



Arteries and Veins of Neck

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Arteries of the Neck

- Common Carotid Artery
- External Carotid Artery
- Internal Carotid Artery
- Subclavian Artery

Common Carotid Arteries

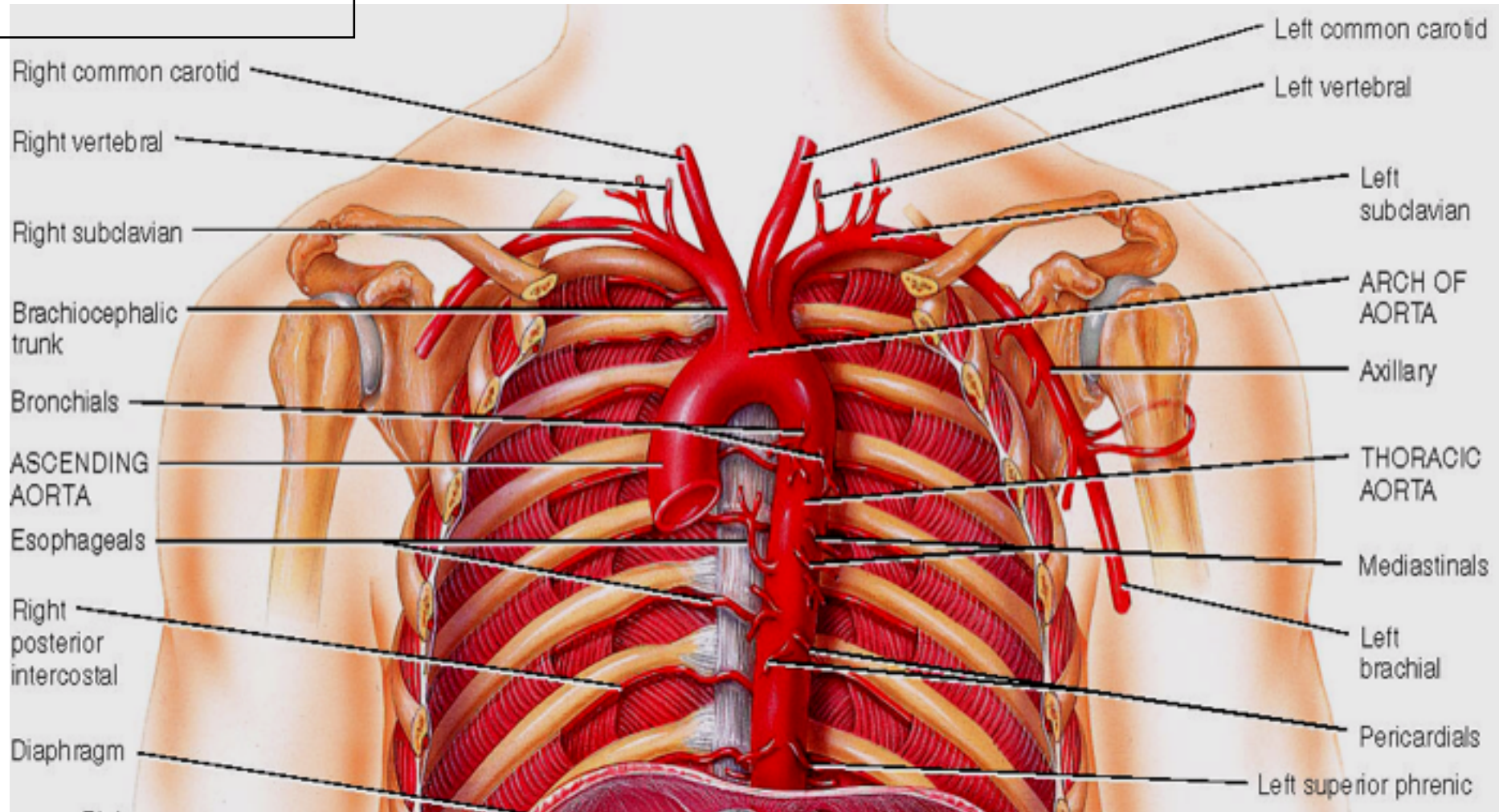
Right Common Carotid Artery:

- Arises from brachiocephalic artery
(Behind right sternoclavicular joint)

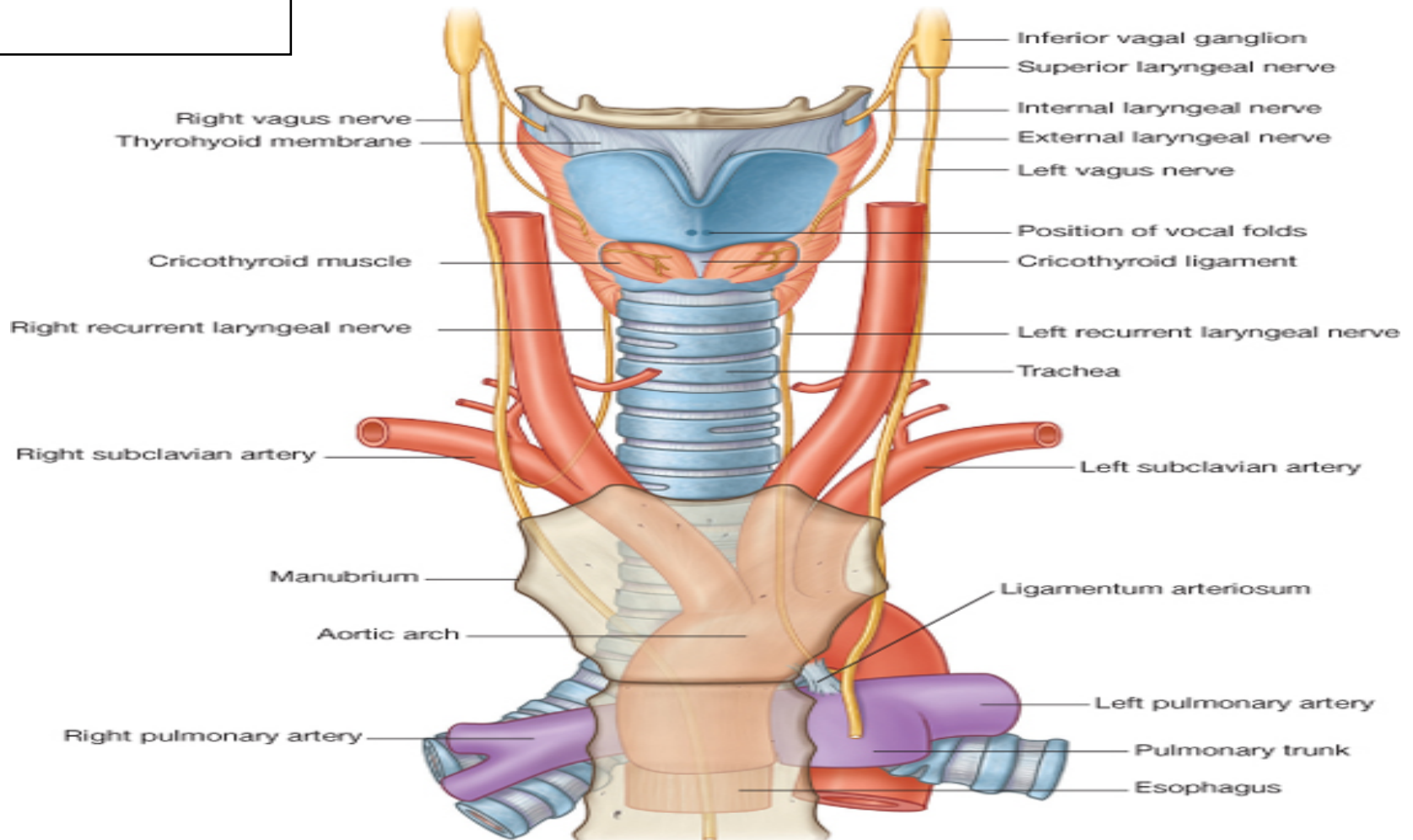
Left Common Carotid Artery:

- Arises from Arch of Aorta
- Runs upwards in the neck from sternoclavicular joint to upper border of thyroid cartilage

Common Carotid Arteries



Common Carotid Arteries



Relations of Common Carotid Artery

Anterolaterally:

- Sternocleidomastoid
- Sternohyoid
- Sternothyroid
- Superior belly of omohyoid

Posteriorly:

- Prevertebral muscles

Medially:

- Larynx
- Pharynx

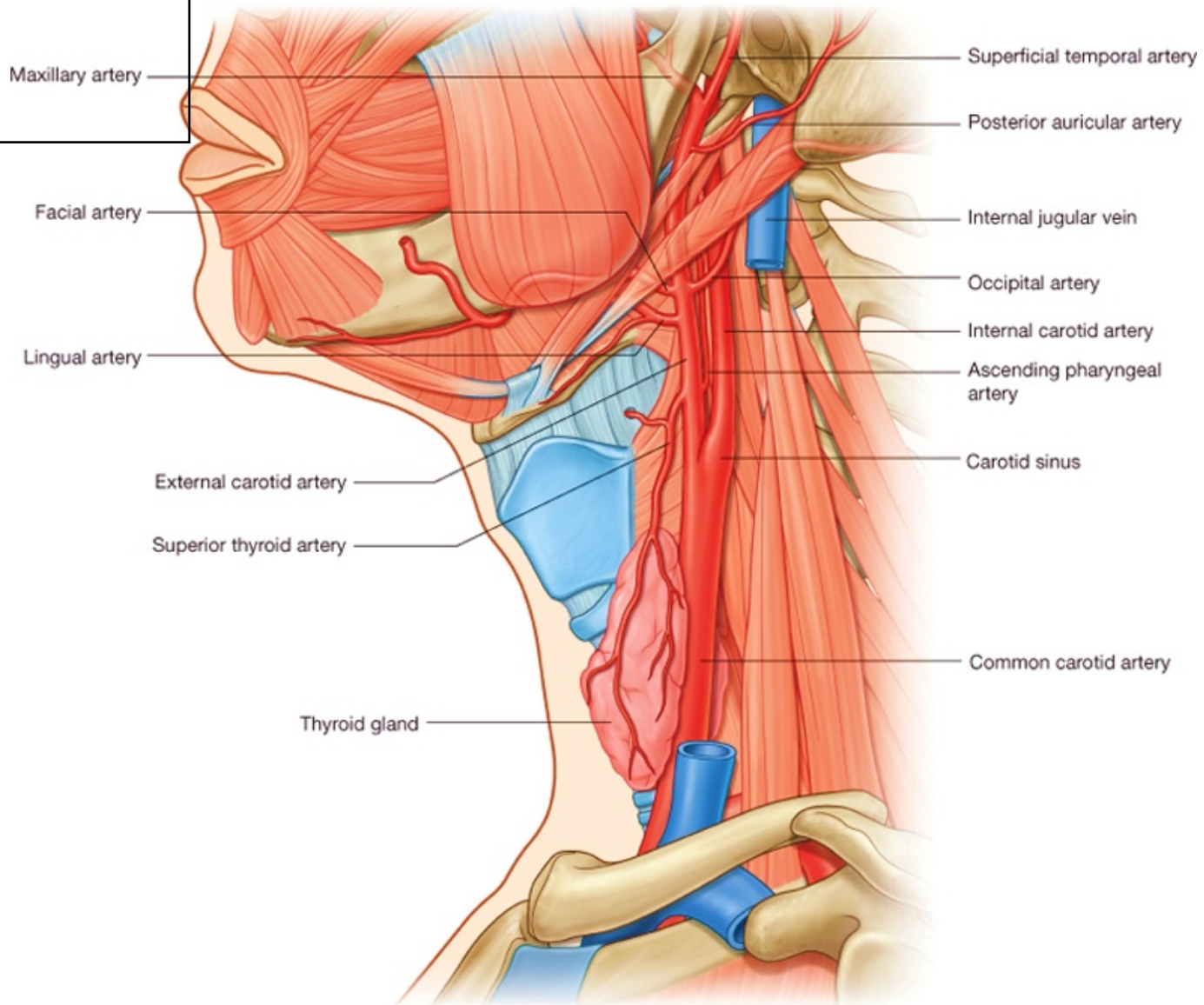
Laterally:

- Internal jugular vein

Branches of Common Carotid Artery

- External Carotid Artery
- Internal Carotid Artery

Common Carotid Arteries



External Carotid Artery

- Begins at the level of upper border of thyroid cartilage
- Terminates in the substance of the parotid gland behind the neck of mandible by dividing into:
 - Superficial temporal artery
 - Maxillary artery

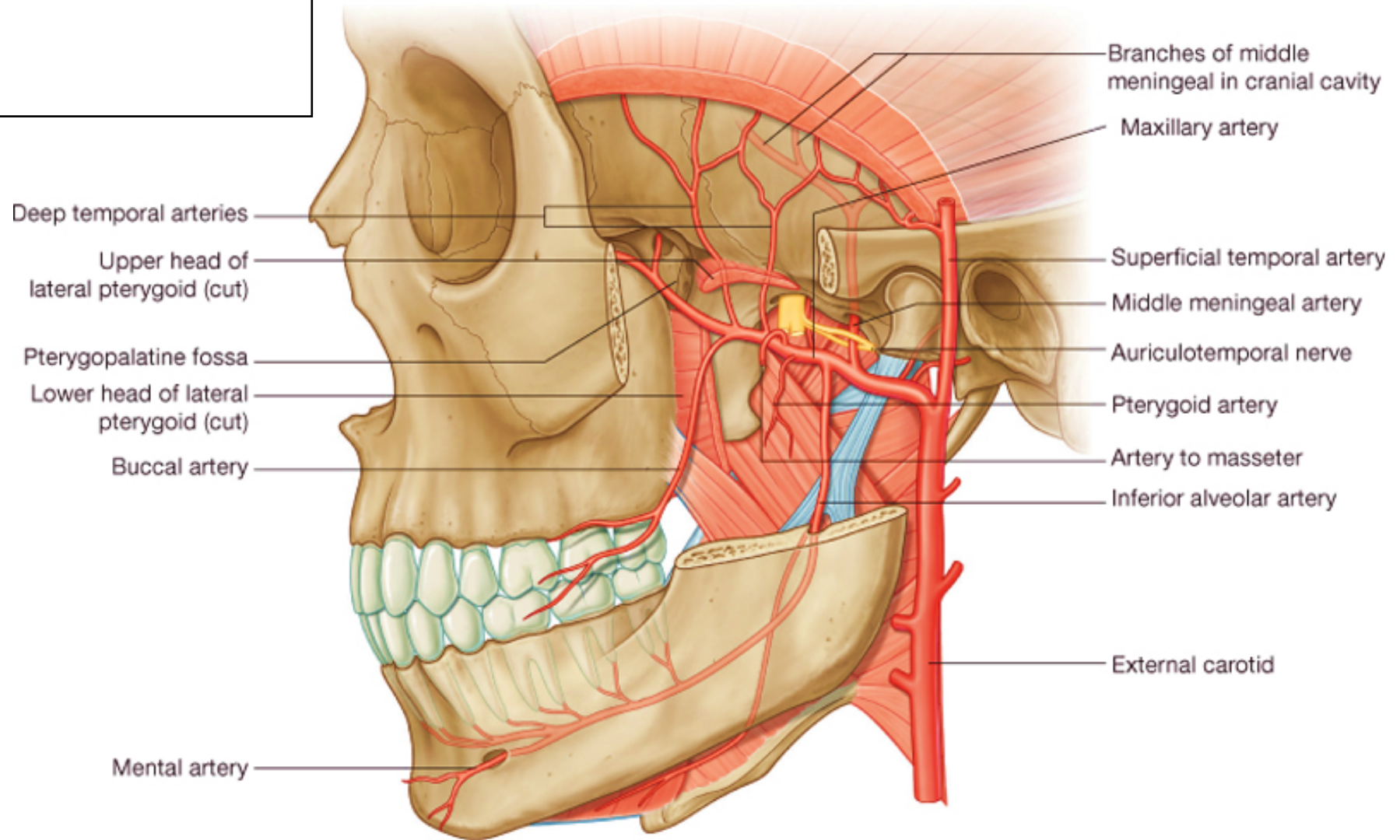
Branches of the external carotid artery

Branch	Supplies
Superior thyroid artery	Thyrohyoid muscle, internal structures of the larynx, sternocleidomastoid and cricothyroid muscles, thyroid gland
Ascending pharyngeal artery	Pharyngeal constrictors and stylopharyngeus muscle, palate, tonsil, pharyngotympanic tube, meninges in posterior cranial fossa
Lingual artery	Muscles of the tongue, palatine tonsil, soft palate, epiglottis, floor of mouth, sublingual gland
Facial artery	All structures in the face from the inferior border of the mandible anterior to the masseter muscle to the medial corner of the eye, the soft palate, palatine tonsil, pharyngotympanic tube, submandibular gland
Occipital artery	Sternocleidomastoid muscle, meninges in posterior cranial fossa, mastoid cells, deep muscles of the back, posterior scalp
Posterior auricular artery	Parotid gland and nearby muscles, external ear and scalp posterior to ear, middle and inner ear structures
Superficial temporal artery	Parotid gland and duct, masseter muscle, lateral face, anterior part of external ear, temporalis muscle, parietal and temporal fossae
Maxillary artery	External acoustic meatus, lateral and medial surface of tympanic membrane, temporomandibular joint, dura mater on lateral wall of skull and inner table of cranial bones, trigeminal ganglion and dura in vicinity, mylohyoid muscle, mandibular teeth, skin on chin, temporalis muscle, outer table of bones of skull in temporal fossa, structures in infratemporal fossa, maxillary sinus, upper teeth and gingivae, infra-orbital skin, palate, roof of pharynx, nasal cavity

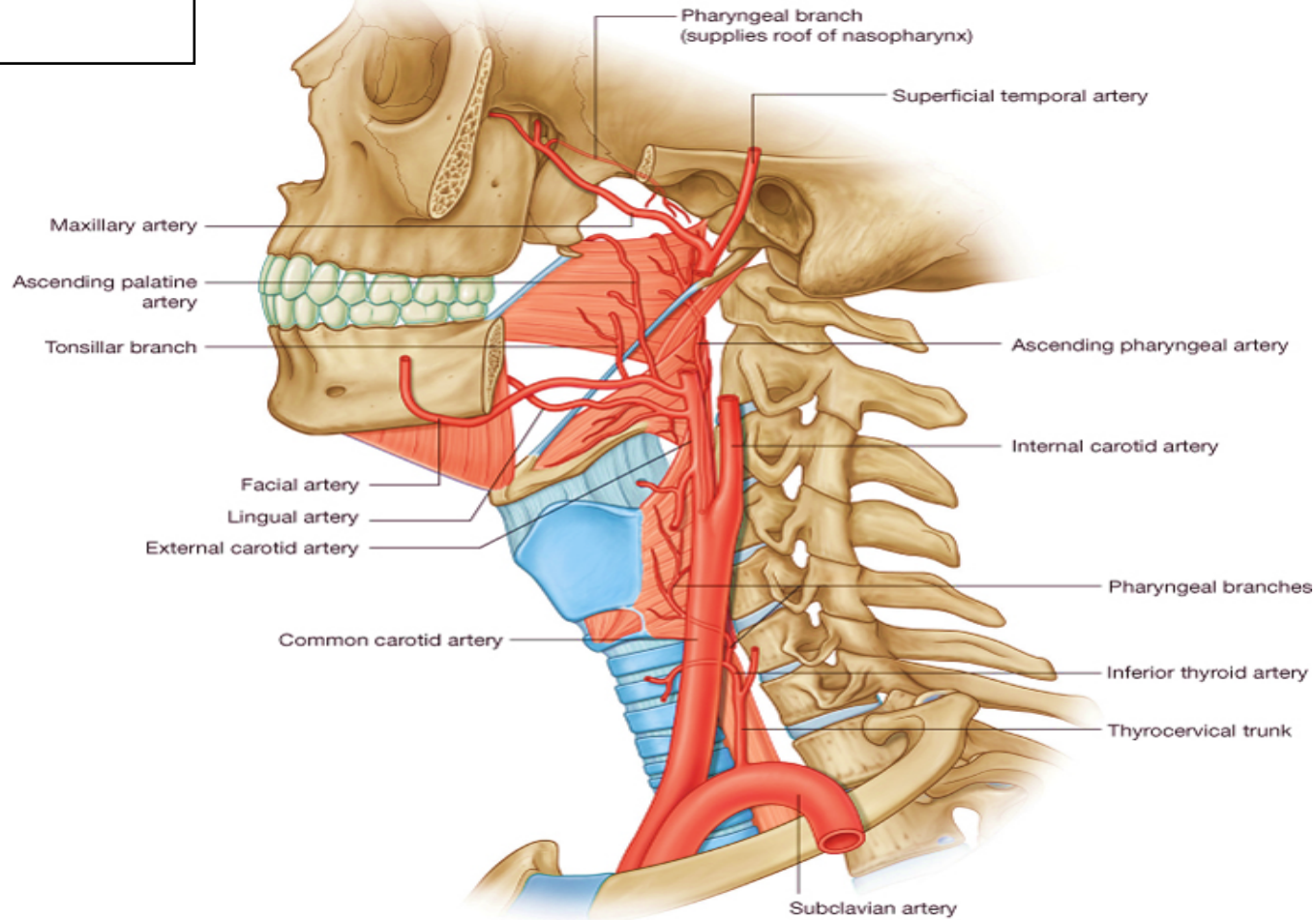
Supply of **External Carotid Artery**

- **Neck**
- **Face**
- **Scalp**
- **Tongue**
- **Maxilla**

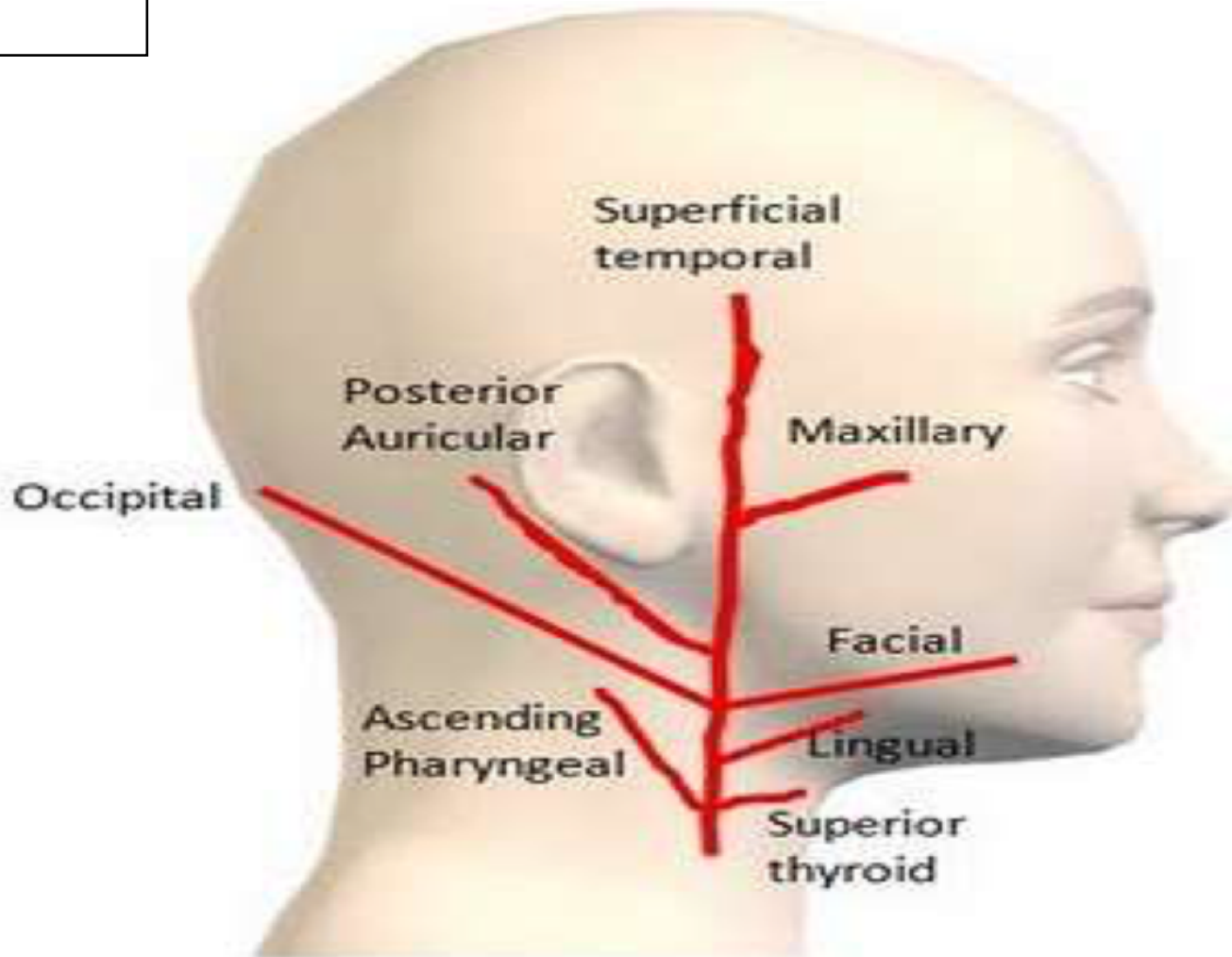
Branches of External Carotid Artery



Branches of External Carotid Artery



External carotid artery branches



Internal Carotid Artery

- Begins at the level of upper border of thyroid cartilage
- No branches in the neck
- Through carotid canal enters into cranial cavity
- Supplies brain, eyes, forehead and part of the nose

Subclavian Artery

Right Subclavian Artery:

- Arises from brachiocephalic artery
(Behind right sternoclavicular joint)
- At outer border of 1st rib it becomes Axillary Artery

Left Subclavian Artery:

- Arises from Arch of Aorta in the thorax
- Runs upwards to the root of the neck & arches laterally
- At outer border of 1st rib it becomes Axillary Artery

Subclavian Artery

Scalenus Anterior muscle passes anterior to the artery on each side and divides it into 3 parts.

1. 1st part of subclavian artery
2. 2nd part of subclavian artery
3. 3rd part of subclavian artery

1st part of Subclavian Artery

Extends from the origin of the subclavian artery to the medial border of the Scalenus anterior muscle.

Branches:

- 1. Vertebral artery**
- 2. Thyrocervical Trunk**
- 3. Internal thoracic artery**

1st part of Subclavian Artery

Branches:

1. Vertebral artery

- Spinal and muscular branches in neck
- Branches in skull

1st part of Subclavian Artery

Branches:

2. Thyrocervical Trunk

- Inferior thyroid artery
- Superficial cervical artery
- Suprascapular artery

1st part of Subclavian Artery

Branches:

3. Internal thoracic artery

- Superior epigastric artery
- Musculophrenic artery

2nd part of Subclavian Artery

Lies behind the Scalenus anterior muscle.

Branches:

1. Costocervical trunk

- Superior intercostal artery
- Deep cervical artery

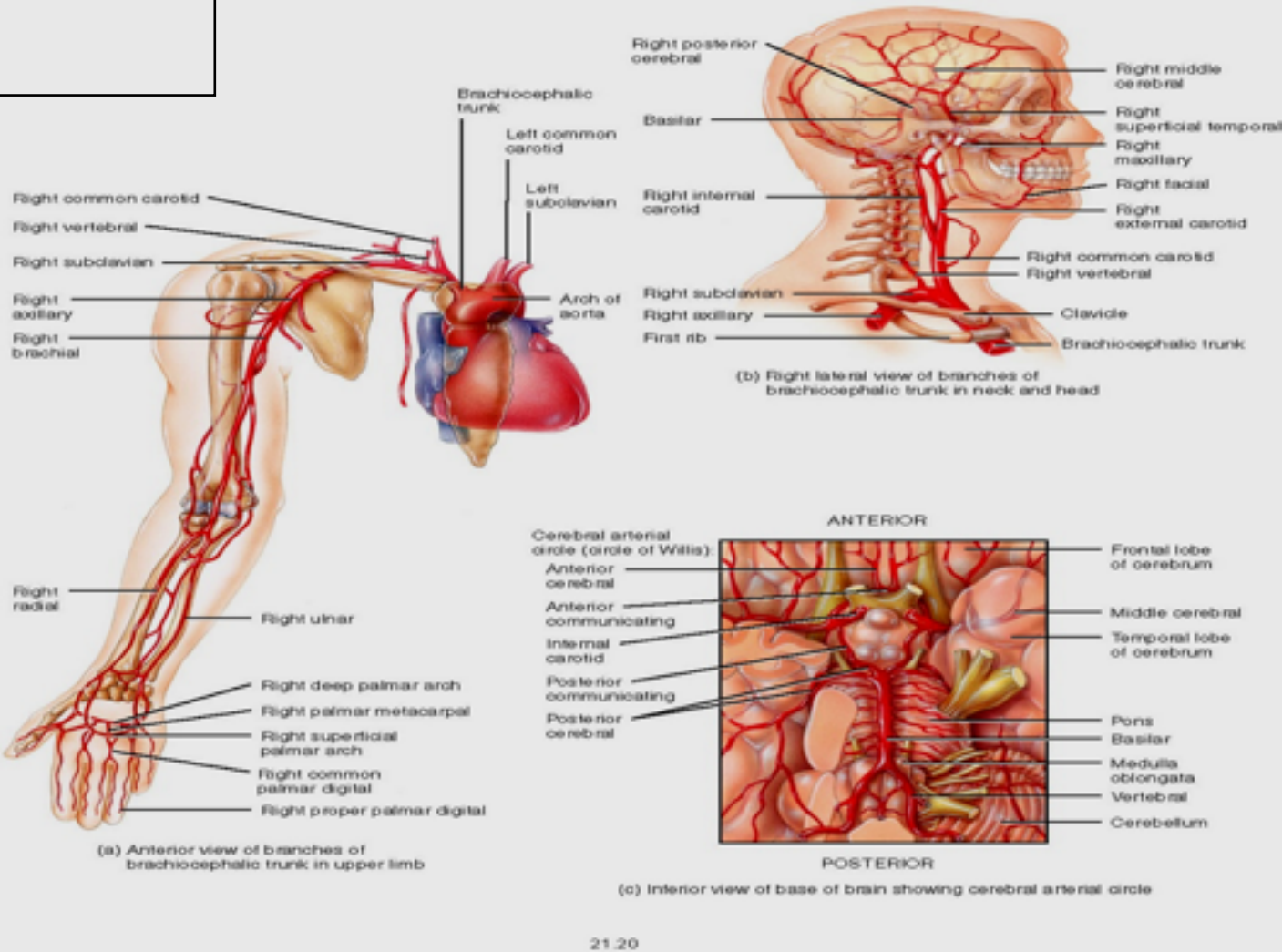
3rd part of Subclavian Artery

Extends from the lateral border of the Scalenus anterior muscle to the lateral border of 1st rib.

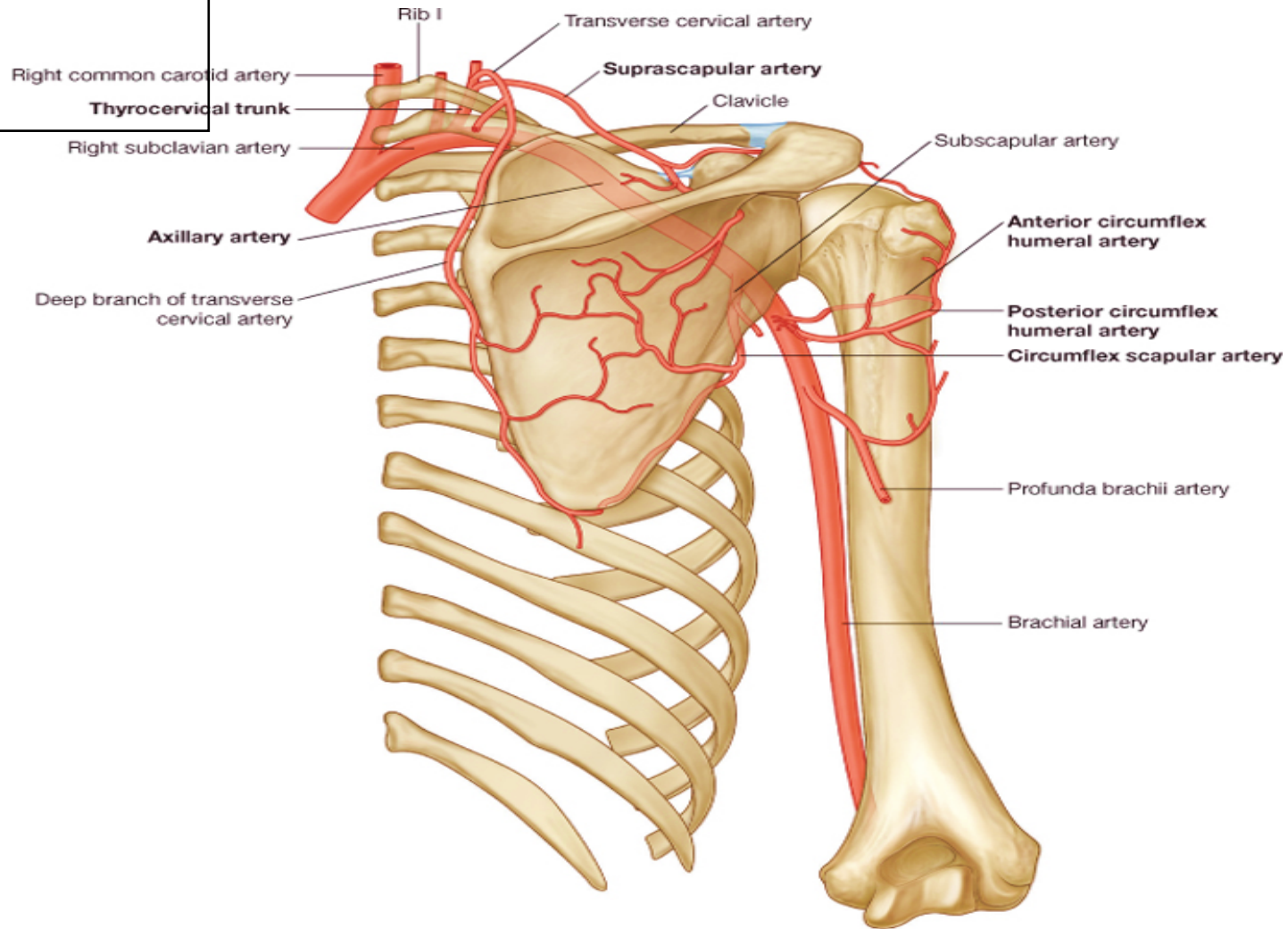
Branches: (Occasional)

1. Superficial cervical artery
2. Suprascapular artery

Subclavian Artery



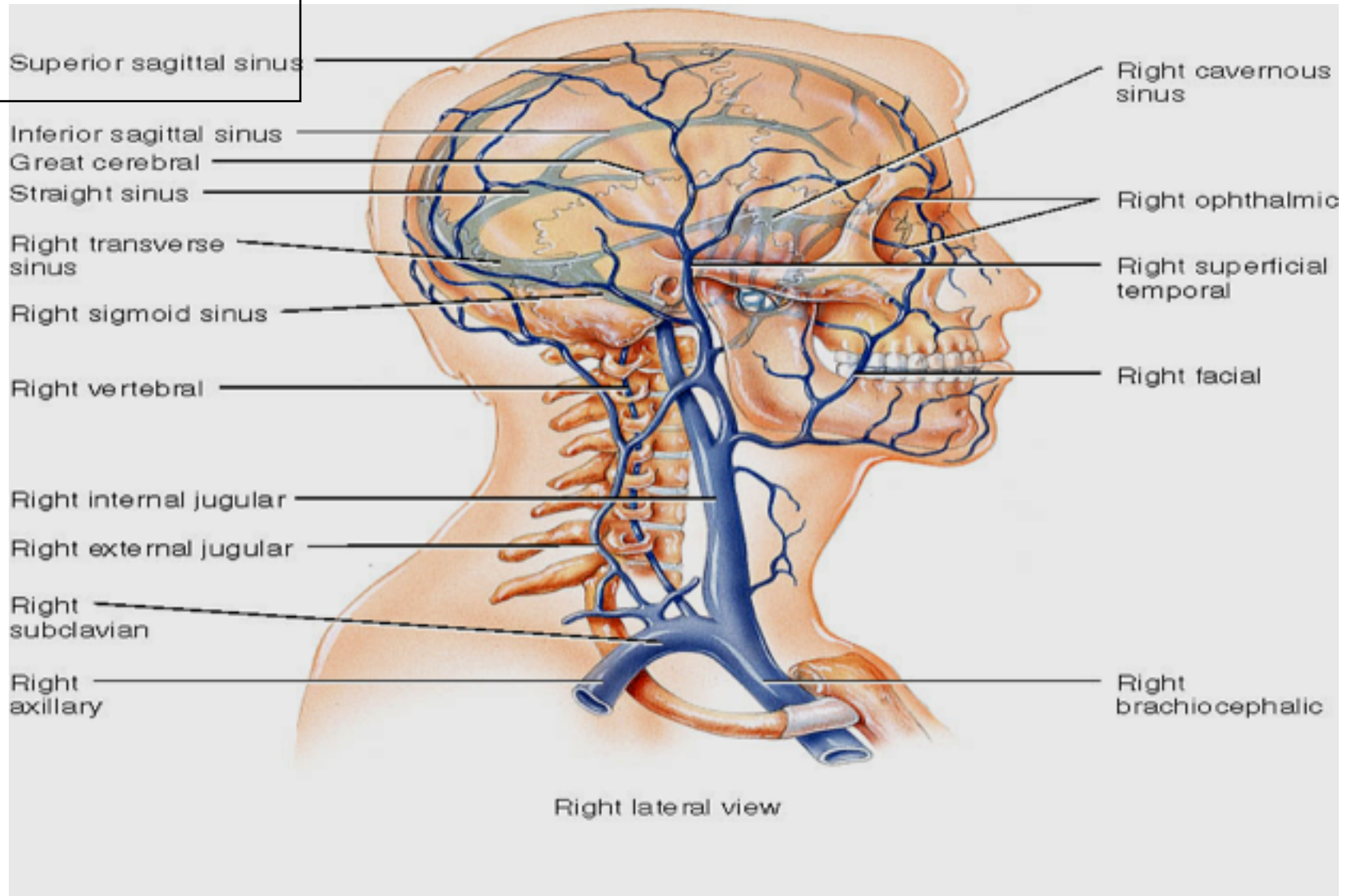
Branches of **Subclavian Artery**



Veins of the Neck

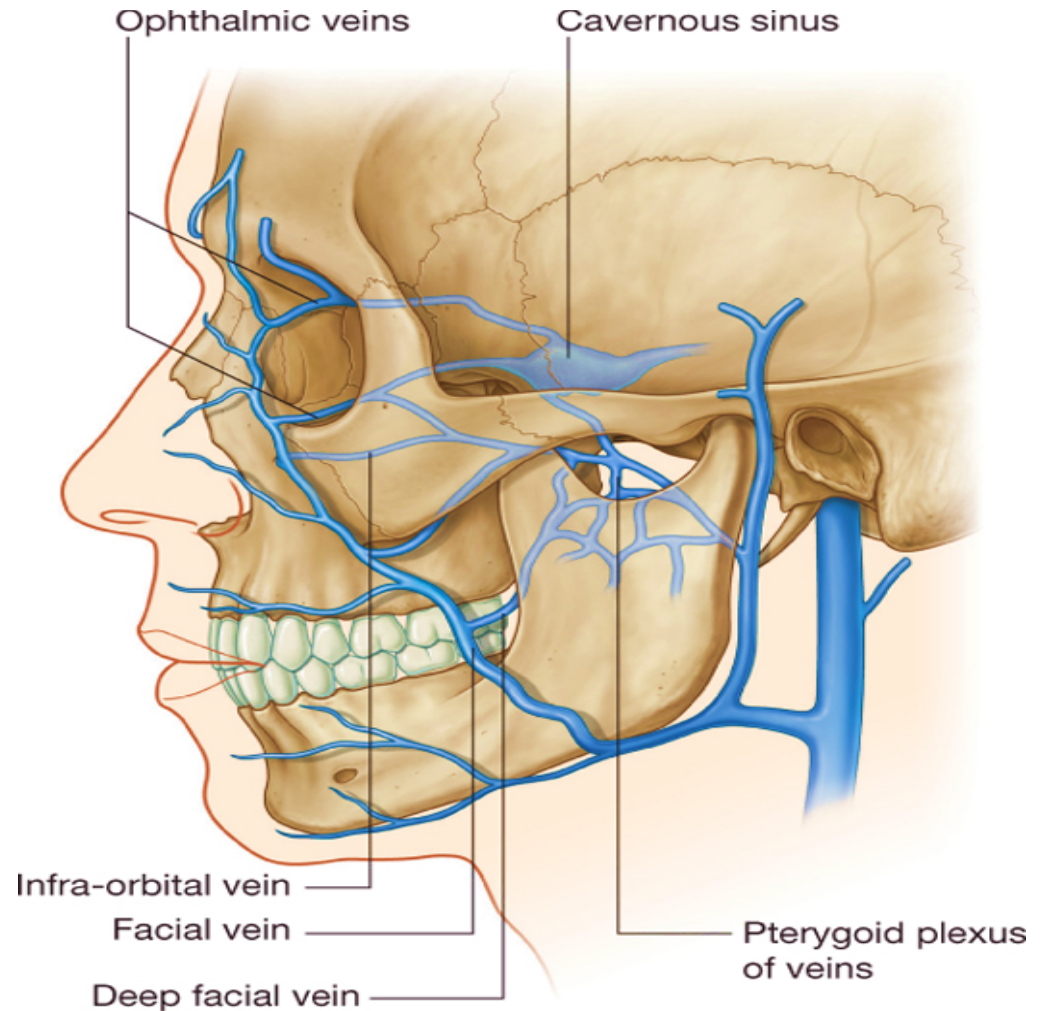
- Facial vein
- Superficial temporal vein
- Maxillary vein
- Rertromandibular vein
- External jugular vein
- Anterior jugular vein
- Internal jugular vein
- Subclavian vein

Veins supplying Head and Neck



Facial Vein

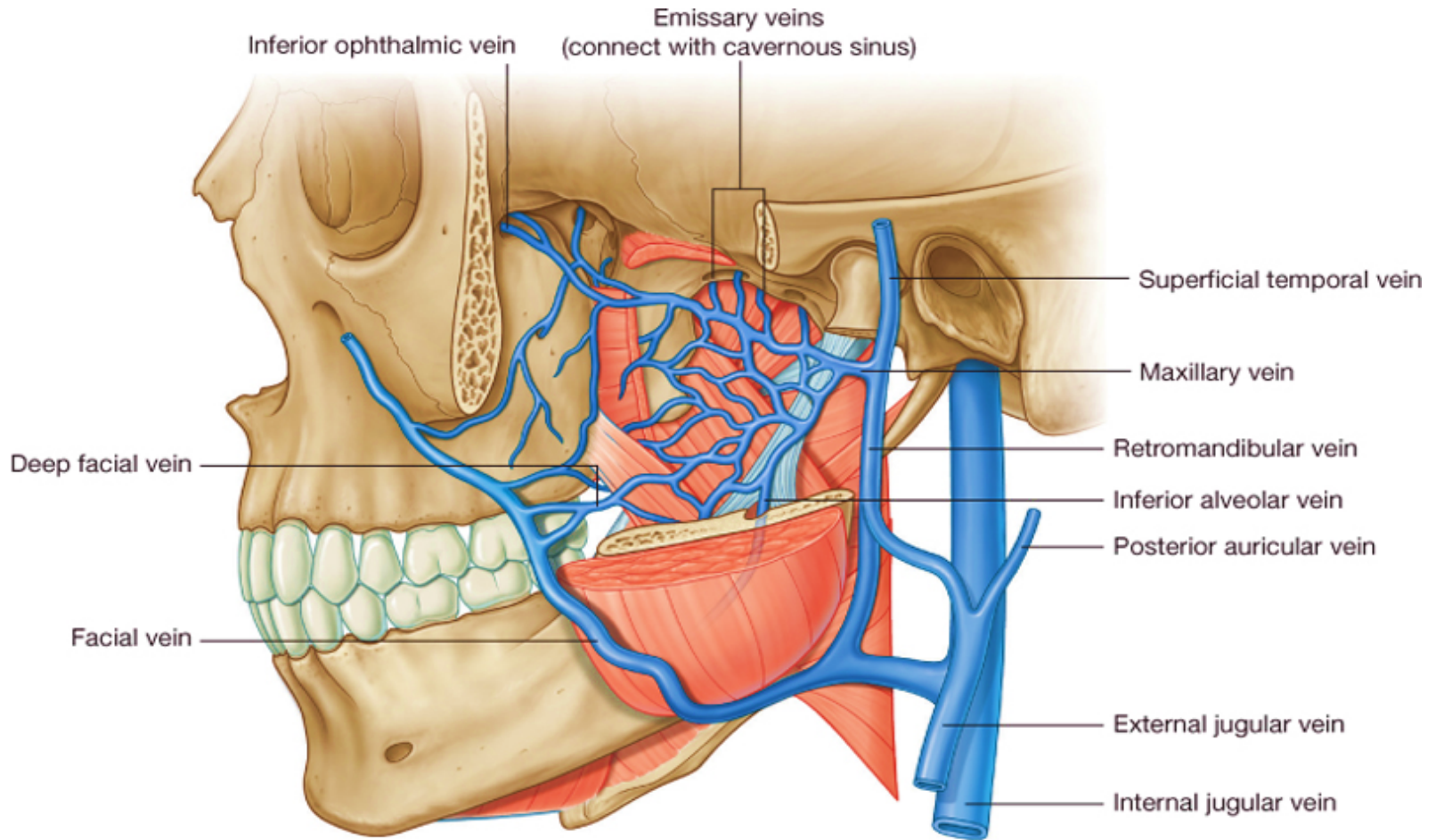
Formed at medial angle
of eye by
the union of supraorbital
and supratrochlear veins.
It joins anterior division
of retromandibular vein



Superficial temporal Vein

Formed on the side of the scalp. Enters parotid gland.

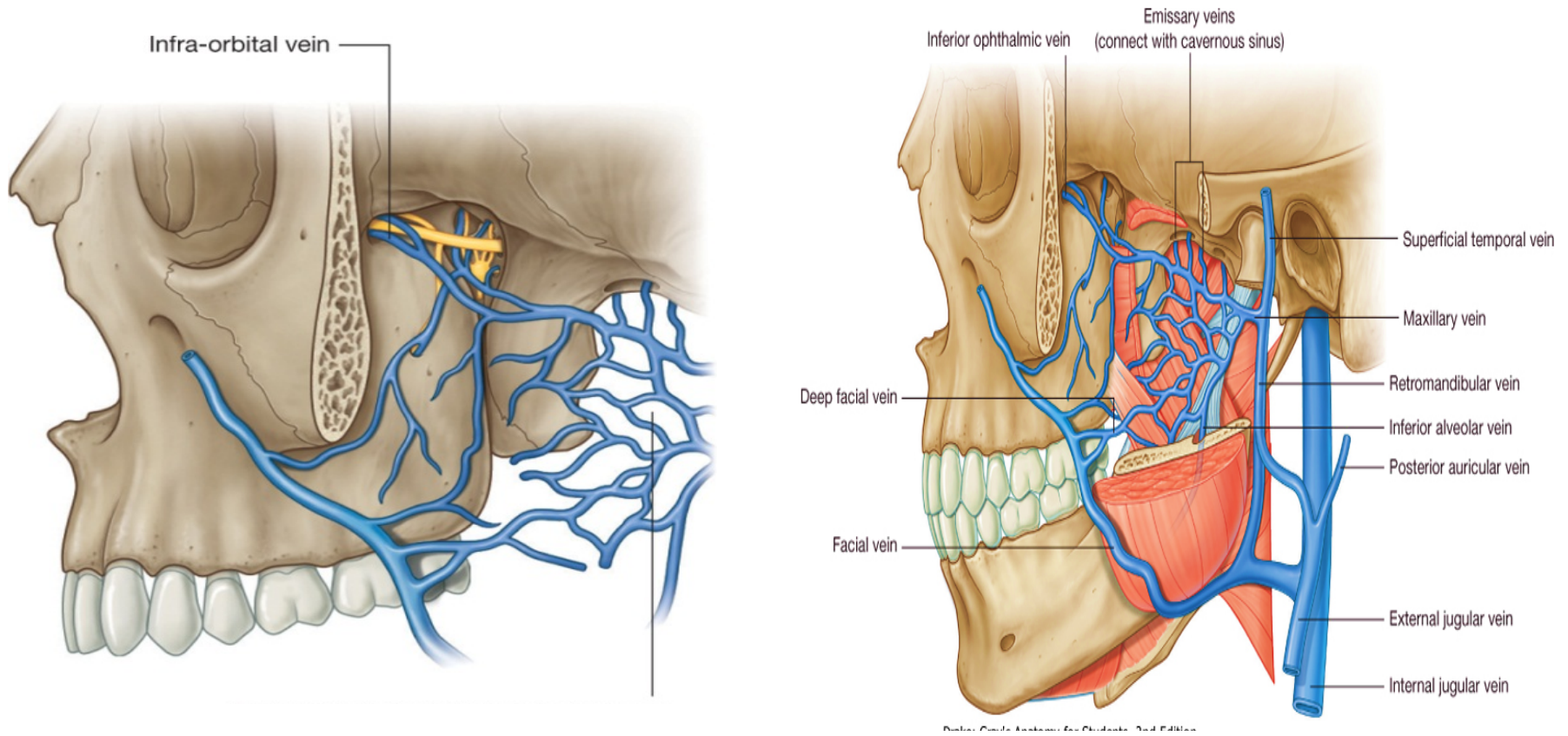
It joins maxillary vein to form **Retromandibular vein**.



Maxillary Vein

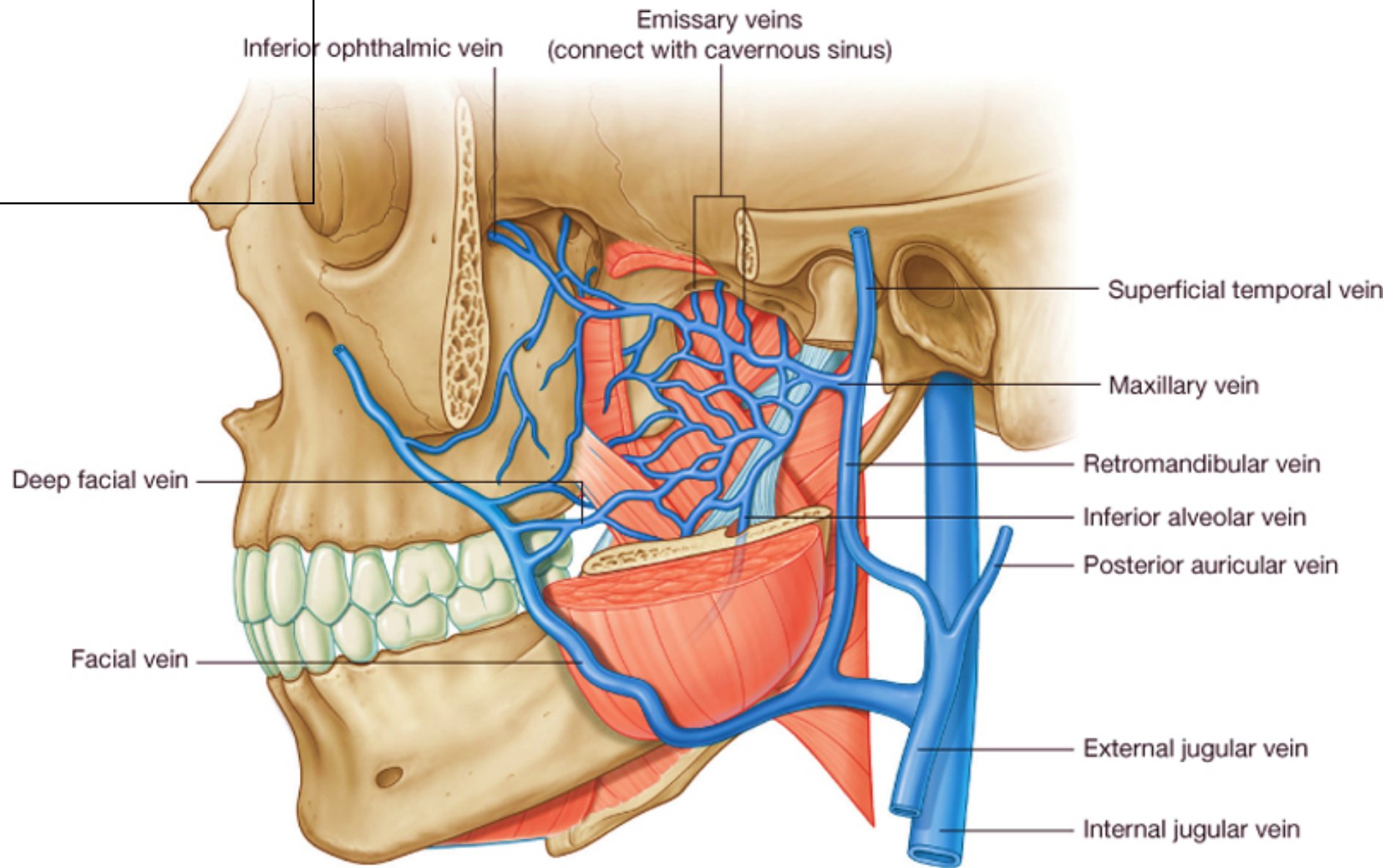
Formed in the Infratemporal fossa from the Pterygoid venous plexus.

It joins superficial temporal vein to form **Retromandibular vein**.



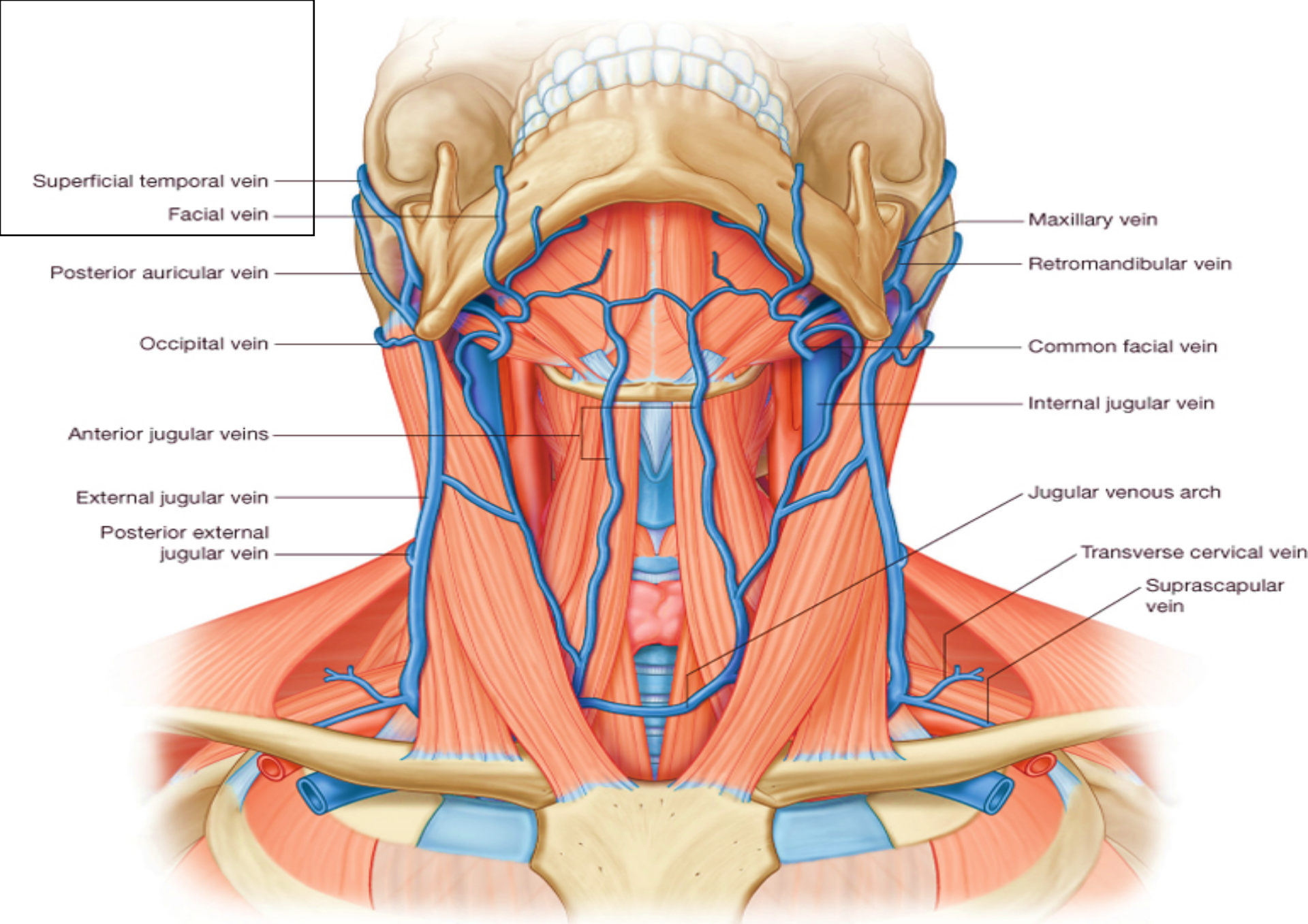
Retromandibular Vein

- Formed by the union of maxillary vein and superficial temporal vein.
- Leaving parotid gland divides into anterior branch and posterior branch.
- Anterior branch joins facial vein.
- Posterior branch joins posterior auricular vein to form external jugular vein.



External jugular Vein

- Formed behind the angle of jaw by the union of
Posterior branch of retromandibular vein with
posterior auricular vein.
- It drains into subclavian vein
 - Tributaries:
 - Posterior external jugular
 - Transverse cervical
 - Suprascapular
 - Anterior jugular





ANTERIOR JUGULAR VEIN

- It forms by union of submental veins at the upper part of the neck
- T descends medial to sternocleidomastoid m.
- It drains into the external jugular vein beneath sternocleidomastoid muscle.
- Receives drainage from thyroid and pharynx

Superficial temporal vein

Facial vein

Posterior auricular vein

Occipital vein

Anterior jugular veins

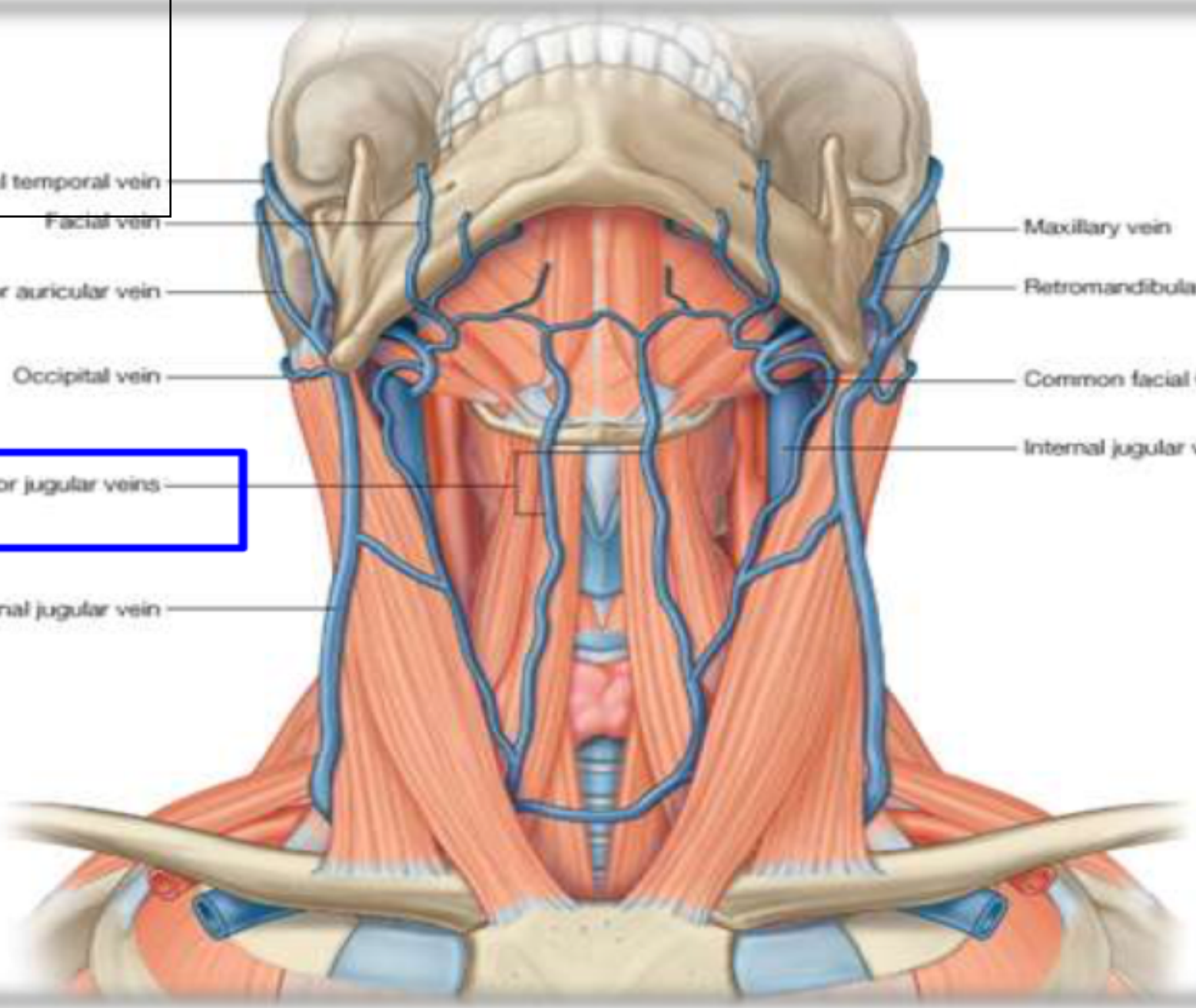
External jugular vein

Maxillary vein

Retromandibular vein

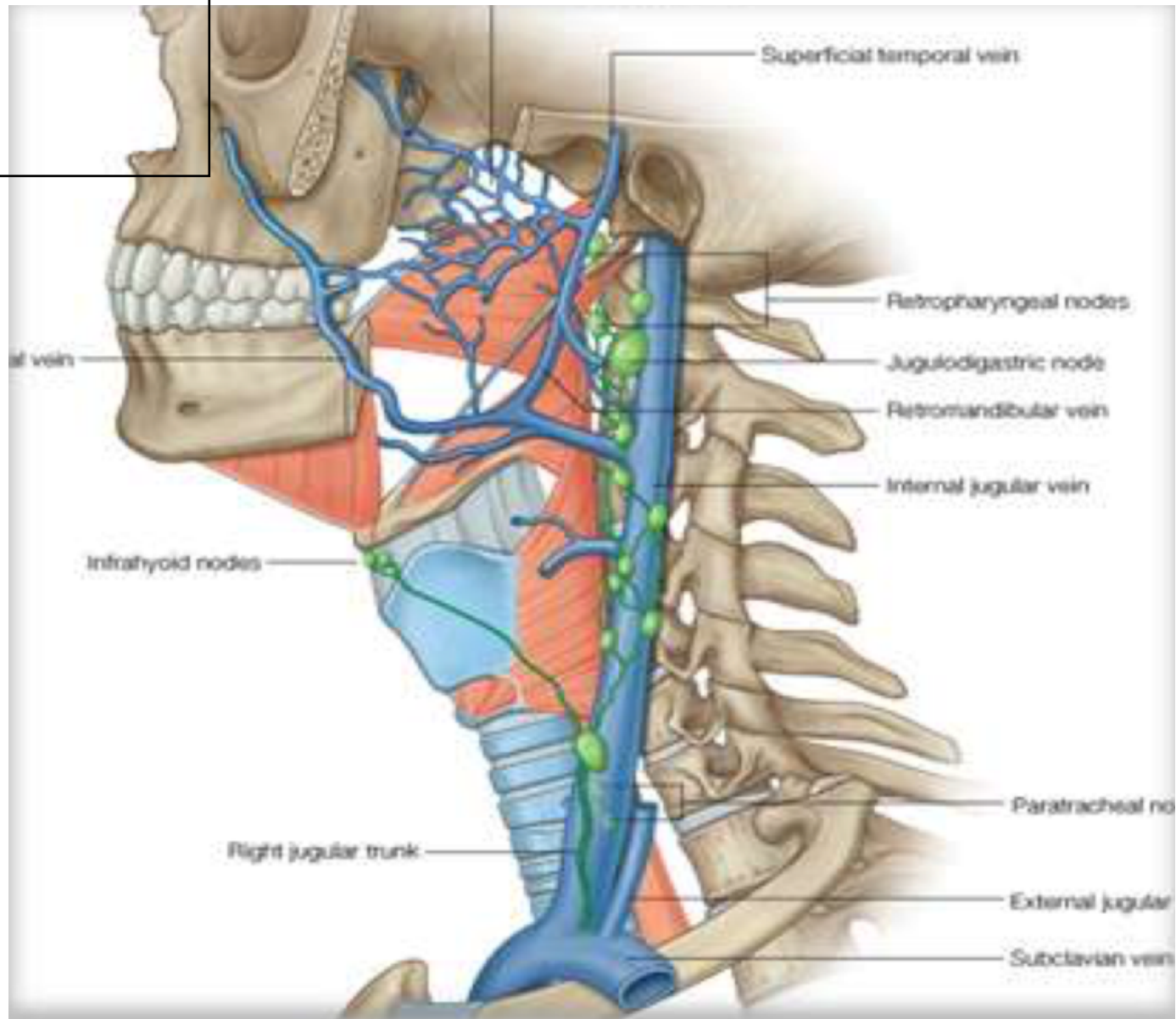
Common facial vein

Internal jugular vein



Internal jugular Vein

- Receives blood from brain, face and neck.
- Continuation of sigmoid sinus and leave the skull from jugular foramen.
- Ends by joining subclavian vein to form brachiocephalic vein.
- **Tributaries:**
 - Facial vein
 - Pharyngeal vein
 - Lingual vein
 - Superior thyroid vein
 - Middle thyroid vein



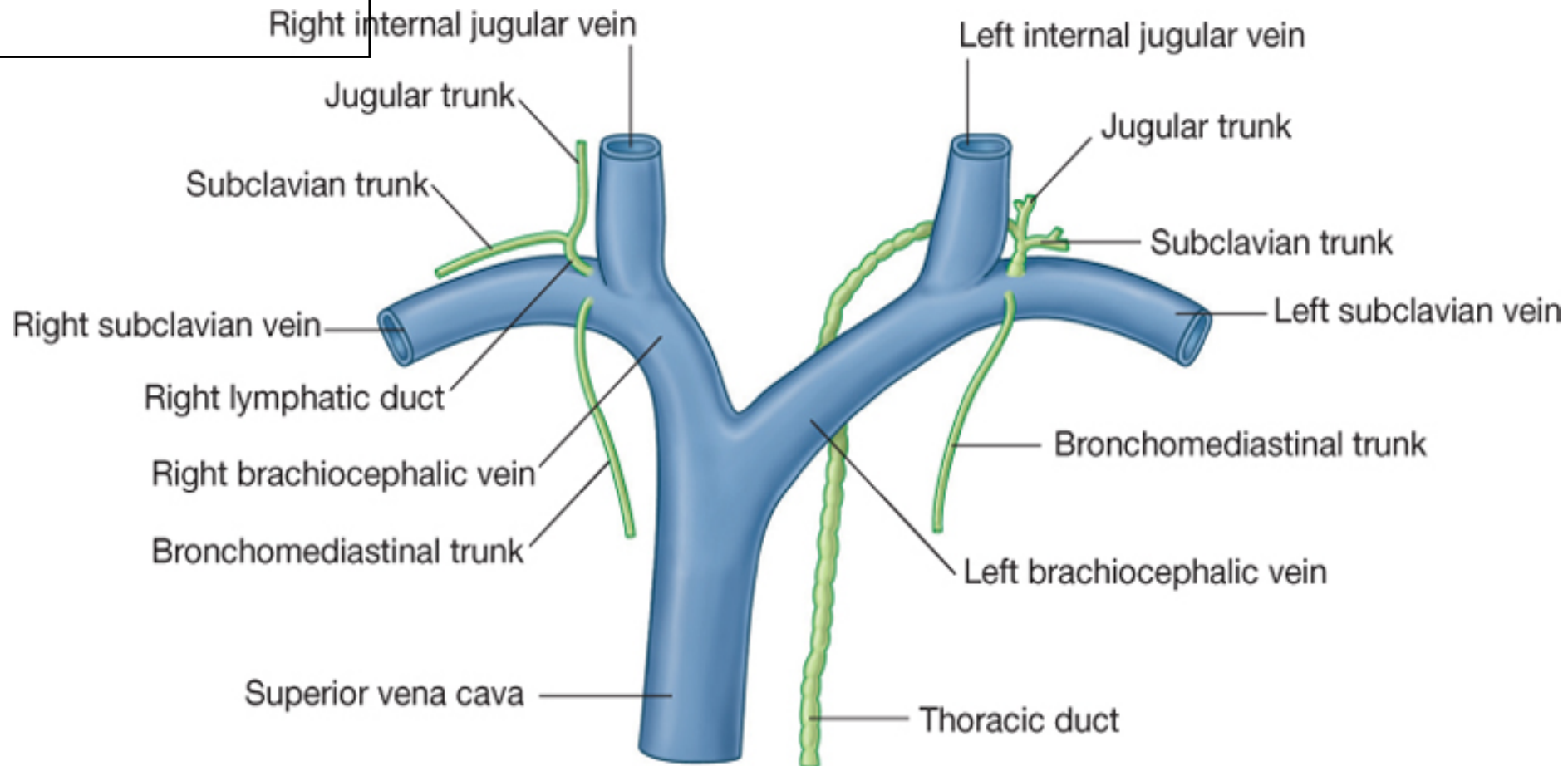
Subclavian Vein

- Continuation of axillary vein at the outer border of 1st rib.
- Joins internal jugular vein to form brachiocephalic vein.

Tributaries:

- External jugular vein

Brachiocephalic Veins & SVC



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

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