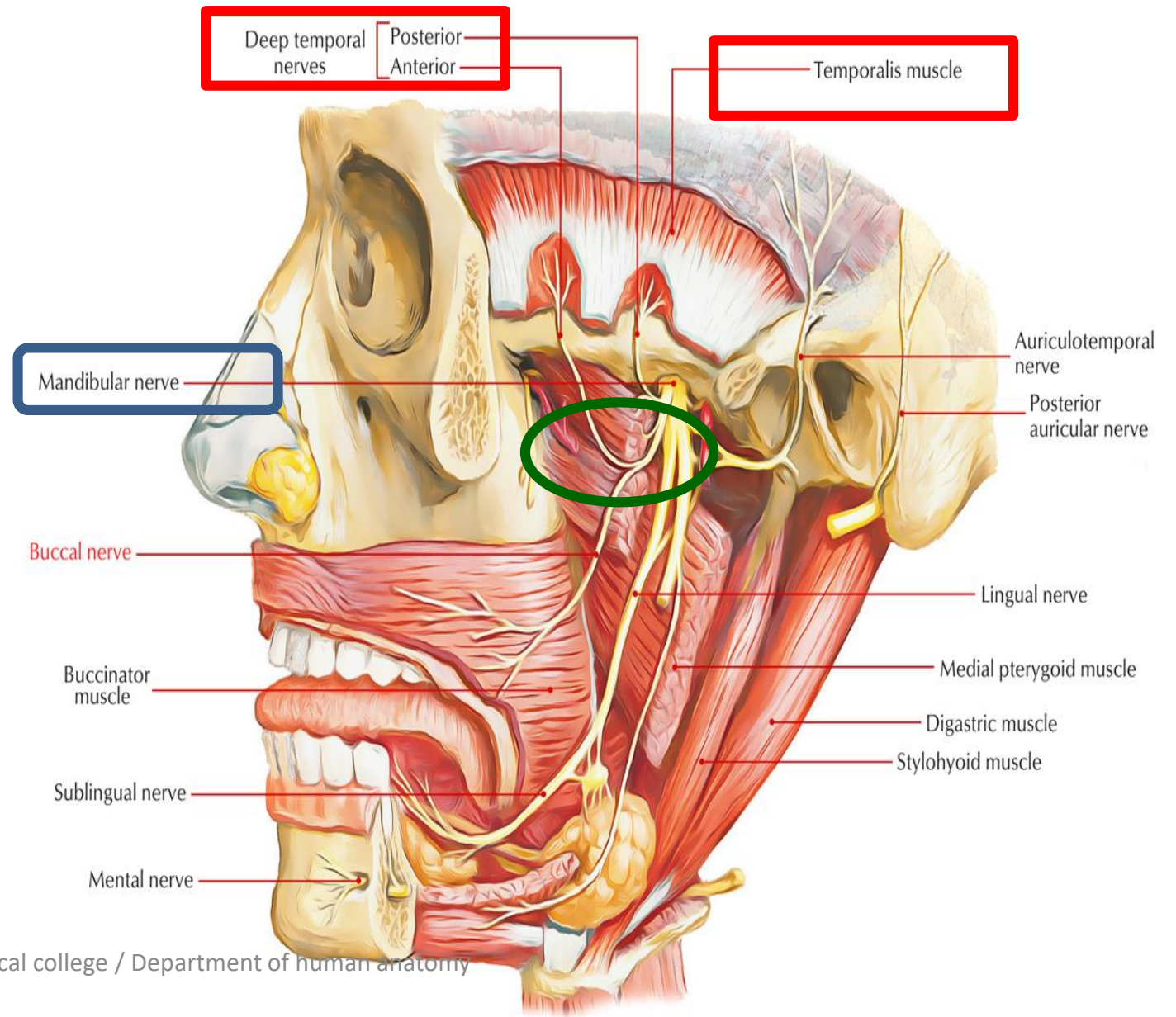
The contents

1. Temporalis muscle
2. Fascia covers temporalis
3. Deep temporal nerve and arteries
4. Superficial temporal artery
5. Zygomatico temporal nerve
6. Auriculotemporal nerve



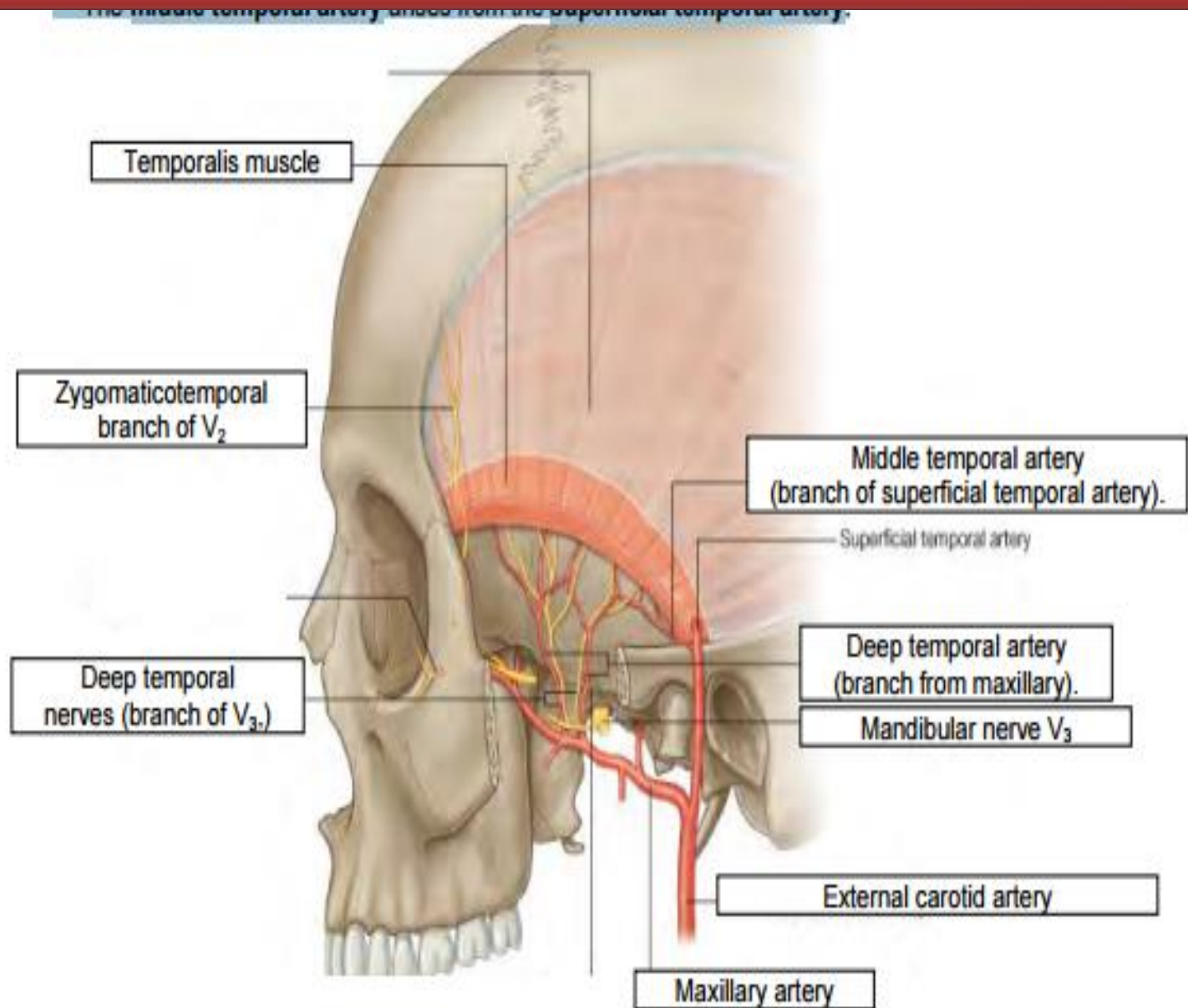
1. Deep temporal nerve

- ✓ Is a branch of the mandibular division of trigeminal (5th) cranial nerve .
- ✓ Two in number, anterior and posterior
- ✓ They pass above the upper border of the lateral pterygoideus
- ✓ Enter the deep surface of the temporalis.



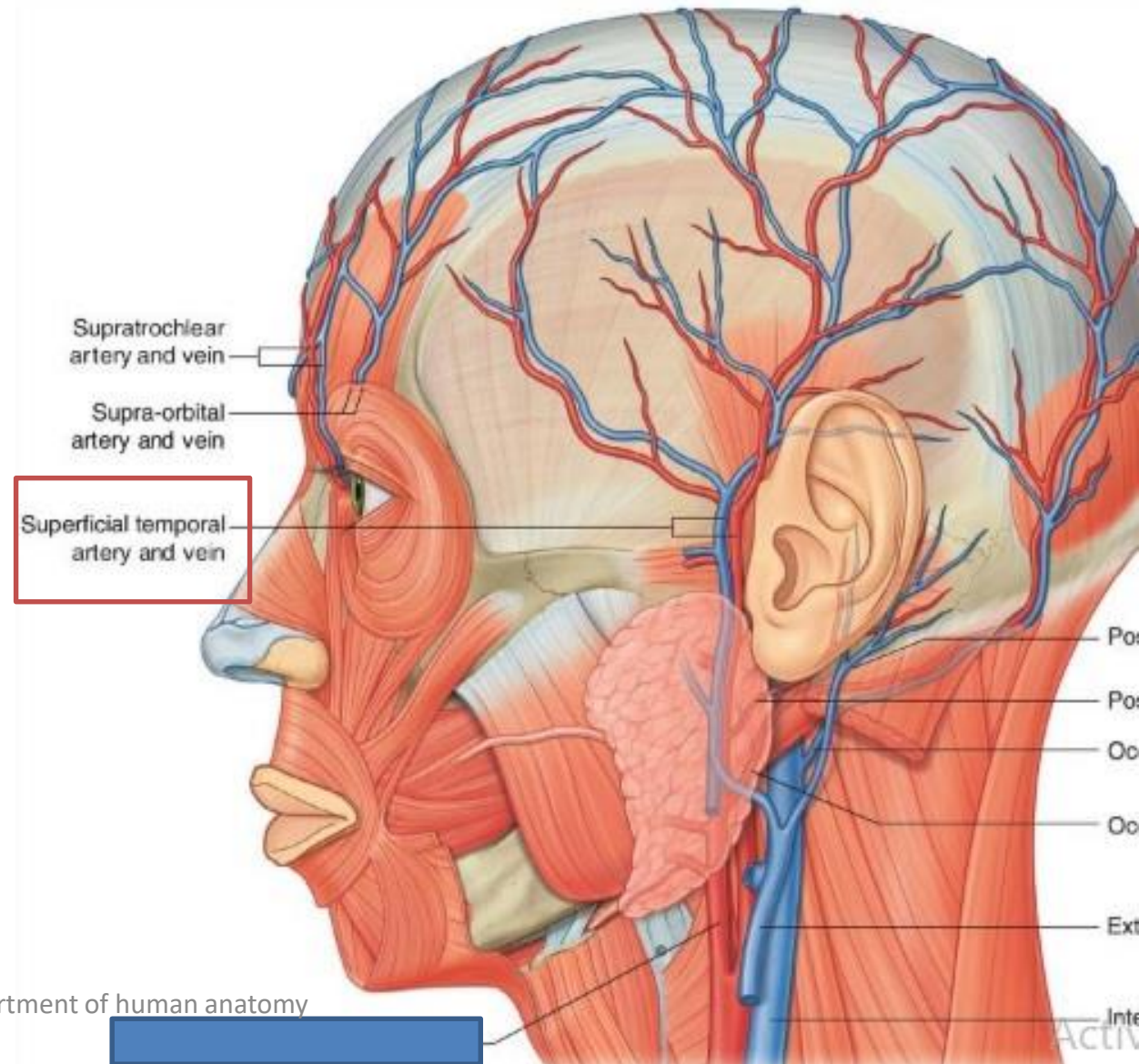
2. Deep temporal arteries

- ✓ **The deep temporal arteries (anterior, middle and posterior) are branches from the second part of the maxillary artery.**
- ✓ **They ascend between the temporalis muscle and the pericranium supplying the overlying muscle.**

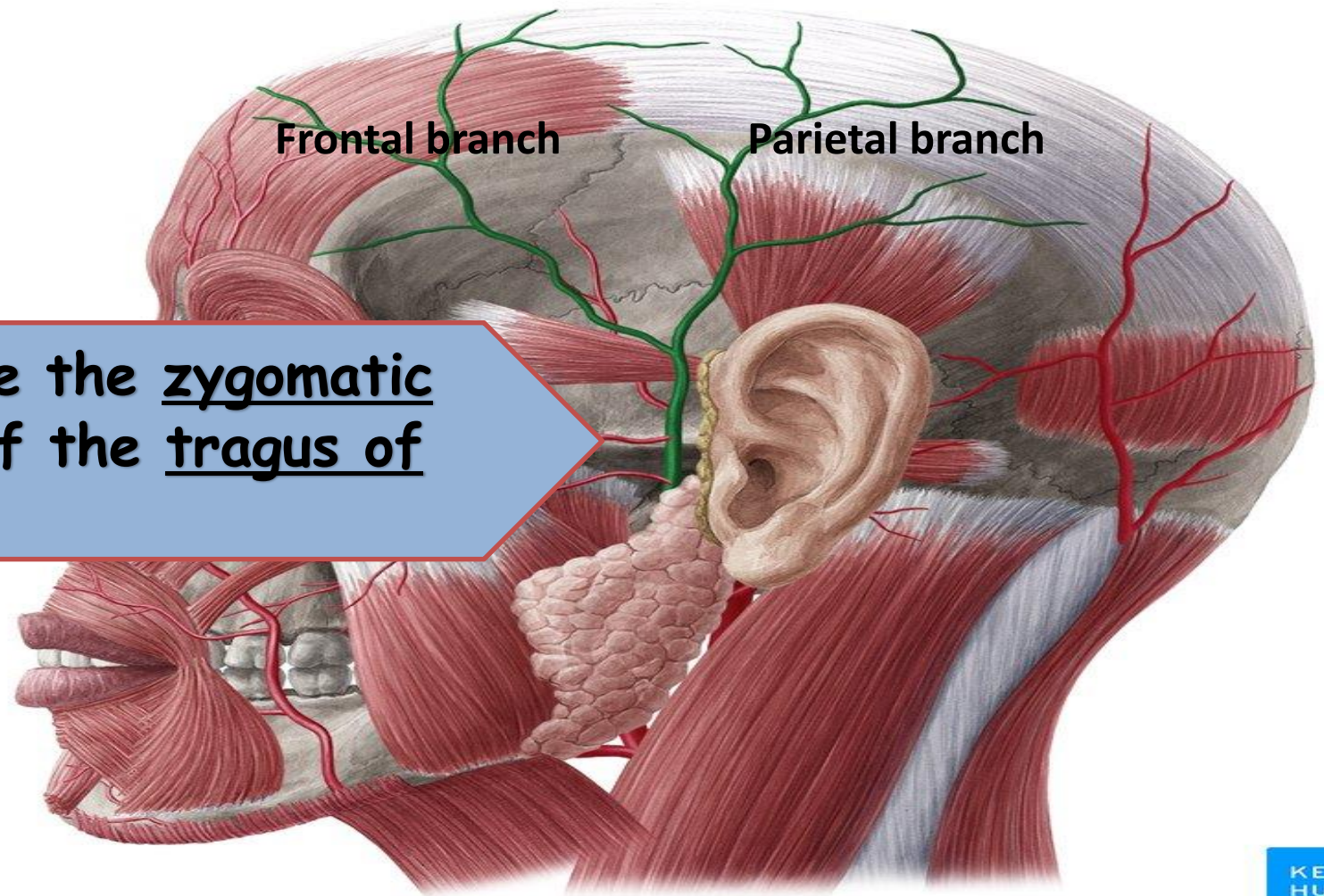


3. Superficial temporal artery

- The smaller of two terminal branches of the external carotid artery
- * Appears to be a continuation of the external carotid.
 - * Begins within the parotid gland, behind the neck of the mandible
 - * Passes superficially over the posterior root of the zygomatic process of the temporal bone
 - * Divides into two branches frontal and parietal arteries.



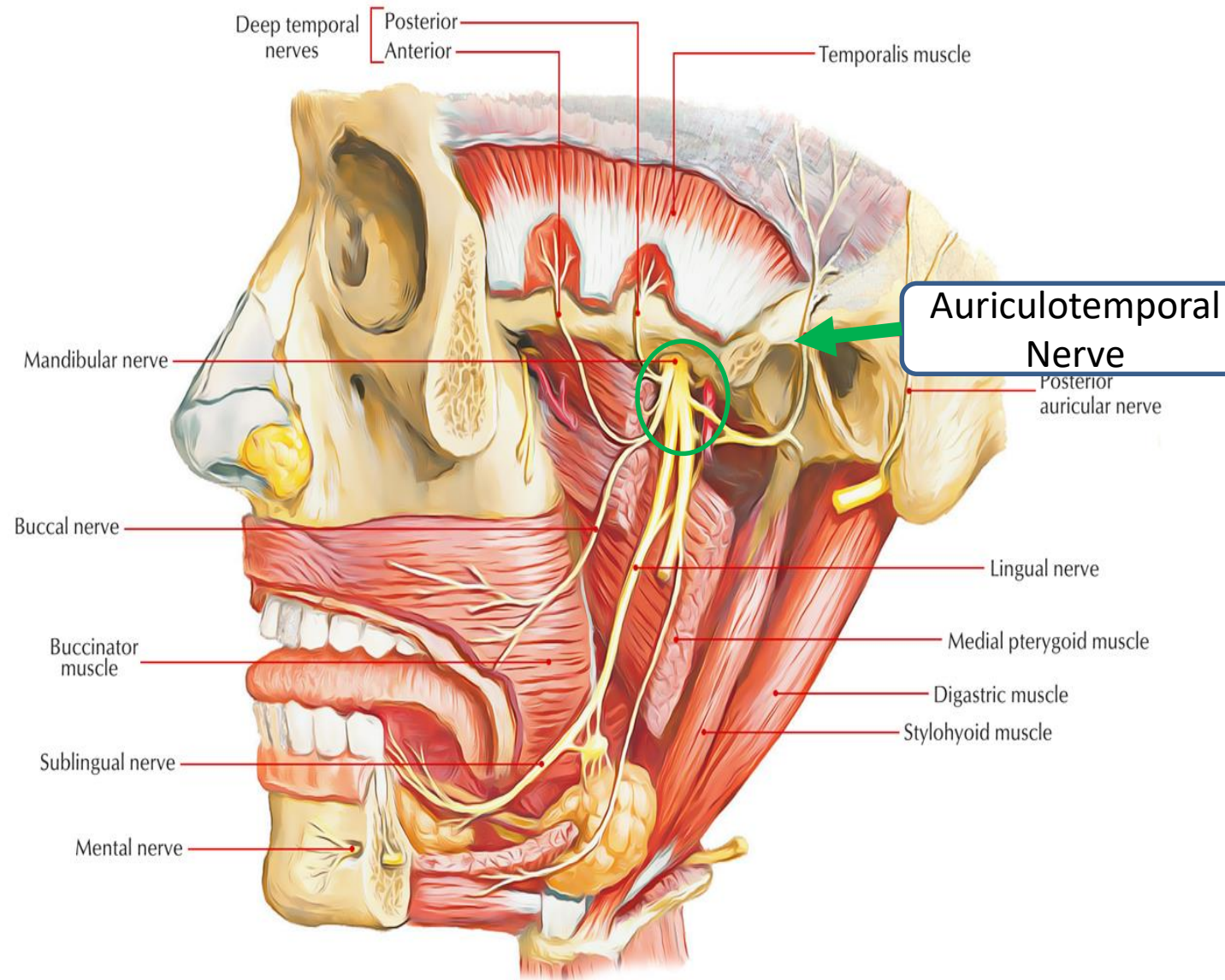
Superficial temporal artery



Its pulse can be felt above the zygomatic arch, above and in front of the tragus of the ear

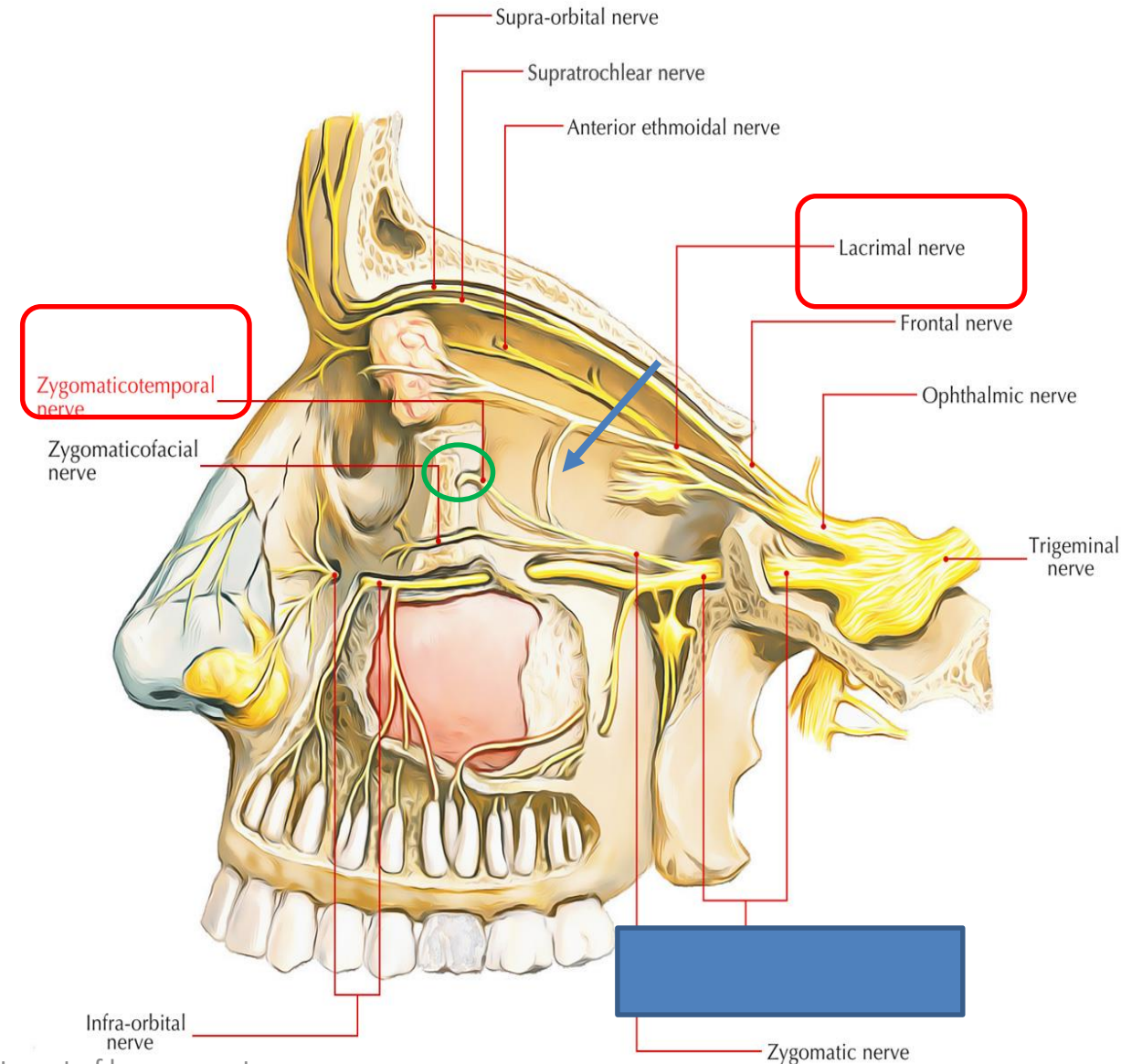
4. Auriculotemporal nerve

- *Is a branch from mandibular division of trigeminal nerve
- *Arises by 2 roots encircling middle meningeal artery
- *Runs backward, deep to neck of mandible
- *Gives sensory branches to skin of auricle, temple, TMJ & parotid gland
- *Carries secretomotor fibers from otic ganglion to parotid gland.



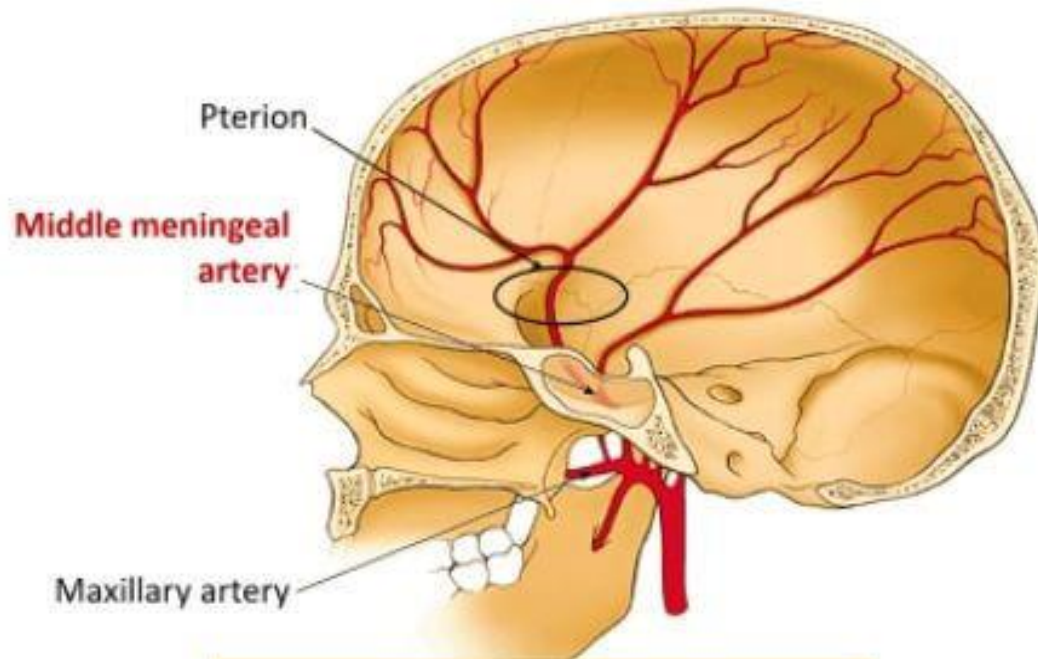
5. Zygomaticotemporal nerve

- Derived from the zygomatic nerve, a branch of the maxillary nerve.
- * Runs along the lateral wall of the orbit in a groove in the zygomatic bone,
- * Receives a branch of communication from the lacrimal nerve
- * Passes through the zygomaticotemporal foramen in the zygomatic bone
- * Enter the temporal fossa.
- * Supply to the skin of the side of the forehead.

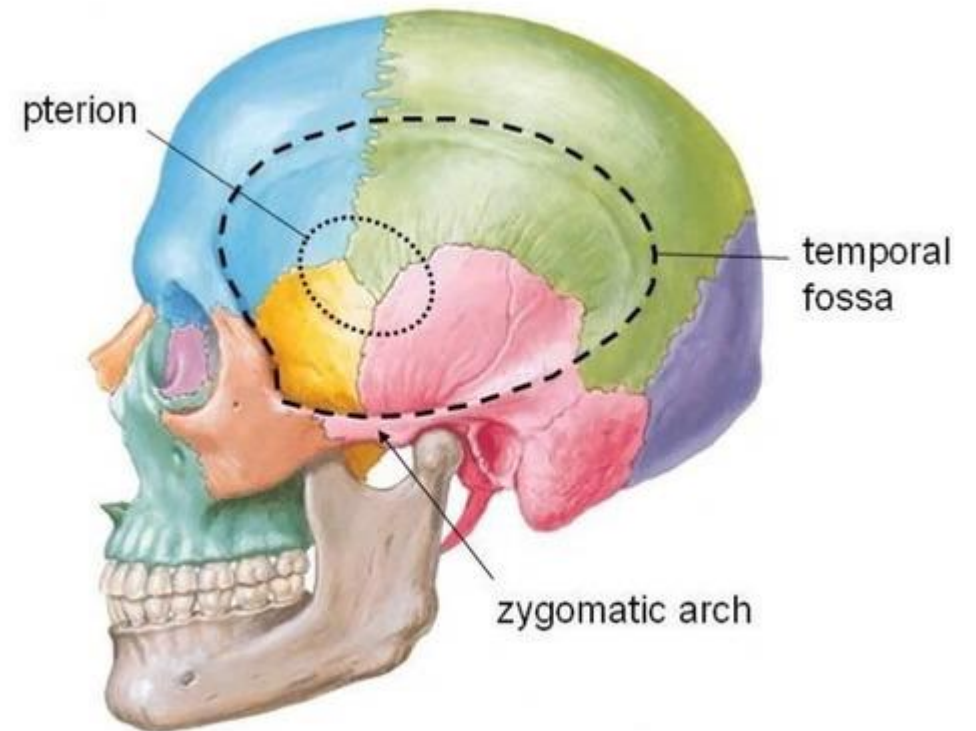


Clinical note

The pterion is an important structure in temporal fossa. It is the point where the temporal, parietal, frontal and sphenoid bones meet and the skull is at its weakest. Trauma in this region can lead to an extradural hematoma as the middle meningeal artery (MMA) lies deep to it.



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What separate the temporal fossa Infratemporal Fossa?

The infratemporal fossa communicates with the temporal fossa through the interval between (deep to) the zygomatic arch and (superficial to) the cranial bones.

*Temporal fossa is superior to the zygomatic arch.

*The infratemporal fossa is inferior to the zygomatic arch.

