

**The University of Jordan  
Faculty Of Medicine**



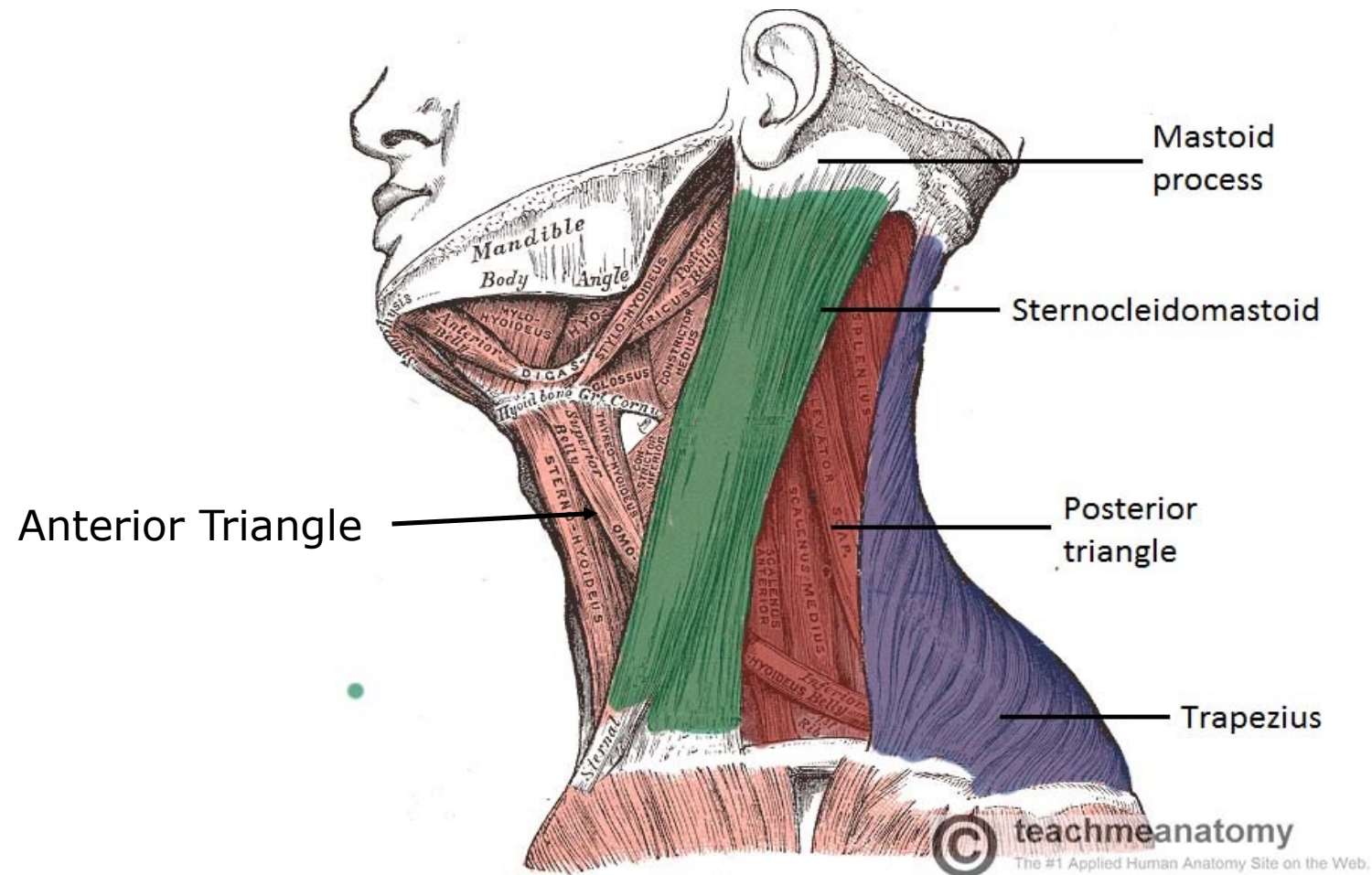
# Triangles of the Neck

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## Neck Triangles

The neck is divided by sternomastoid into two triangles Anterior and posterior



**Neck Triangles**

**Anterior  
Triangles**

**Posterior  
Triangles**

**Two Carotid  
Triangles**

**Two Digastric  
Triangles**

**One Submental  
Triangles**

**Two Muscular  
Triangles**

## Boundaries

# Posterior Triangles

**Anterior :** Sternomastoid

**Posterior:** Trapezius

**Base :** intermediate 1/3 of clavicle

**Apex:** Meeting of Sternomastoid and Trapezius

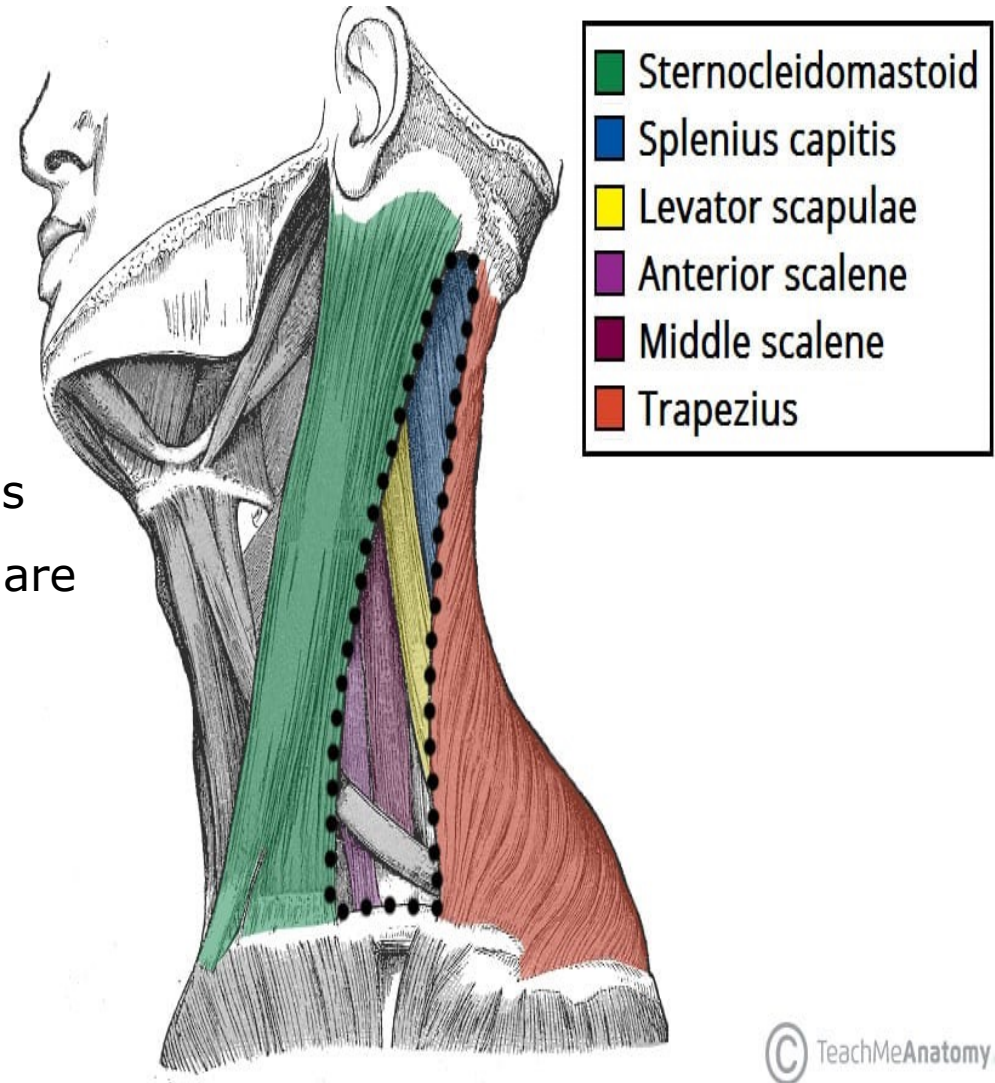
**Roof :** Skin, Superficial fascia with platysma muscle and deep fascia

**Floor :** scalene muscles, levator scapulae, splenius capitis and **a small part of semispinalis capitis**, all are covered by the prevertebral fascia

## Subdivision

The inferior belly of omohyoid subdivides the posterior triangle into

- Occipital triangle
- Supraclavicular triangle



## **Contents of the Posterior Triangle :**

### **A. Nerves :**

**1) The spinal accessory N.**

**2) The Four Cutaneous Branches of the Cervical Plexus**

A. Lesser occipital N. (C<sub>2</sub>)

B. Great auricular N. (C<sub>2,3</sub>)

C. Transverse cervical N. (C<sub>2,3</sub>)

D. Supraclavicular nerves (C<sub>3, C<sub>4</sub></sub>)

**3) The First and Second Stages of the Brachial Plexus**

### **C. Lymph Nodes :**

1) Occipital lymph nodes: lie at apex of the posterior triangle.

2) Supraclavicular lymph nodes

**D. Muscle:** Inferior belly of omohyoid

## D. Arteries in the Posterior Triangle :

1) **The 3rd part of Occipital A. :** crosses the *apex* of the triangle.

2) **The 3rd part of the Subclavian A. :**

- This part extends from the ***lateral border*** of scalenus anterior to the ***lateral border*** of the first rib where it becomes the axillary A.

3) **Transverse Cervical A.**

4) **Suprascapular A.**

3,4 are branches from thyrocervical trunk of the first part of the subclavian A

## E. Veins:

1. External jugular veins

2. Suprascapular

3. Transverse cervical.

## POSTERIOR TRIANGLE - deeper

Brachial plexus roots & trunks

Transverse (superf.) Cervical A.

Suprascapular A.

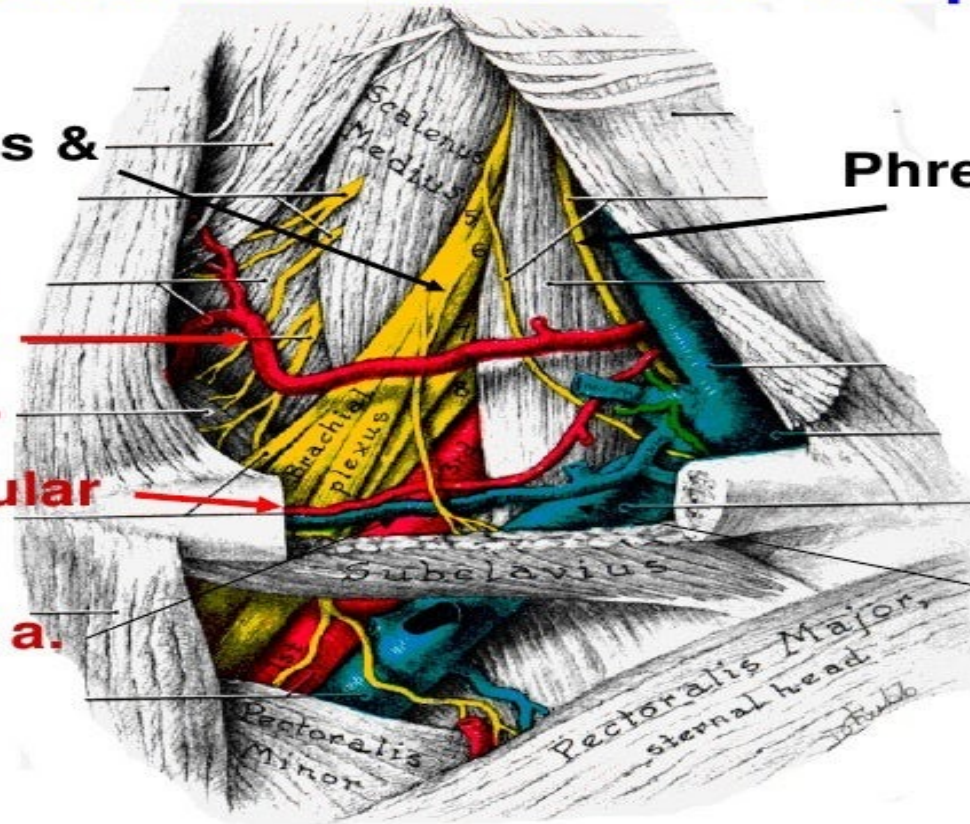
Subclavian a.

Phrenic n.

Nose



Subclavian vein



note: Subclavian vein is not in post triangle

# Anterior Triangles

## Boundaries

**Anterior :** Midline of the neck

**Posterior:** Sternomastoid

**Base :** Inferior border of mandible

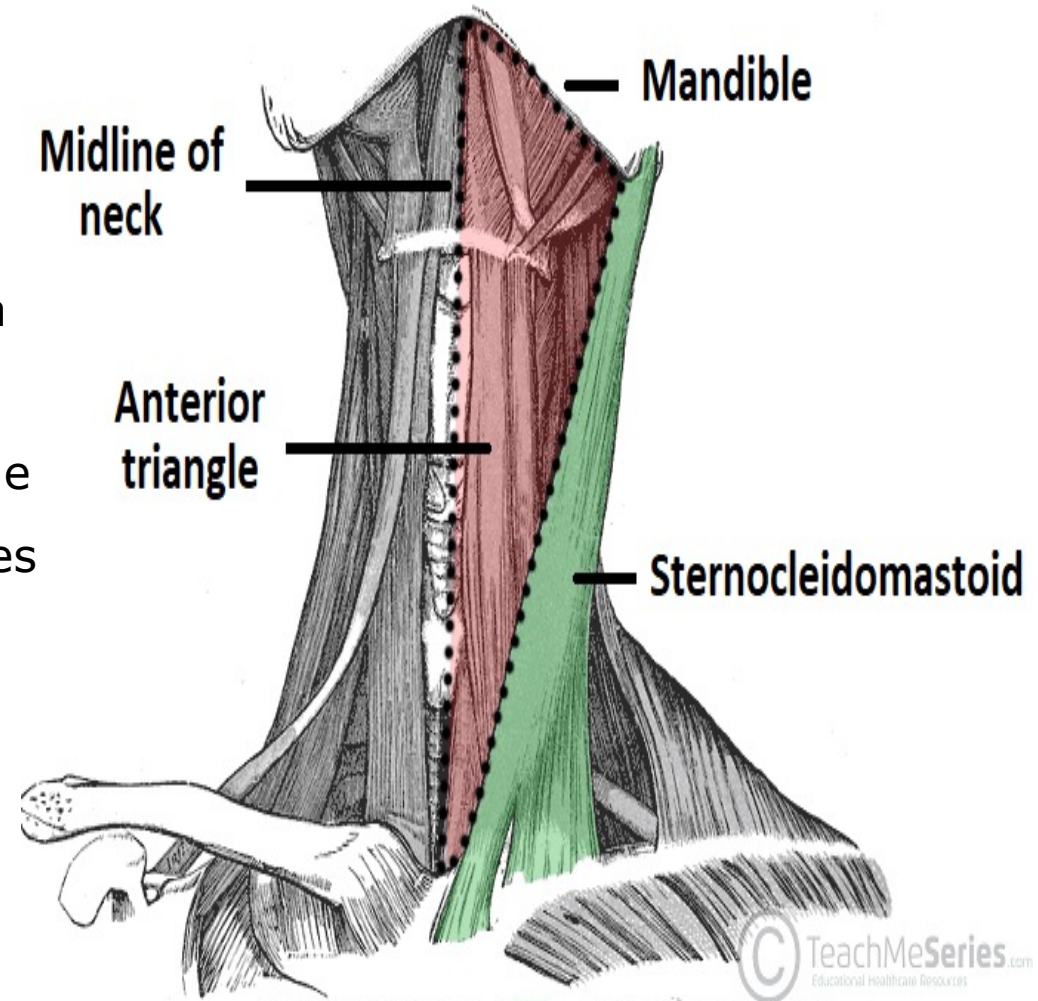
**Apex:** Suprasternal notch

**Roof :** Skin, platysma muscle and cervical fascia

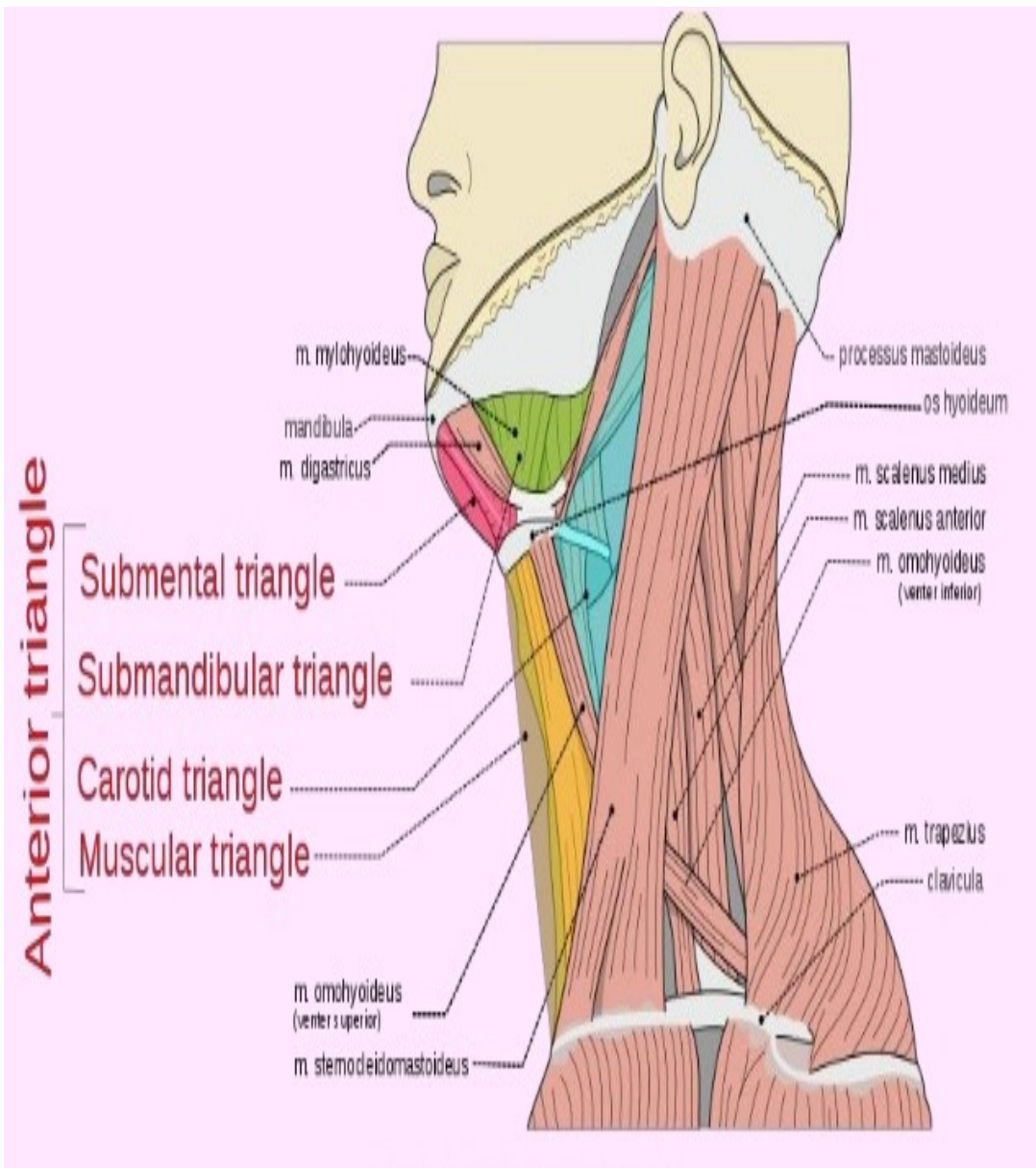
## Subdivision:

The anterior triangle is divided by digastric muscle and superior belly of omohyoid into 3 1/2 triangles as follows:

- 1-Digastrics triangle
- 2-Carotid triangle
- 3-Muscular triangle
- 4-Submental triangle (1/2)



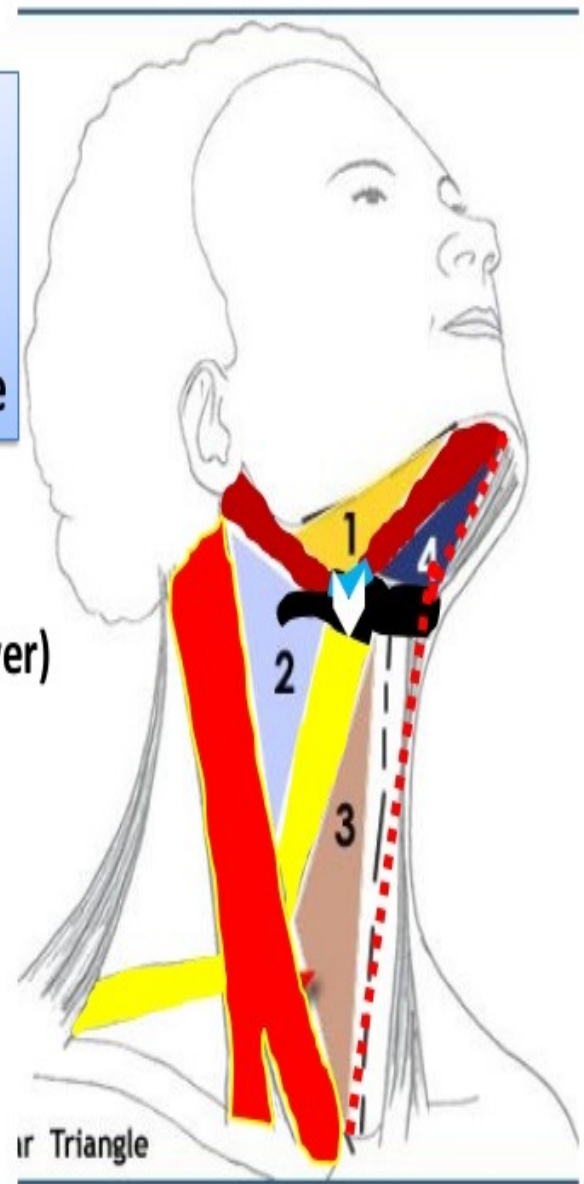




1. Digastric triangle
2. Carotid triangle
3. Muscular triangle
4. Submental triangle

Fascial sling (investing layer)

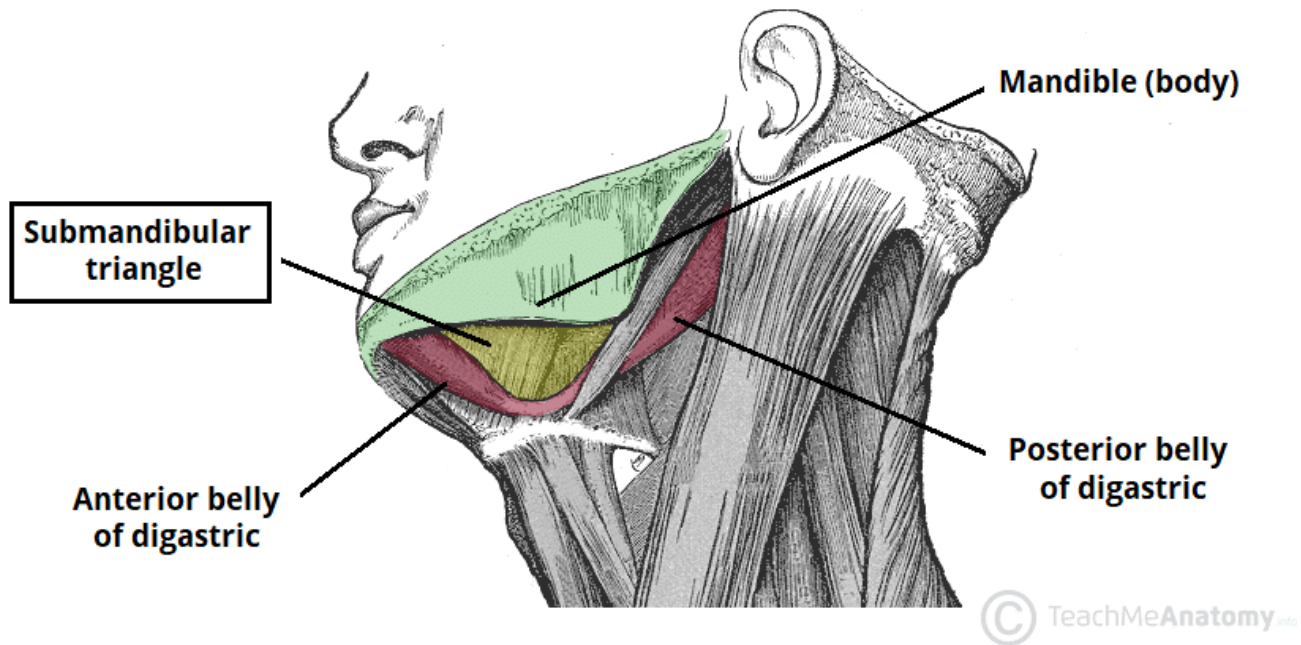
**Division of anterior triangle**



## I) Digastric triangle: (Submandibular triangle)

### Boundaries:

- **Above:** Lower border of mandible.
- **Below and in front:** Anterior belly of digastric muscle.
- **Below and behind:** Posterior belly of digastric muscle and stylohyoid muscle.
- **Roof:** Skin, superficial fascia, platysma and deep fascia containing cutaneous nerves.
- **Floor:** Mylohyoid muscle and part of the hyoglossus



**Contents:** (2 glands, 2 vessels and 2 nerves)

### 1. Gland:

- Submandibular salivary gland with submandibular lymph nodes on its surface.
- Lower part of parotid gland lies in its posterior part.

### 2. Vessels:

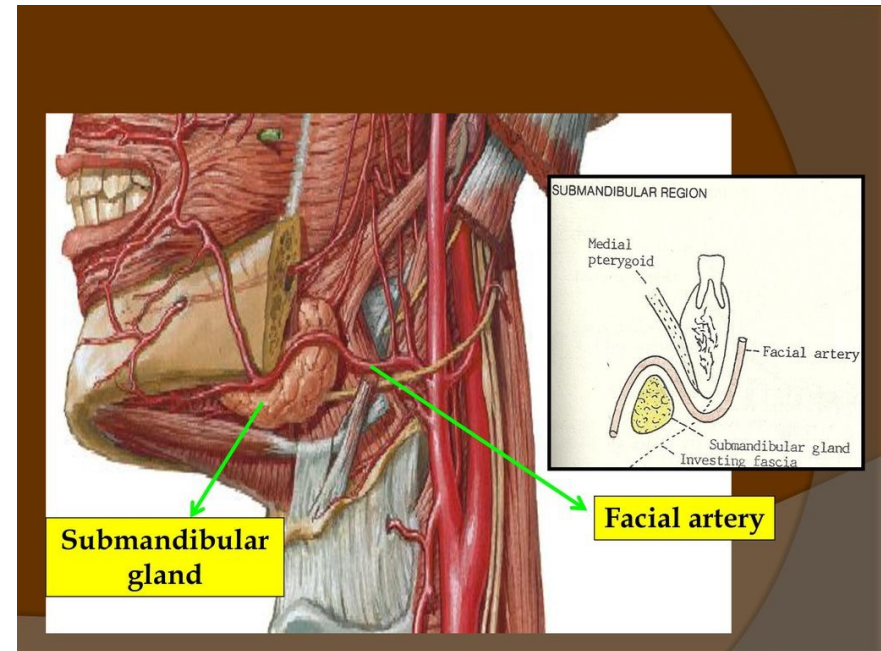
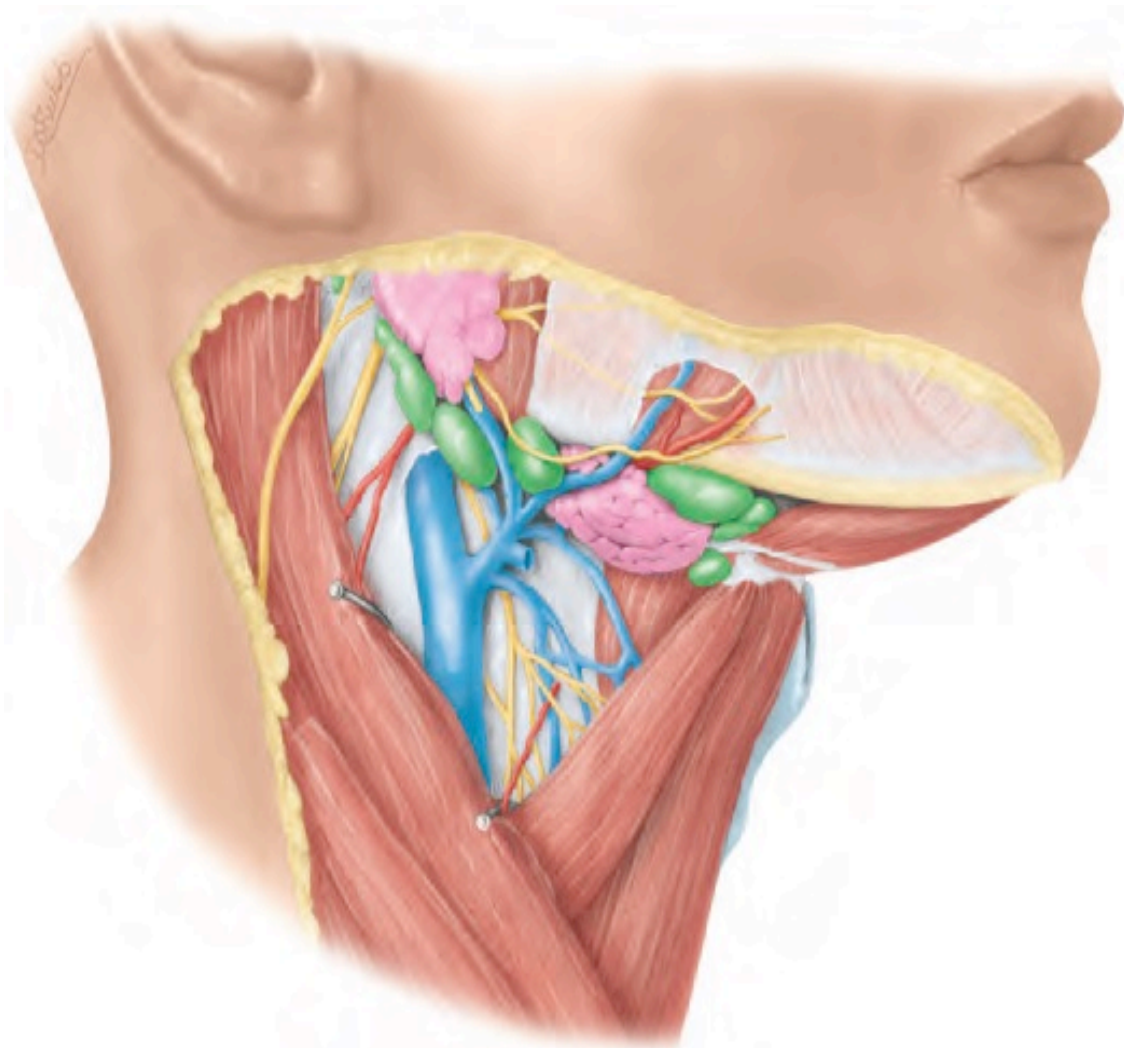
**a. Facial artery:** It ascends on the posterior border of submandibular gland then between the gland and the mandible. It gives its submental artery.

**b. Anterior facial vein:** It lies superficial on the submandibular gland.

### 3. Nerves:

**a. Hypoglossal nerve:** On the hyoglossus muscle.

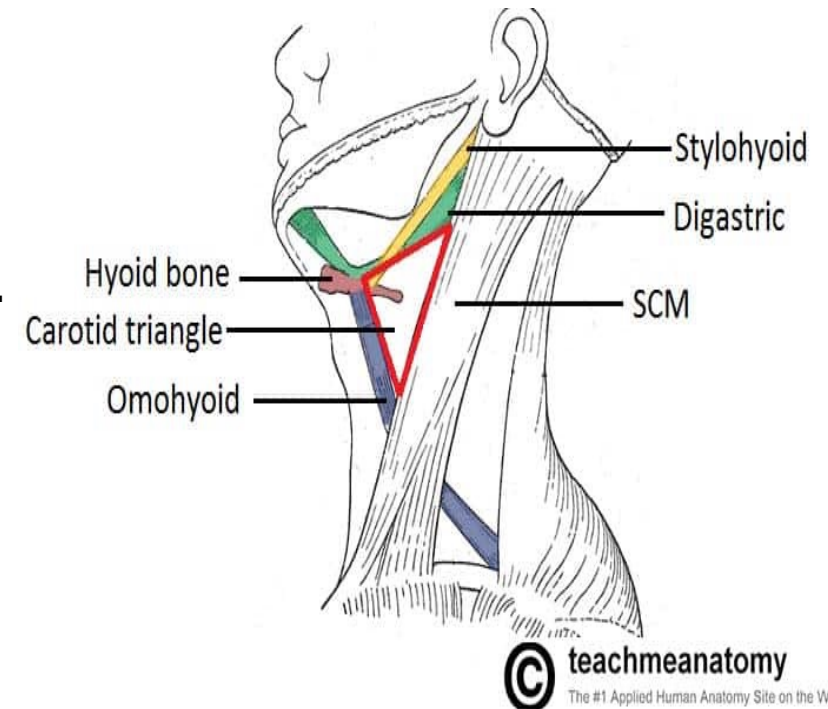
**b. Nerve to mylohyoid:** On the surface of mylohyoid muscle.



## II) Carotid triangle:

### Boundaries:

- **Posterior:** Anterior border of sternomastoid muscle.
- **Above:** Posterior belly of digastric and stylohyoid muscles.
- **Below and in front:** Superior belly of omohyoid muscle.
- **Roof:** Skin, superficial fascia, platysma and deep fascia containing cutaneous nerves.  
(As digastric triangle)
- **Floor:**
  - **Anterior:** Thyrohyoid and hyoglossus.
  - **Posterior:** Middle and inferior constrictors of pharynx.



## Contents:

### A) Carotid sheath

### B) Arteries: (3 carotid arteries)

**1. Upper part of common carotid artery (CCA)** divides opposite the upper border of thyroid cartilage into external and internal carotid arteries.

**2. External carotid artery (ECA):** It ascends anteromedial to internal carotid artery, outside the carotid sheath and gives 5 branches in the triangle:

**Superior thyroid artery , Lingual artery: Facial artery ,Occipital artery, Ascending pharyngeal artery.**

**3. Internal carotid artery (ICA):** It lies posterolateral to external carotid artery and gives no branches in the neck.

### C) Deep cervical lymph nodes: Related to IJV

## D) Veins:

1. **Internal jugular vein (IJV)** descends in the carotid sheath lateral to internal and common carotid arteries.
2. **Veins correspond** to the branches of external carotid artery veins. They terminate in the IJV.

## E) Nerves:

1. **Vagus nerve**
2. **Hypoglossal nerve (12<sup>th</sup> cranial nerve):**
3. **Ansa cervicalis**
4. **Superior laryngeal gives internal and external laryngeal nerves** lie medial to external carotid artery below the hyoid bone.
5. **Spinal root of accessory nerve** runs in the upper angle of the triangle superficial to IJV.
6. **Sympathetic trunk** embedded in the posterior wall of the carotid sheath.

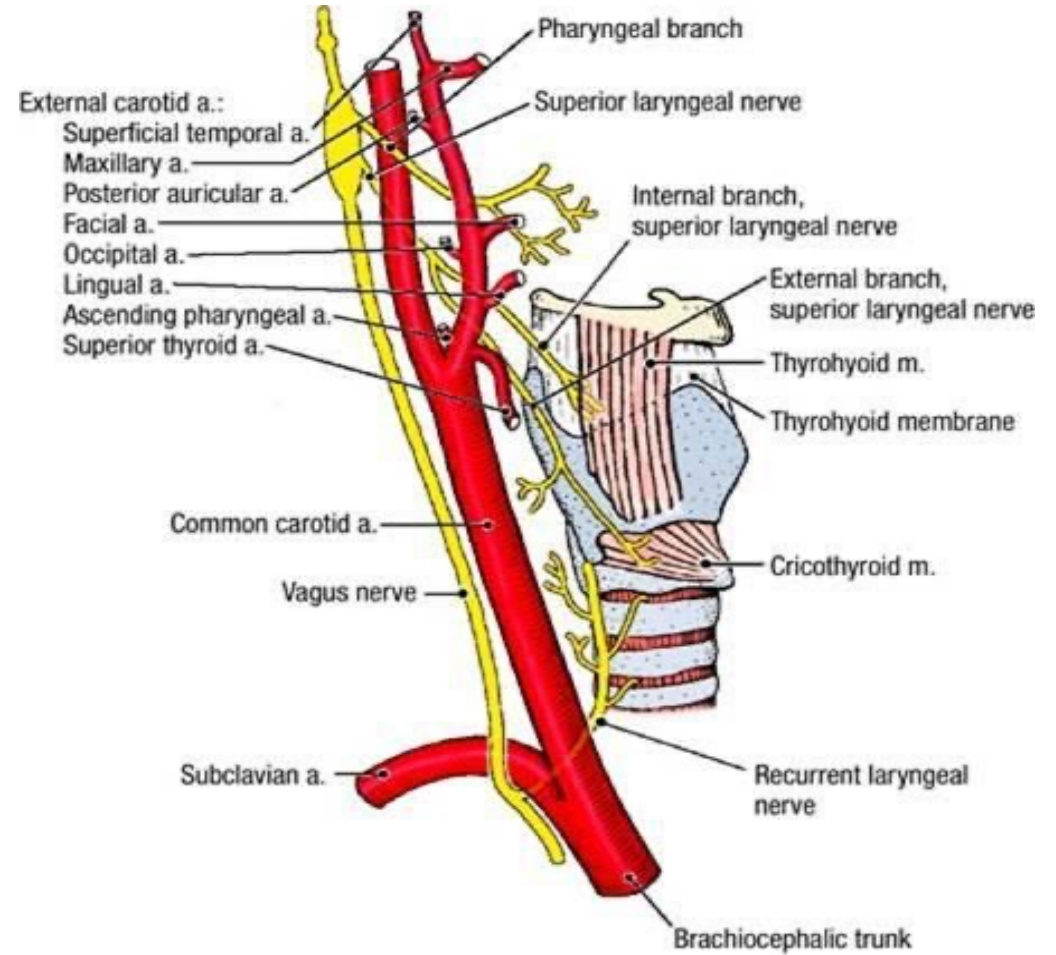
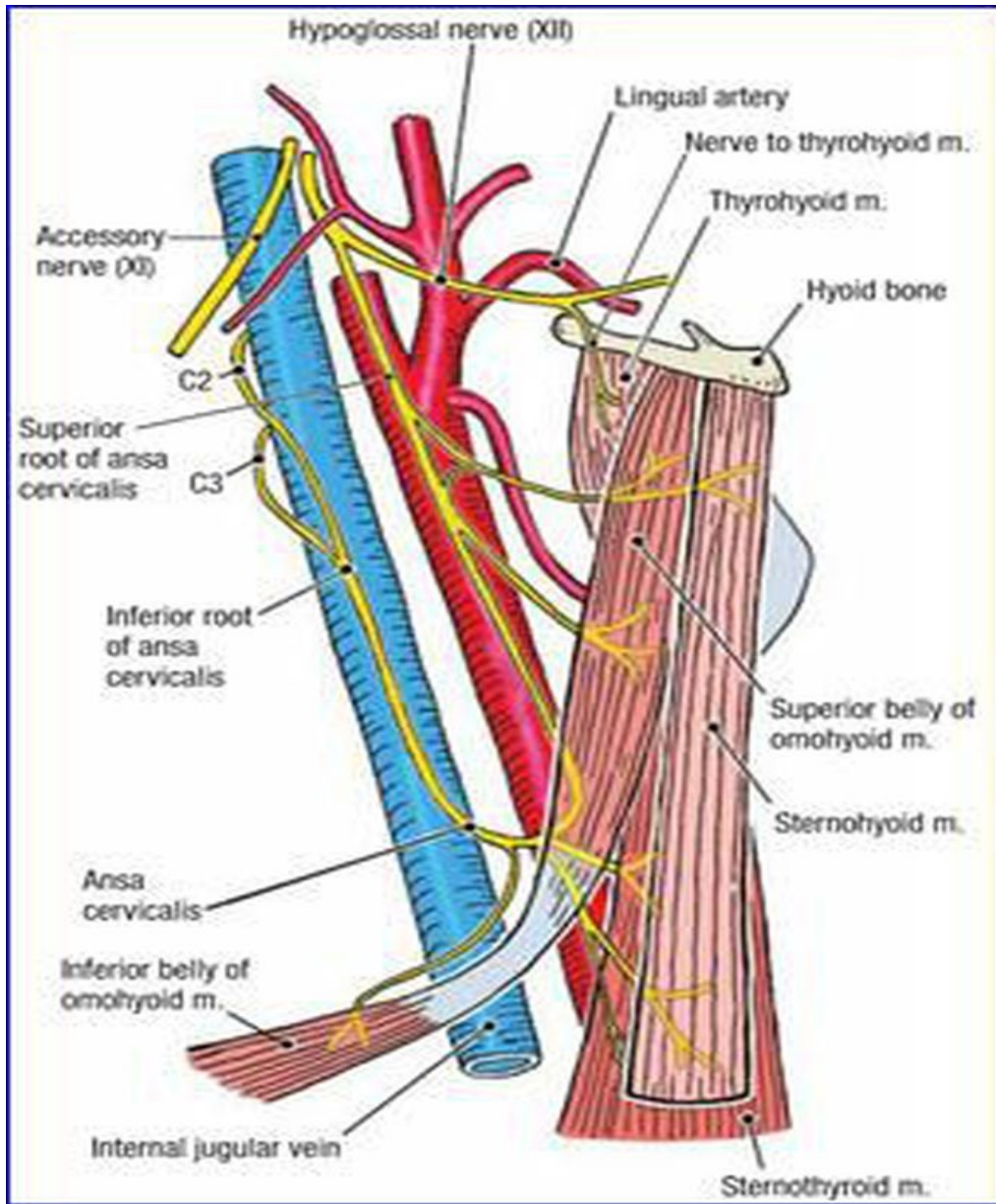



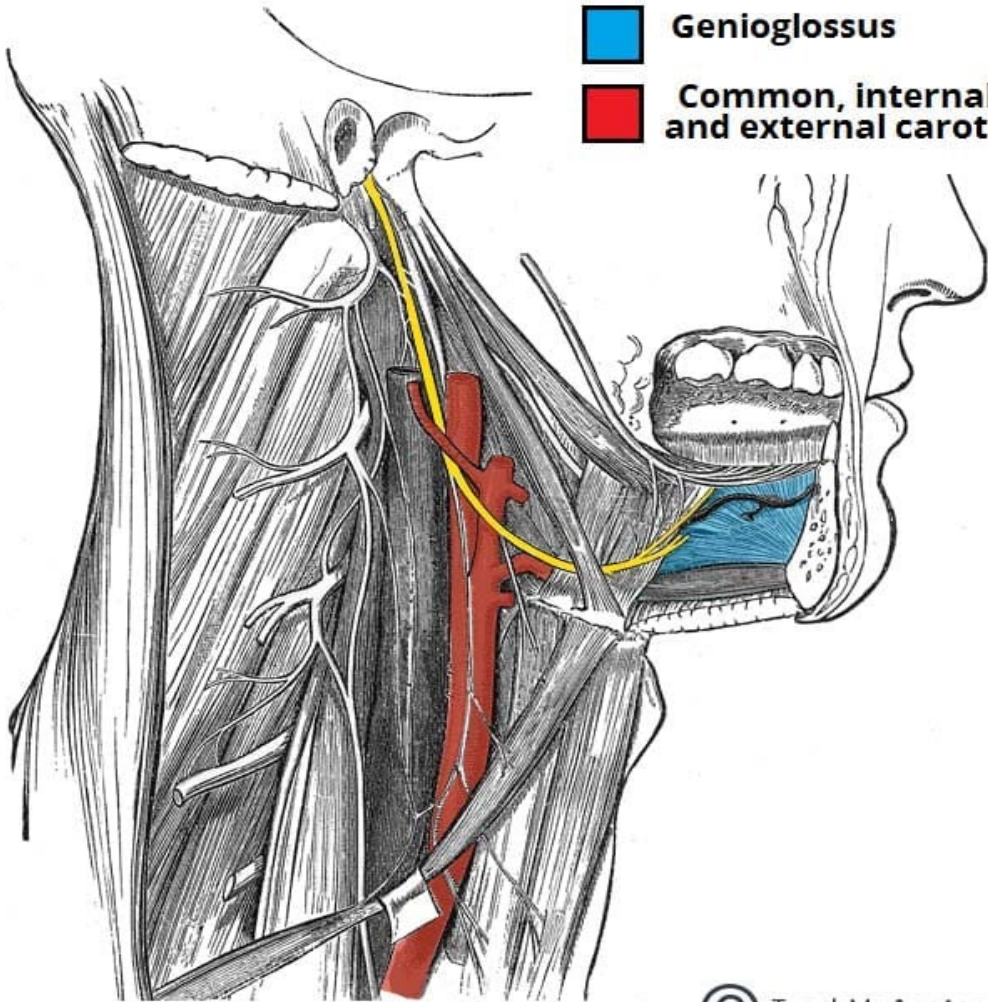


Figure 7.9. Branches of the external carotid artery and right vagus nerve (X) in the neck.



-  Hypoglossal nerve
-  Genioglossus
-  Common, internal and external carotid



### III) Muscular triangle:

#### Boundaries:

**1-In front:** Midline of the neck from the hyoid bone to the sternum.

**2- Above and behind:** Superior belly of omohyoid.

**3-Below and behind:** Anterior border of sternomastoid.

**4-Floor:** Thyroid cartilage, cricoid cartilage, thyrohyoid membrane.

**5- Roof:** Skin, platysma, anterior jugular vein and deep fascia.

#### Contents:

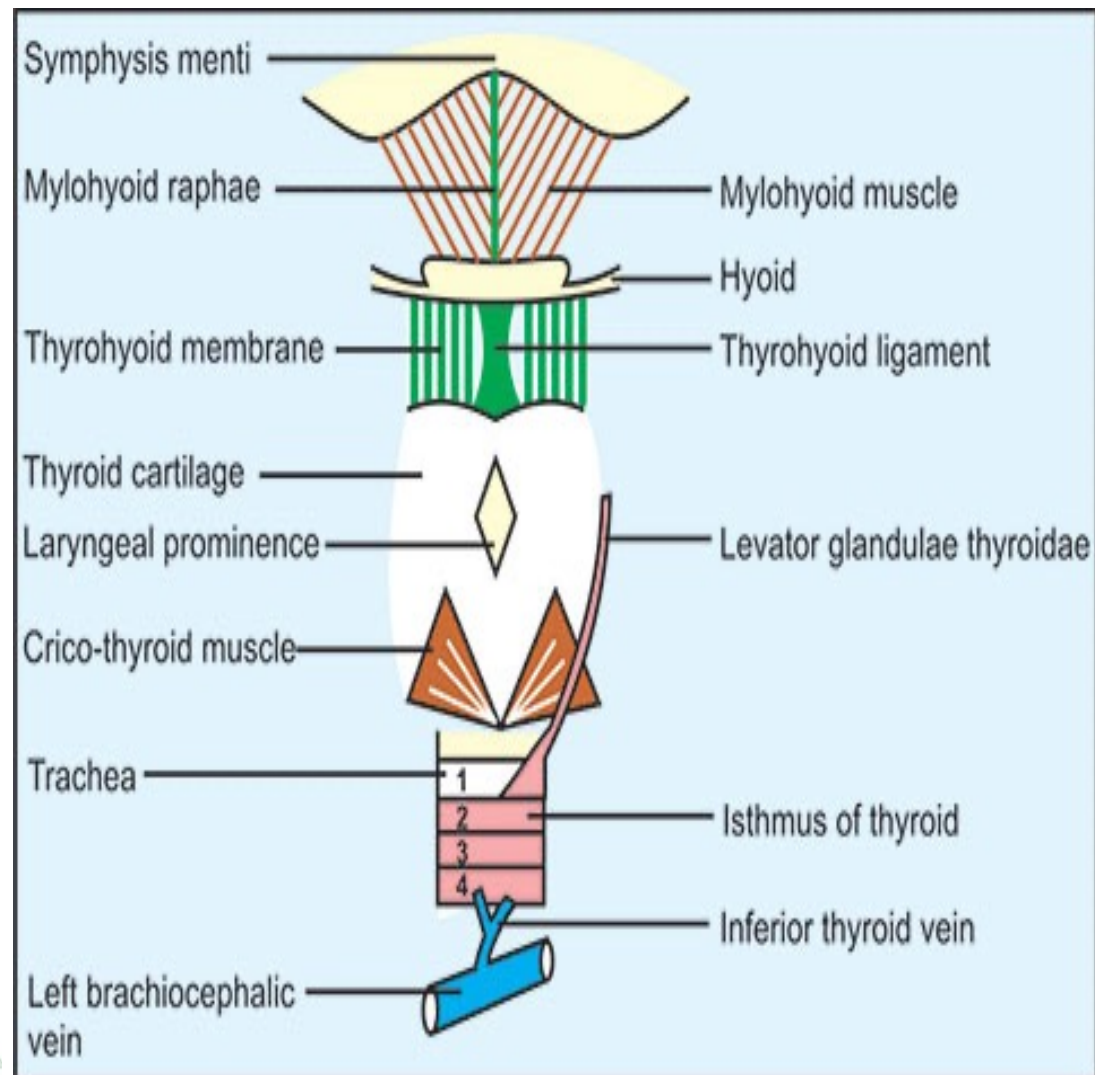
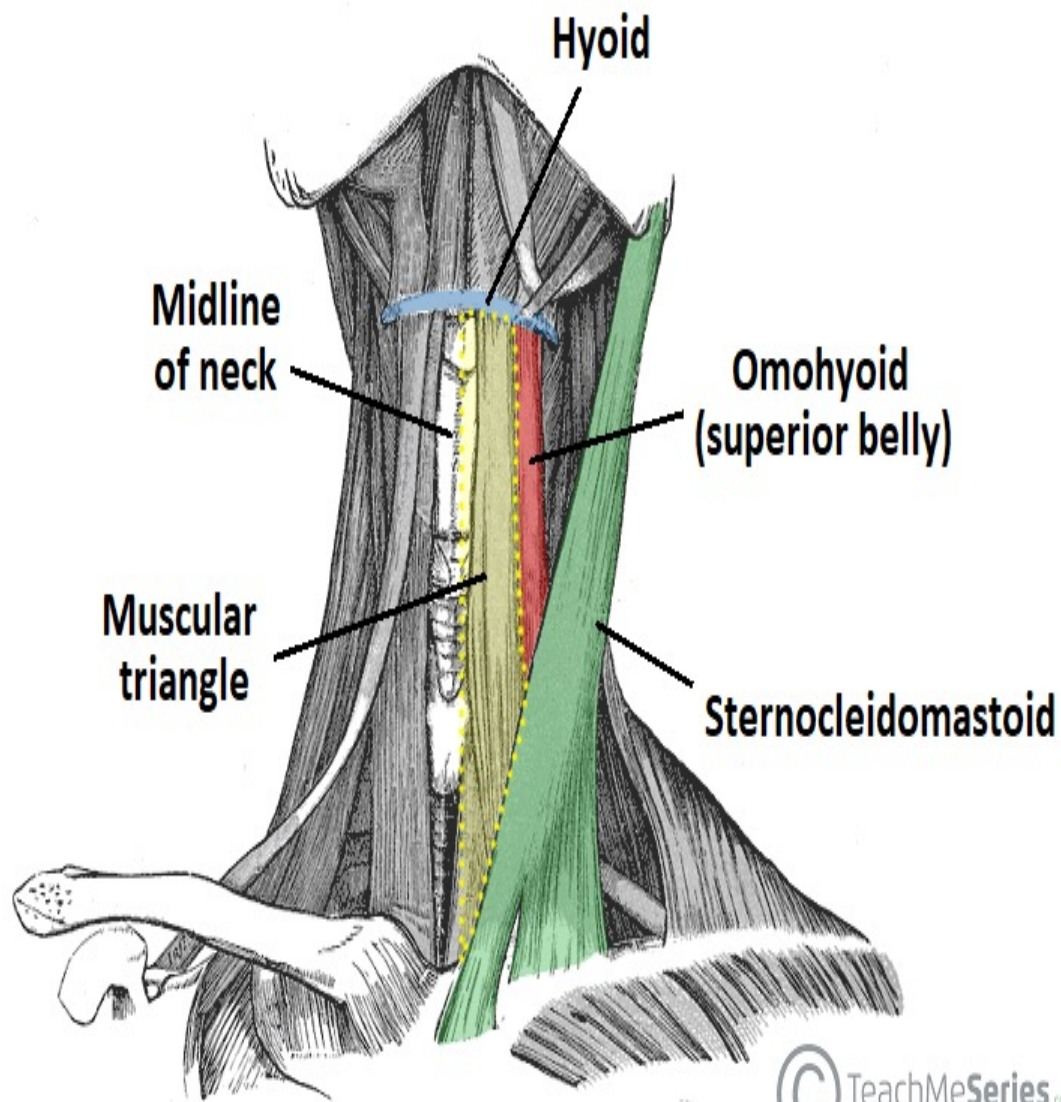
**1. Three infrahyoid muscles:** Sternohyoid, sternothyroid and thyrohyoid.

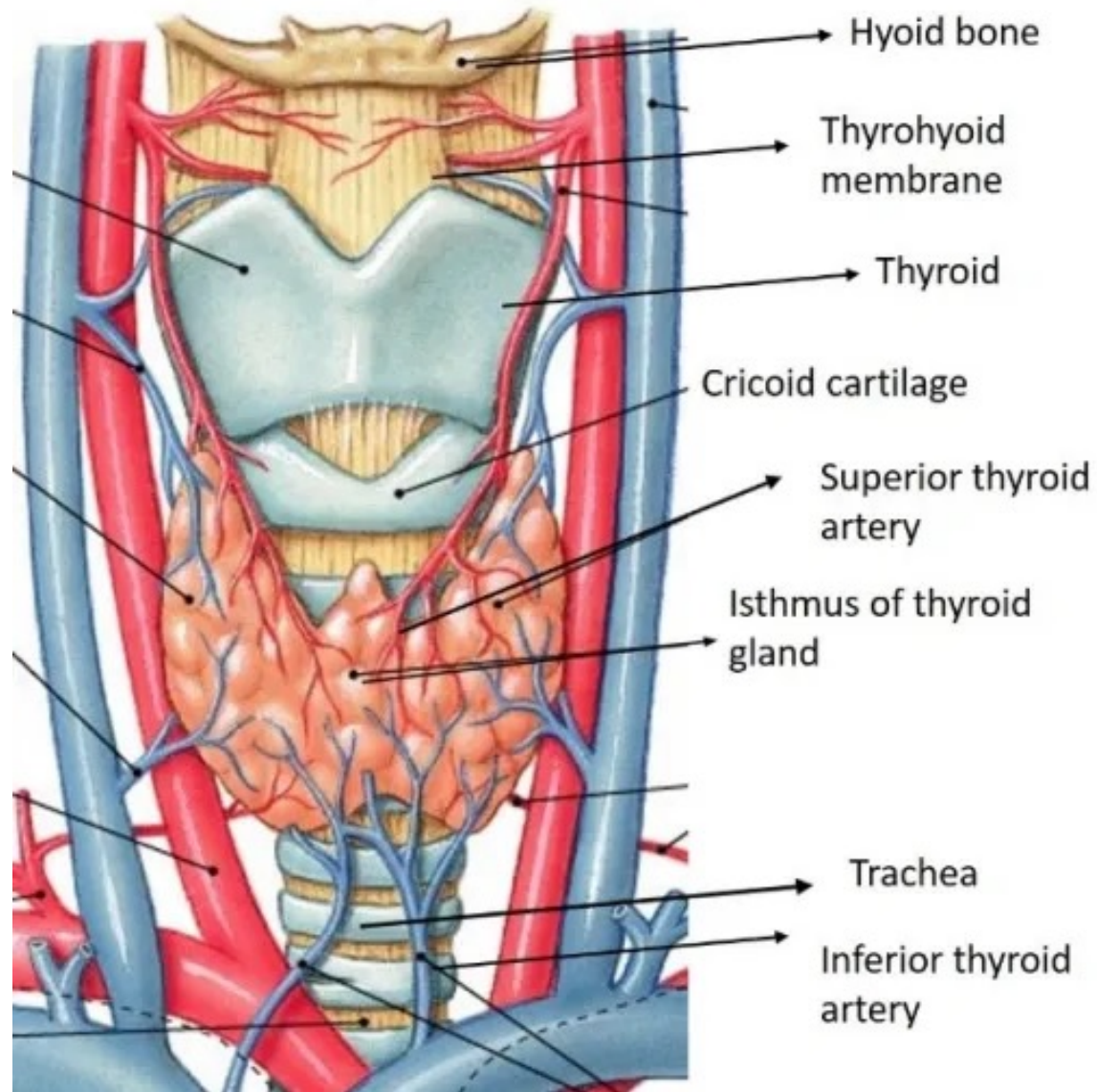
**2. Structures in the median region of the neck below the hyoid bone:**

- Thyrohyoid membrane, thyroid cartilage, cricoid cartilage, cricothyroid membrane, cricothyroid muscle

- Isthmus of thyroid gland, jugular arch, and inferior thyroid veins.

**1. Pre laryngeal and pre tracheal lymph nodes.**





## IV. Submental Triangle:

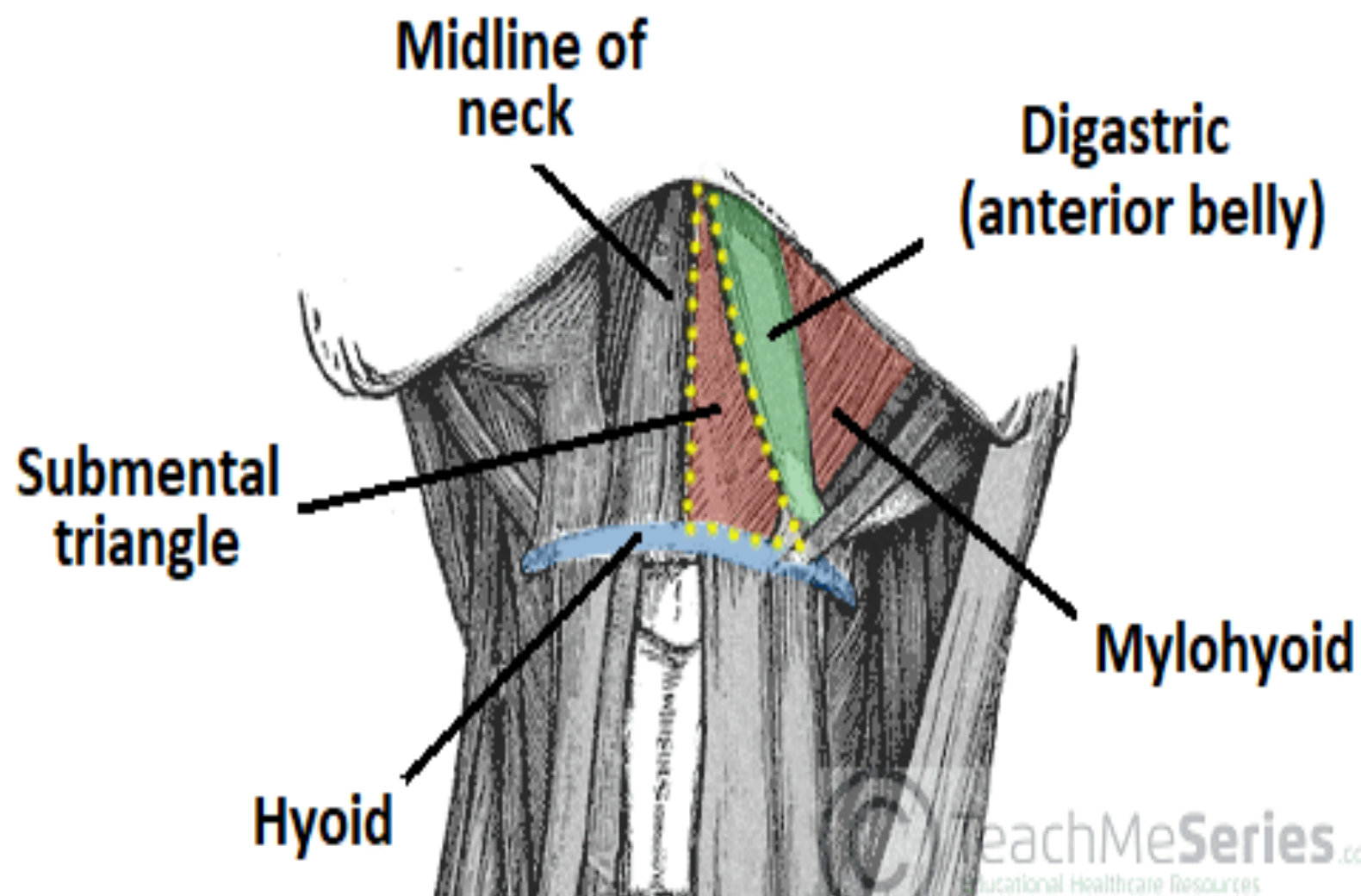
- It is a single triangle, 1/2 of this triangle presents in right anterior triangle and the other 1/2 is present in the left anterior triangle.

### Boundaries:

- **Base below:** Body of the hyoid bone (forms its base).
- **On each side:** Anterior belly of digastric.
- **Apex above:** Symphysis menti.
- **Floor:** Parts of both mylohyoid muscles as they meet each other in the median raphe.

### Contents:

- ❖ Submental lymph nodes
- ❖ Submental veins which unite to form the anterior jugular vein.



Thank  
you

The image features the words "Thank you" written in a black, elegant cursive script. The text is set against a white background and is surrounded by various teal-colored decorative elements. These include several leaves of different shapes and sizes, some with detailed vein patterns, and small, simple star or plus symbols scattered around the text. The overall composition is balanced and aesthetically pleasing, with the teal color providing a soft contrast to the black text and white background.