

Parotid Gland

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Lecture ILOS & Objectives:

By the end of this lecture the student should be able to:

- **Describe the position and shape of the parotid gland.**
- **Identify the relations of the parotid gland**
- **Identify the structures within the parotid gland.**
- **Describe the anatomy of parotid duct.**
- **Identify blood supply & lymphatic drainage of the parotid gland.**
- **Define the nerve supply of parotid gland.**

Parotid Gland

It is the largest salivary gland

Shape:

Inverted pyramid

Base, upwards and concave

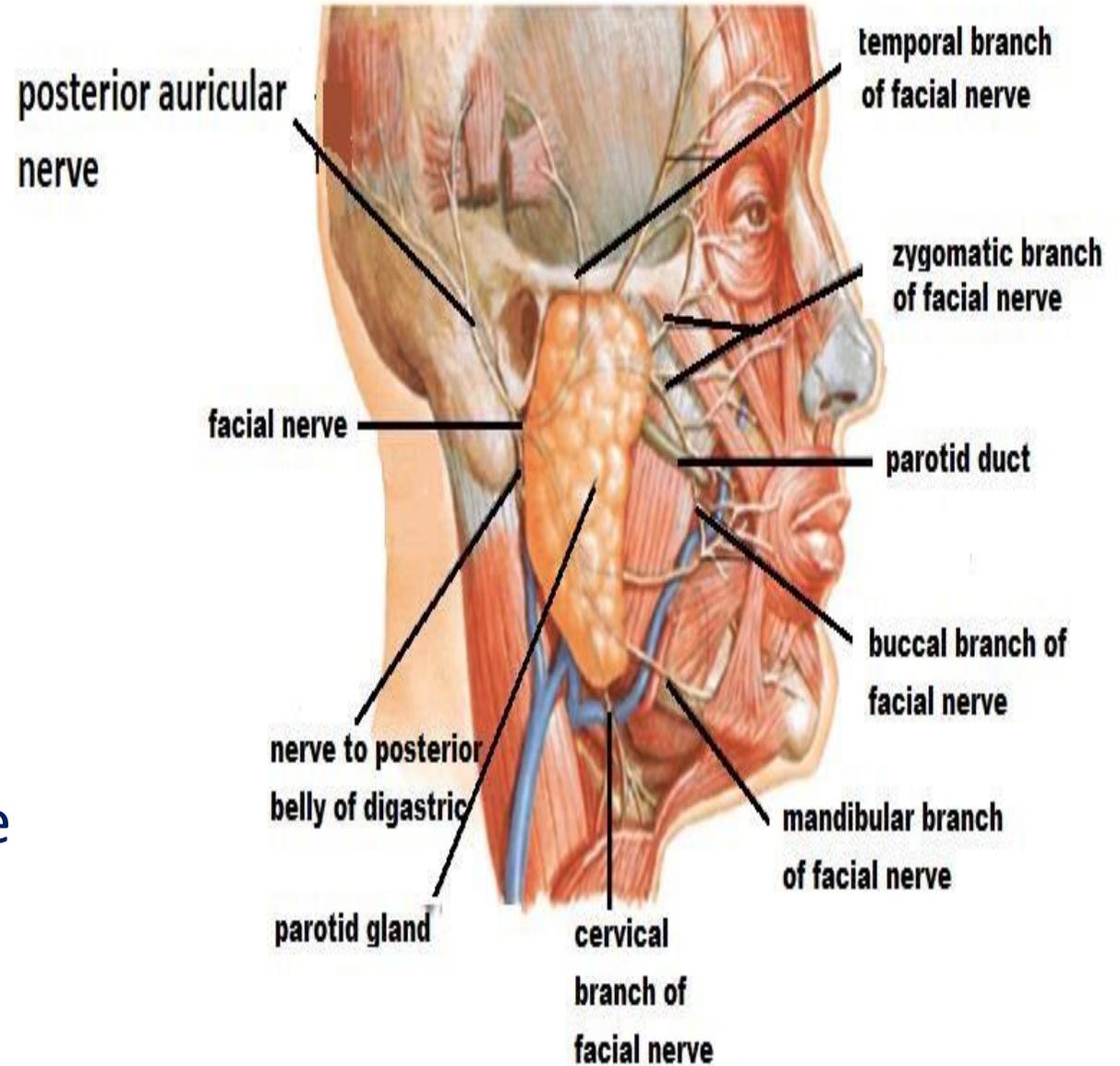
Apex, downwards and narrow.

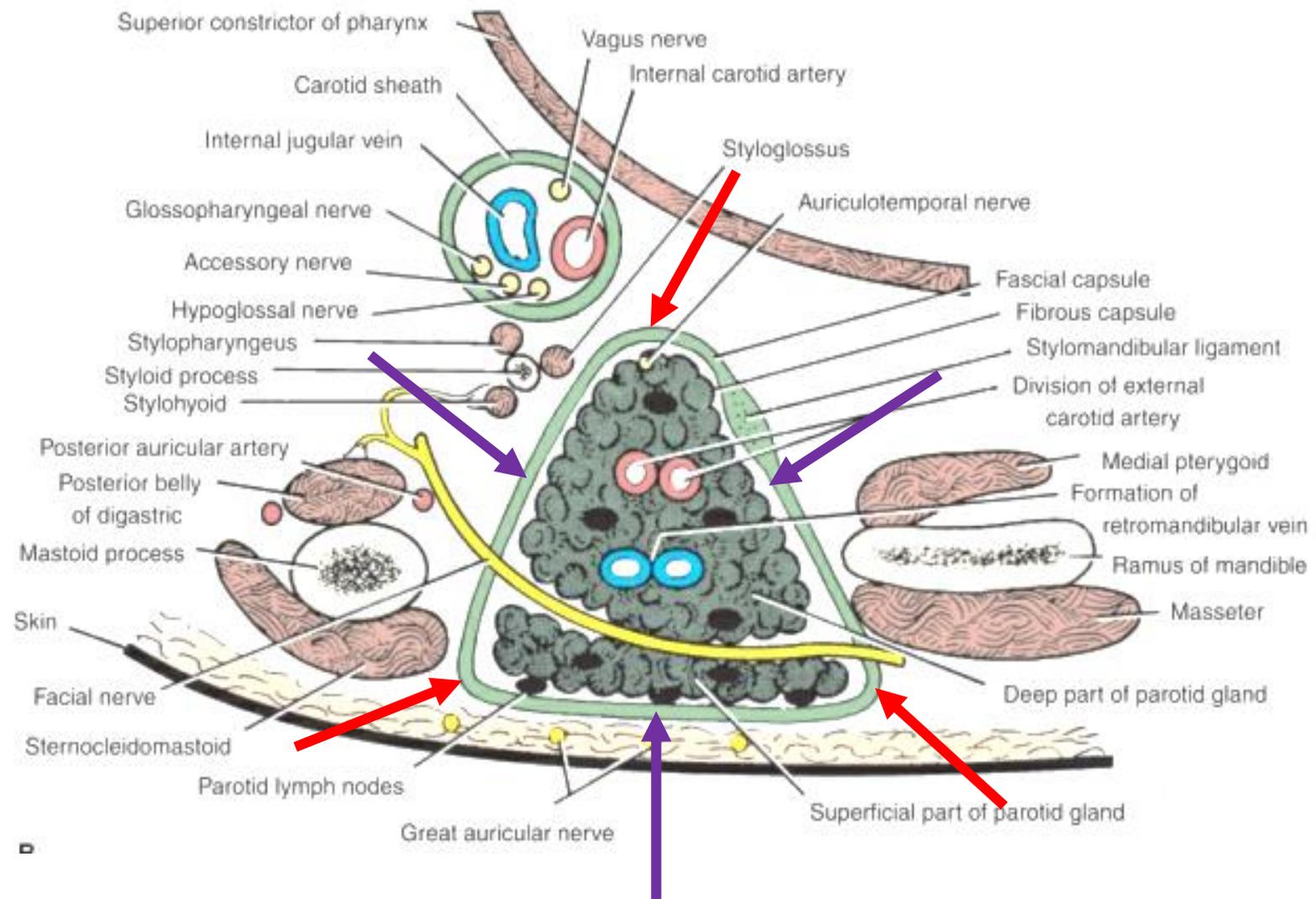
3 surfaces Lateral, antero-medial and Postero-medial

3 borders, Anterior, posterior and medial
Anteriorly ;it shows a small accessory lobe

Capsule

It is enclosed within a capsule of deep fascia called the parotid fascia.





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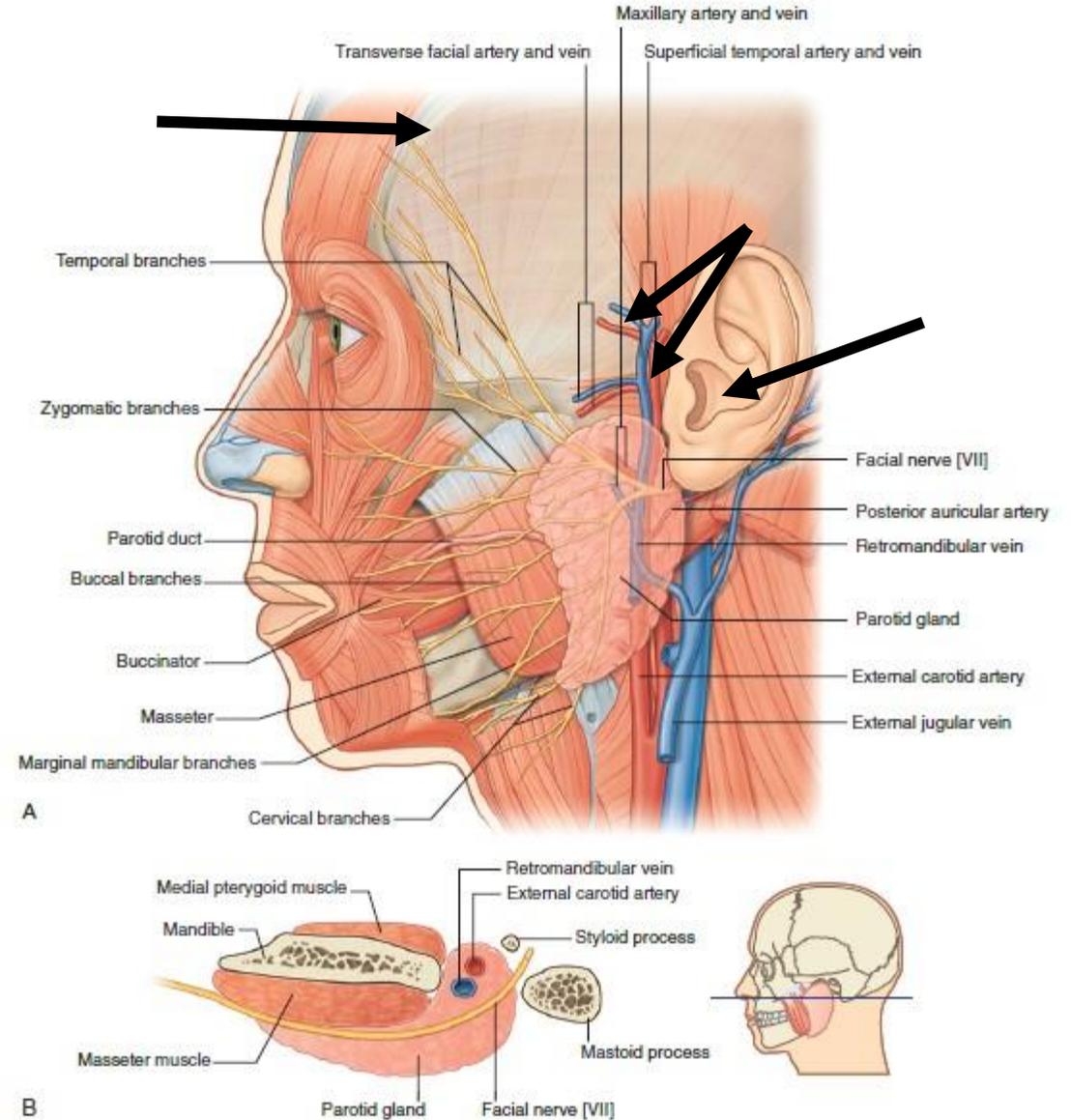
Relations of Parotid Gland

The concave superior base is related to:

- The external auditory meatus
- Posterior aspect of the temporomandibular joint

The following structures emerge from under the base :

1. Superficial temporal vessels
2. Auriculo-temporal nerve .

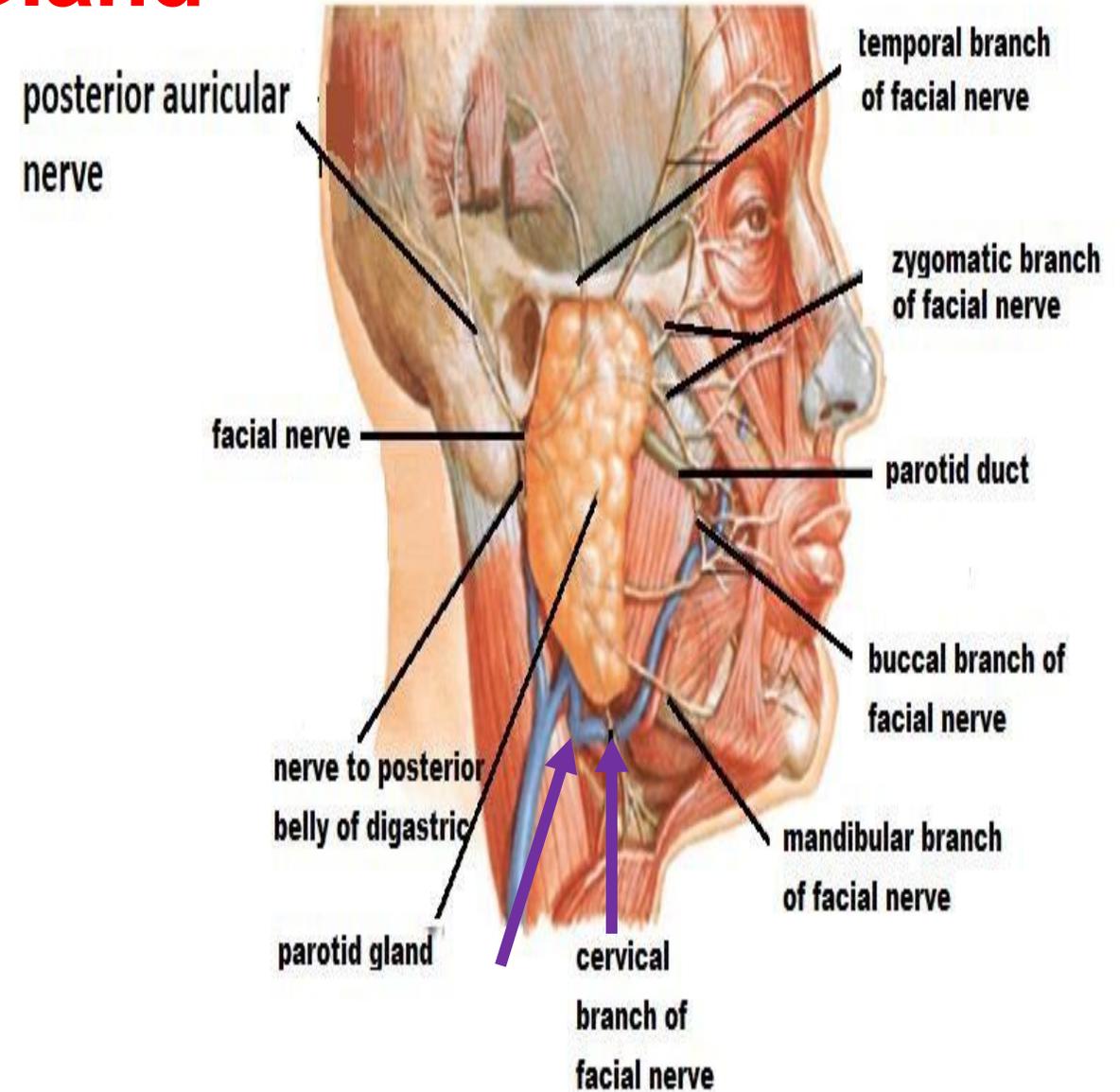


Relations of Parotid Gland

The apex :

The following structures emerge from under the apex:

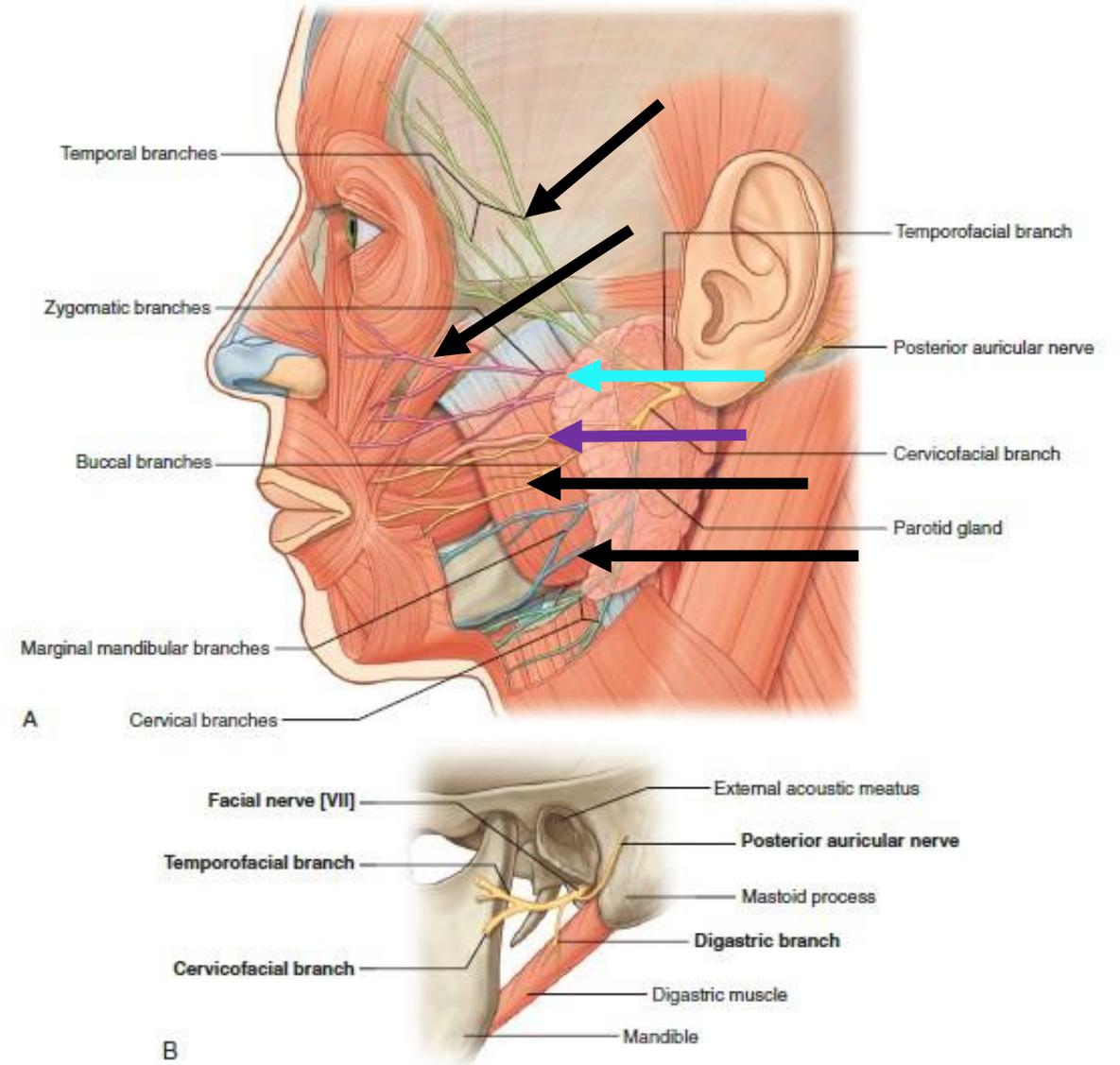
1. The cervical branch of the facial nerve
2. Anterior & posterior divisions of posterior facial (retromandibular) vein



Relations of Parotid Gland

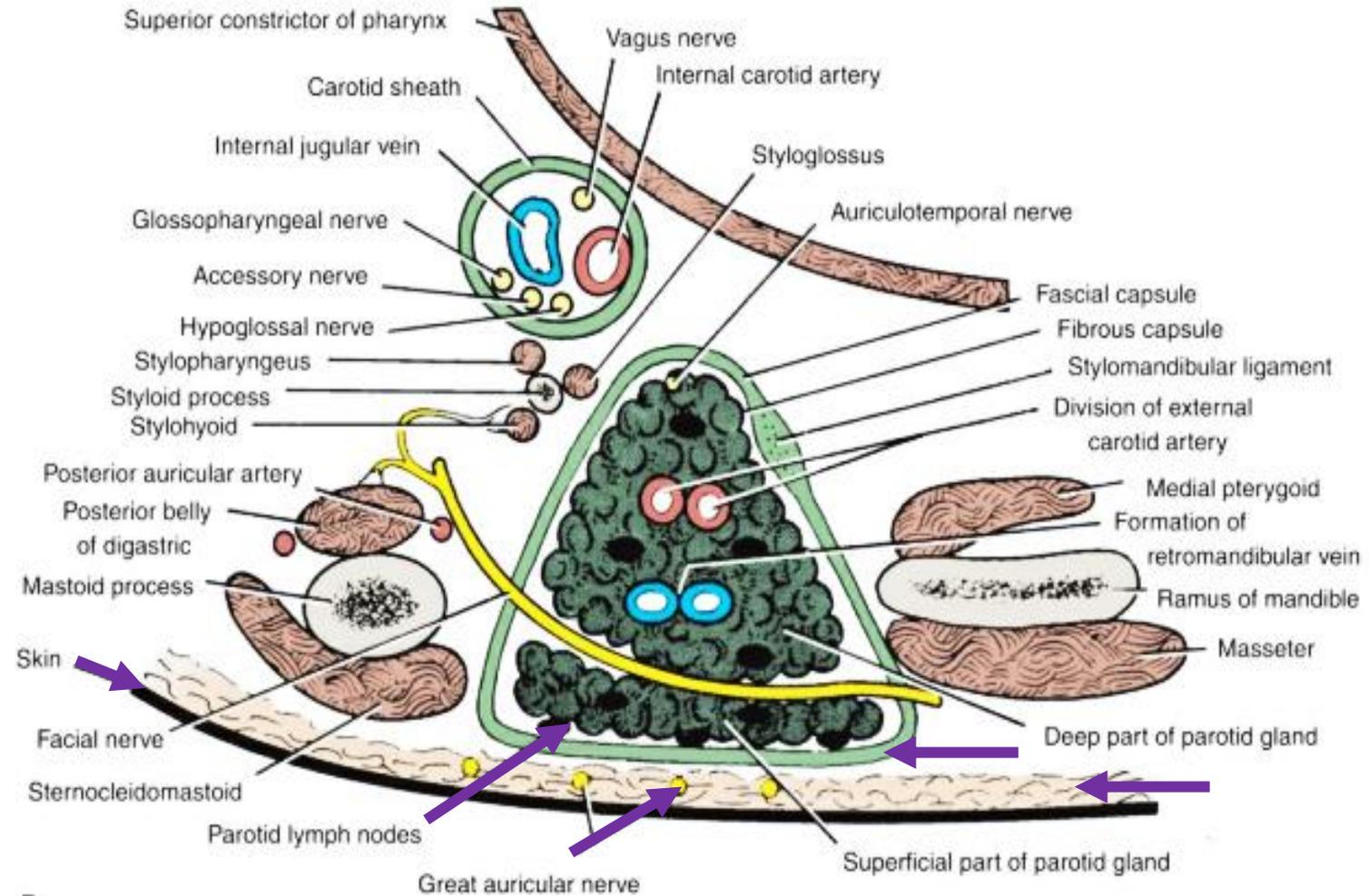
The anterior border :

- Structures at the anterior border from above downwards:
 1. Temporal branch of facial nerve.
 2. Zygomatic branch of facial nerve.
 3. Transverse facial artery.
 4. Accessory parotid gland.
 5. Parotid duct.
 6. Buccal branch of facial nerve.
 7. Mandibular branch of facial nerve.



Relations of Parotid Gland

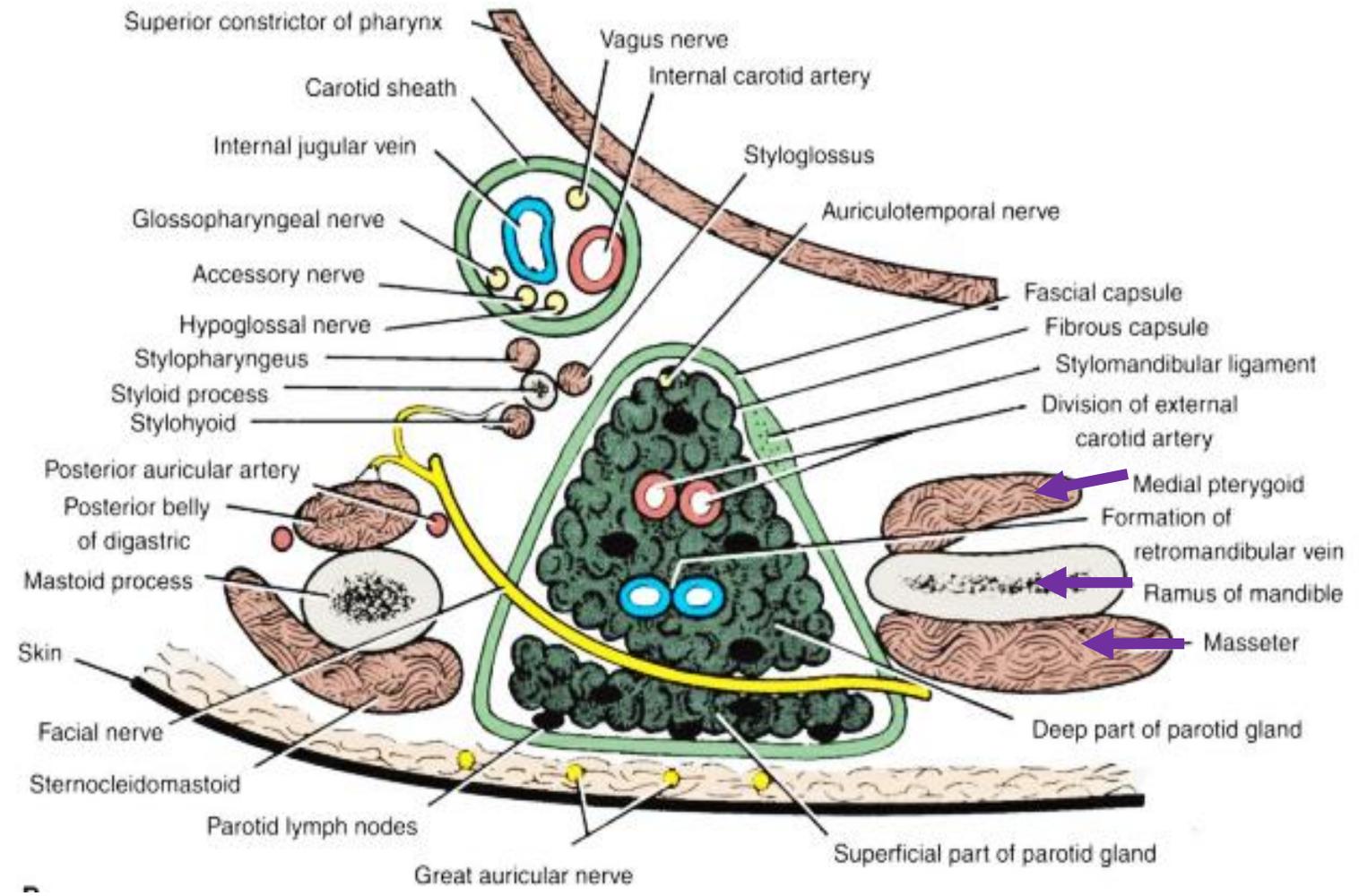
- **The lateral (superficial) surface is covered by:**
 - Skin
 - Superficial fascia
 - Deep fascia
- Superficial parotid lymph nodes .



Relations of anteromedial surface:

is related to a bone sandwiched between 2 muscles

- Ramus of the mandible
- Masseter muscle (lateral to the ramus)
- Medial pterygoid (medial to the ramus)

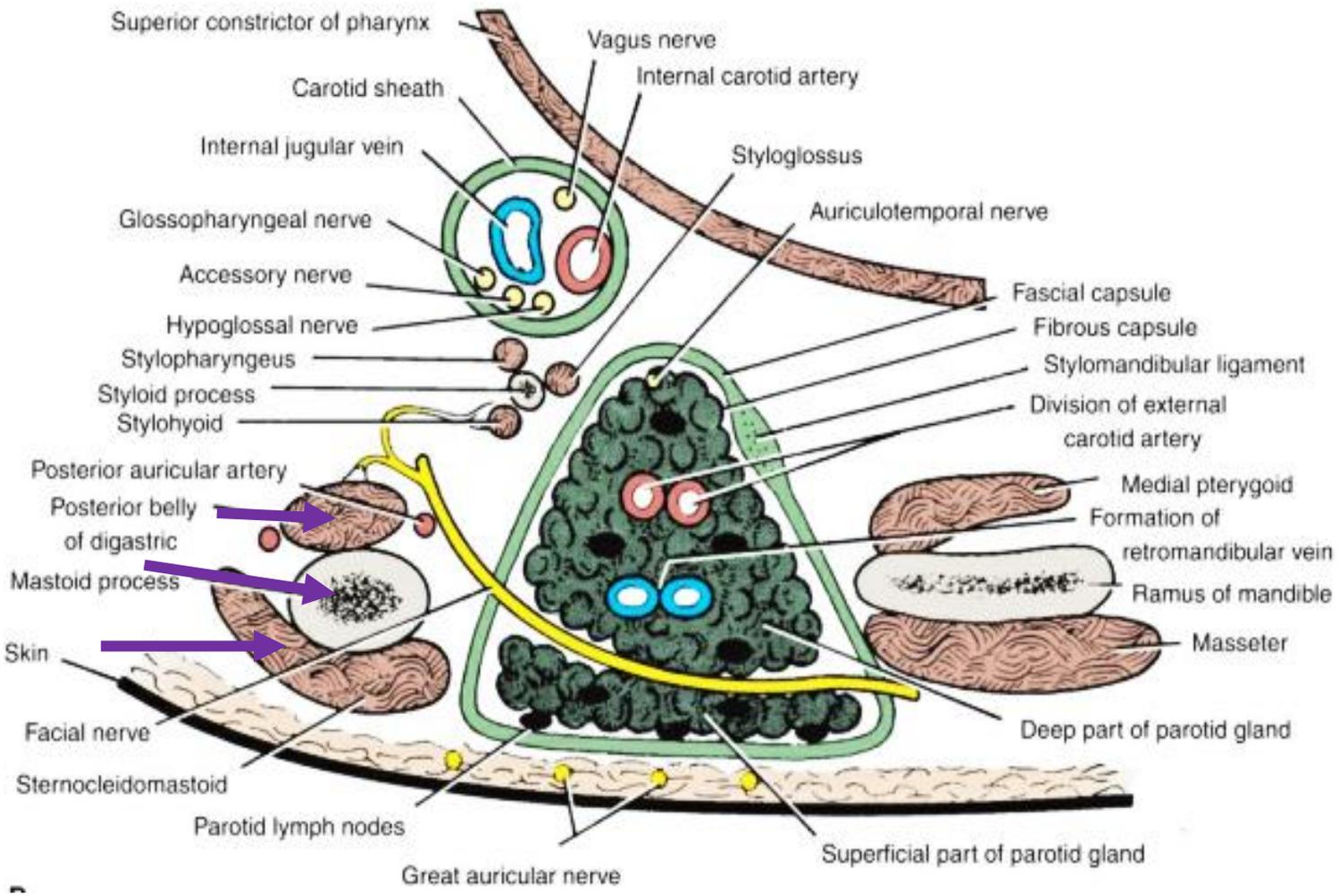


Relations of posteromedial

surface : is related to a **bone**

sandwiched between **2** muscles

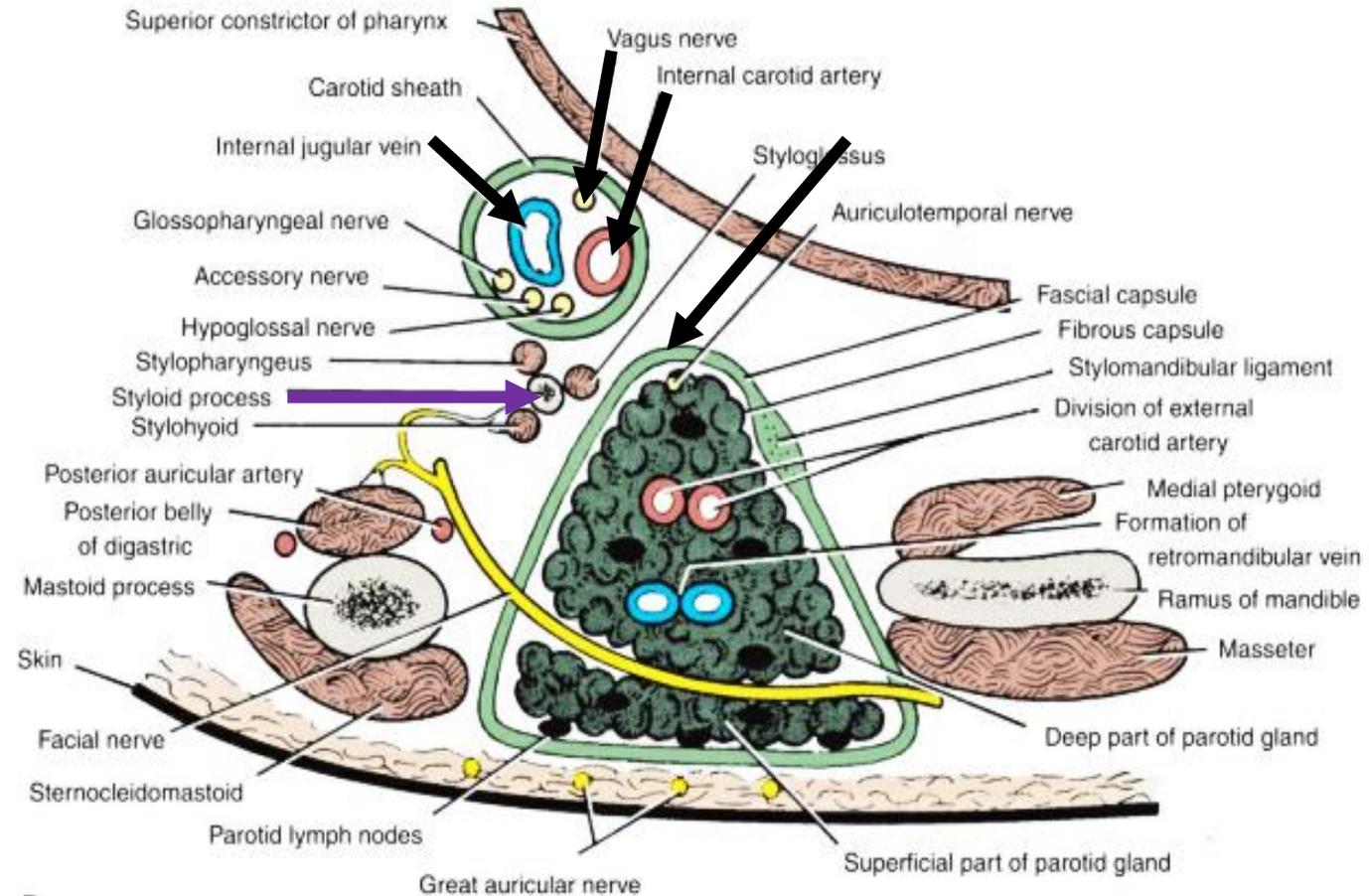
- Mastoid process
- Sternomastoid muscle
- Posterior belly of digastric (lateral to mastoid process)
- Posterior belly of digastric (medial to mastoid process)



Relations of medial border:

related to:

1. The styloid process and its muscles and ligaments
2. The contents of the carotid sheath
 - * Internal carotid artery
 - * Internal jugular vein
 - * Vagus nerve



Structures Within Parotid Gland

Some parotid lymph nodes

Structures traverse the gland from superficial to deep:

1. **Facial nerve** enters the gland from posteromedial surface and divides inside it into its 5 terminal branches.

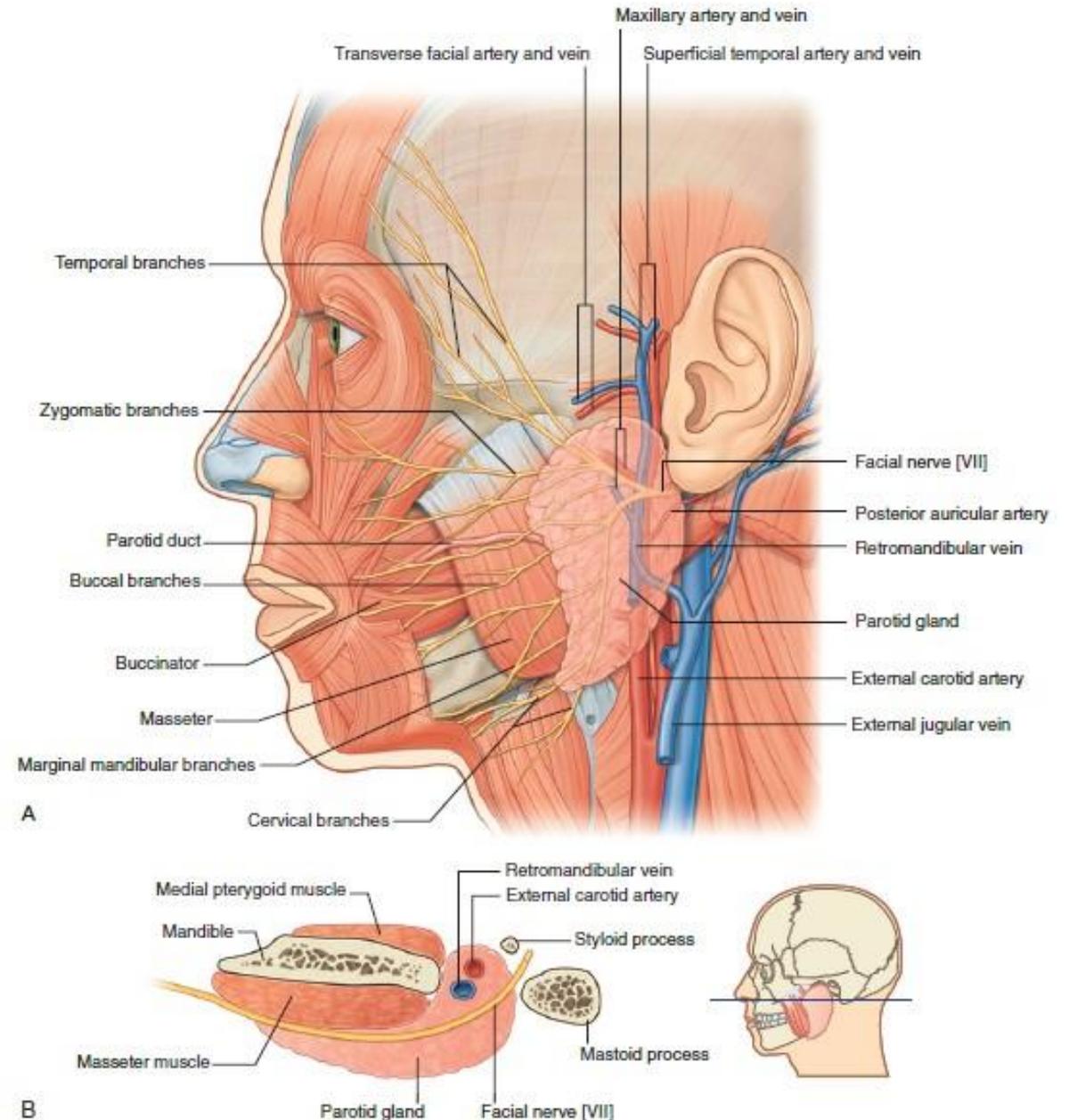
2. **Retromandibular vein:**

- It is formed by union of superficial temporal and maxillary veins.
- Divides at the lower pole of the gland into 2 divisions.

3. **External carotid artery :**

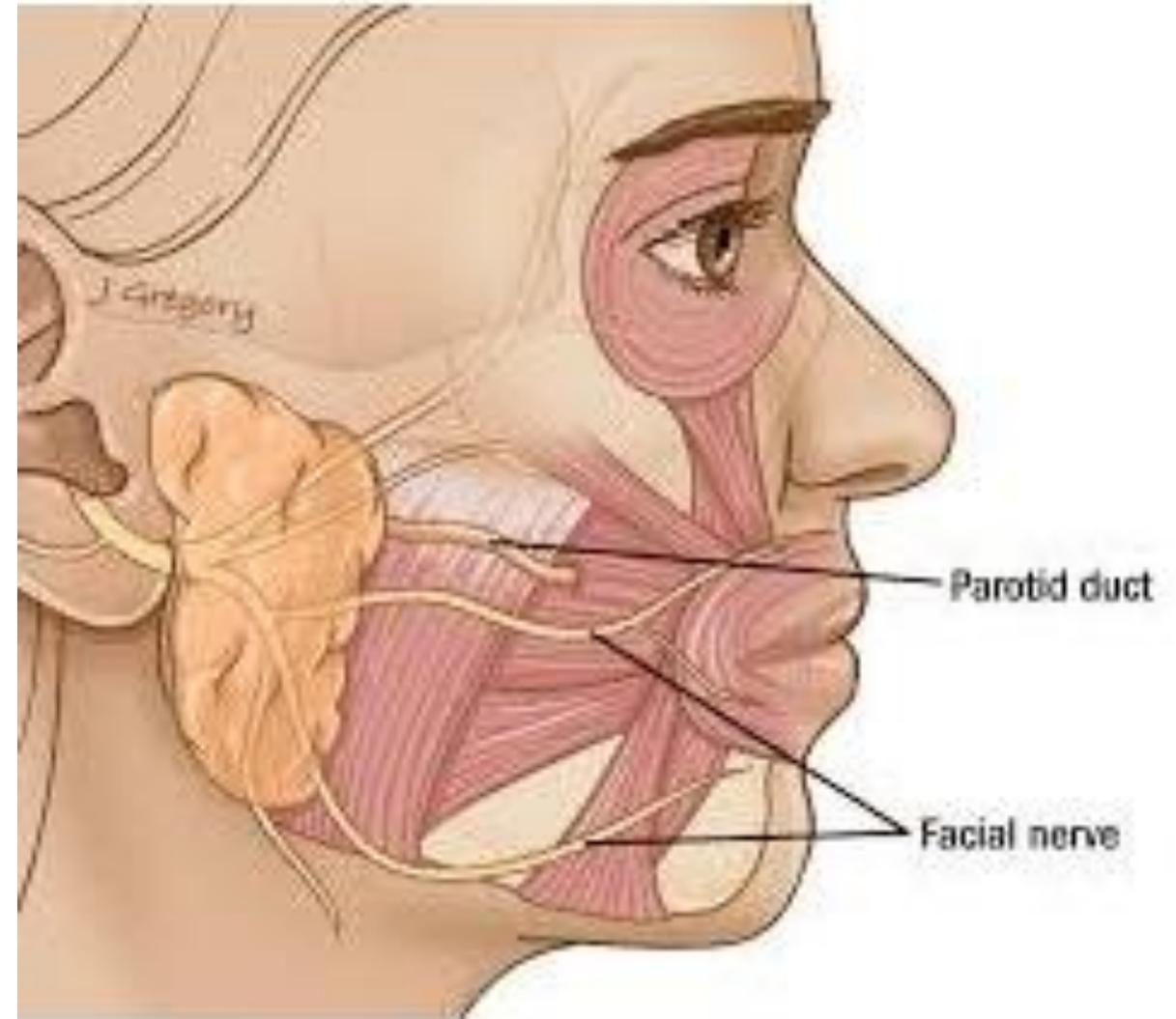
It divides within the gland into :

- a. Maxillary artery
- b. Superficial temporal artery



Parotid Duct

- It is about 5 cm long.
- Appears at the anterior border of the gland at the level of the lobule of the ear.
- It runs forwards over the masseter below the accessory parotid gland and transverse facial artery.
- It lies between 2 branches of the facial nerve:
 - Zygomatic branch (above)
 - Buccal branch (below)



Parotid Duct

At the anterior border the masseter it turns medially to open in the vestibule of the mouth piercing the following structures in succession:

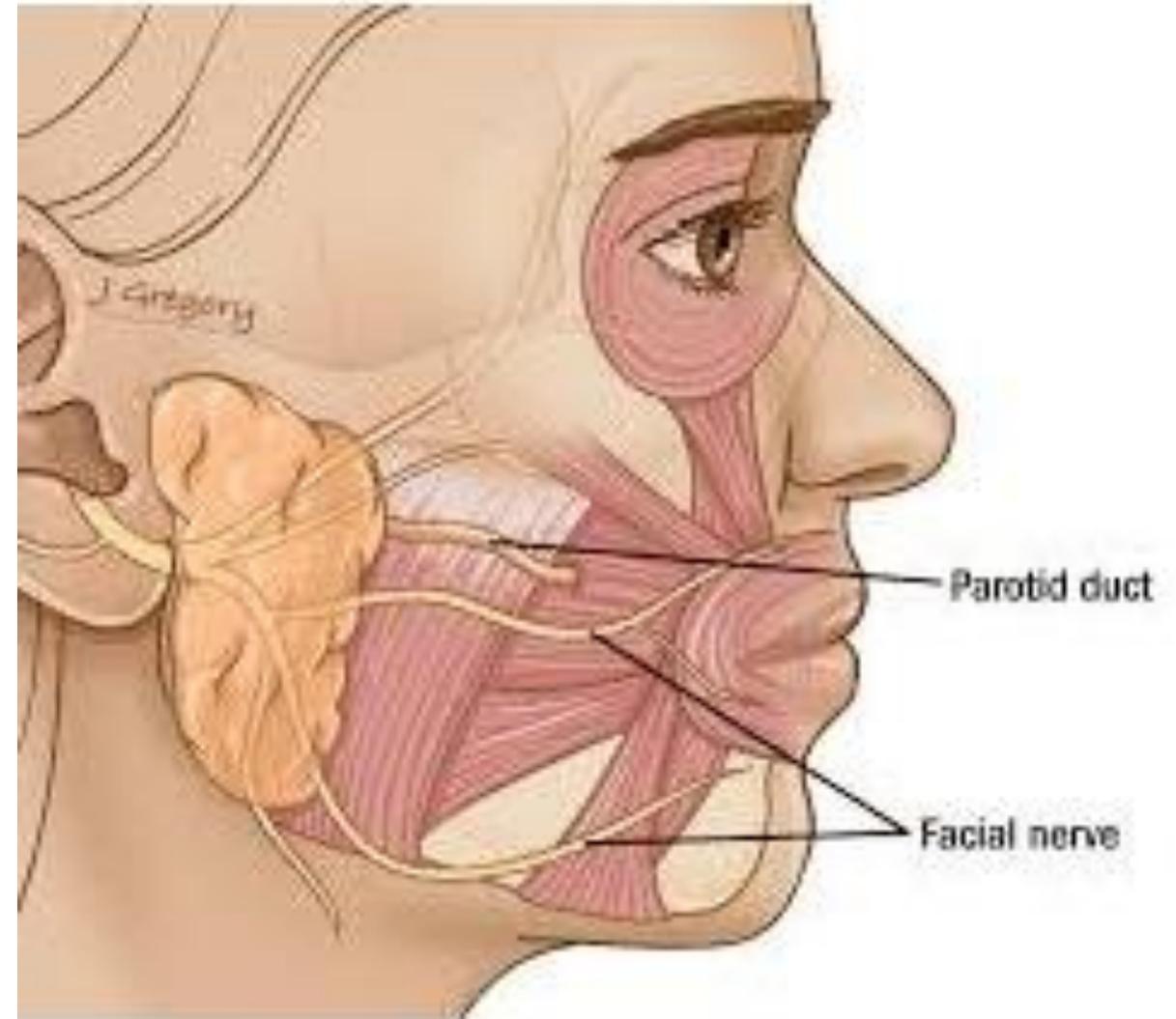
Buccal pad of fat

Buccopharyngeal fascia

Buccinator muscle

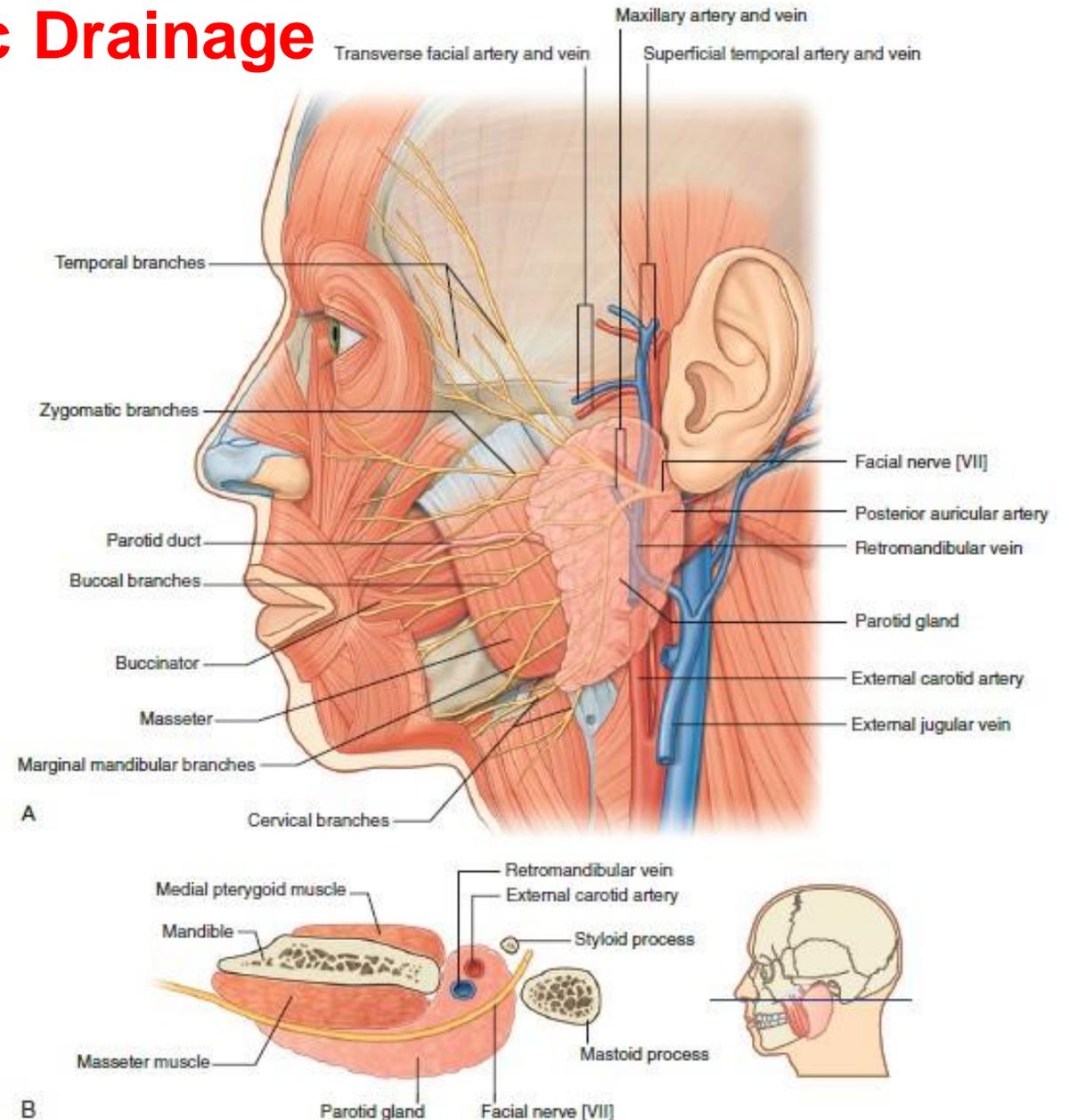
Buccal mucous membrane

- It then opens in the vestibule of the mouth opposite the 2nd upper molar tooth.



Blood Supply and Lymphatic Drainage

- ❖ **Arterial supply:** From the external carotid artery and its branches .
- ❖ **Venous drainage :** To the external jugular vein
- ❖ **Lymph drainage:** Into the superficial and deep parotid lymph nodes and end in the superficial and deep cervical lymph nodes.



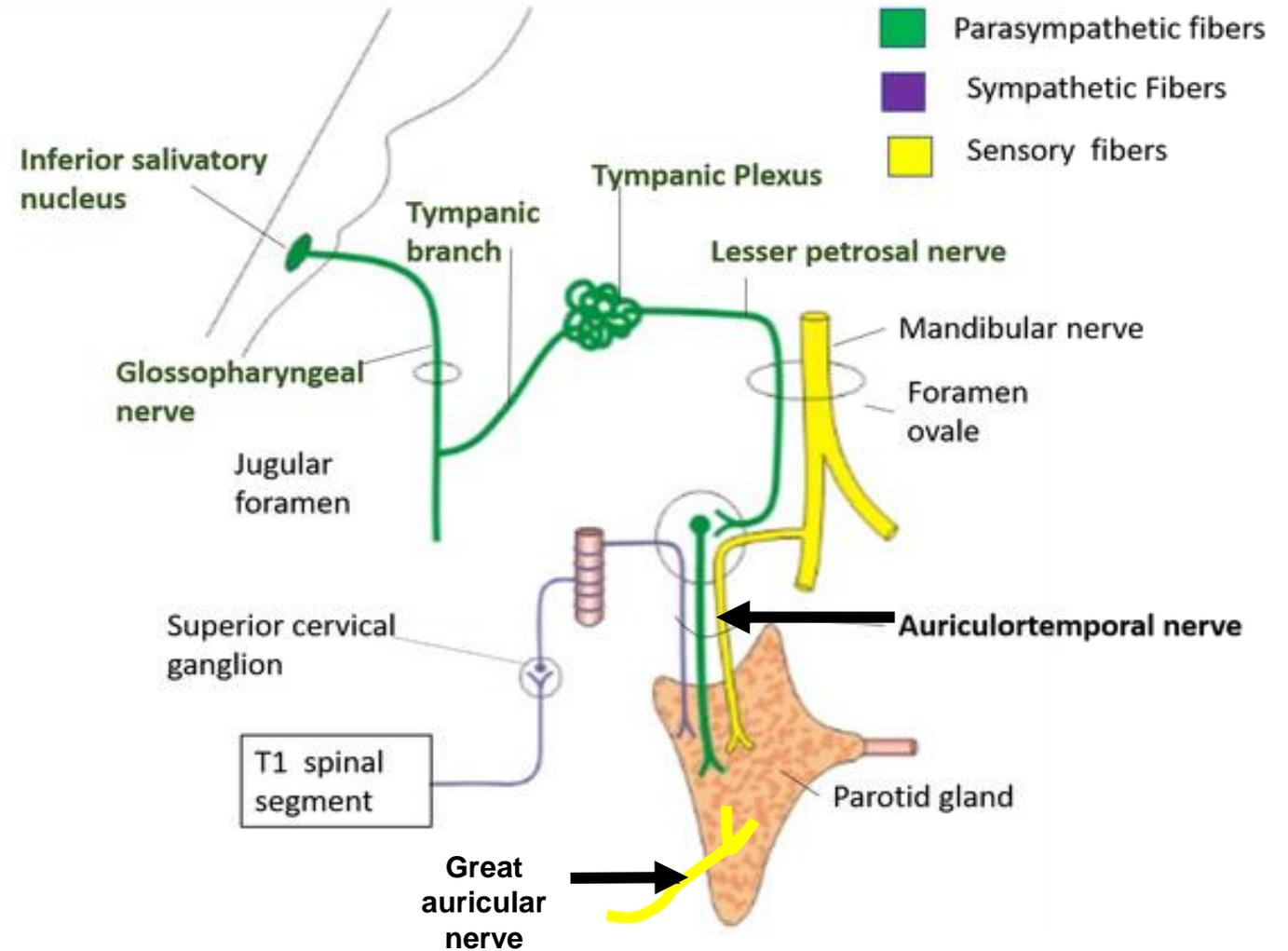
Nerve Supply of Parotid Gland

Sensory fibers :

1. Auriculo-temporal nerve supplies the parenchyma.
2. Great auricular nerve supplies the capsule and connective tissue stroma .

Sympathetic fibres :

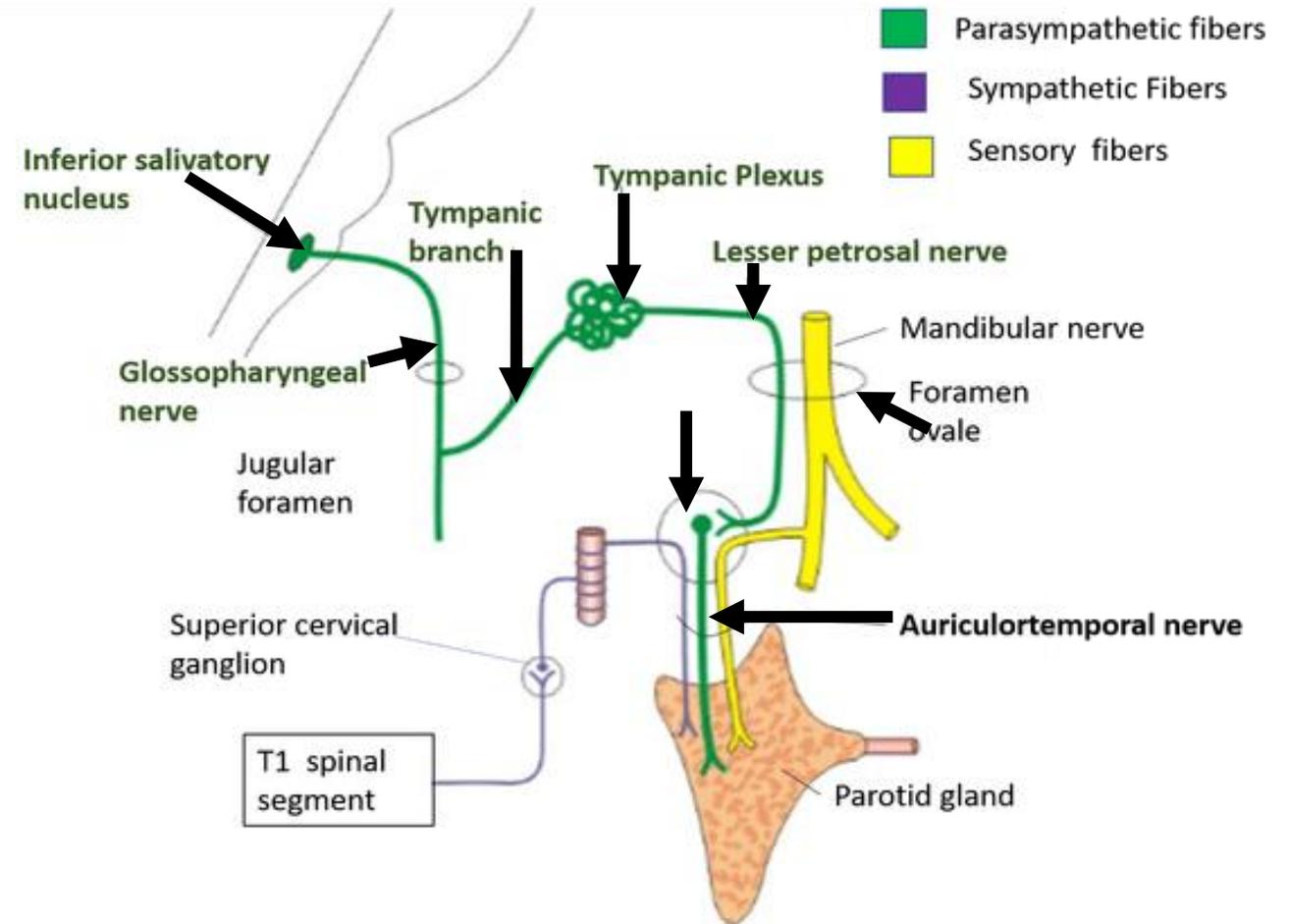
- Postganglionic from the plexus around the external carotid artery.



Nerve Supply of Parotid Gland

Parasympathetic (Secretomotor) fibres:

- Preganglionic fibres arise from the inferior salivatory nucleus in the upper medulla.
- They join glossopharyngeal nerve (9th cranial)
- They leave the 9th nerve as its tympanic branch
- Tympanic branch enters the middle ear where it joins the tympanic plexus.
- Lesser petrosal nerve arises from the tympanic plexus and leaves the middle ear to the middle cranial fossa.
- It then passes through foramen ovale to the infratemporal fossa .
- It relays in the **otic** ganglion
- Postganglionic fibres reach the parotid gland by joining the auriculotemporal nerve.



REFERENCES

- **Snell`s clinical anatomy by regions ,Tenth Edition**
- **Gray`s Anatomy for students, Third Edition**
- **Grant`s Atlas of Anatomy**

THANK
You! 😊