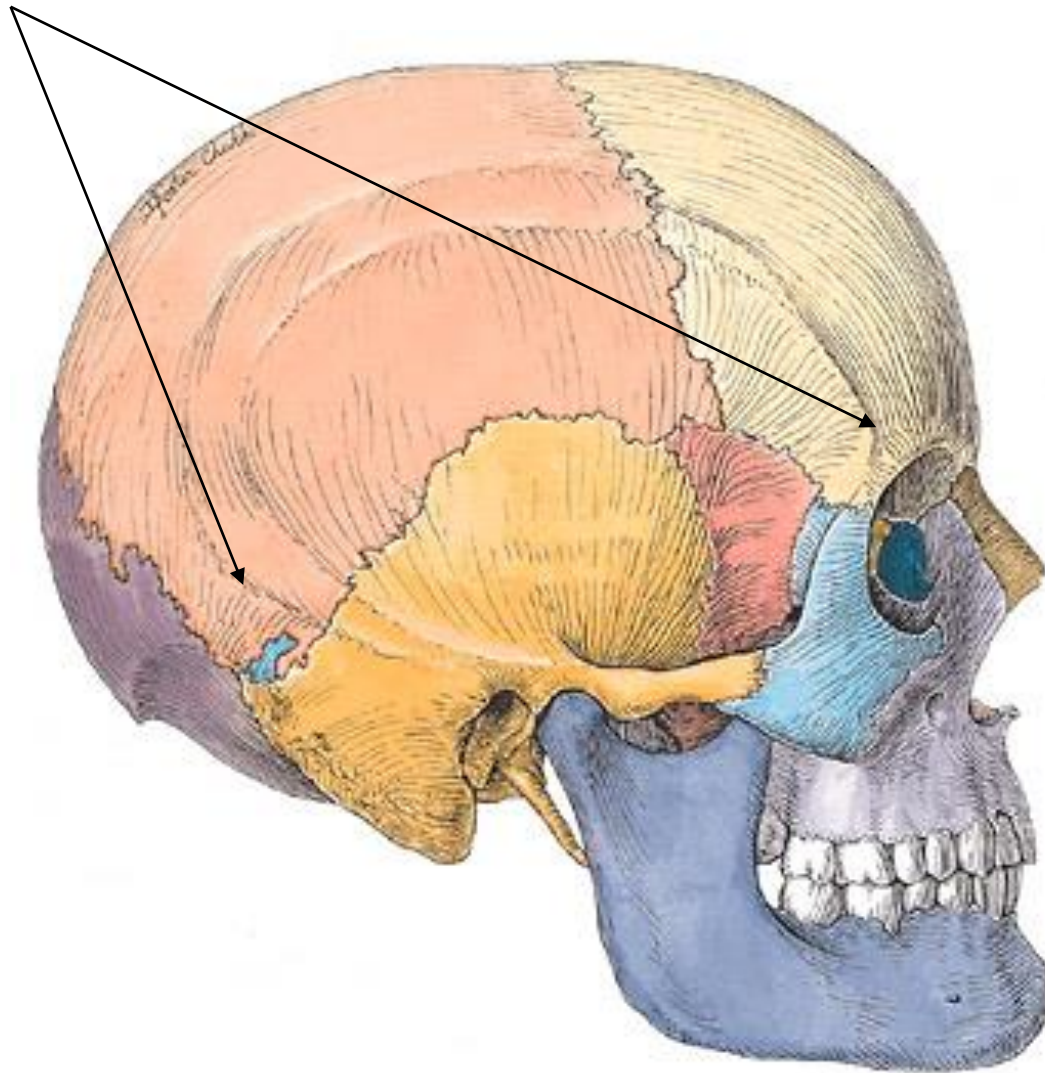


# Temporal and Infratemporal Fossae

Maan Al-Abbasi

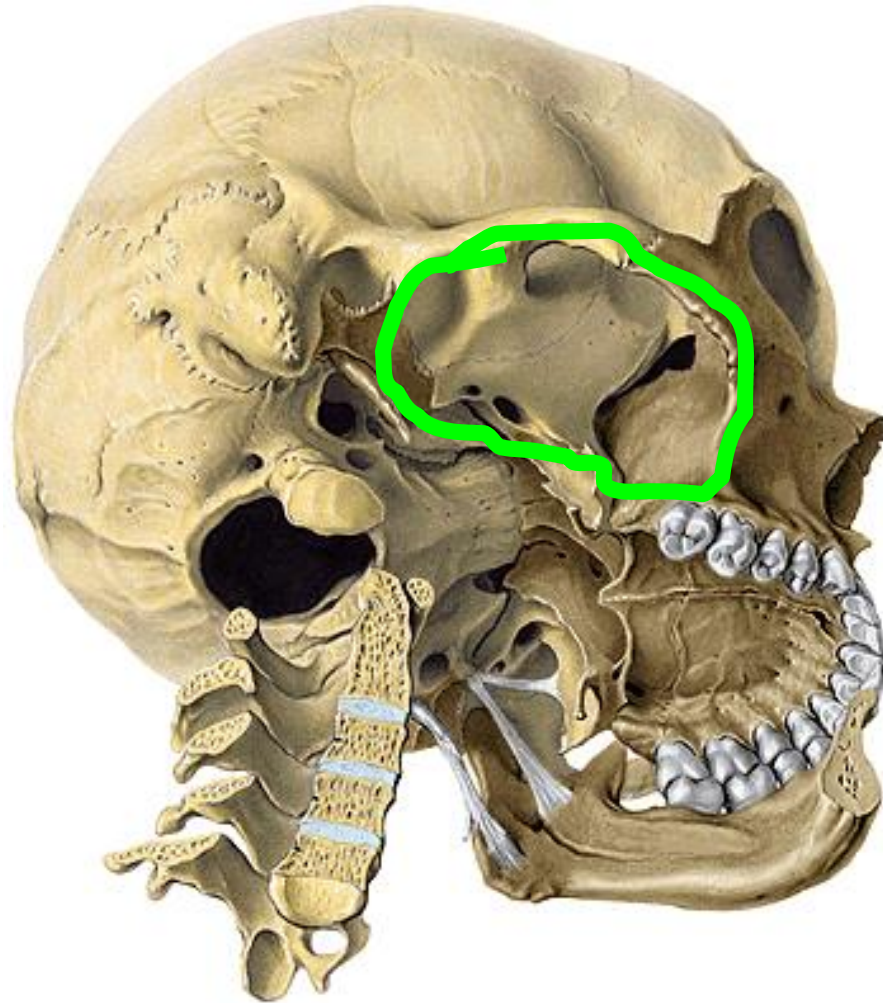
# Temporal Fossae - boundaries



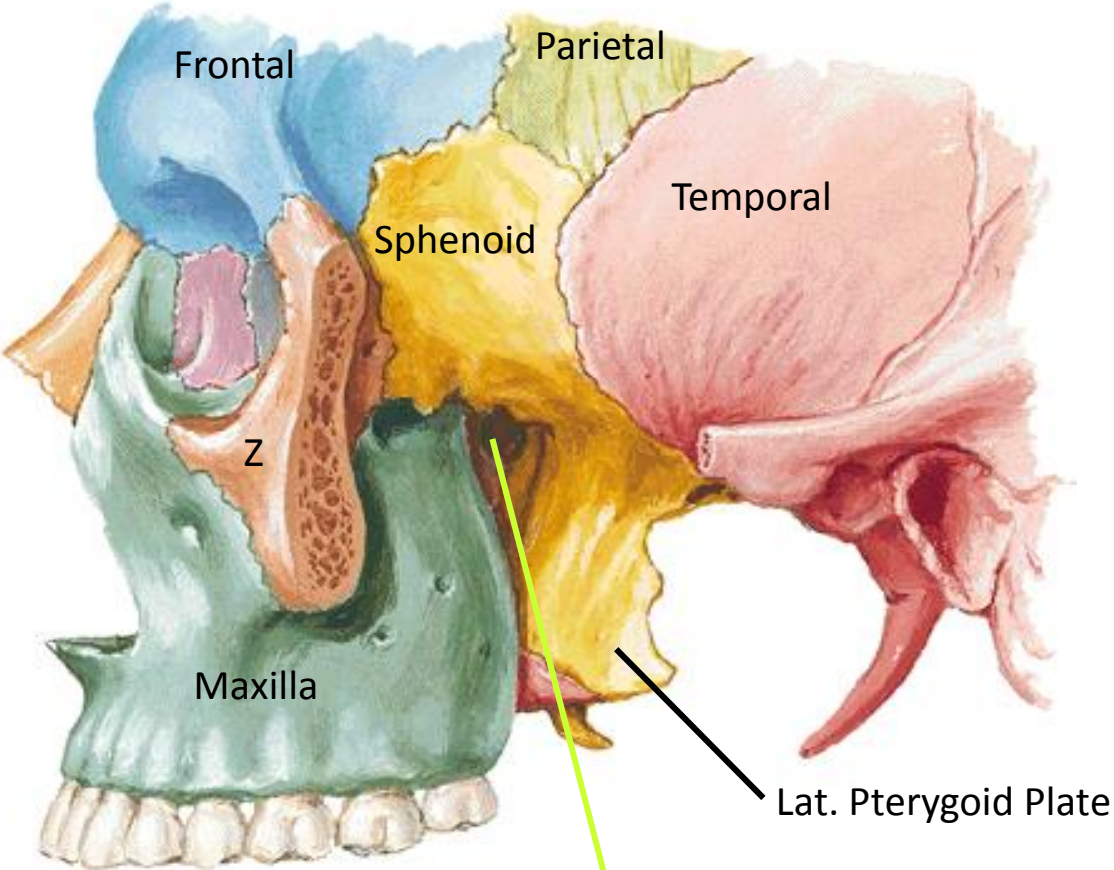
# Temporal Fossa - Contents

1. Temporal muscle
2. Temporal fascia (overlies the temporalis muscle)
3. Superficial temporal artery (br. of external carotid)
4. Superficial temporal vein (unites with the maxillary vein to form the retromandibular vein)
5. Auriculotemporal nerve (br. of mandibular nerve which is a br of the trigeminal nerve)

# Infratemporal Fossa - boundaries



# Boundaries of the infratemporal fossa.



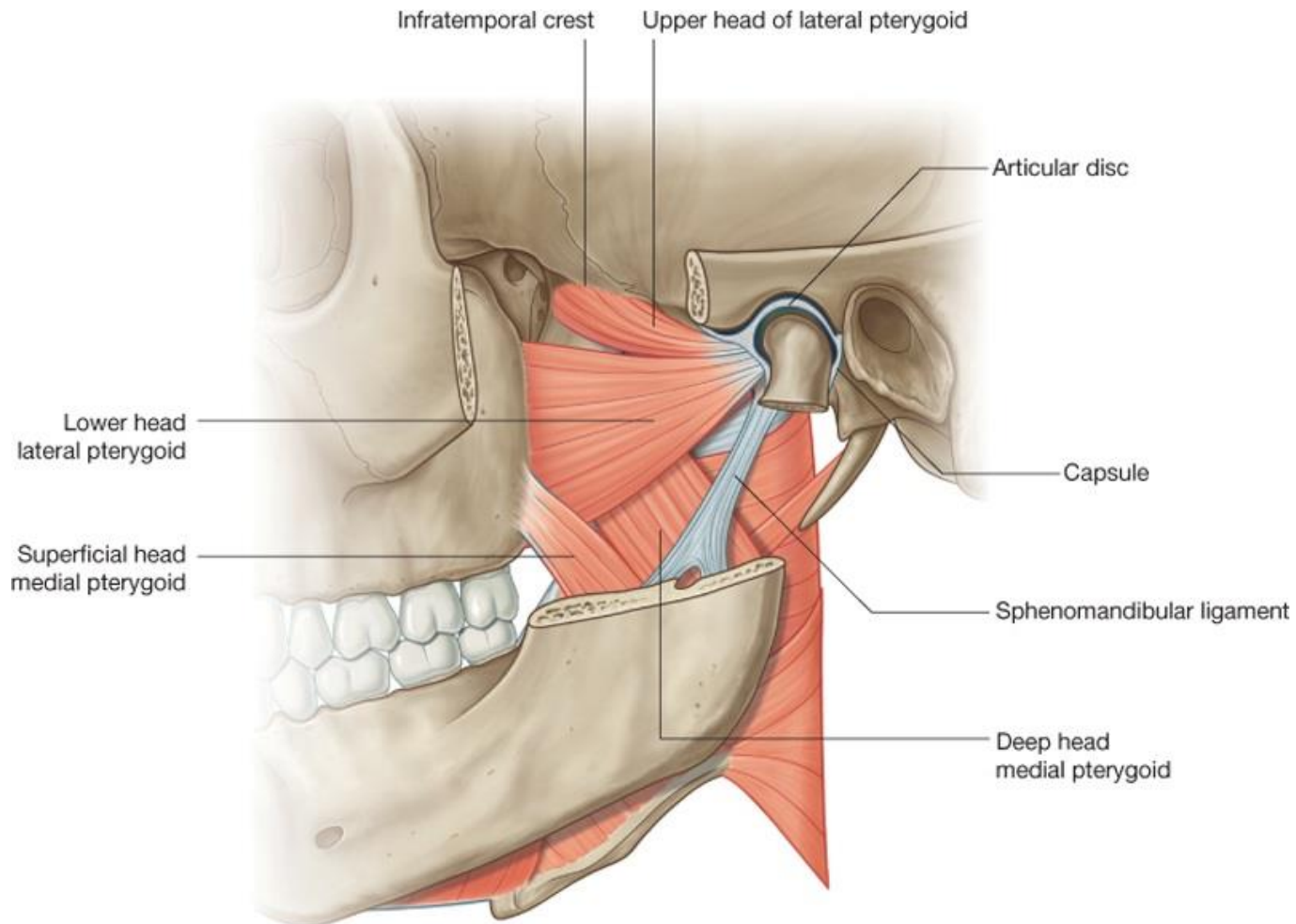
Boundaries:  
Lateral=Ramus of Mandible  
Anterior=Maxilla  
Medial=Lat. Pterygoid Plate  
Roof=Sphenoid

Pterygomaxillary Fissure  
Infratemporal Fossa

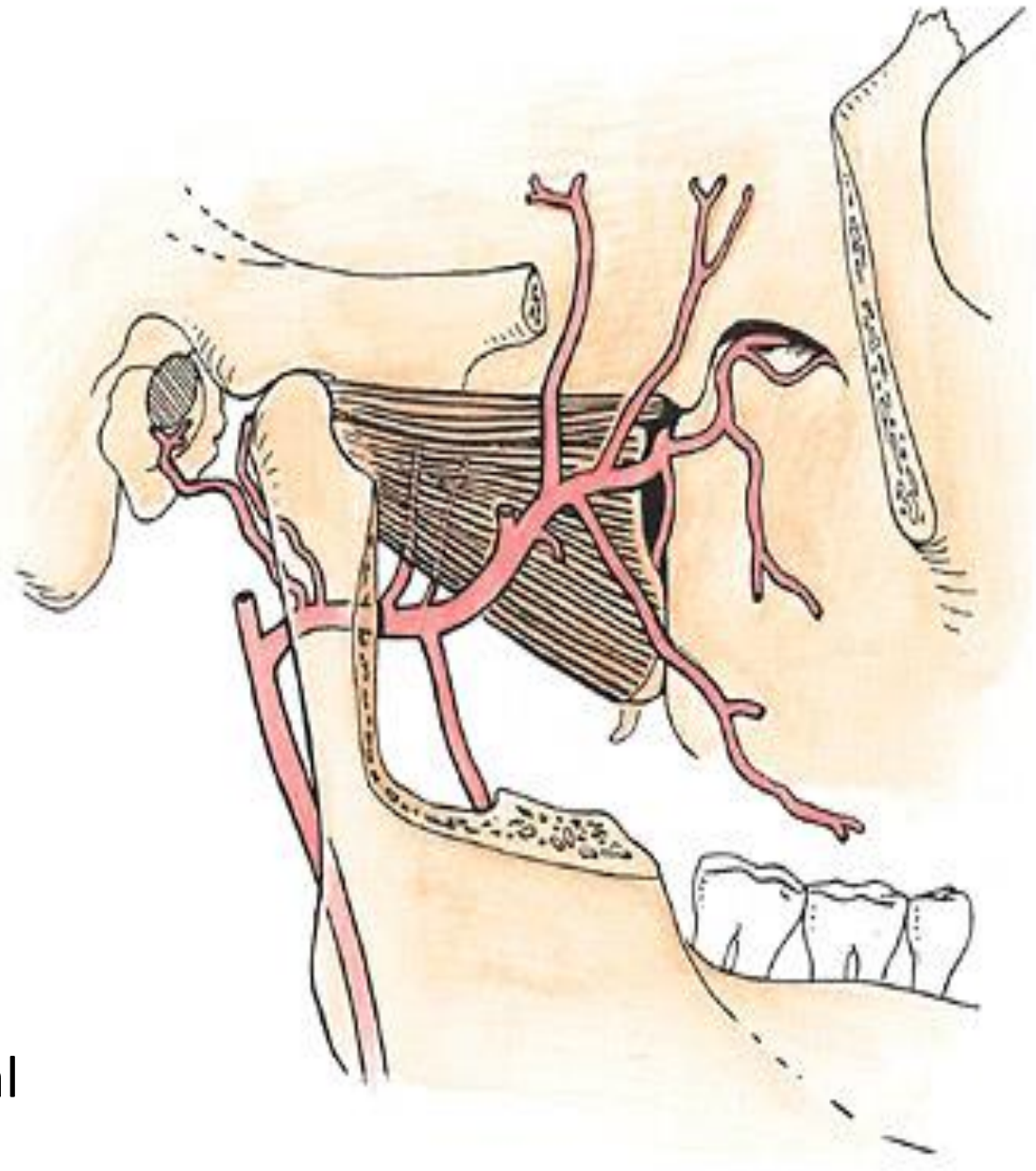
# Infratemporal Fossa Contents

- Parotid gland (glenoid process)
- Maxillary artery
- Pterygoid venous plexus
- Otic PS ganglion
- Muscles of mastication
- Mandibular nerve
- Sphenomandibular ligament

# Infratemporal Fossa - content



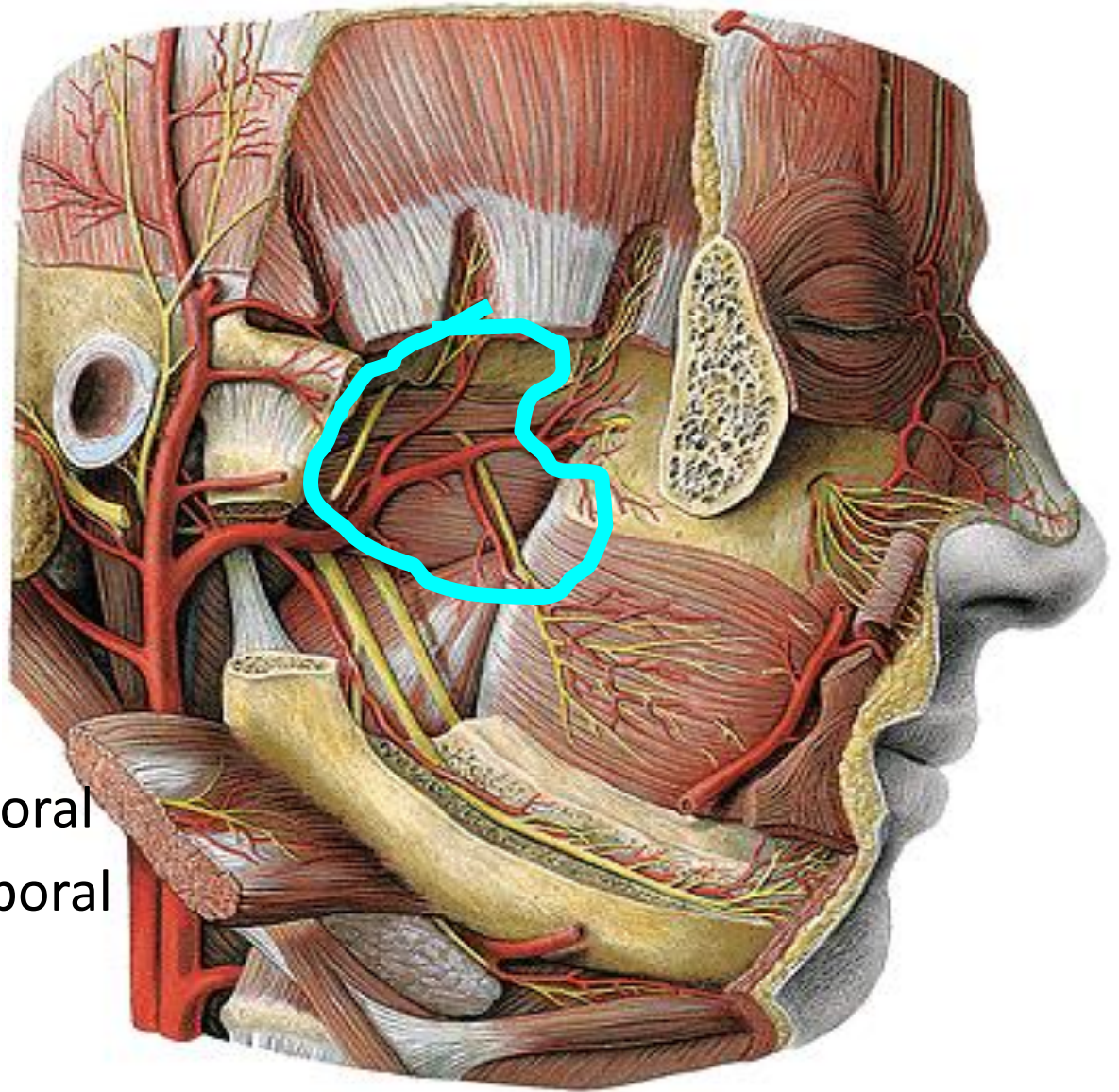
# 1<sup>st</sup> part



- Deep auricular
- Anterior tympanic
- Middle meningeal
- Accessory meningeal
- Inferior alveolar



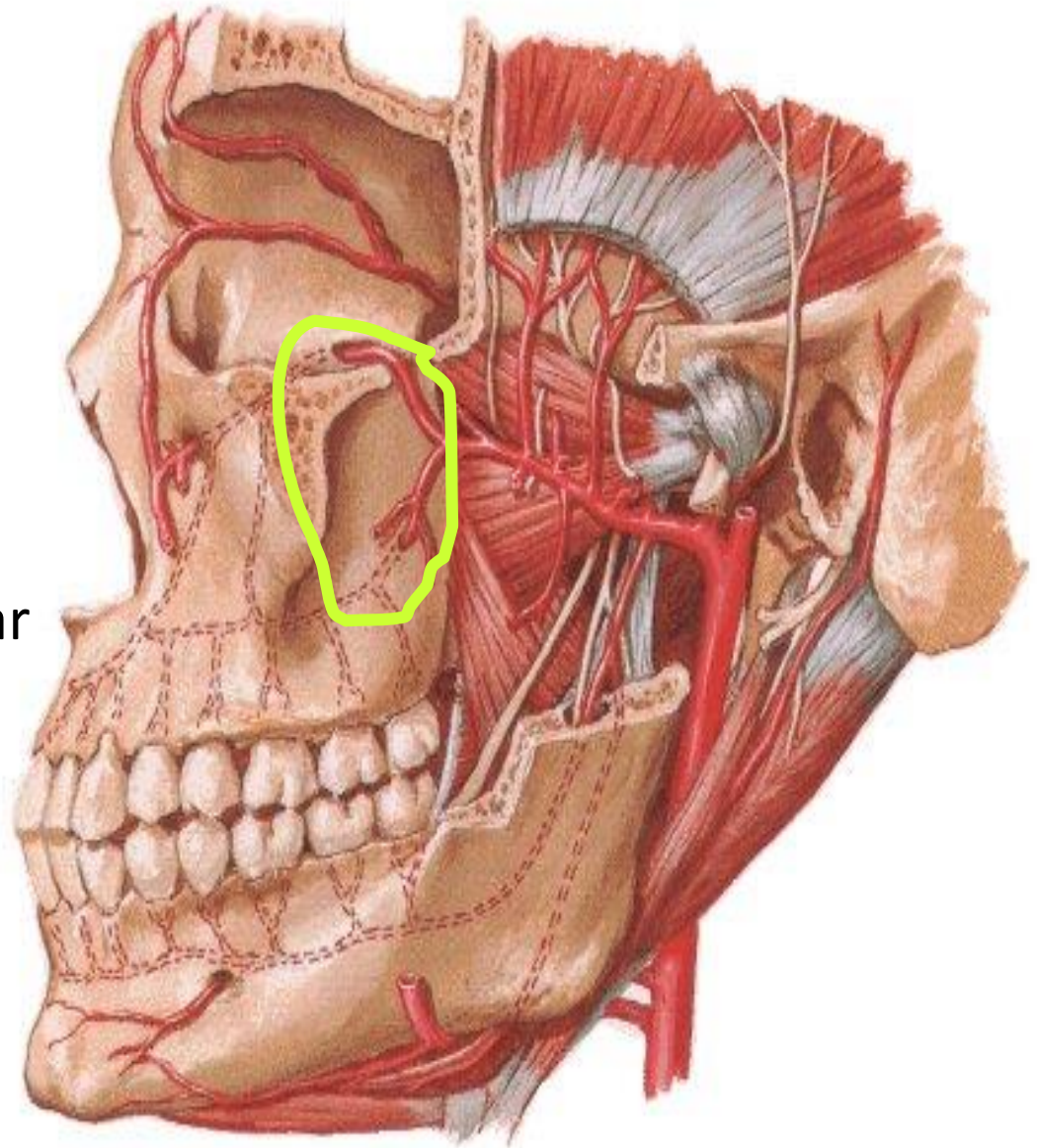
## 2<sup>nd</sup> part



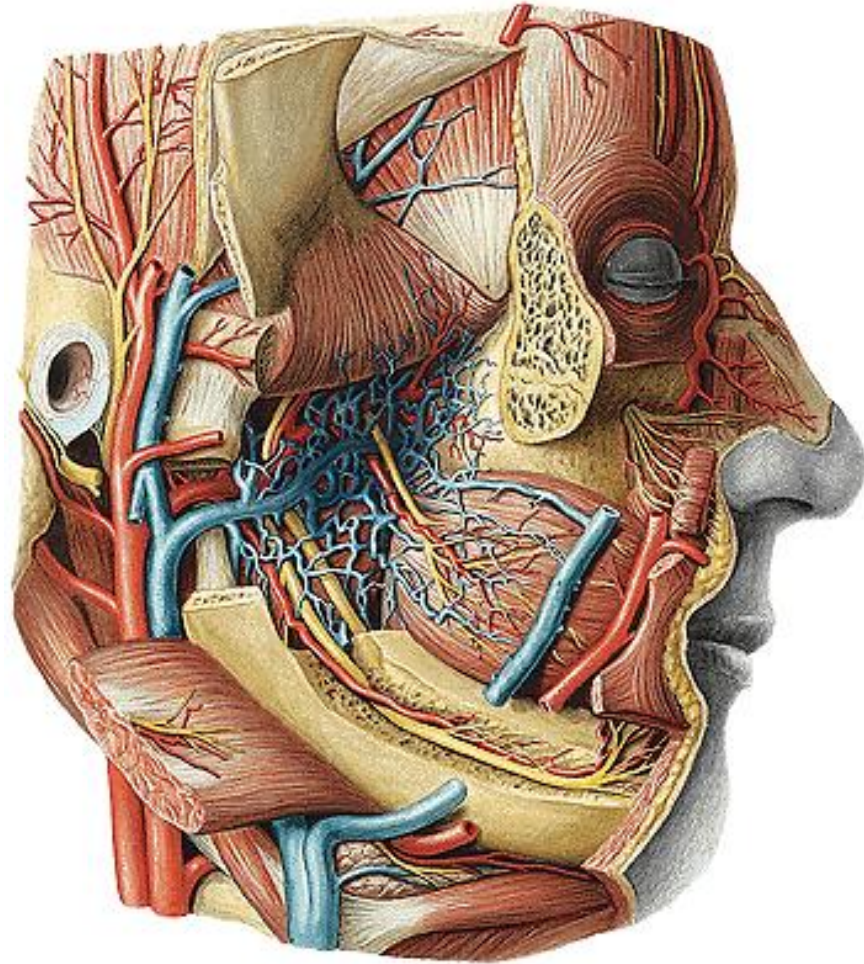
- Masseteric
- Anterior deep temporal
- Posterior deep temporal
- Pterygoid
- Buccal

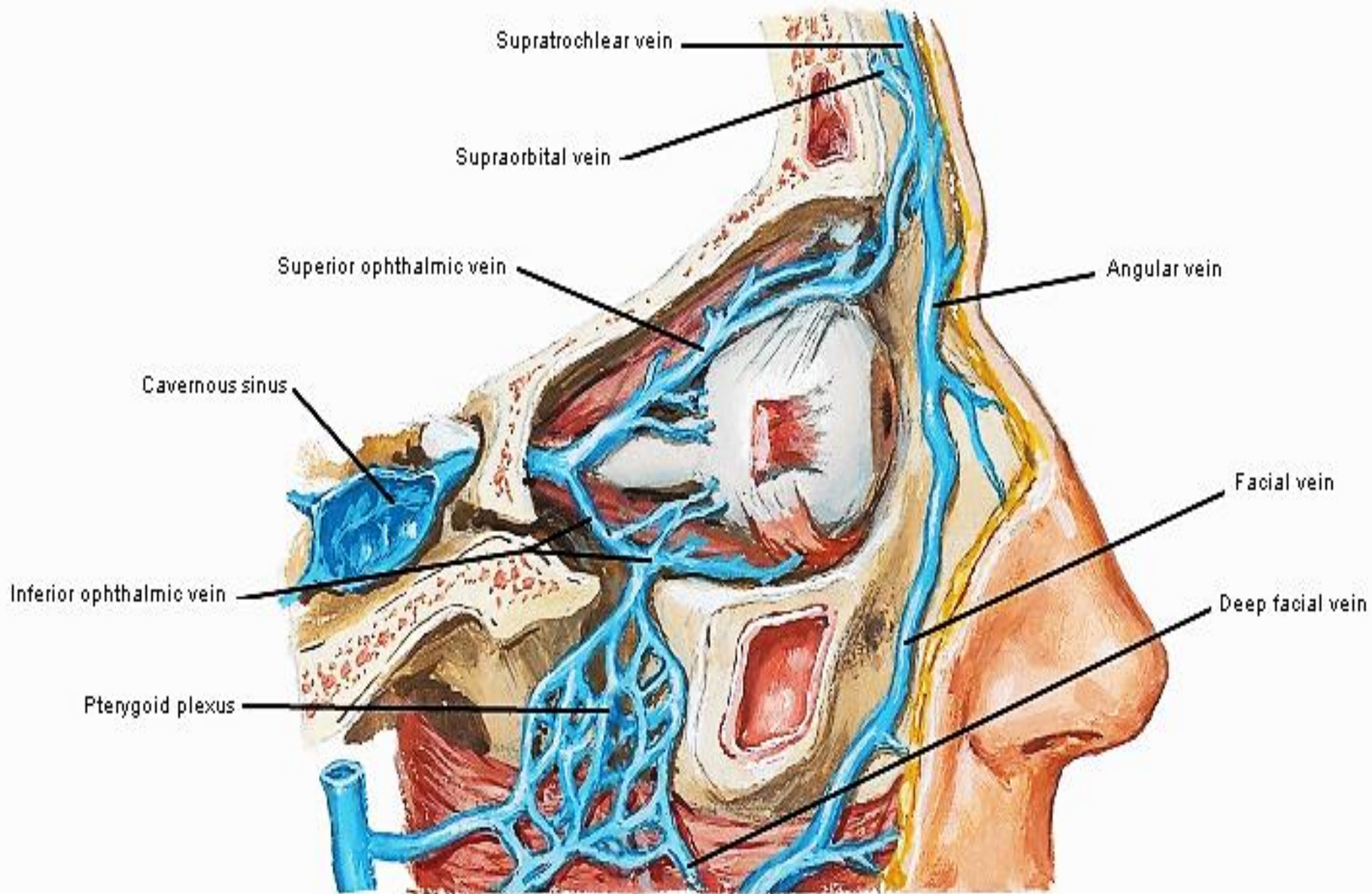
# 3<sup>rd</sup> part

- Posterior superior alveolar
- Infraorbital
- Descending palatine
- Artery of pterygoid canal
- Pharyngeal
- Sphenopalatine



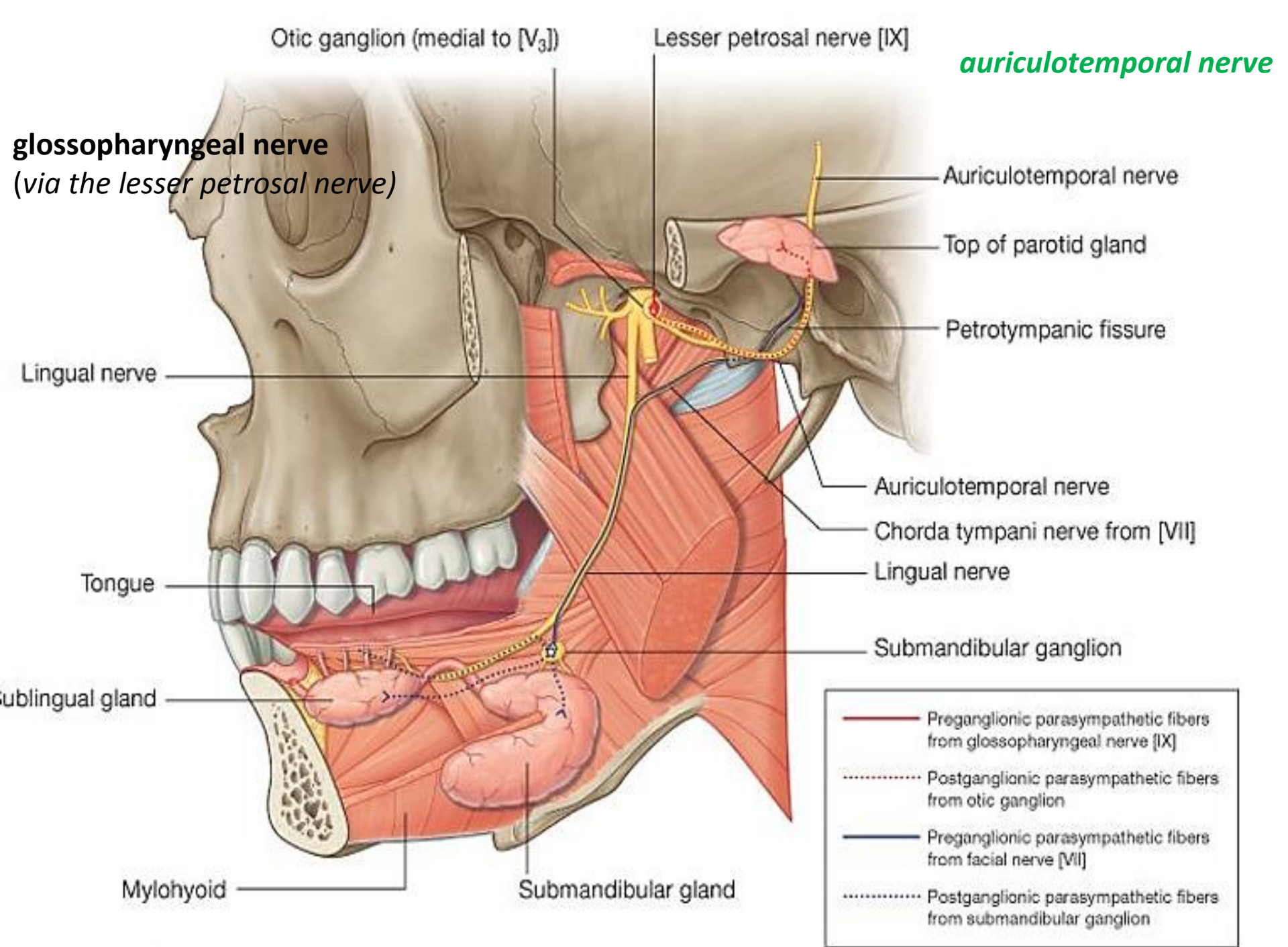
# Pterygoid Venous Plexus

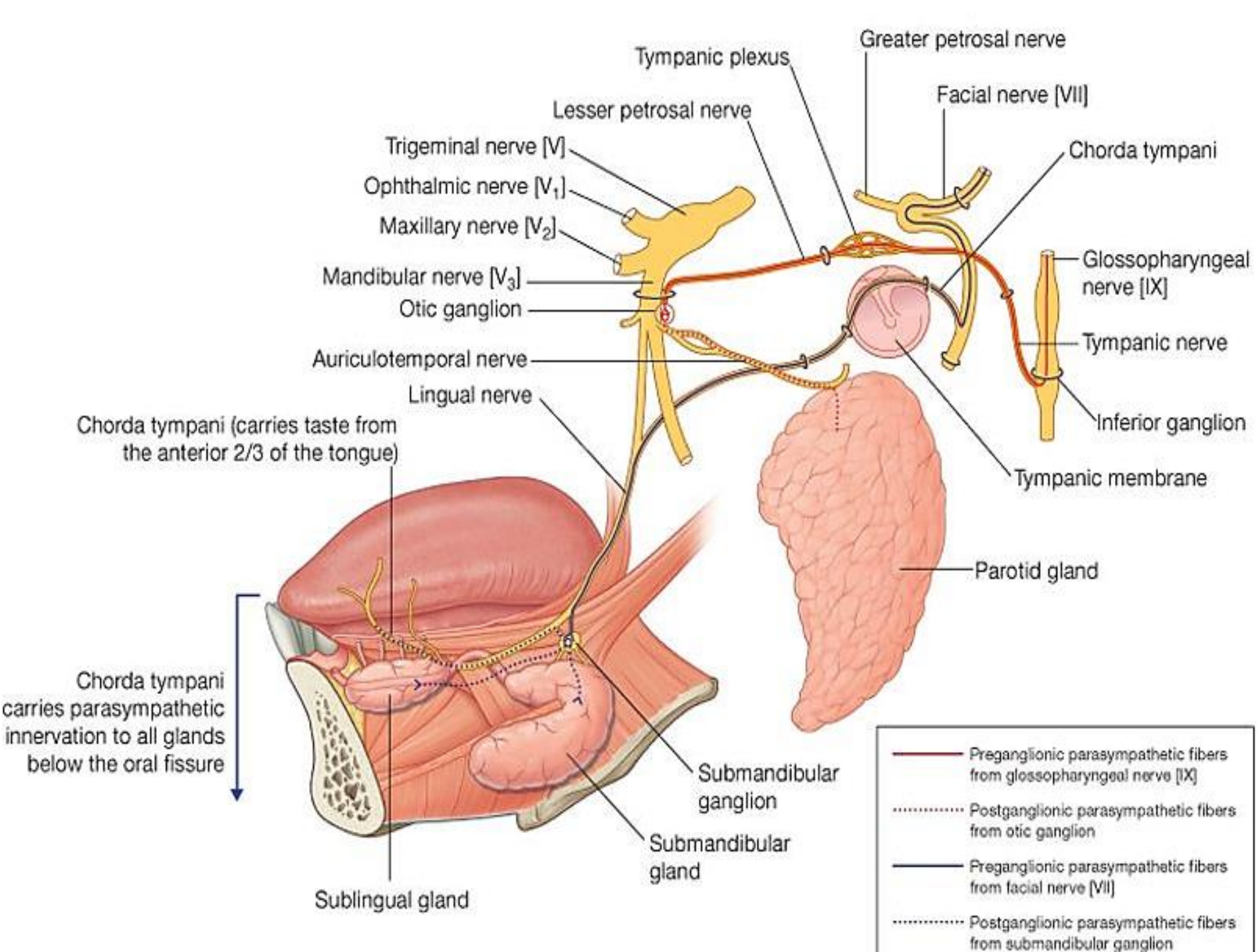




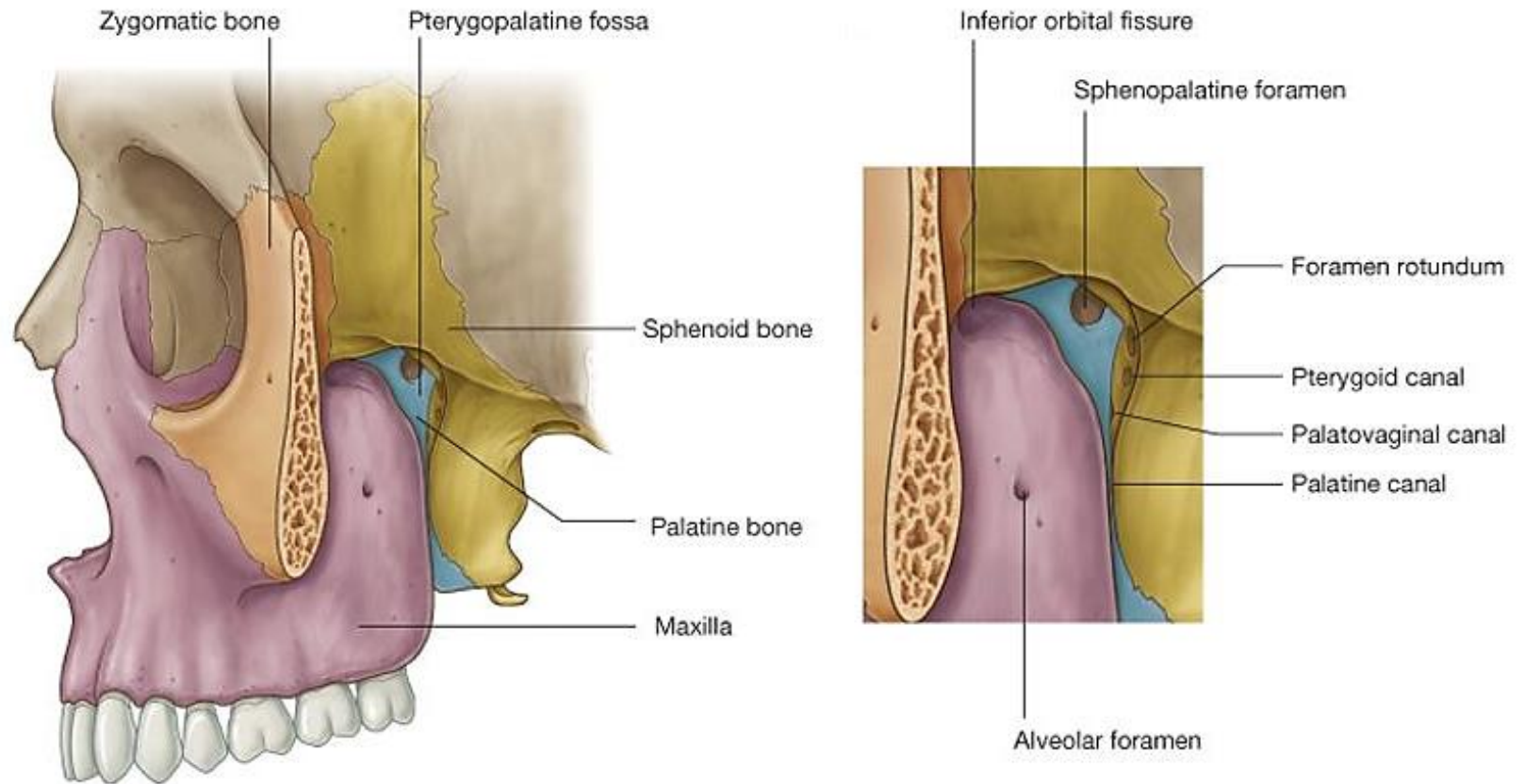
# Otic ganglion (parasympathetic)

- Located in the infratemporal fossa, just inferior to the foramen ovale. **Presynaptic parasympathetic fibers**, derived mainly from the **glossopharyngeal nerve** (*via the lesser petrosal nerve*), synapse in the otic ganglion.
- **Postsynaptic parasympathetic fibers**, secretory to the parotid gland, pass from the otic ganglion to this gland through the ***auriculotemporal nerve***.

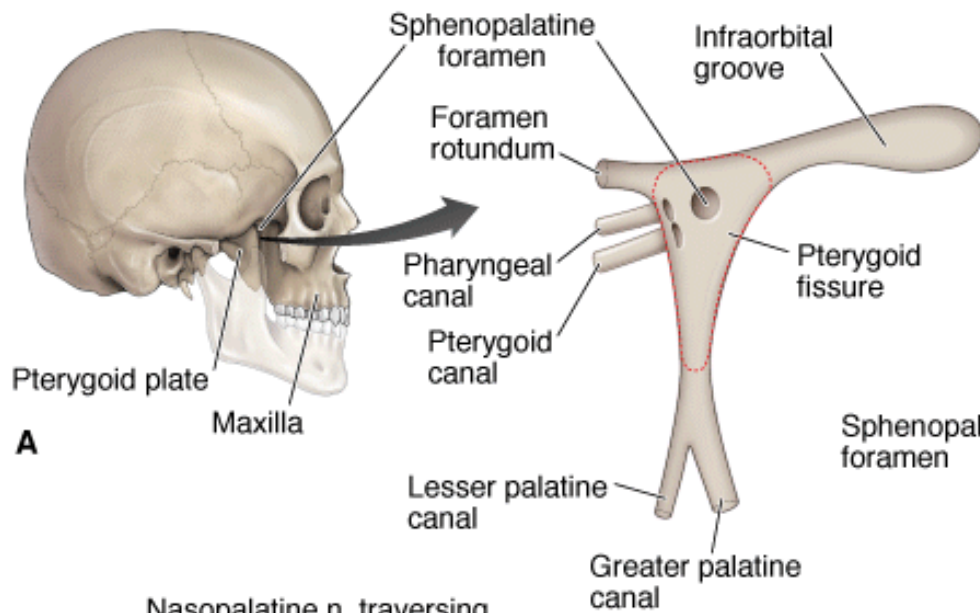




# Pterygopalatine fossa

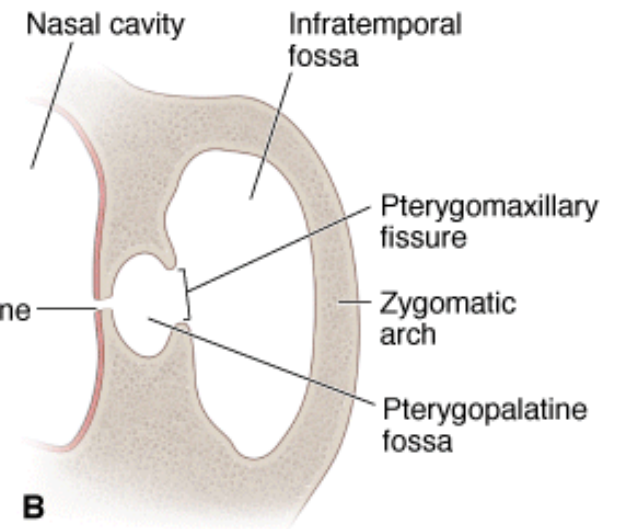






**A**

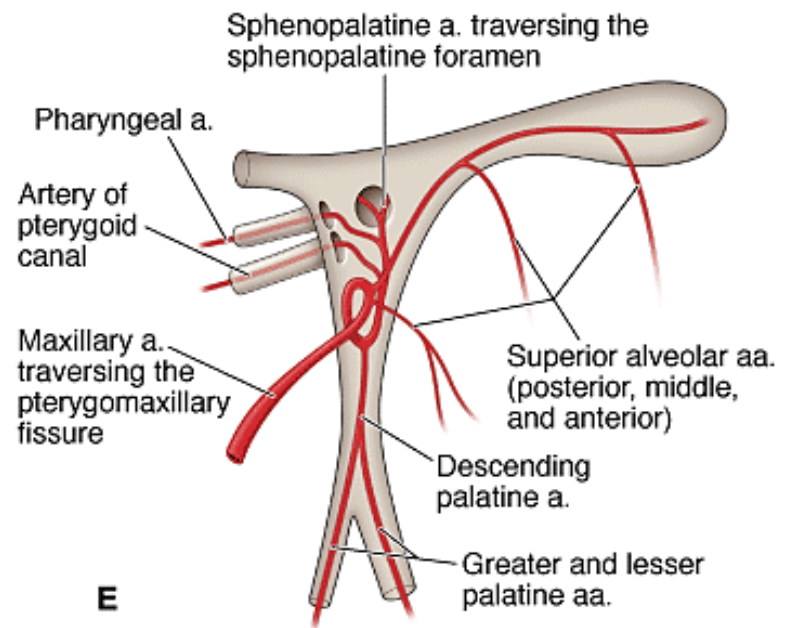
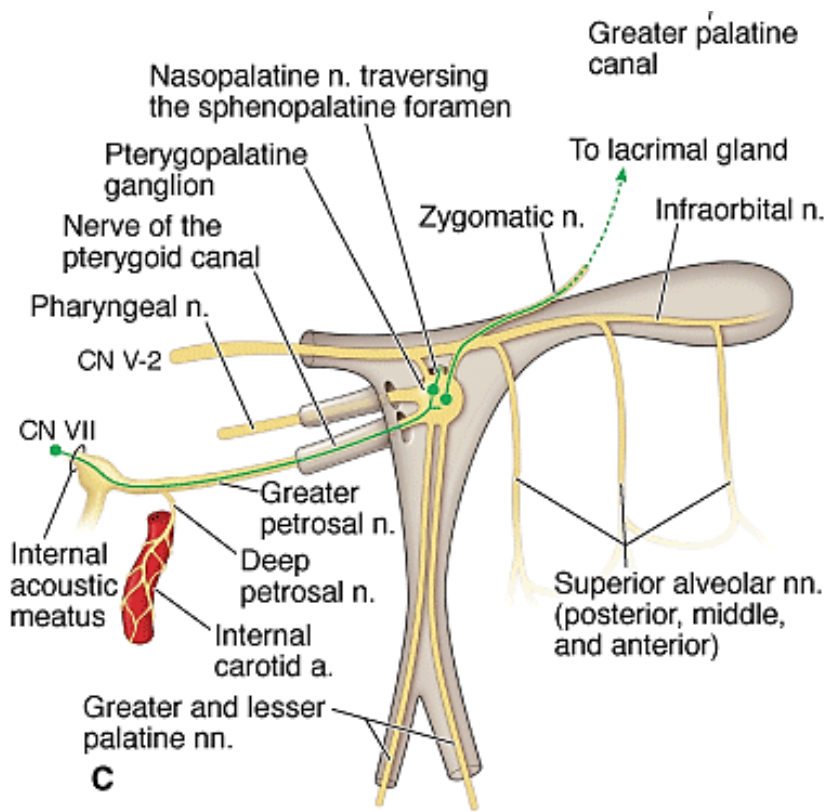
Nasopalatine n. traversing the sphenopalatine foramen



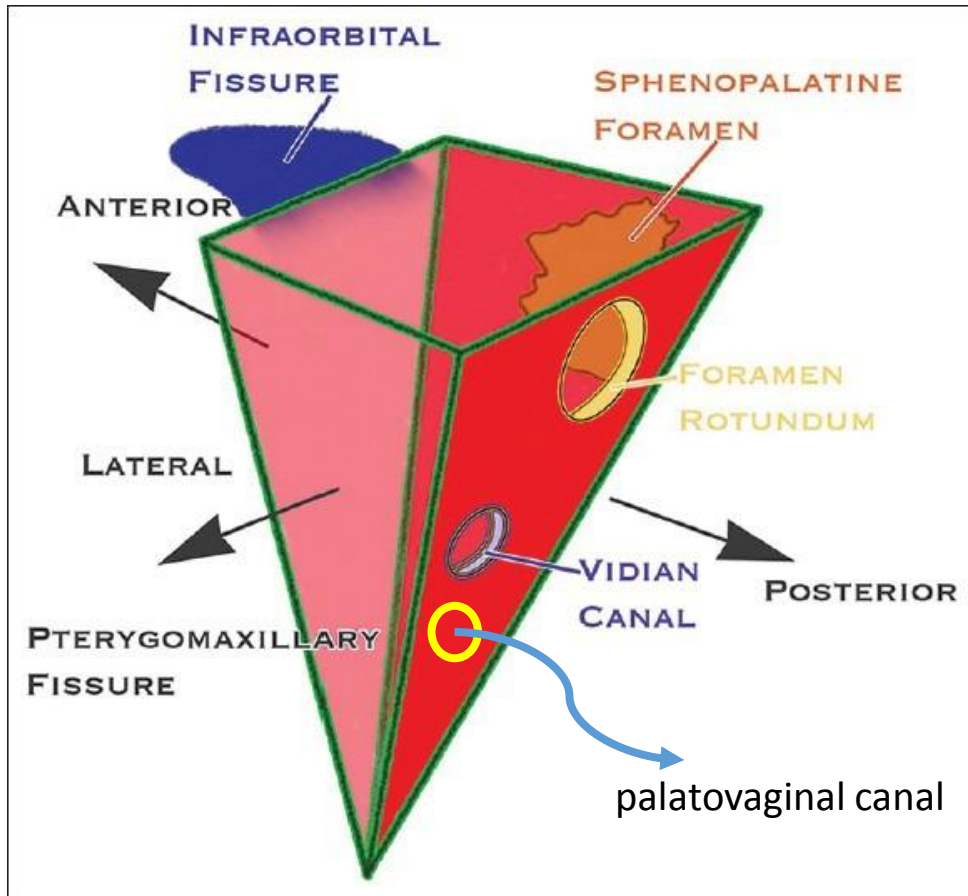
**B**

# Pterygopalatine fossa – arteries and nerves



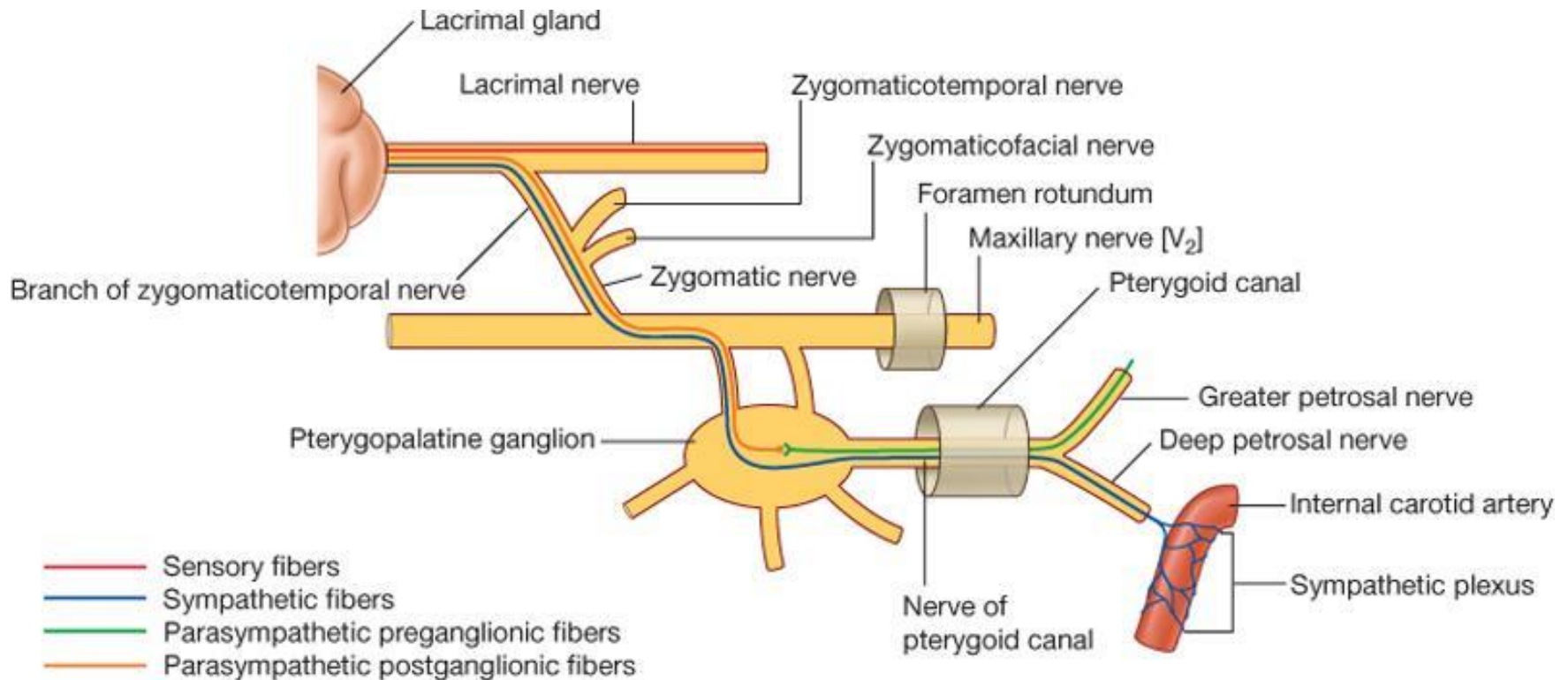


# Pterygopalatine fossa - connections



1. foramen rotundum & pterygoid canal  
middle cranial fossa
2. palatovaginal canal  
nasopharynx
3. palatine canal leads  
oral cavity (hard palate)
4. sphenopalatine foramen  
nasal cavity
5. pterygomaxillary fissure  
infratemporal fossa
6. inferior orbital fissure  
orbit

# Pterygopalatine ganglion



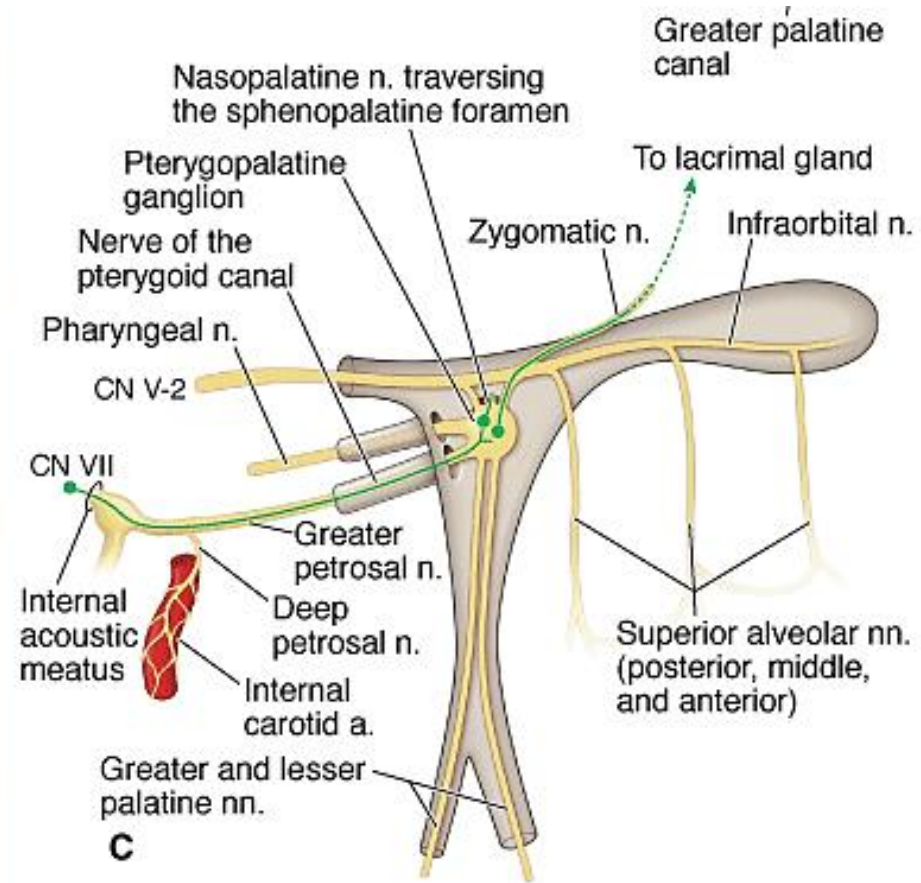
Drake: Gray's Anatomy for Students, 2nd Edition.

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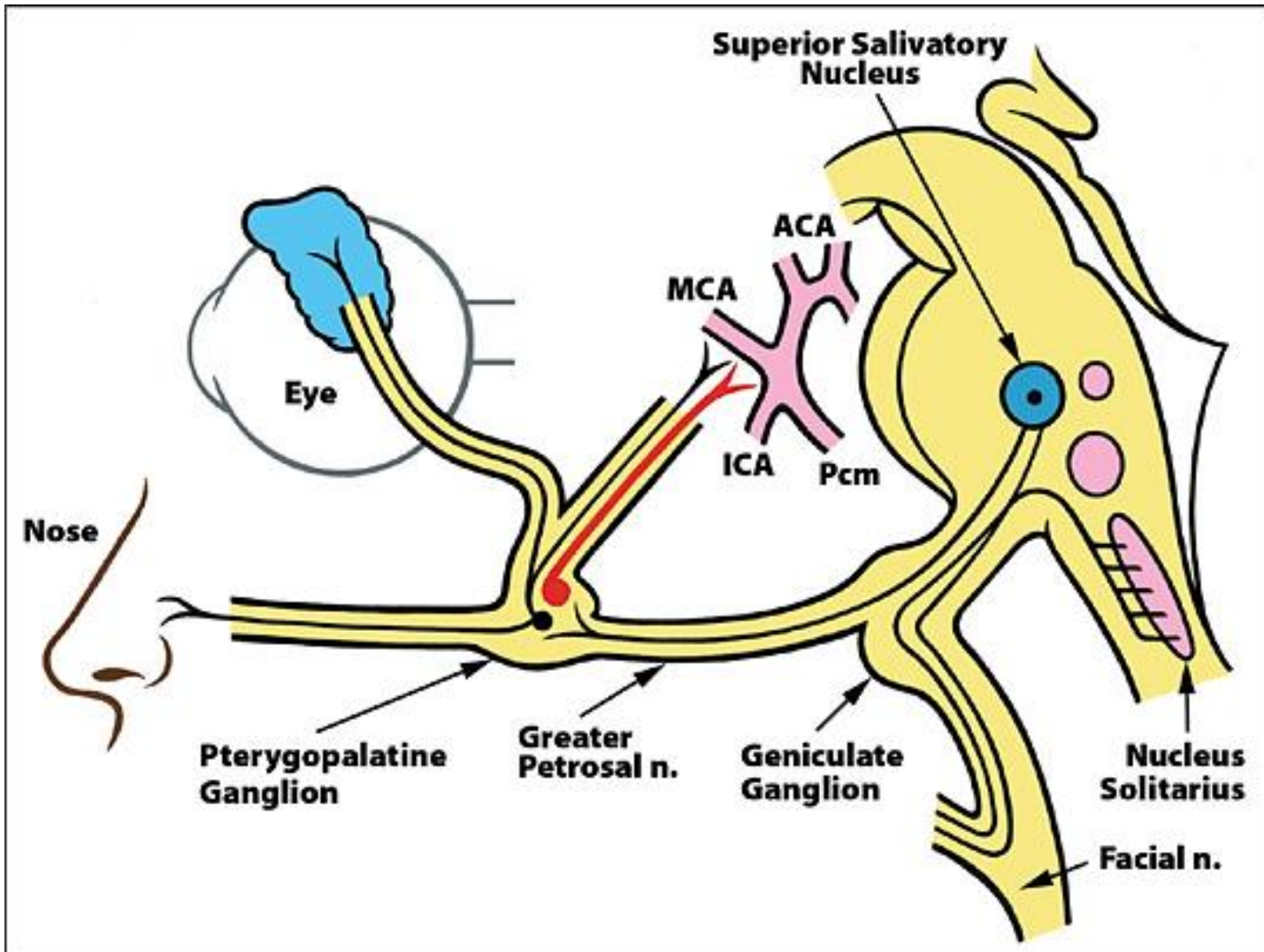
# Pterygopalatine Ganglion

(Ganglion pterygopalatinum, Meckel's ganglion, Nasal ganglion, Sphenopalatine ganglion)

- Largest of the 4 PS ganglia in the head
- Formed by the cell bodies of the postganglionic neurons associated with preganglionic parasympathetic fibers of the facial nerve [VII] carried by the *greater petrosal nerve* and the *nerve of the pterygoid canal*.



# Parasympathetic Connection



# Study the Cranial Fossa!

