

Muscular and carotid triangles

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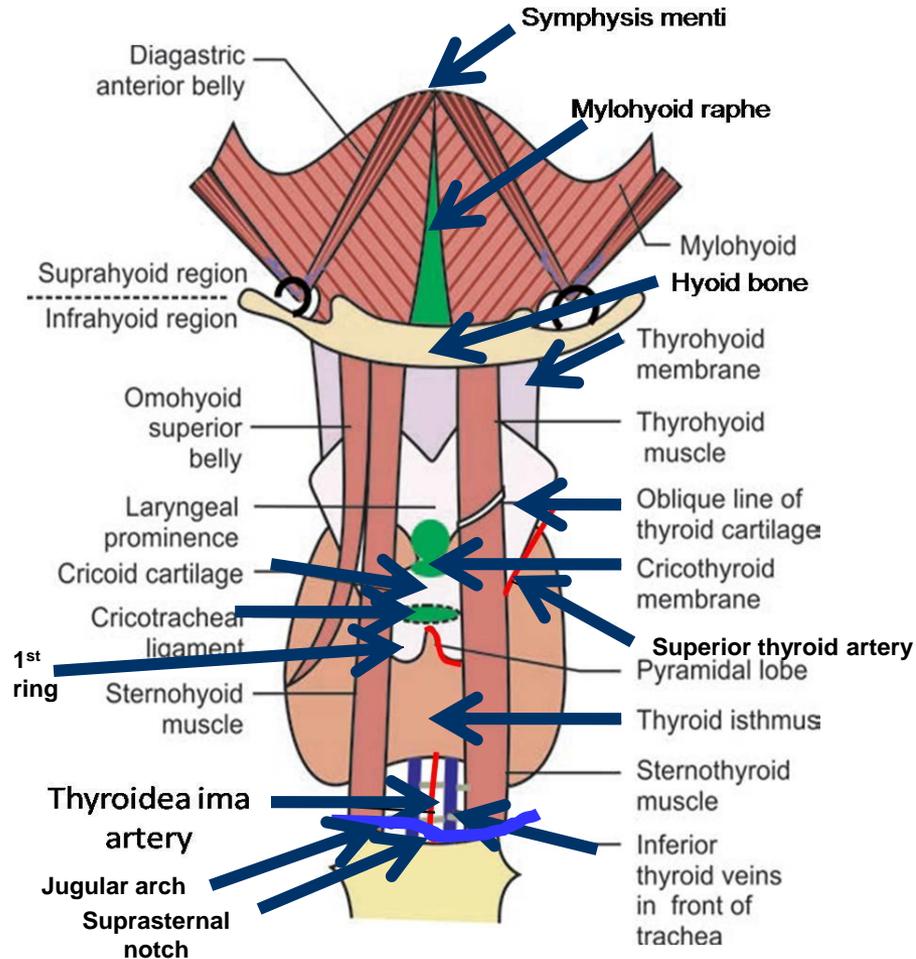
Lecture ILOS & Objectives:

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

- 1. Define structures of the midline of the neck.**
- 2. Define the boundaries and contents of muscular triangle.**
- 3. Define the ansa cervicalis and muscles supplied by it.**
- 4. Describe the boundaries and contents of the carotid triangle.**
- 5. Identify the common carotid artery its origin, end and branches.**

Structures in the midline of the neck from above downwards

1. Symphysis menti.
2. Mylohyoid raphe.
3. Body of the hyoid bone.
4. Thyrohyoid membrane.
5. Thyroid cartilage.
6. Cricothyroid ligament.
7. Cricoid cartilage.
8. Cricotracheal ligament.
9. 1st ring of trachea.
10. Isthmus of thyroid gland.
11. Superior thyroid arteries
12. Inferior thyroid veins.
13. Thyroidea ima artery.
14. Jugular arch.
15. Suprasternal notch.



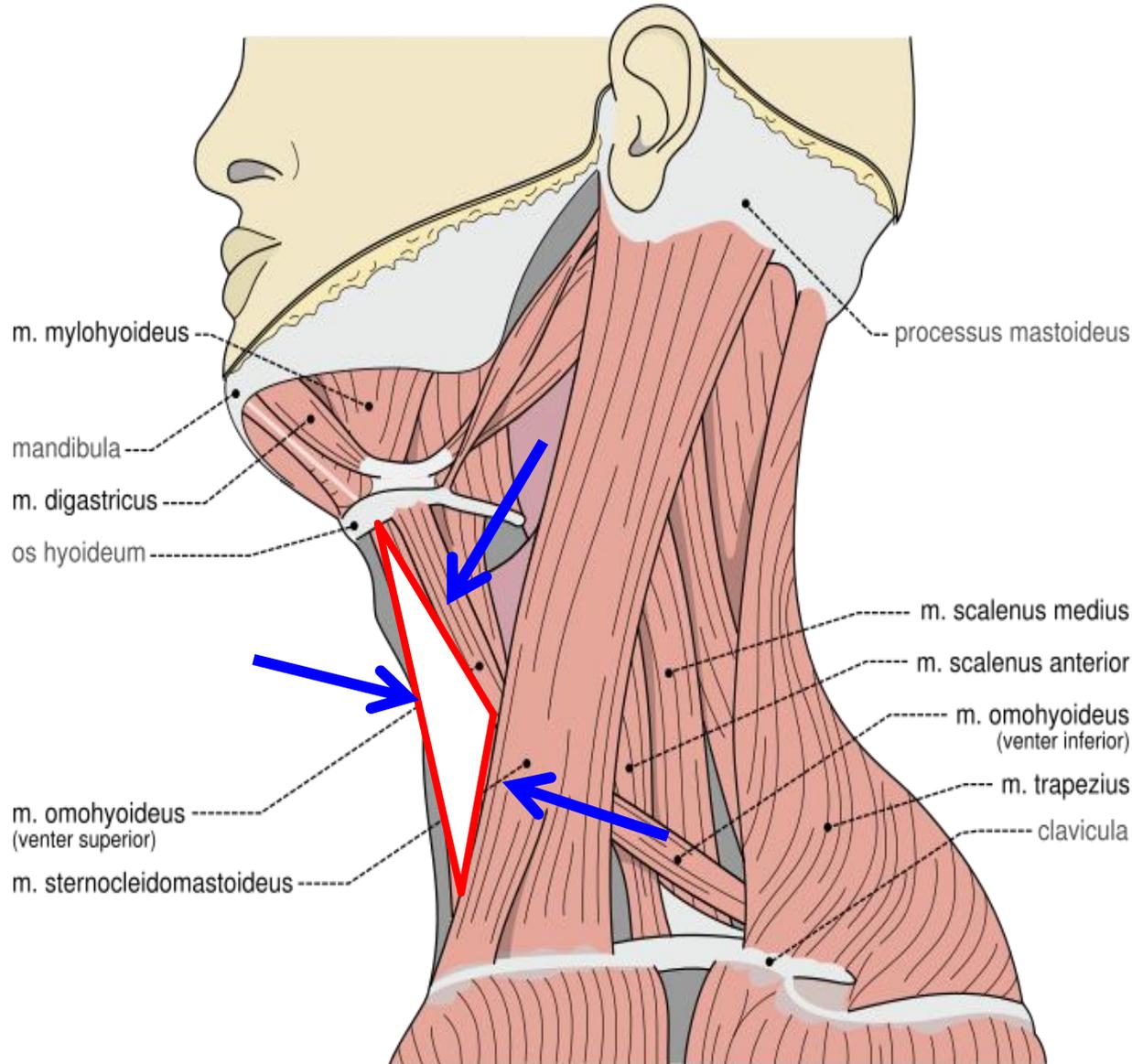
Muscular Triangle

Boundaries:

- **Anteriorly:** midline of the neck
- **Superiorly:** superior belly of omohyoid
- **Inferiorly:** anterior border of sternomastoid

Contents:

1. Sternohyoid
2. Sternothyroid
3. Thyrohyoid



• **Sternohyoid:**

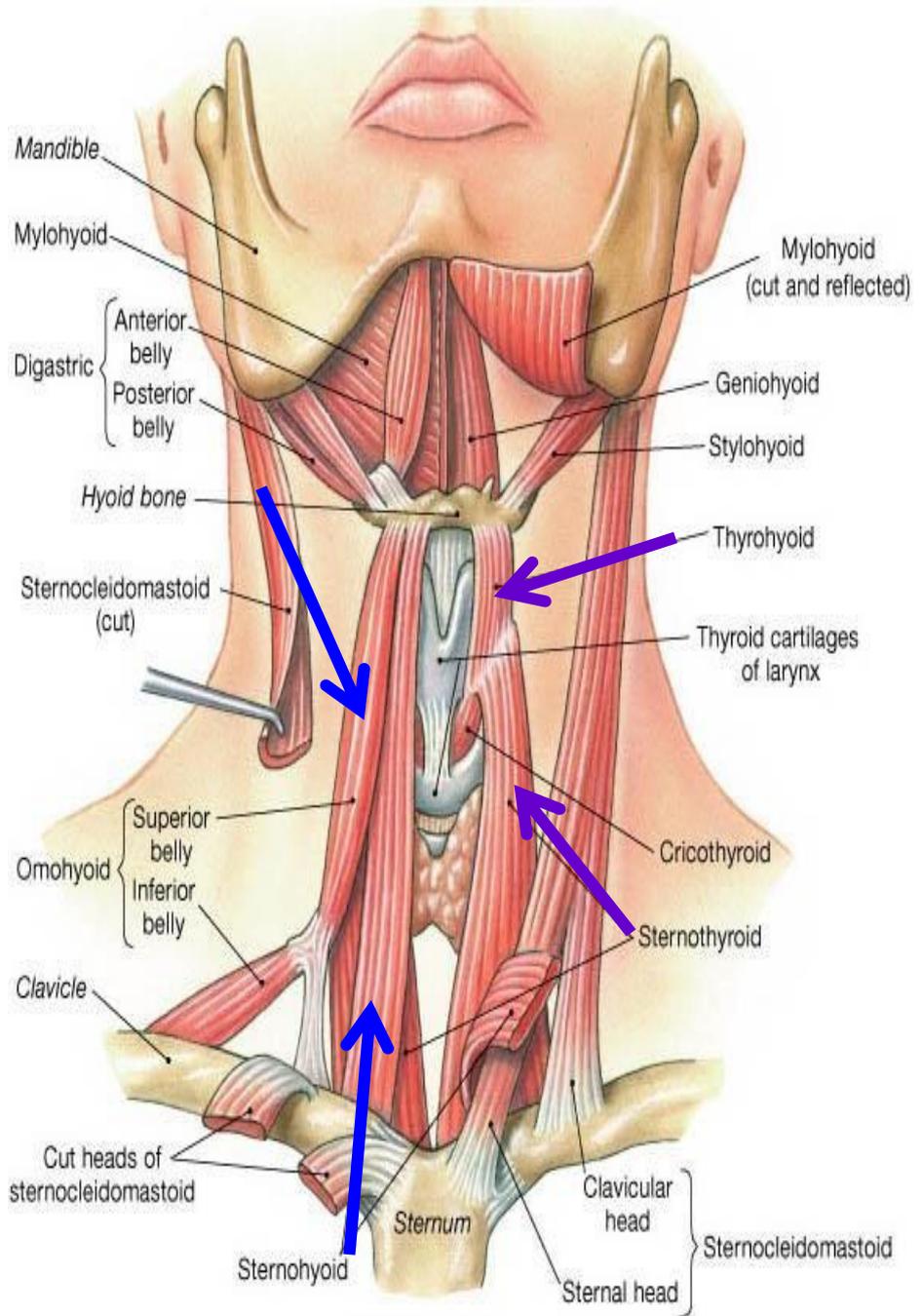
- **Origin:** back of manubrium and medial end of clavicle
- **Insertion:** medial part of lower border of hyoid bone
- **Nerve supply:** ansa cervicalis
- **Action:** depression of hyoid bone

• **Sternohyoid:**

- **Origin:** back of manubrium sterni
- **Insertion:** oblique line of thyroid cartilage
- **Nerve supply:** ansa cervicalis
- **Action:** depression of larynx

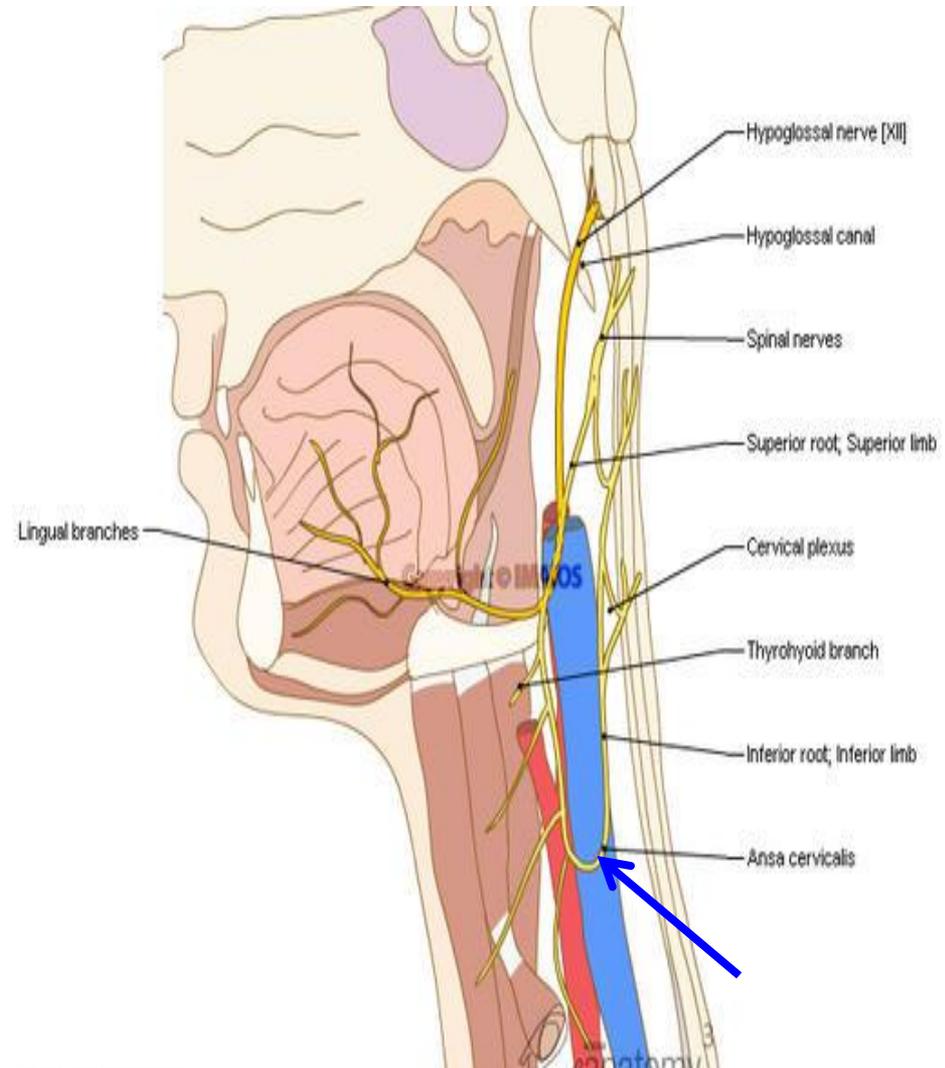
• **Thyrohyoid:**

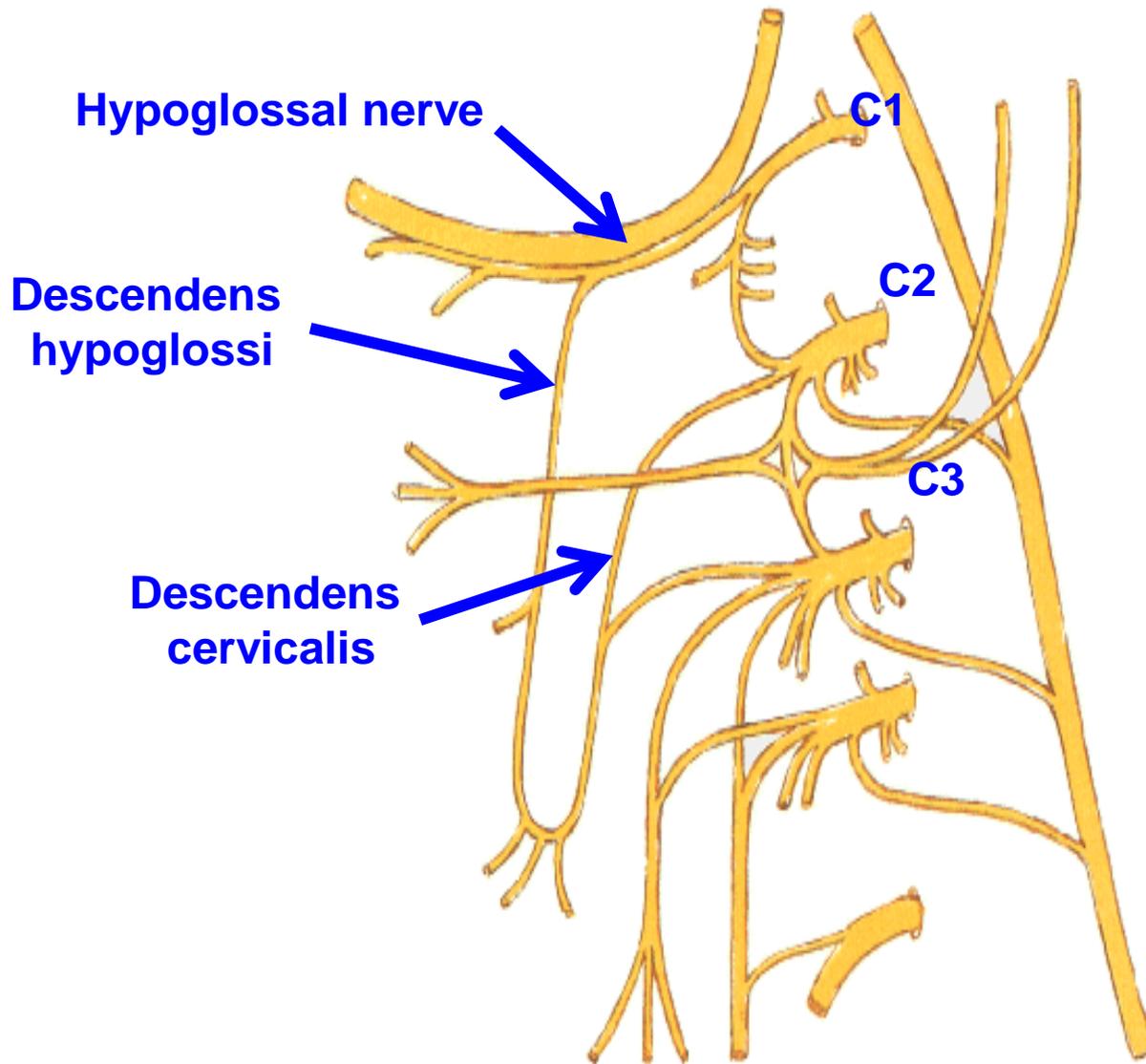
- **Origin:** oblique line of thyroid cartilage
- **Insertion:** lower border of hyoid bone
- **Nerve supply:** C1 through hypoglossal nerve
- **Action:** depression of hyoid bone or elevation of larynx



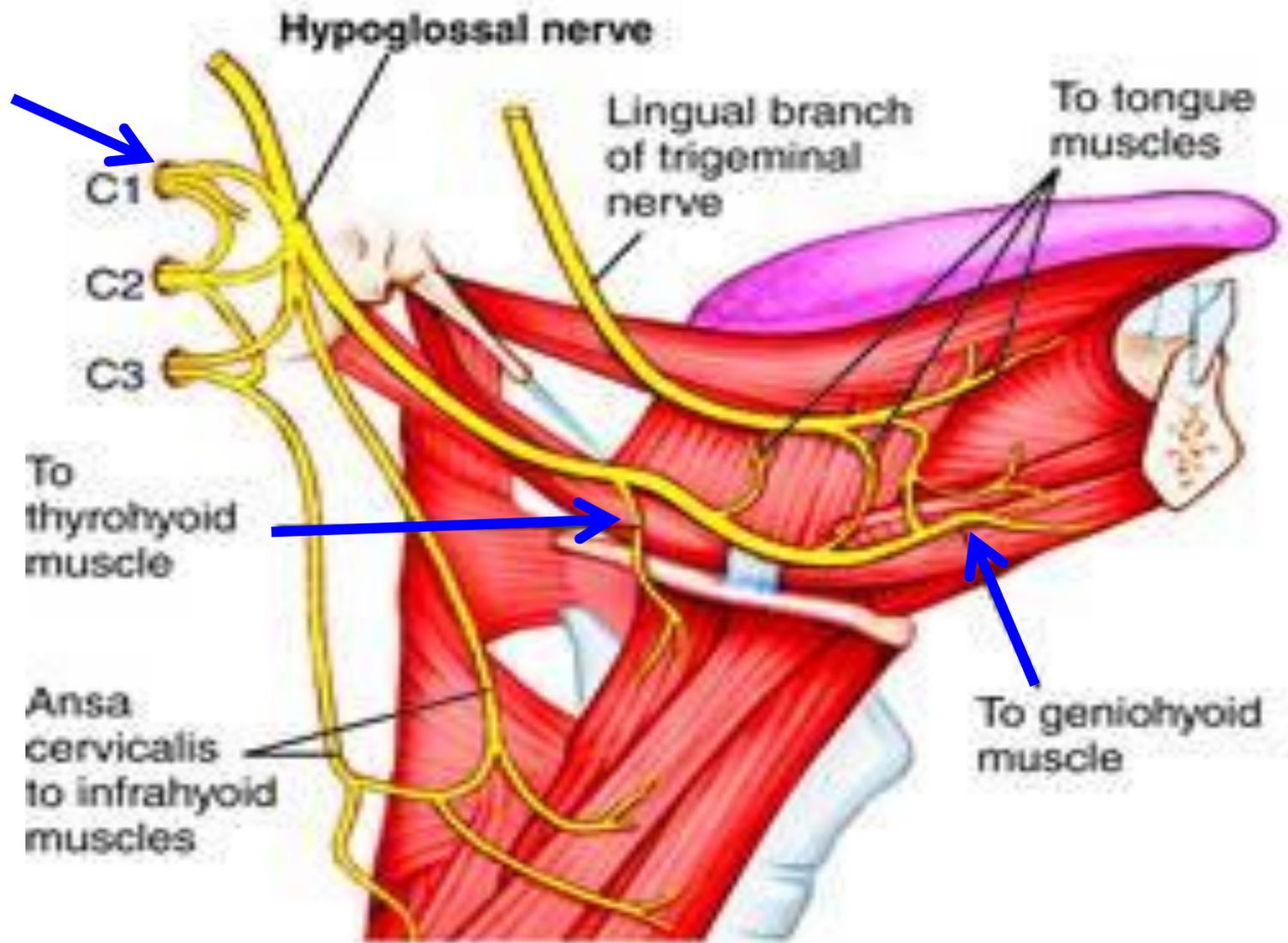
Ansa Cervicalis

- it is a loop of cervical nerves lies on carotid sheath
- It is formed of:
 - **Descendens hypoglossi:** consists of fibres from C1
 - **Descendens cervicalis:** Consists of fibres from C2 & C3
 - **Branches:** gives branches to
 - sternohyoid,
 - sternothyroid
 - omohyoid





Ansa Cervicalis



Carotid Triangle

- **Boundaries:**

- **Superiorly:** posterior belly of digastric

- **Inferiorly:** superior belly of omohyoid

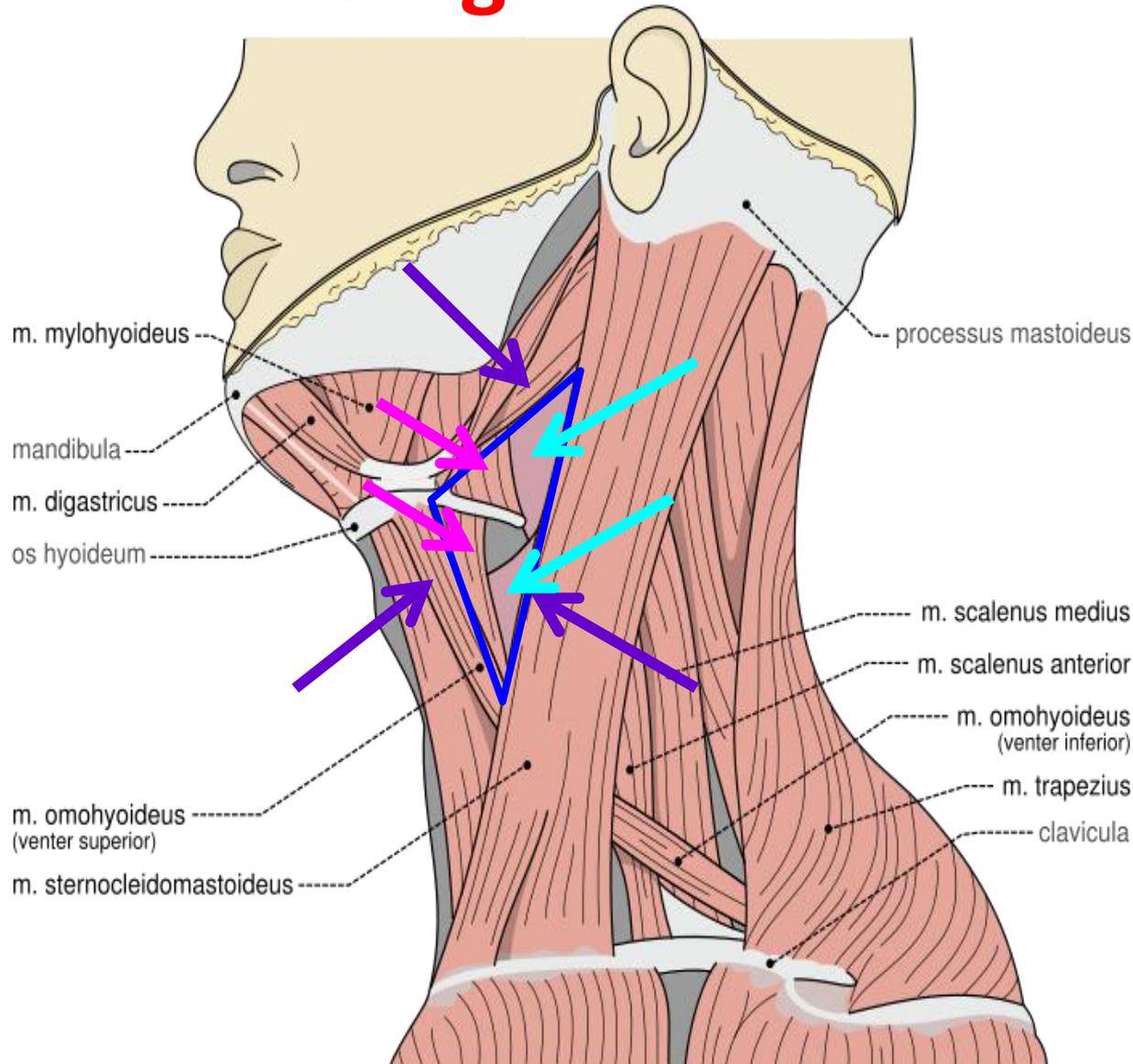
- **Posteriorly:** anterior border of sternomastoid

- **Roof:** skin, superficial fascia, platysma and deep fascia

- **Floor:**

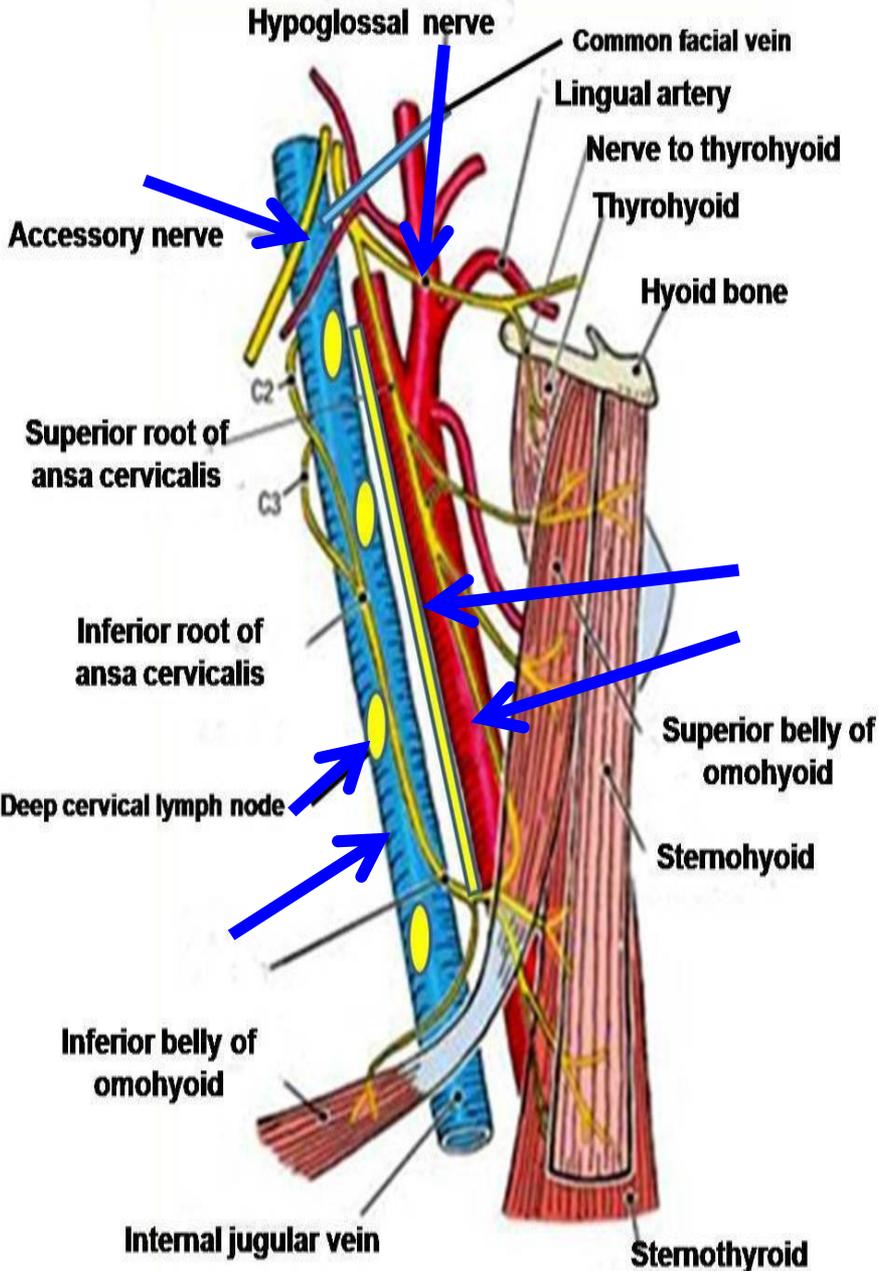
- Hyoglossus & Thyrohyoid

- Middle & inferior constrictors



•Contents

- Internal jugular vein laterally
- Common& internal carotid arteries medial to IJV
- External carotid artery
 - it gives 5 of its branches in the triangle; superior thyroid, ascending pharyngeal, lingual, facial& occipital
- Vagus nerve within carotid sheath
- Hypoglossal nerve descends between IJV&ICA then crosses ECA& lingual artery
- Ansa cervicalis
- Cervical sympathetic trunk
- Accessory nerve
- Deep cervical lymph nodes
- Common facial vein

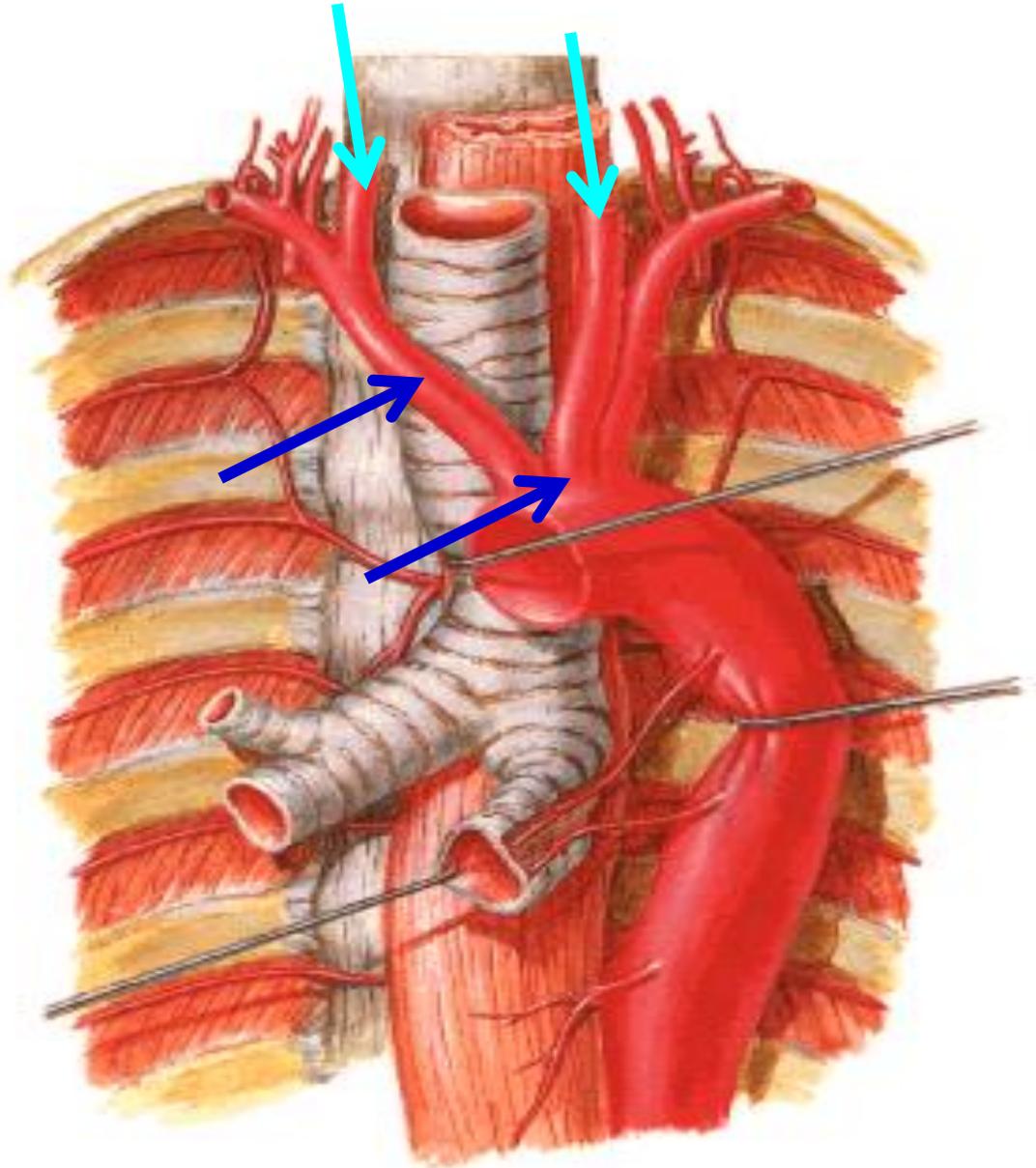


Common Carotid Artery

- **Origin:**

- **On the right side:**
from the innominate artery.

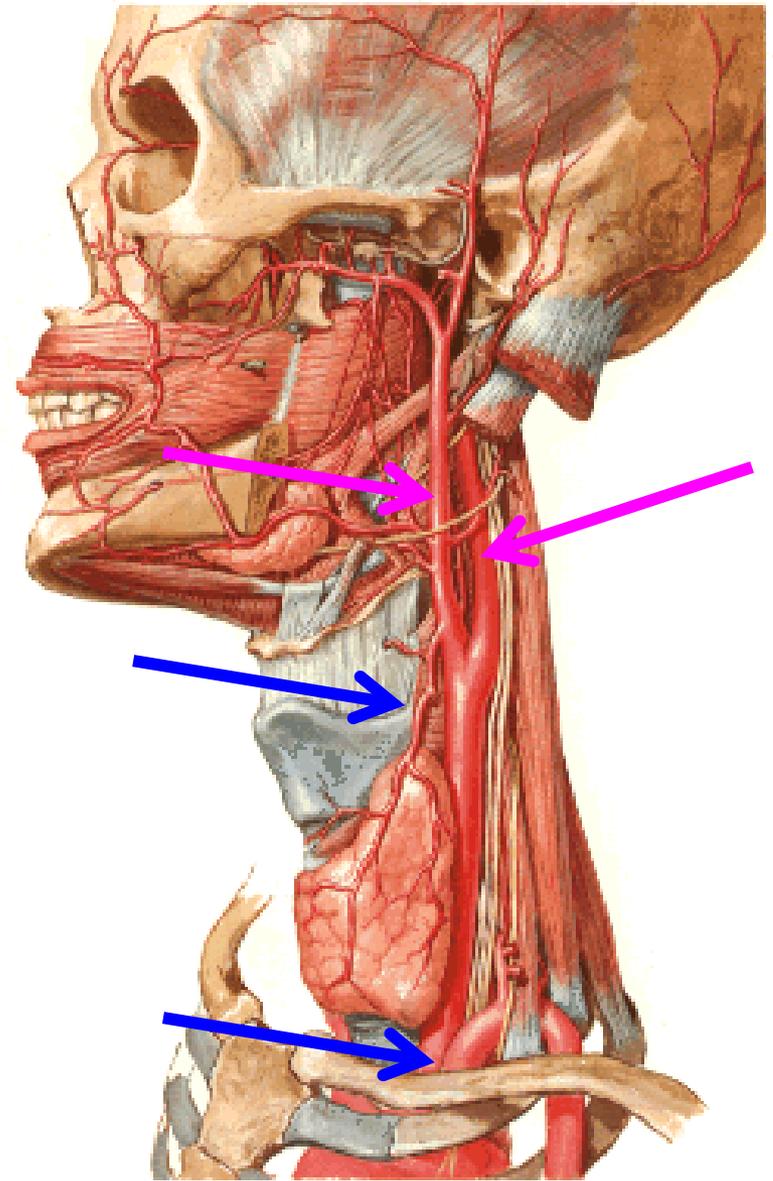
- **On the left side:**
Directly from arch of aorta



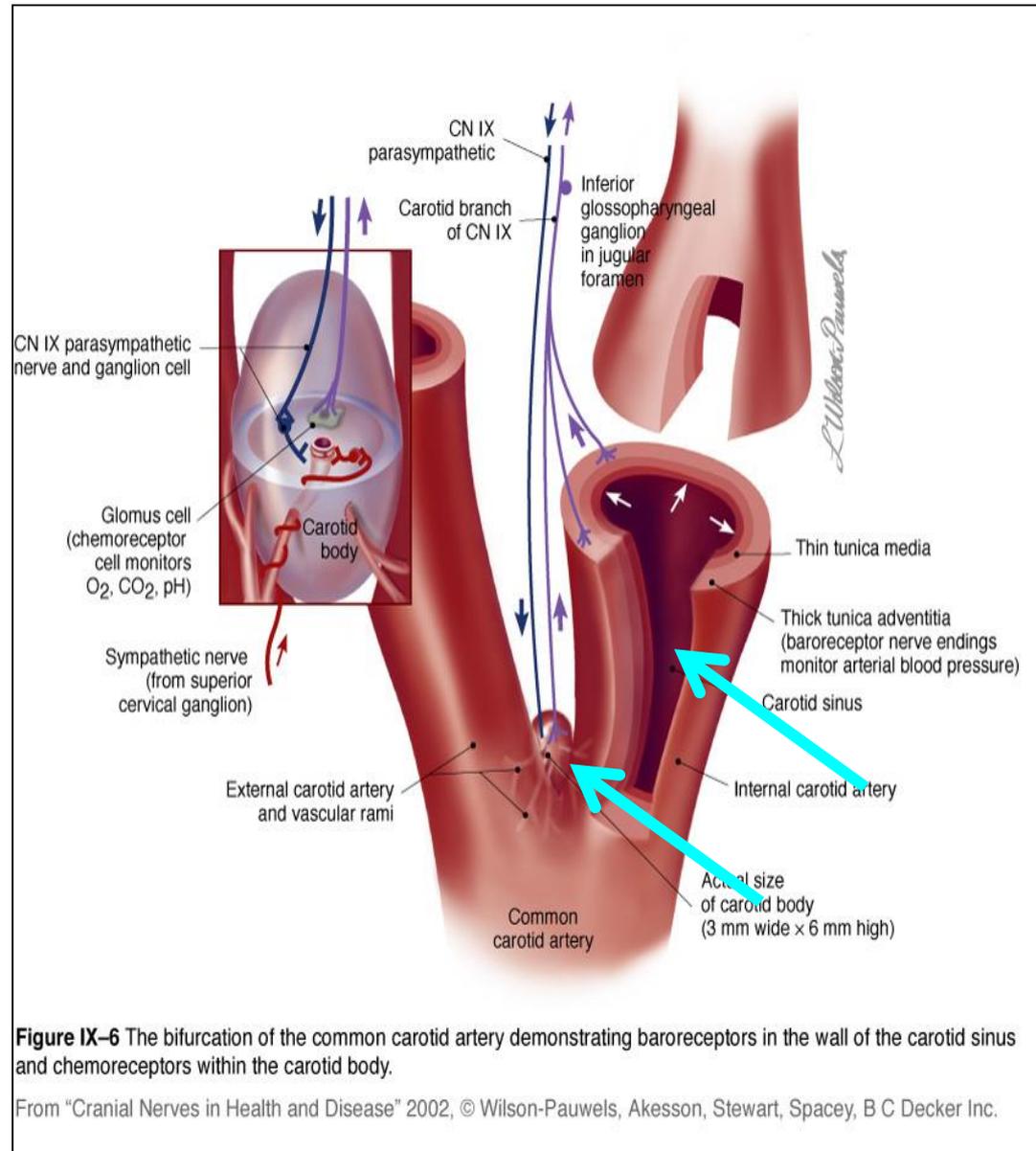
- **Course:**

- It ascends behind sternoclavicular joint to the neck.

- It ends at upper border of thyroid cartilage by dividing into internal and external carotid arteries.

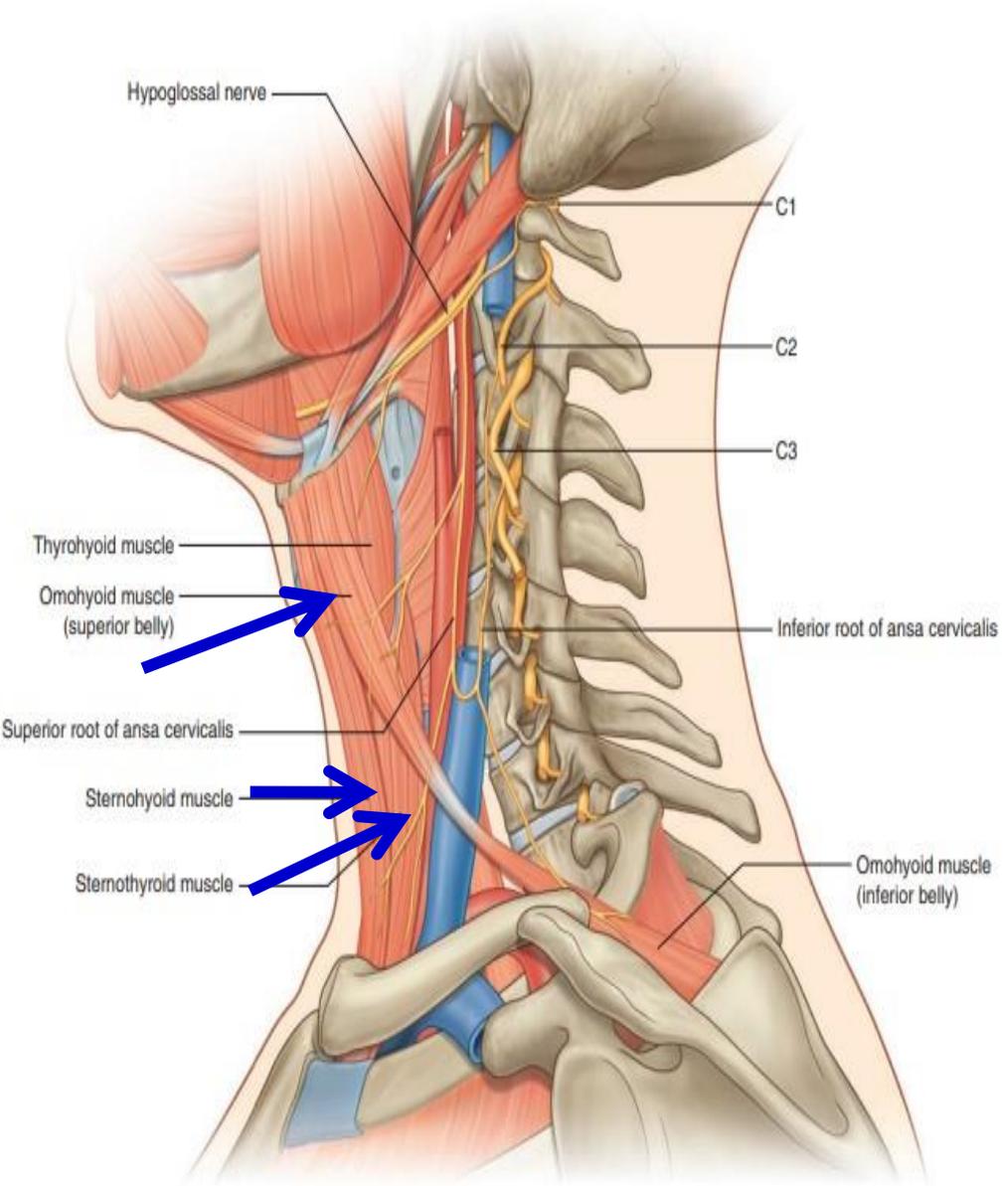


- At the end of common carotid artery there is a localized dilatation called **carotid sinus** that contains **carotid body** which is a small reddish brown structure.



• Superficial relations:

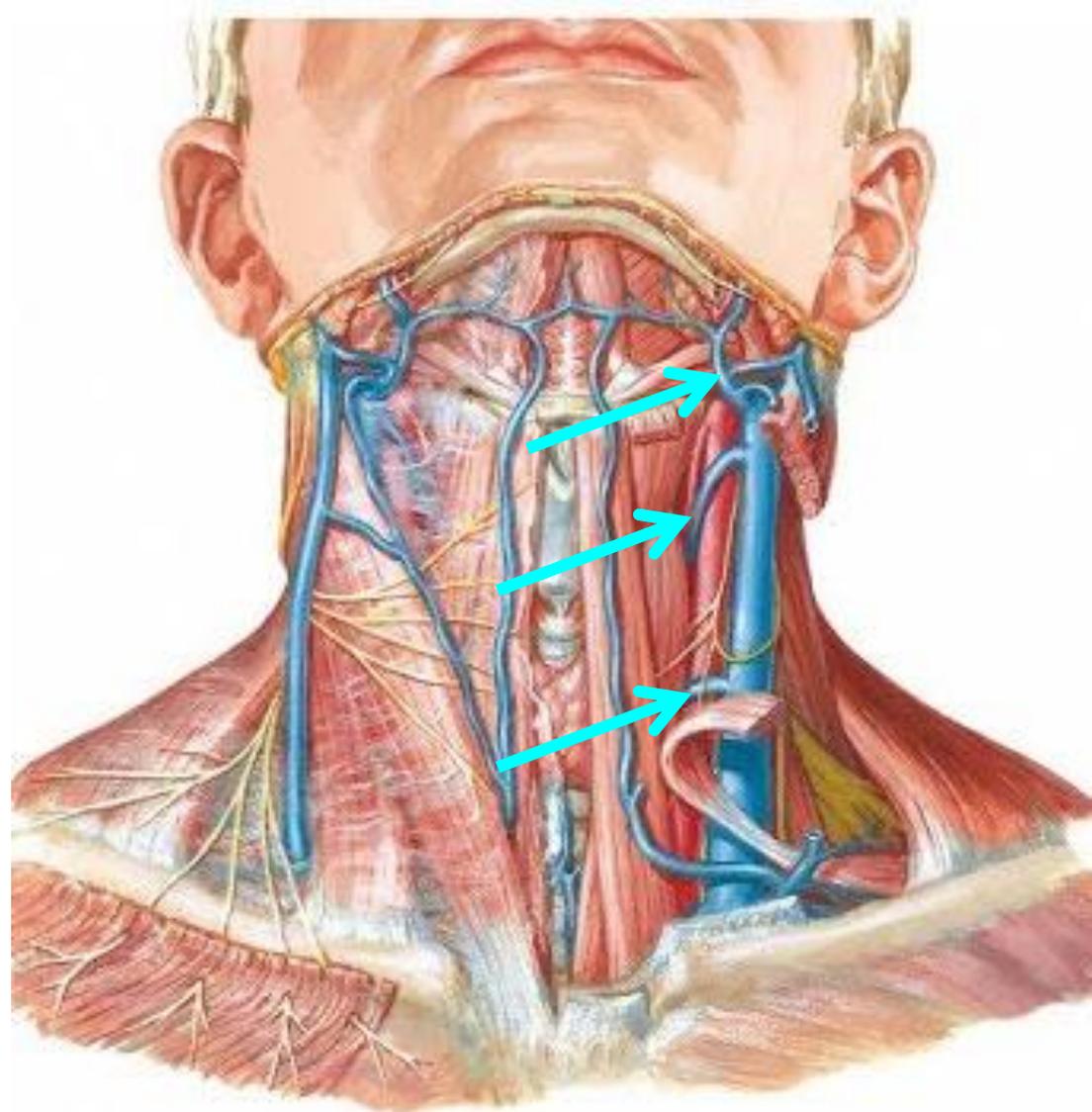
- Skin, superficial fascia, platysma & deep fascia.
- Ansa cervicalis.
- **Upper part** is covered only by **1** muscle (**Sternomastoid**).
- **Lower part** is covered by **4** muscles:
 - Sternohyoid
 - Sternothyroid
 - Omohyoid (superior belly)
 - Sternomastoid



• **Superficial relations:**

• It is crossed superficially by 3 veins:

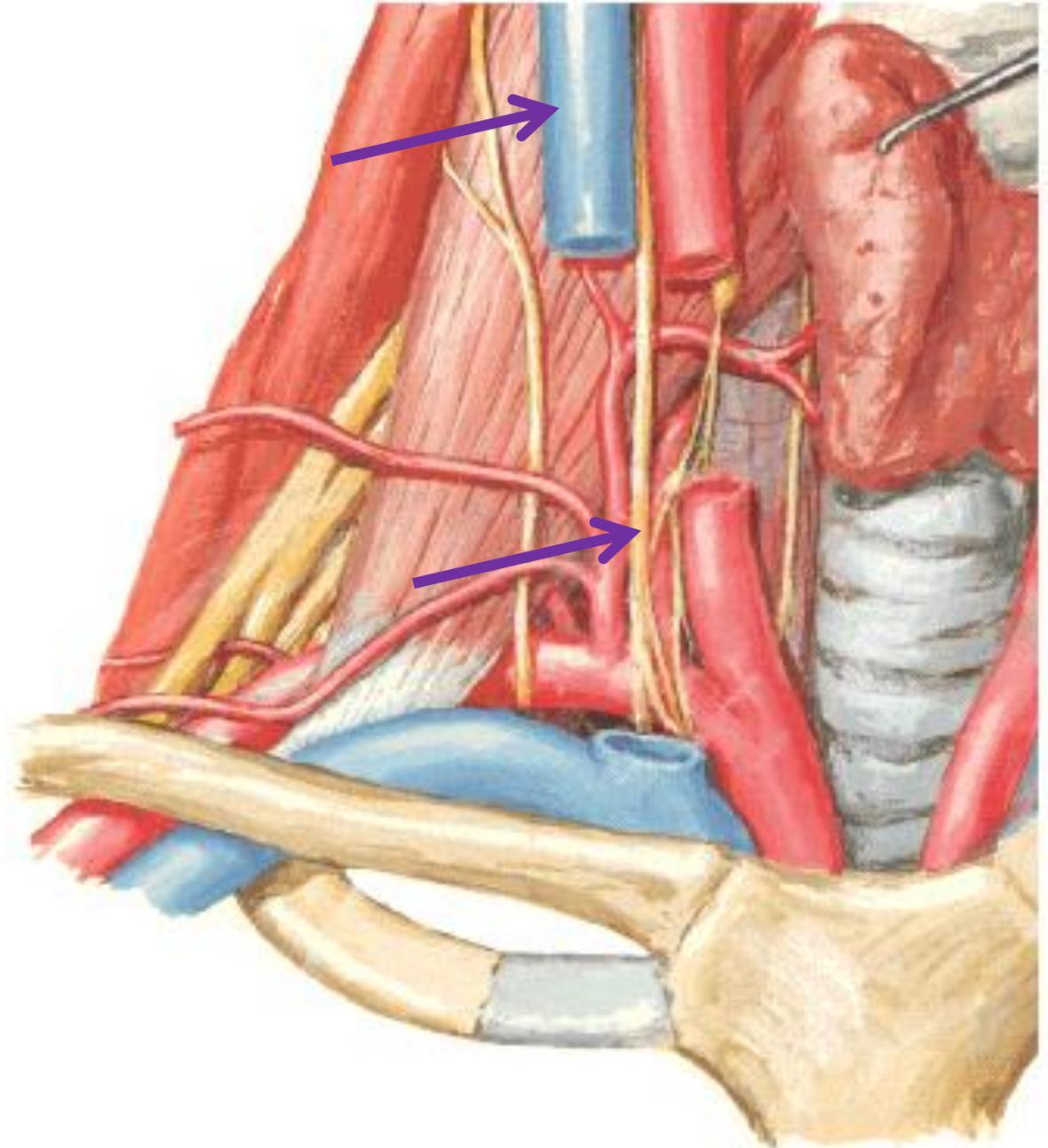
- Anterior jugular vein
- Middle thyroid vein
- Superior thyroid vein



• Laterally:

• Internal jugular vein

• Vagus nerve



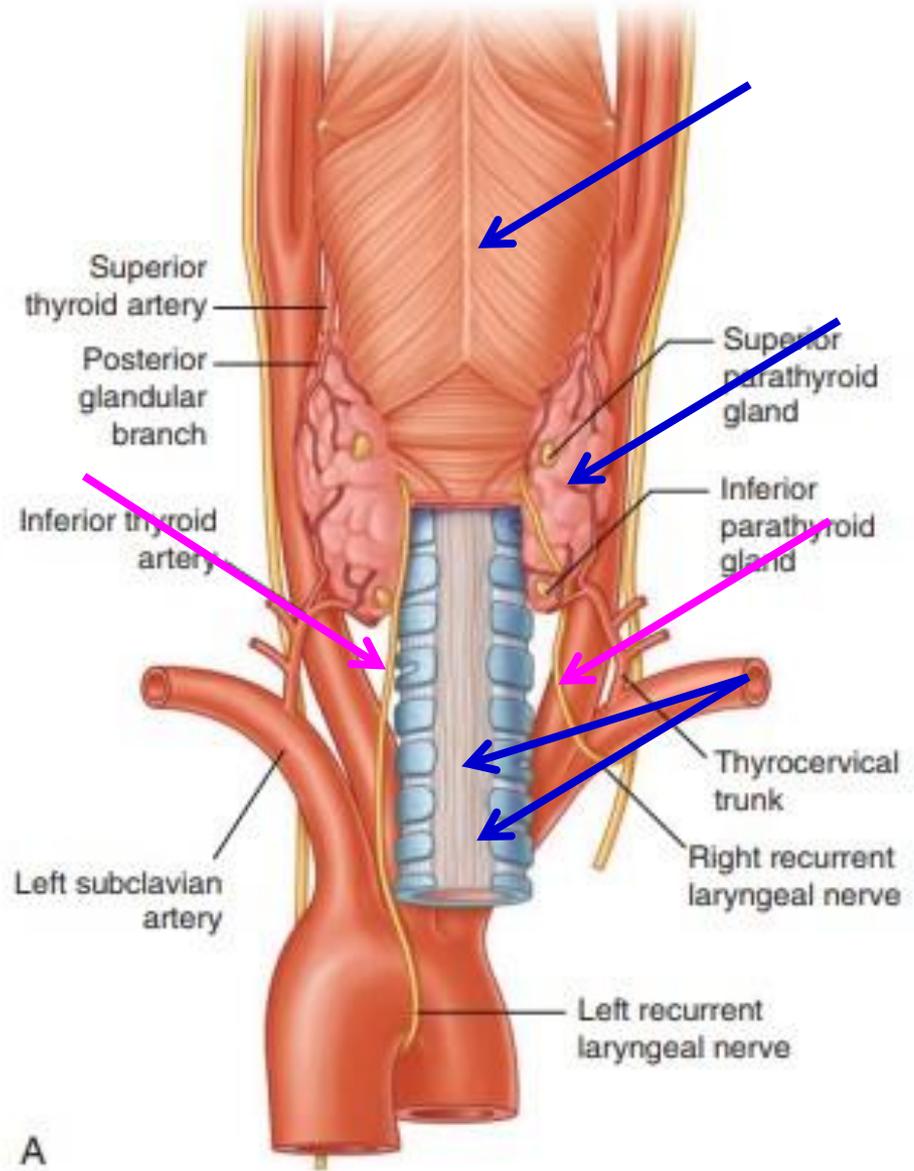
- Medially:

- **Below:** Trachea & oesophagus

- **Above:** Larynx & Pharynx

- Recurrent laryngeal nerve between trachea and oesophagus.

- Thyroid gland.



REFERENCES

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

Thank
you

