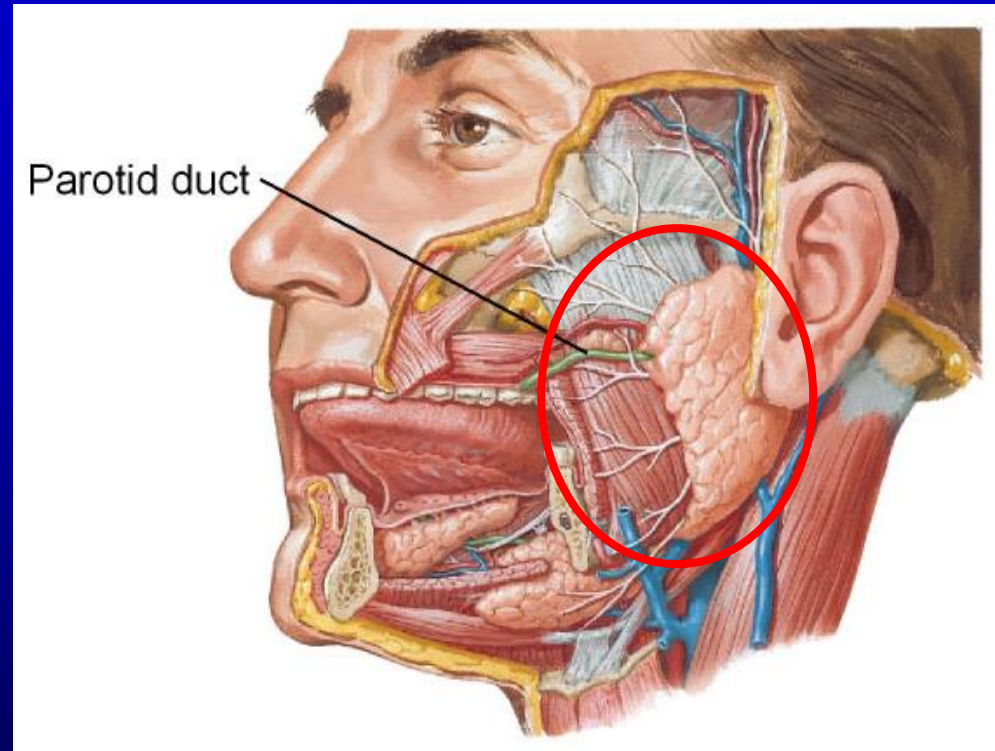


The Parotid Region

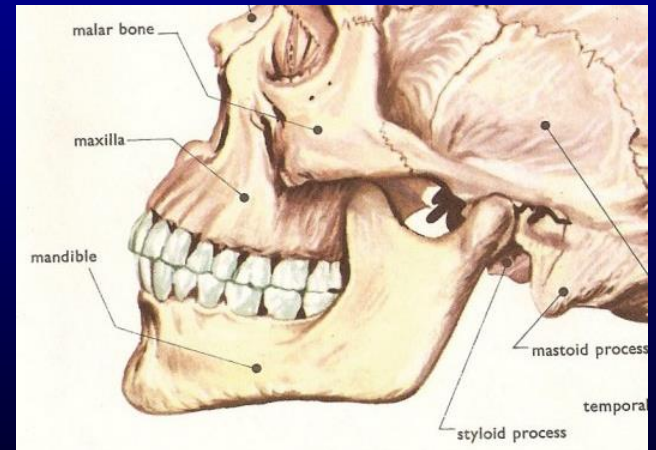
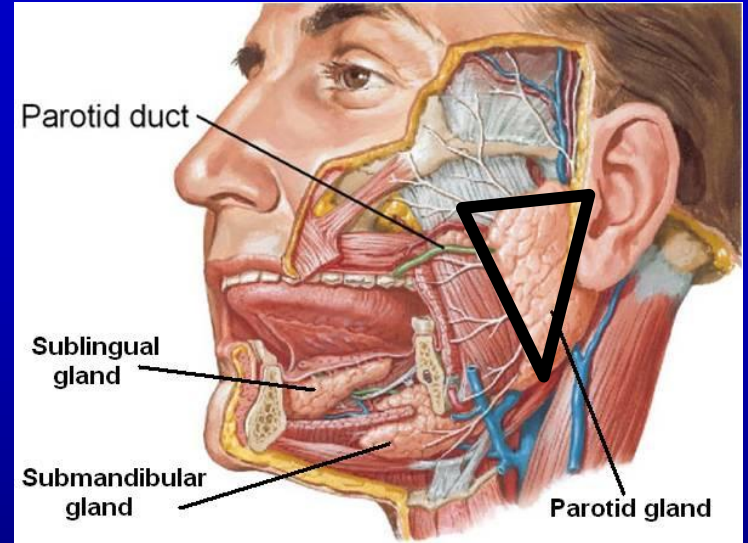
The Parotid Region

- The region on the lateral surface of the face that comprises the **parotid gland** & the **structures immediately related to it**

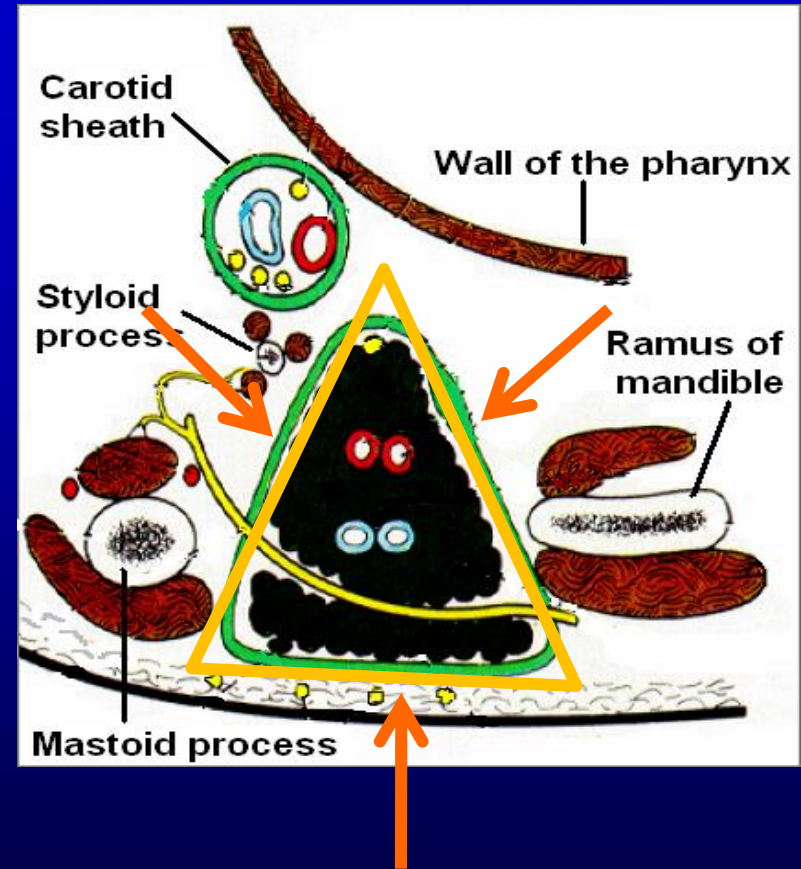


Parotid Gland

- Largest of the **salivary glands**
- Located subcutaneously, below and in front of the **external auditory meatus**
- Occupies the deep hollow behind the **ramus of the mandible**
- **Wedge-shaped** when viewed **externally**, with the **base** above & the **apex** behind the angle of the mandible

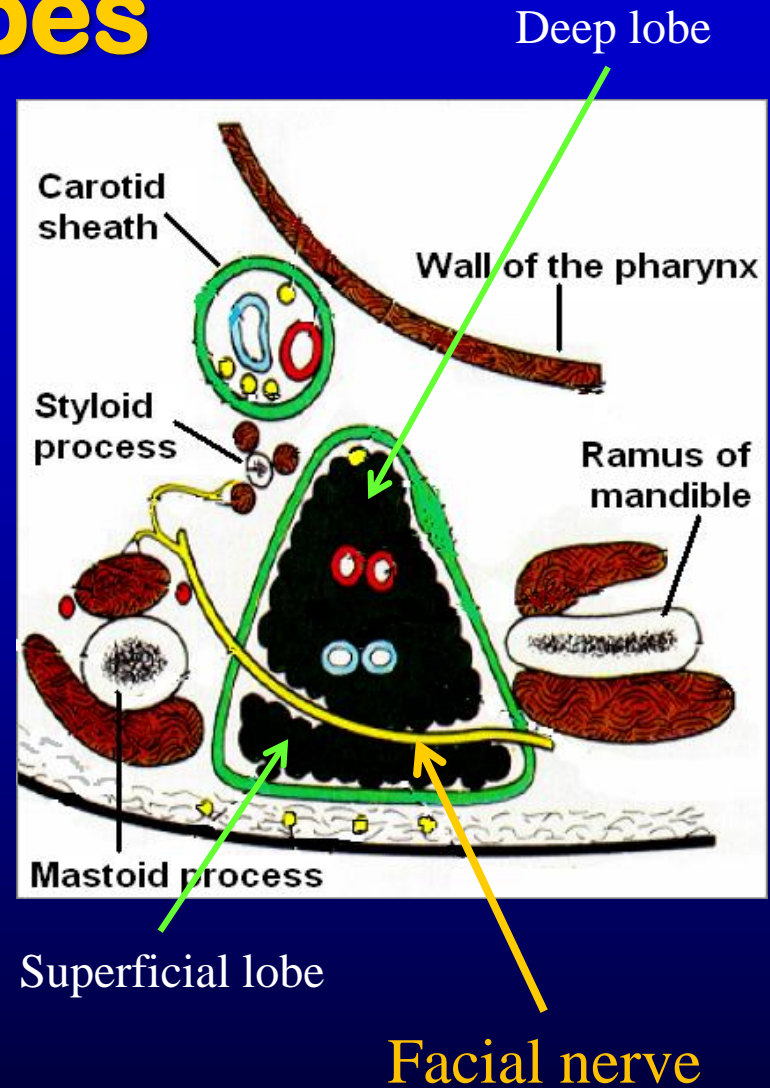


- Wedge-shaped in horizontal section with the **base** in the lateral position and **apex** against the pharyngeal wall.
- It exhibits 3 surfaces:
 - Lateral
 - Anteromedial
 - Posteromedial



Lobes

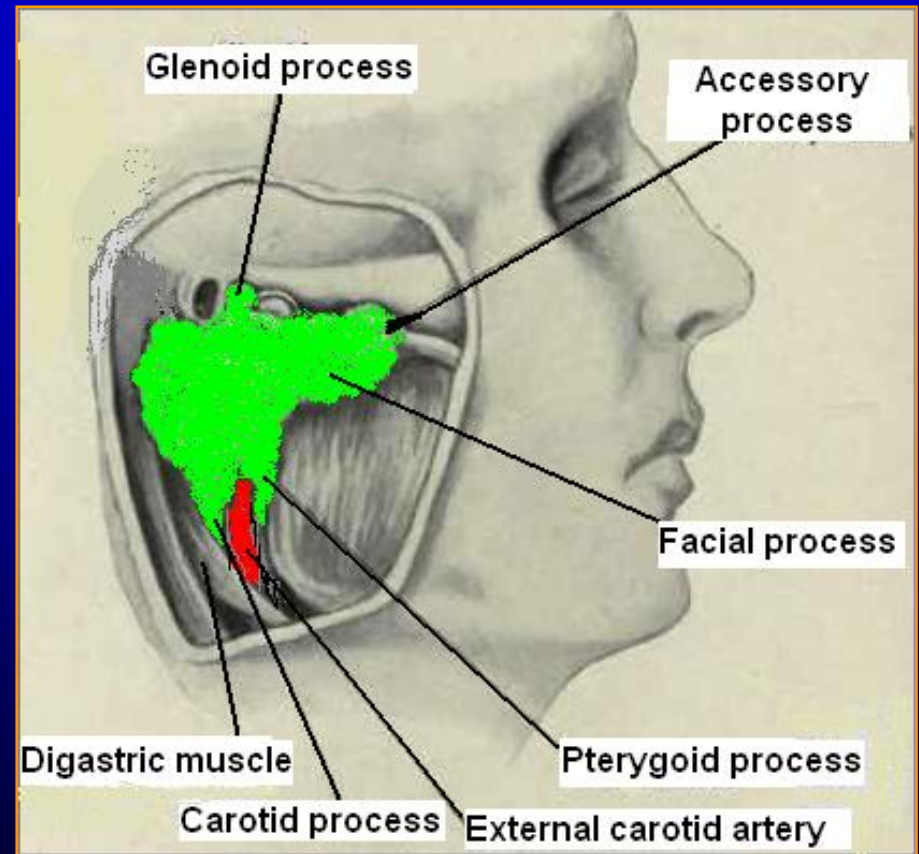
- The **facial nerve** courses horizontally through the gland and divides it into:
 - **Superficial lobe**
 - **Deep lobe**



Processes

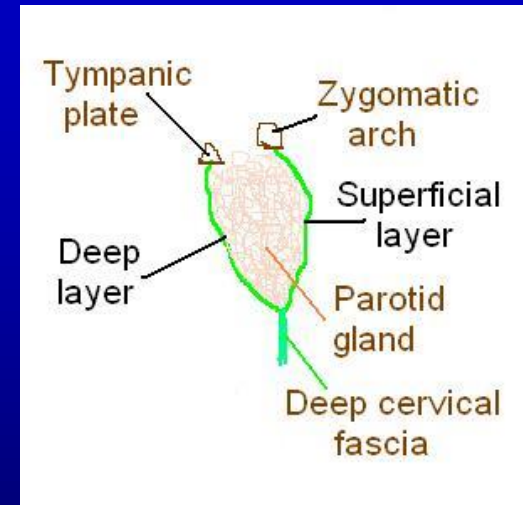
The gland is an irregular lobulated mass, sends 'processes' in various directions. These include:

- **Glenoid process**, that extends upward behind the temporo-mandibular joint, in front of external auditory meatus
- **Facial process**, that extends anteriorly onto the masseter muscle
- **Accessory process (part)**, small part of facial process lying along the parotid duct
- **Pterygoid process**, that extends forward from the deeper part, lies between the medial pterygoid muscle & the ramus of mandible
- **Carotid process**, that lies posterior to the external carotid artery



Capsules

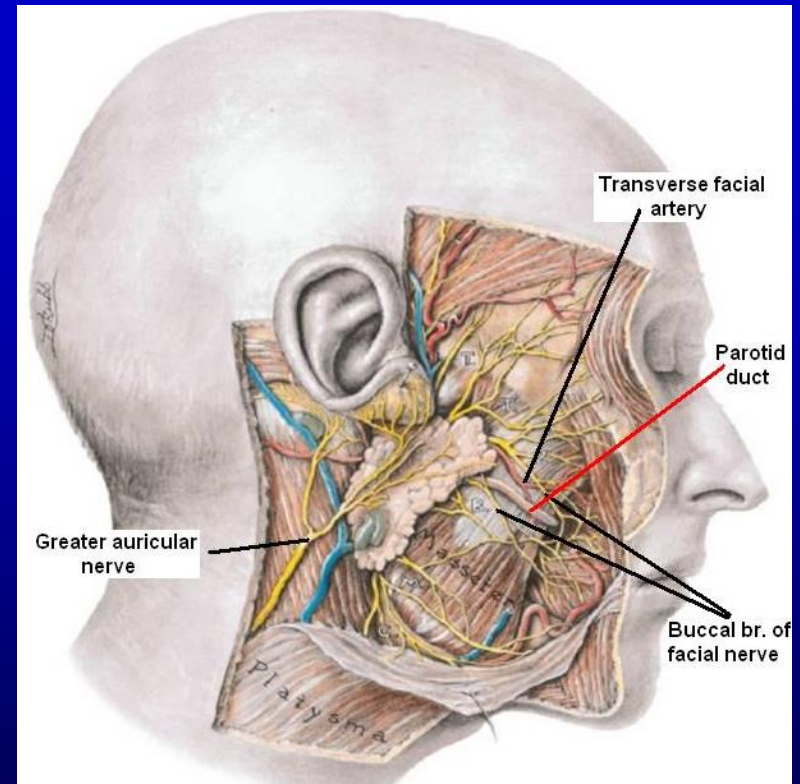
- The parotid gland is enclosed in **two capsules**:
 - An **inner connective tissue capsule**
 - An **outer dense fibrous capsule** derived from the **investing layer of the deep cervical fascia**
- The **deep cervical fascia** extends upward, reaches the inferior border of parotid gland, splits into the **superficial** & the **deep** layer, to enclose the gland
- Above the gland, the:
 - **Superficial layer** gets attached to the **zygomatic arch**
 - **Deep layer** gets attached to the **tympanic plate of temporal bone**

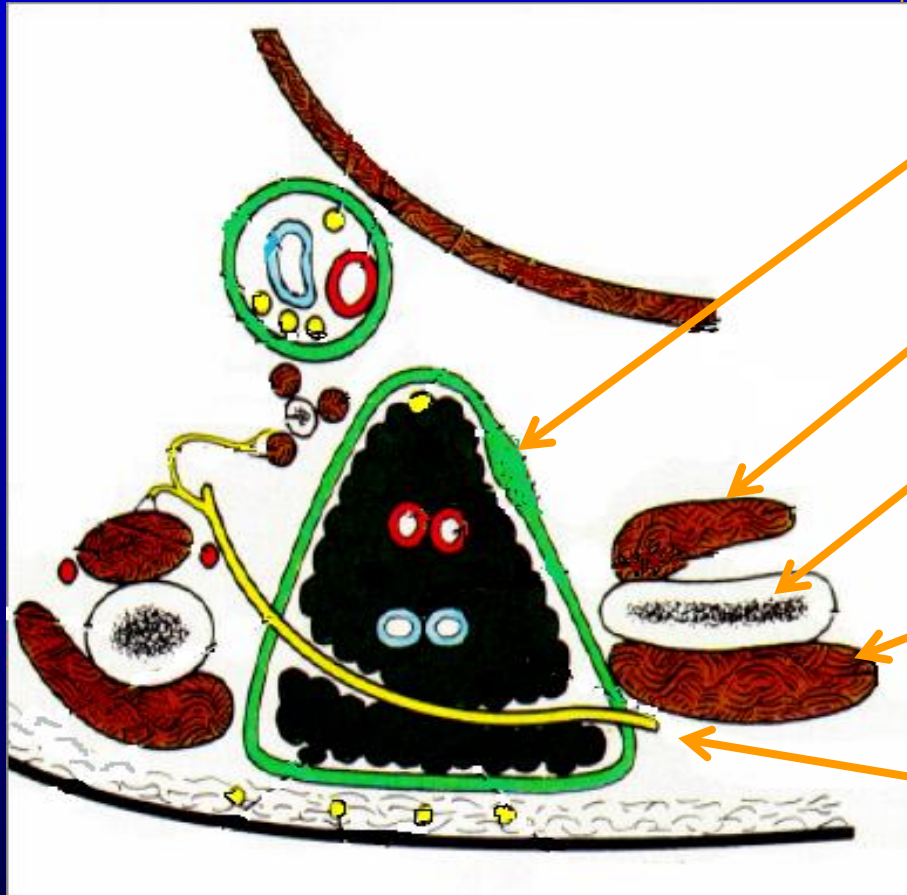


A portion of fascia extending from the styloid process to the angle of mandible is called **stylomandibular ligament**. It separates the parotid gland from the submandibular gland

Relations

- **Superficial (lateral):**
 - Skin & superficial fascia
 - Great auricular nerve
 - Parotid lymph nodes
- **Superior:**
 - External auditory meatus
 - Temporomandibular joint
 - Its glenoid process is related to the auriculo-temporal nerve

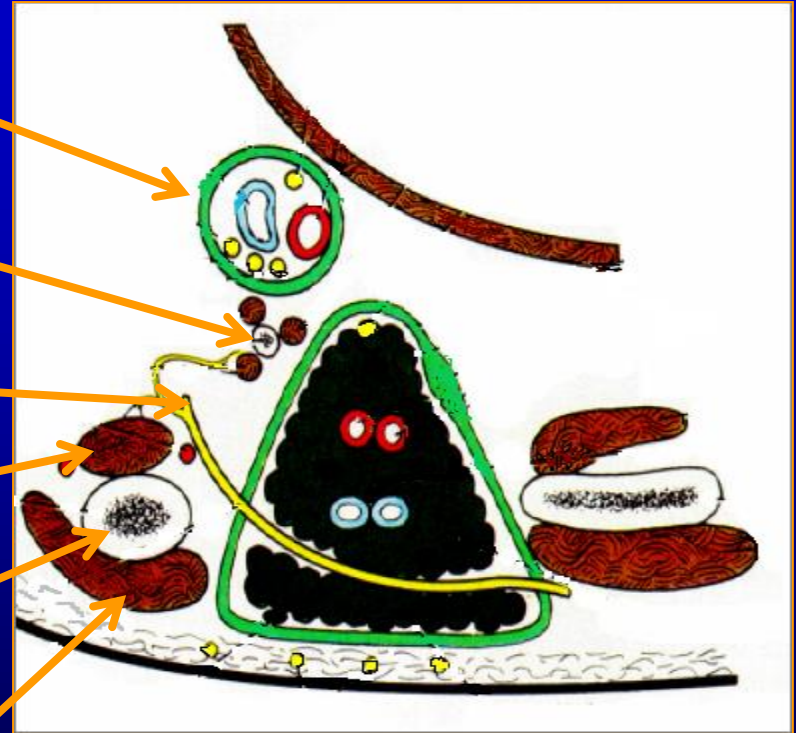




- **Anteromedial:**
 - Stylomandibular ligament
 - Medial pterygoid
 - Posterior border of the ramus of mandible
 - Masseter
 - Terminal branches of the facial nerve
 - Temporo-mandibular joint

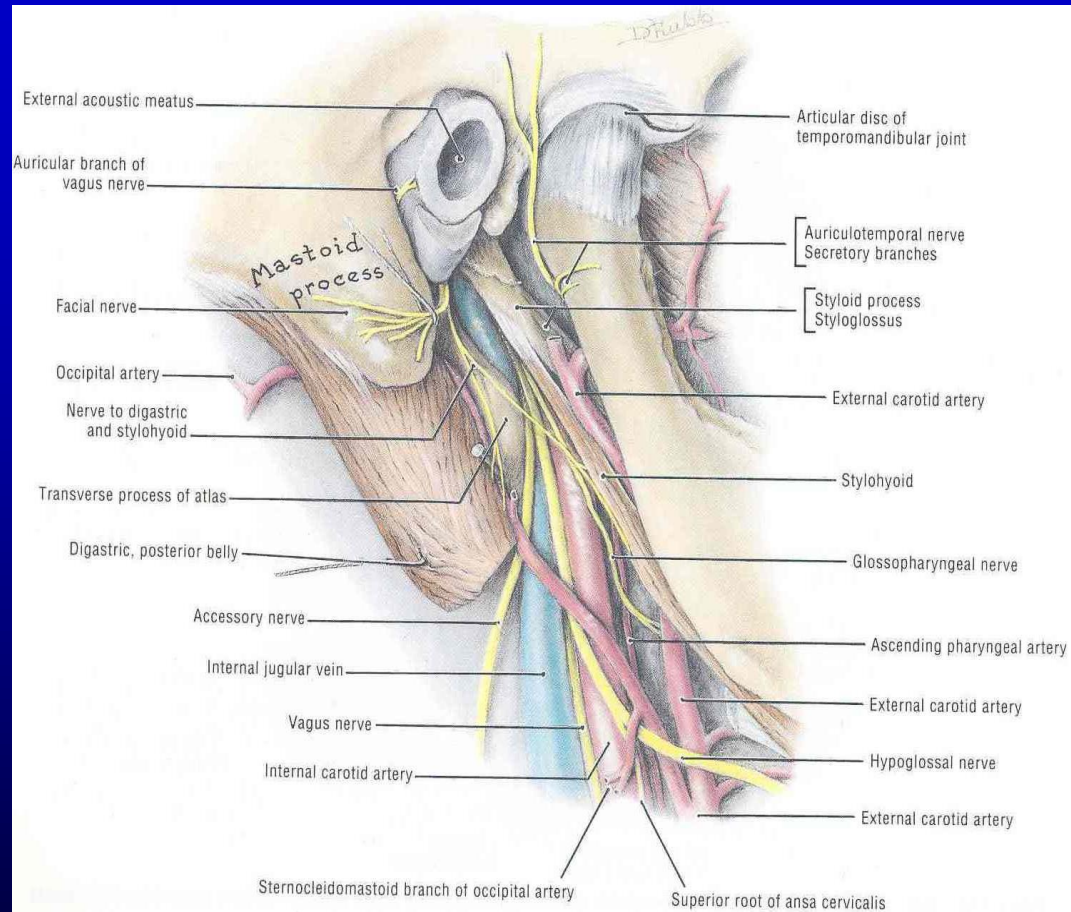
- **Posteromedial:**

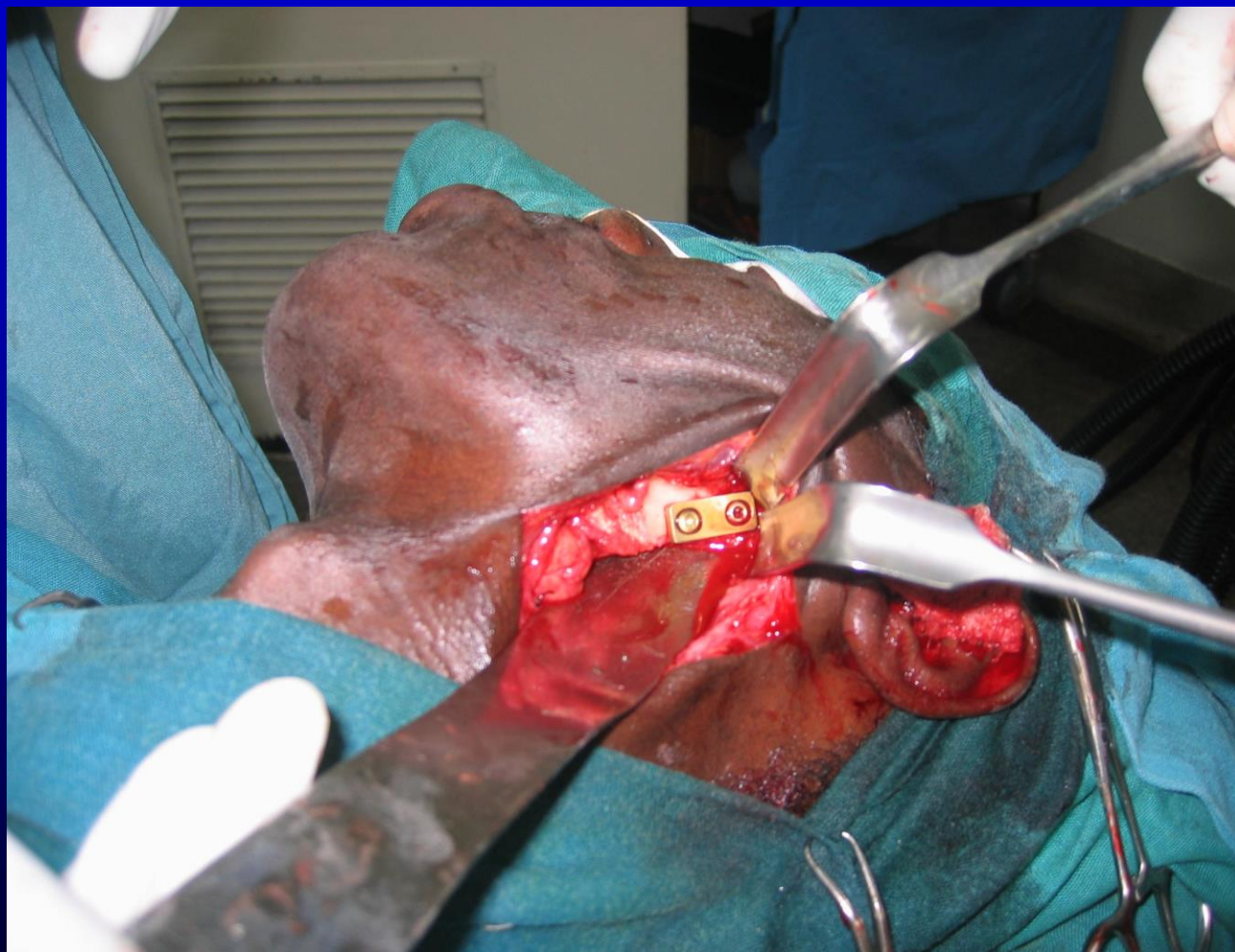
- Carotid sheath with its contents
- Styloid process & attached muscles
- Facial nerve
- Posterior belly of digastric muscle
- Mastoid process
- Sternocleidomastoid



The Parotid Bed

- The structures intimately related to the deep surface of the parotid gland (anteromedial & posteromedial relations)



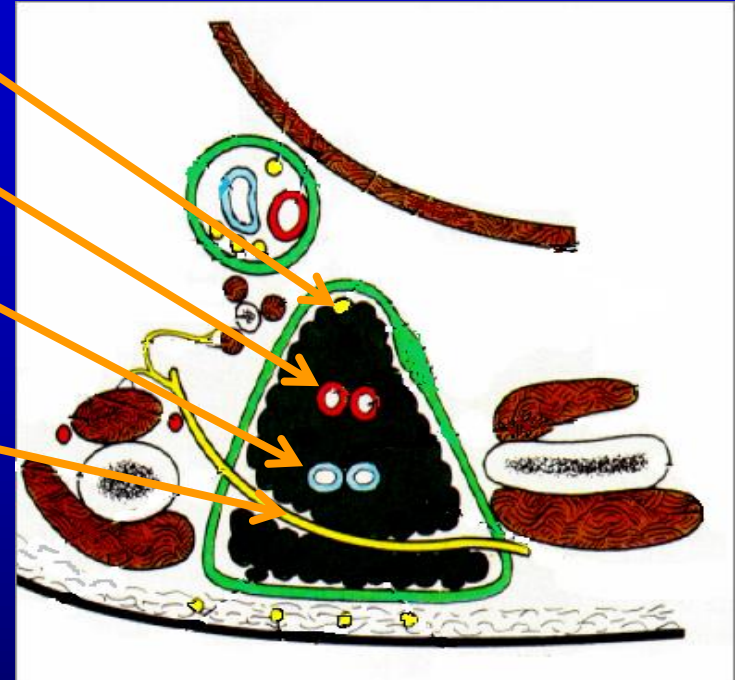


Structures Coursing Within the Parotid Gland

Deep

- Auriculotemporal nerve
- External carotid artery
- Retromandibular vein
- Facial nerve

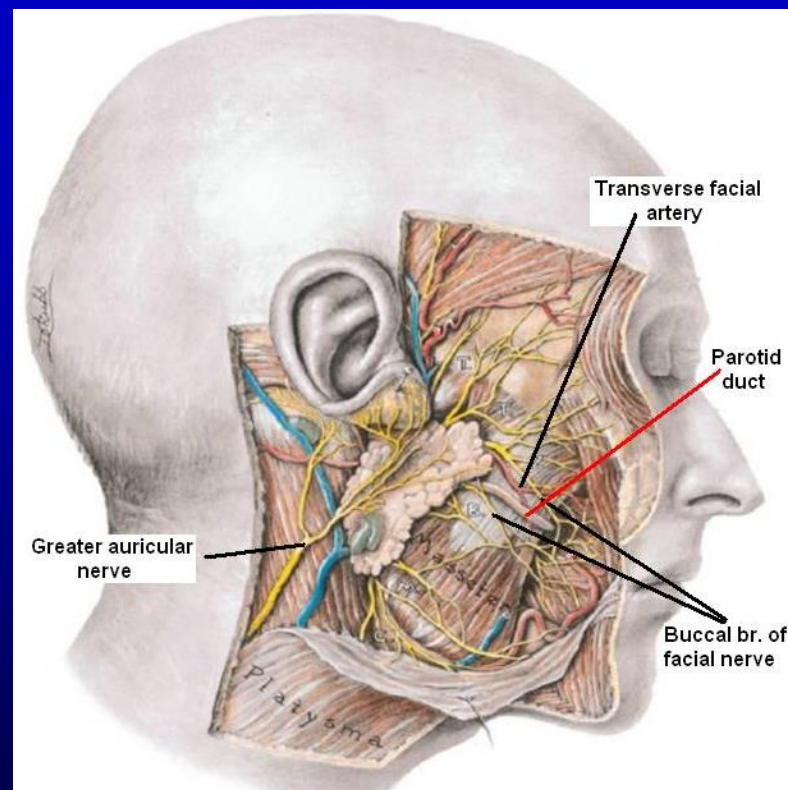
Superficial



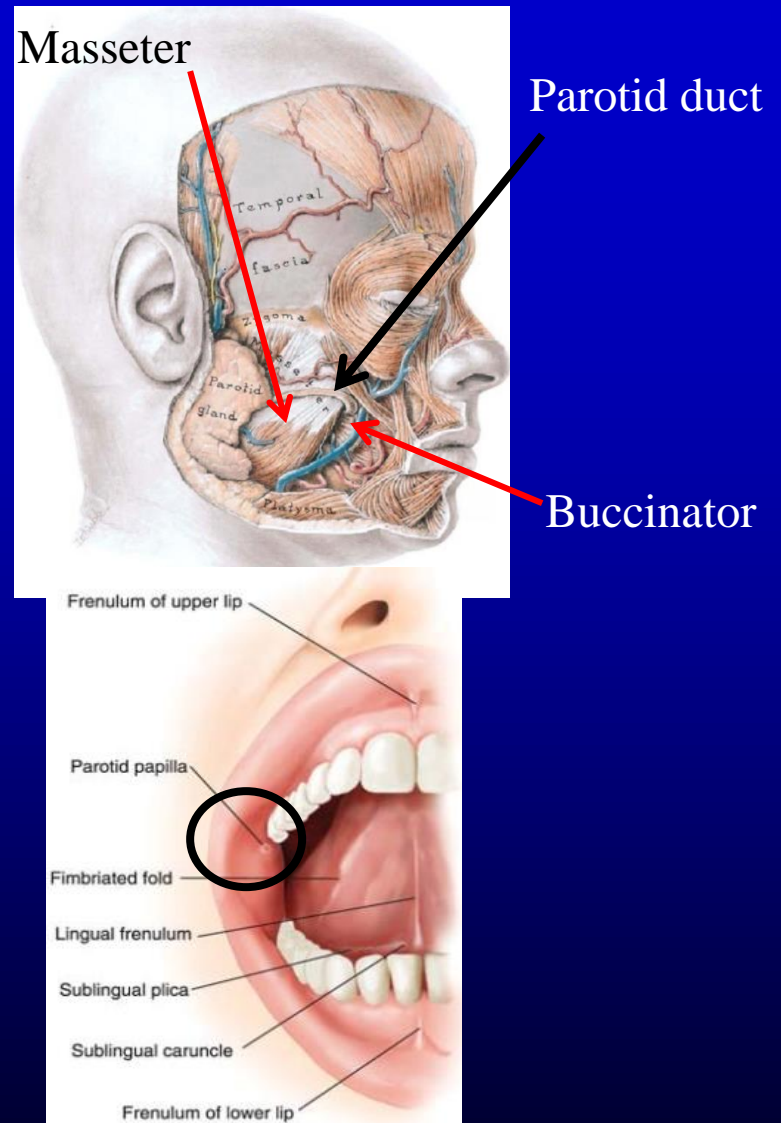
A few lymph nodes are scattered in the substance of the gland

Parotid (Stensen's) Duct

- About 2 inches long
- Emerges from the facial process of the gland
- **Passes forward** over the lateral surface of the **masseter muscle**
 - about a fingerbreadth below the **zygomatic arch**
 - accompanied by the:
 - **transverse facial vessels & upper zygomatic branches of facial nerve above**
 - **lower zygomatic branches of facial nerve below**



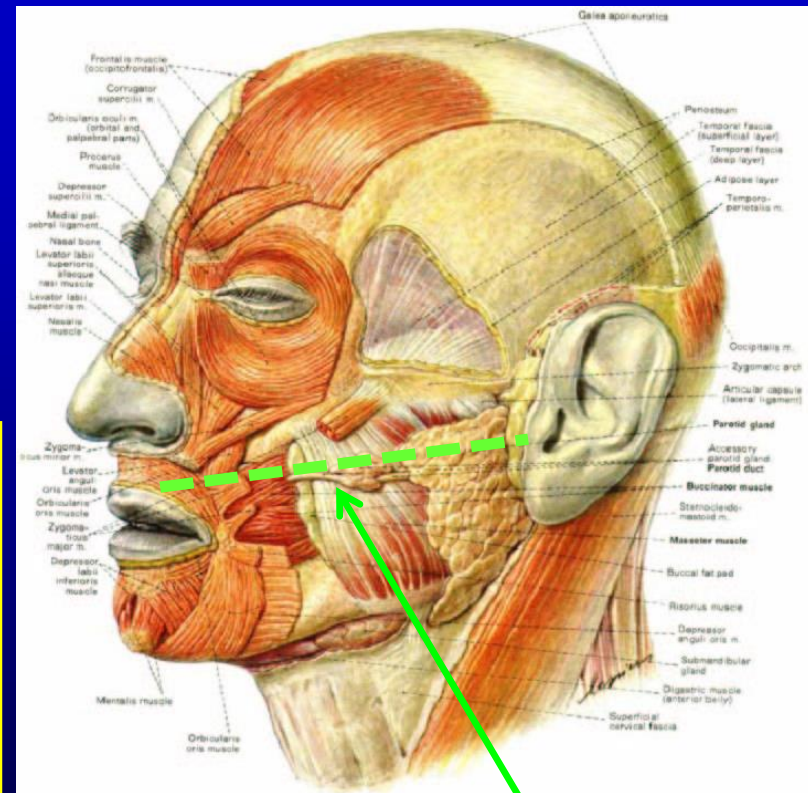
- Turns around the anterior border of masseter muscle
- Pierces the:
 - Buccal pad of fat
 - Buccopharyngeal fascia
 - Buccinator muscle &
 - Buccal mucosa
- Opens into the vestibule of mouth on a small papilla, opposite the second upper molar tooth



- The oblique passage of the duct in the buccinator muscle acts as a valve-like mechanism & prevents inflation of the duct during blowing

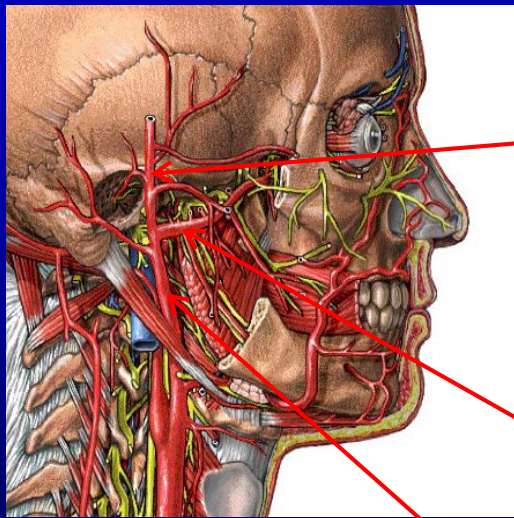
- The duct can be rolled over the clenched masseter muscle

- The duct is represented by the middle 1/3 of a line extending from the tragus of the auricle to a point midway between the ala of nose & upper lip



Parotid Duct

Arterial supply:
External carotid artery
& its terminal branches

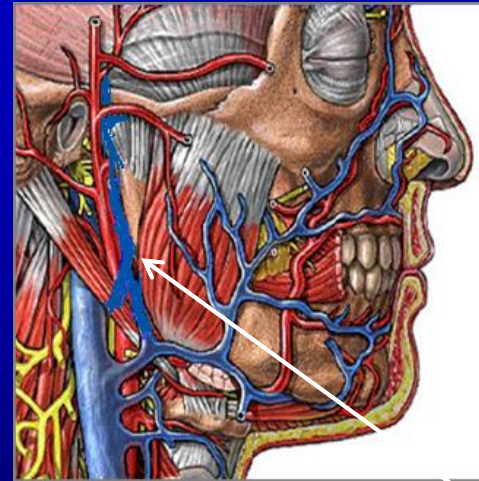


Superficial
temporal a.

Maxillary a.

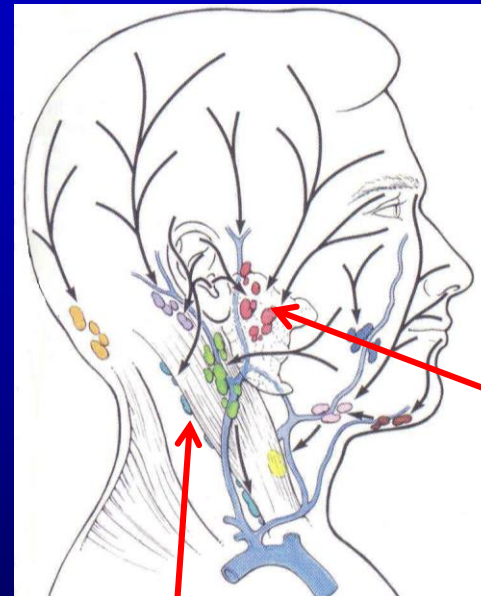
External
carotid a.

Venous drainage: Into
the retro-mandibular vein



Retromandibular v.

Lymph Drainage: Into the parotid & then into the deep cervical lymph nodes

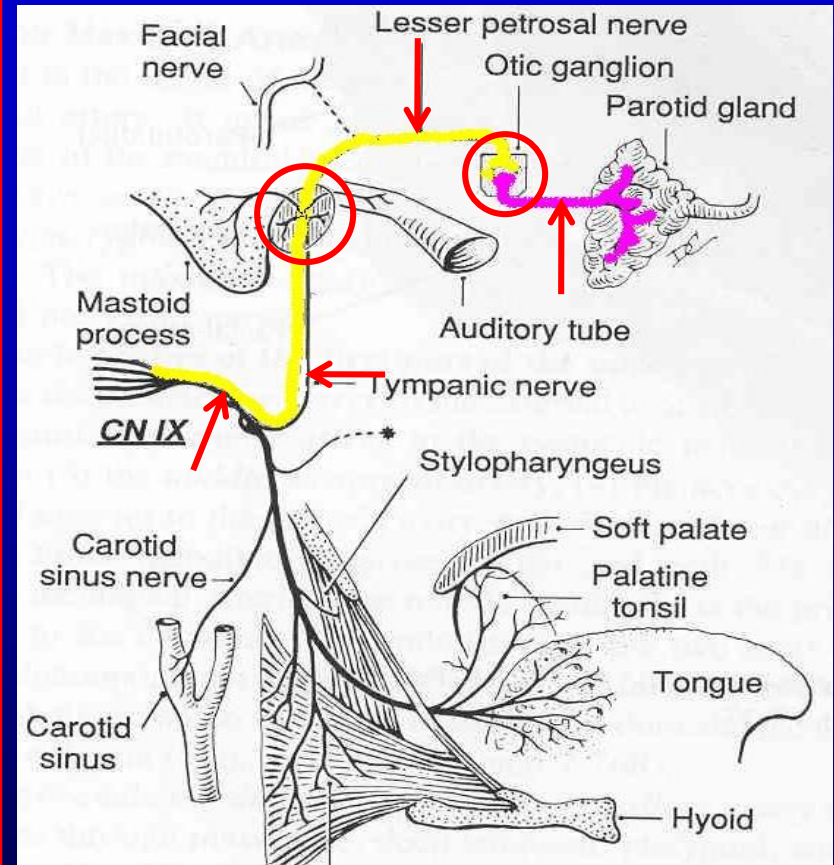


Parotid n.

Deep cervical n.

Nerve Supply

- **Sensory** :
 - Auriculotemporal n.
- **Autonomic**:
 - Sympathetic through plexus around the arteries (T1 → SCG → plexus around ECA)
 - Parasympathetic through otic ganglion (CN9 → tympanic n. → tympanic plexus → lesser petrosal n. → **otic ganglion** → auriculotemporal n.)



Clinical Anatomy

- Parotid duct being a superficial structure, is prone to get damaged in injuries, or during surgical procedures on the face
- Parotid neoplasms (malignant) are very invasive and quickly involve the facial nerve causing facial palsy
- Inflammation of parotid gland results in painful swelling because of a tight capsule enclosing the gland. The swollen glenoid process exaggerates this pain on chewing

- Frey's syndrome: a disorder characterized by recurrent episodes of localized **facial flushing and/or sweating** in the area **over the parotid gland** in response to **gustatory stimuli**
- This is due to aberrant nerve regeneration after injury (a communication develops between the **auriculo-temporal & greater auricular nerves** such that parasympathetic fibers migrate into the cutaneous sympathetic nerves that supply the sweat glands)



Thank You

