

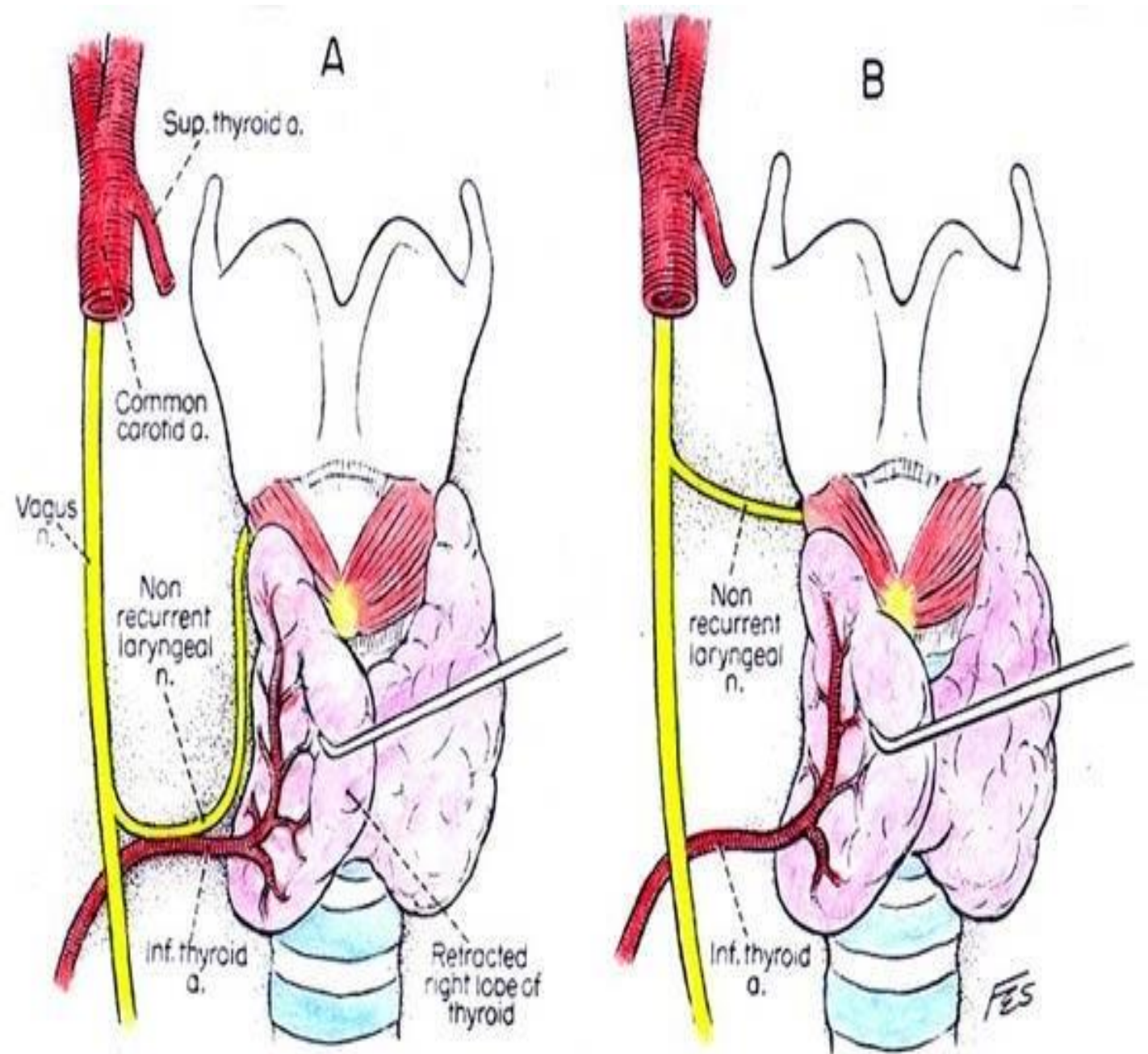
بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

# Gross Anatomy of The Thyroid Gland

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# OUTLINE

- INTRODUCTION
- GROSS ANATOMY
- BLOOD SUPPLY
- NERVE SUPPLY
- LYMPHATIC DRAINAGE



APPLIED ANATOMY

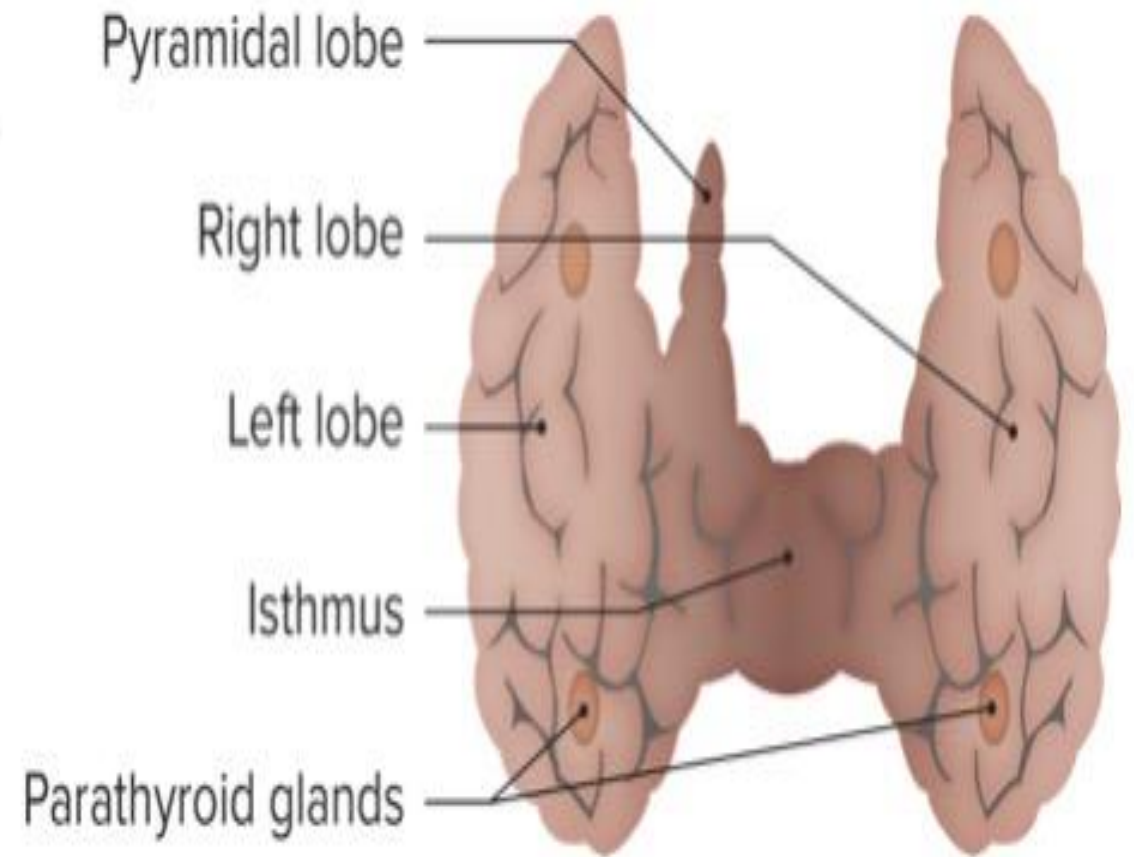
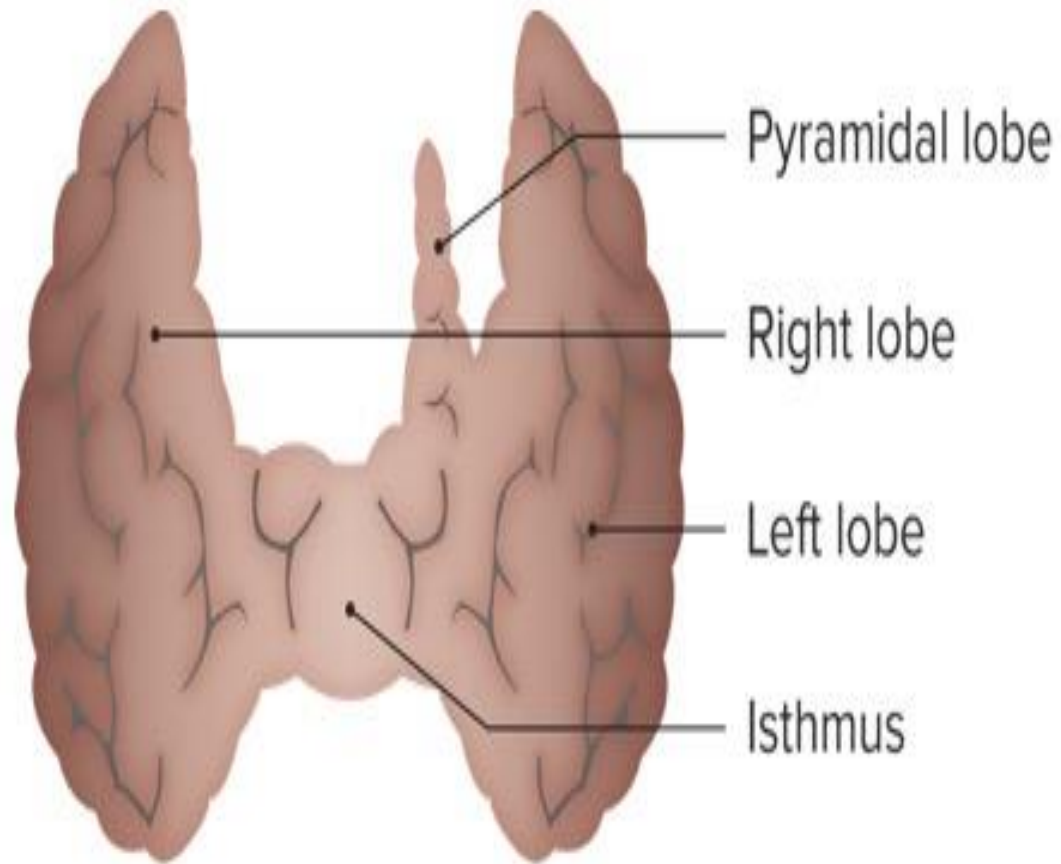
# INTRODUCTION

- Weight = 25g
- Shape – pear or butterfly shape, each lobe conical
- Lobe has, two poles
- 2poles – narrow upper pole (APEX)  
-- broader lower pole (BASE)
- 3 surfaces
- 3 borders

- The **thyroid gland** is an endocrine structure located in the neck.

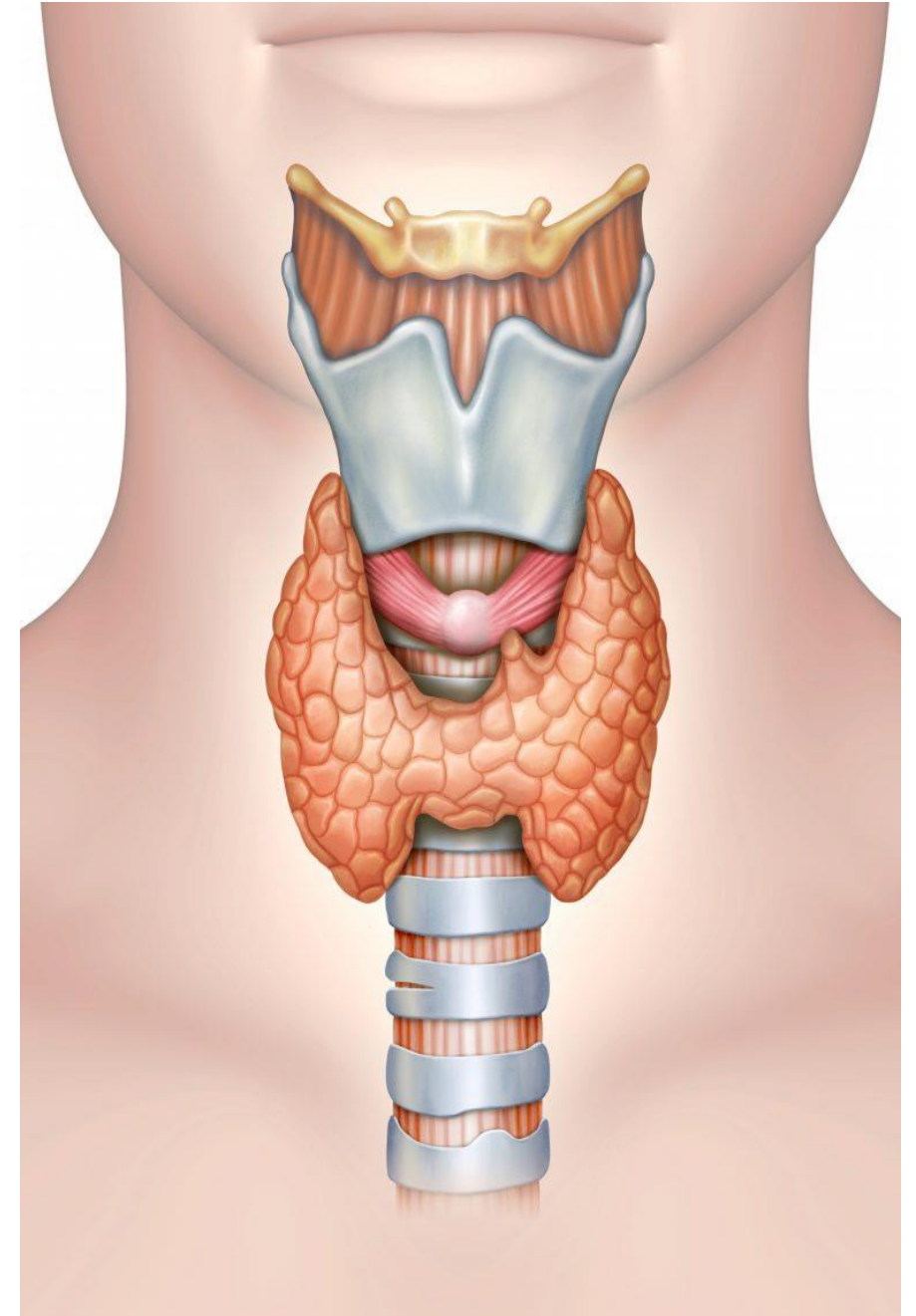
It plays a key role in regulating the metabolic rate of the body.

- It regulate calcium metabolism
- It releases thyroid harmones



# Anatomical Location

- The **thyroid gland** is located in the anterior neck and spans the C5-T1 vertebrae. It consists of two lobes (left and right), which are connected by a central isthmus anteriorly – this produces a butterfly-shape appearance.
- The lobes of the thyroid gland are wrapped around the cricoid cartilage and superior rings of the **trachea**.



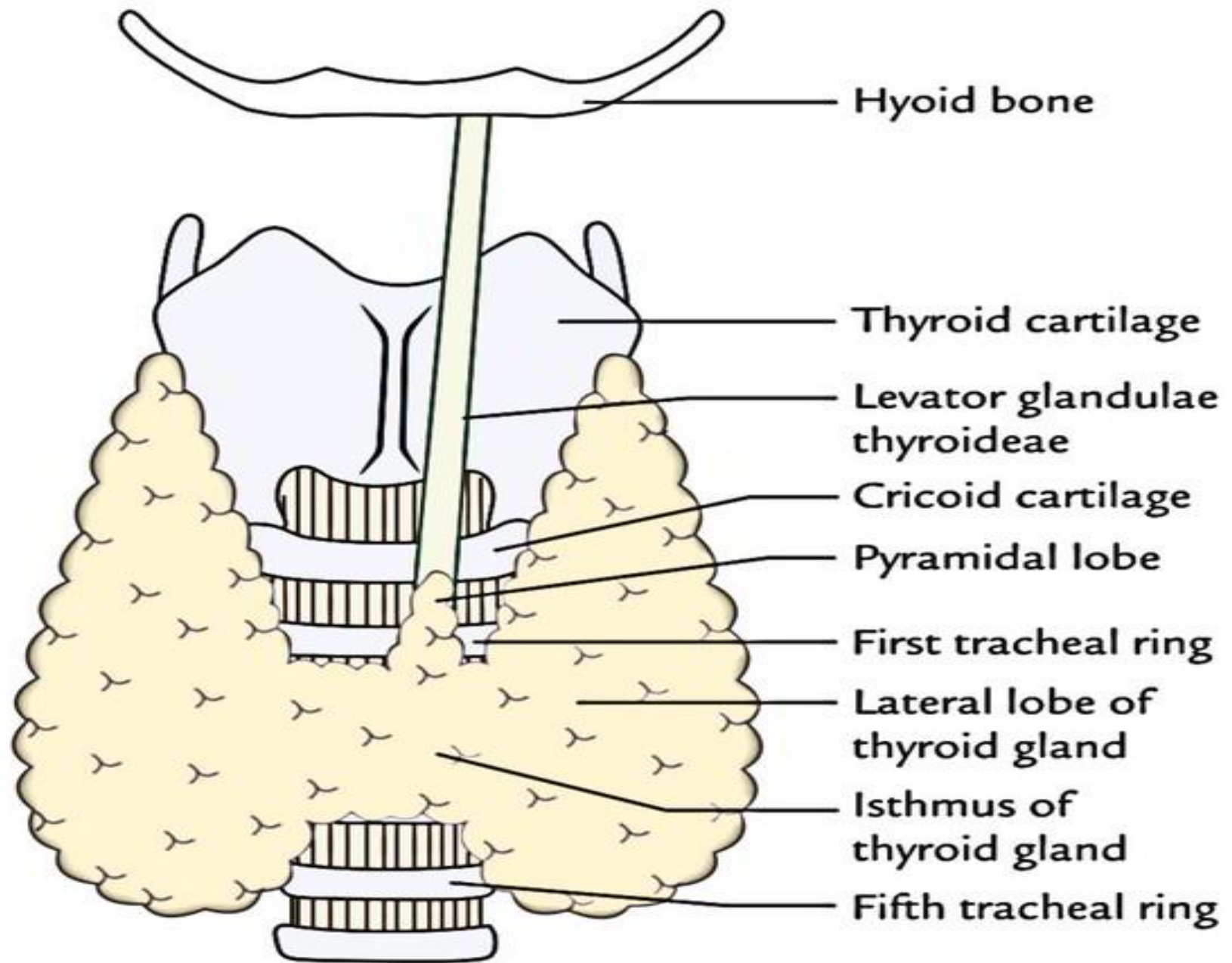
**Vertebral levels**

C5

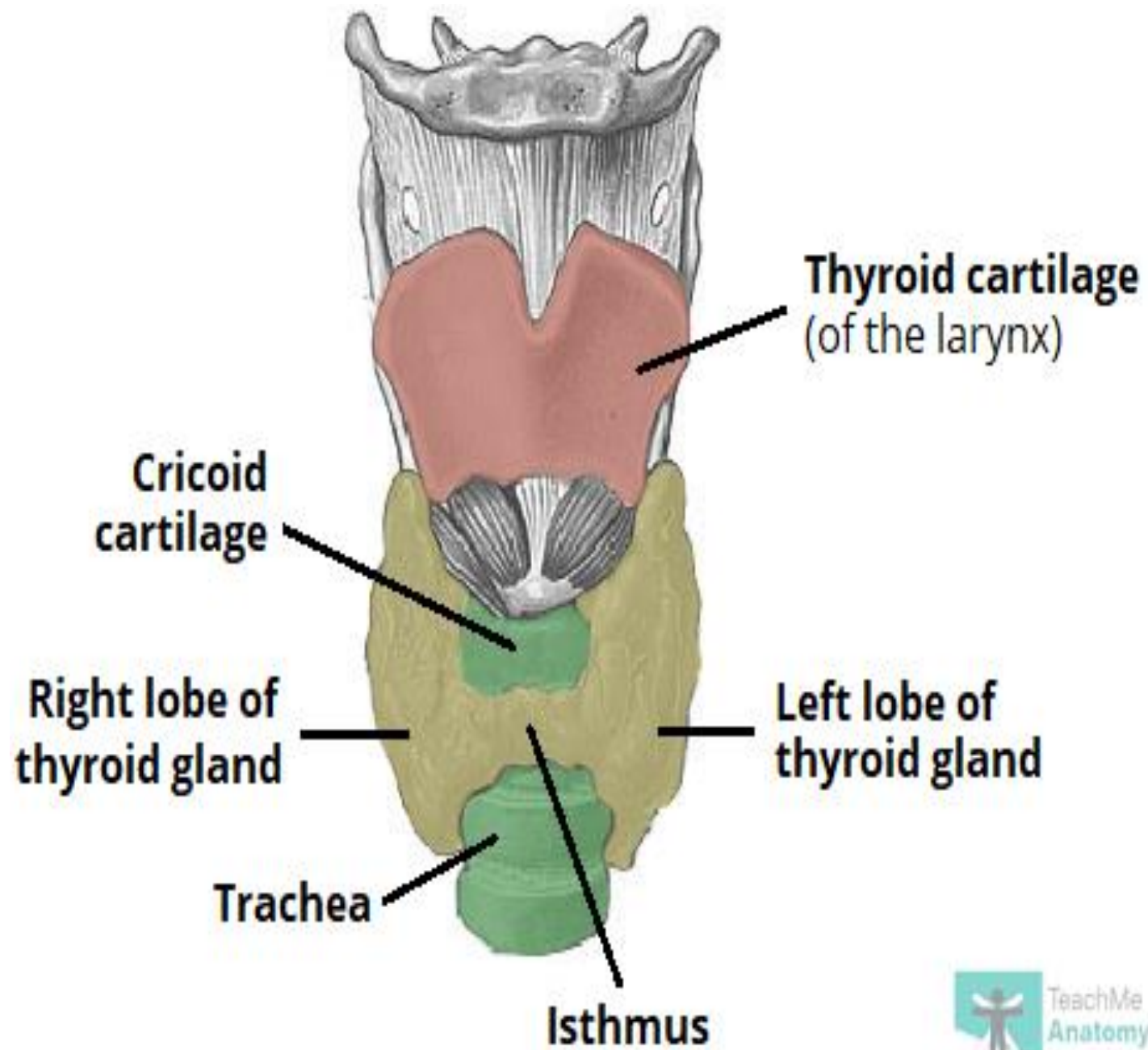
C6

C7

T1







# RELATIONS OF LOBES

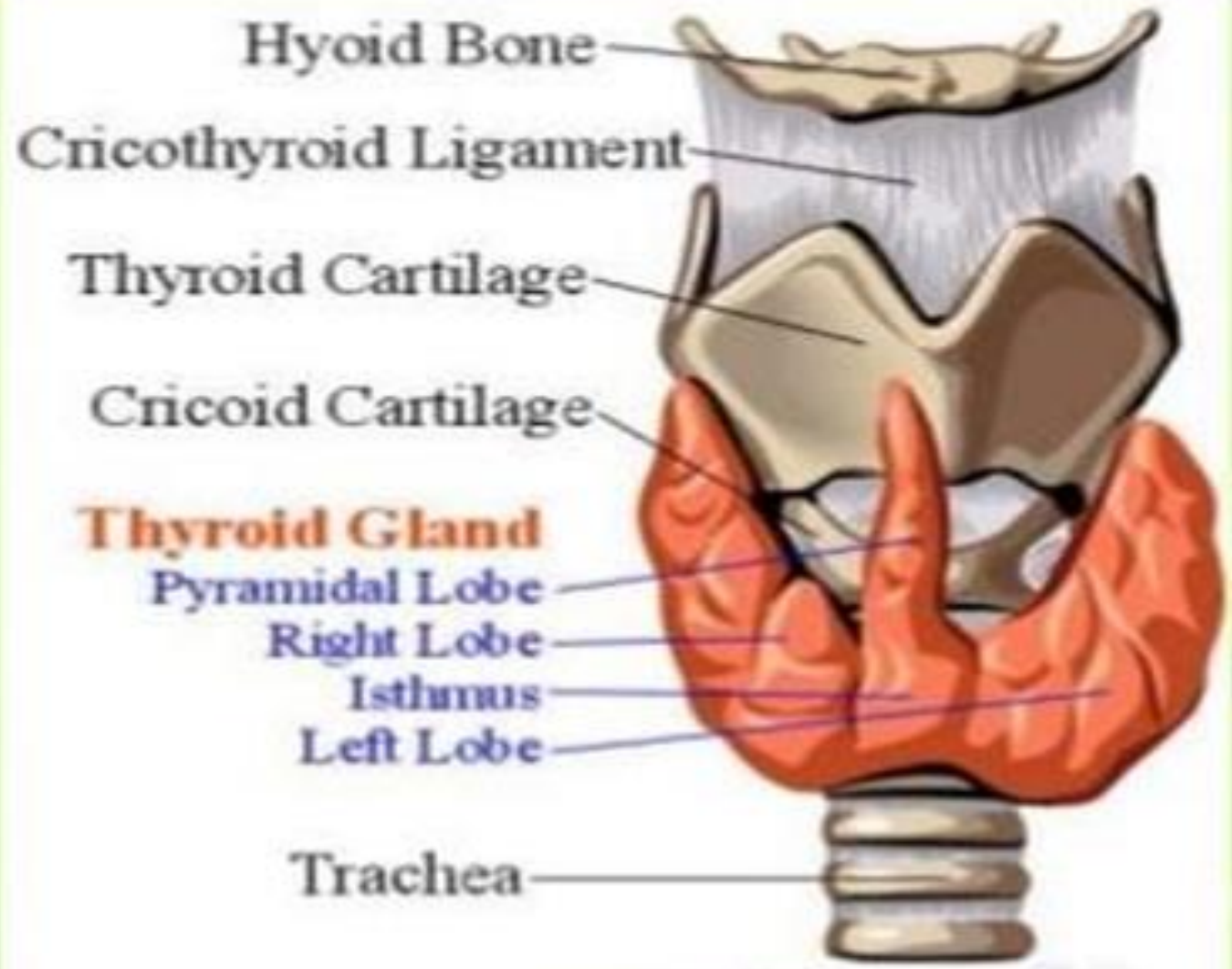
- **APEX:**

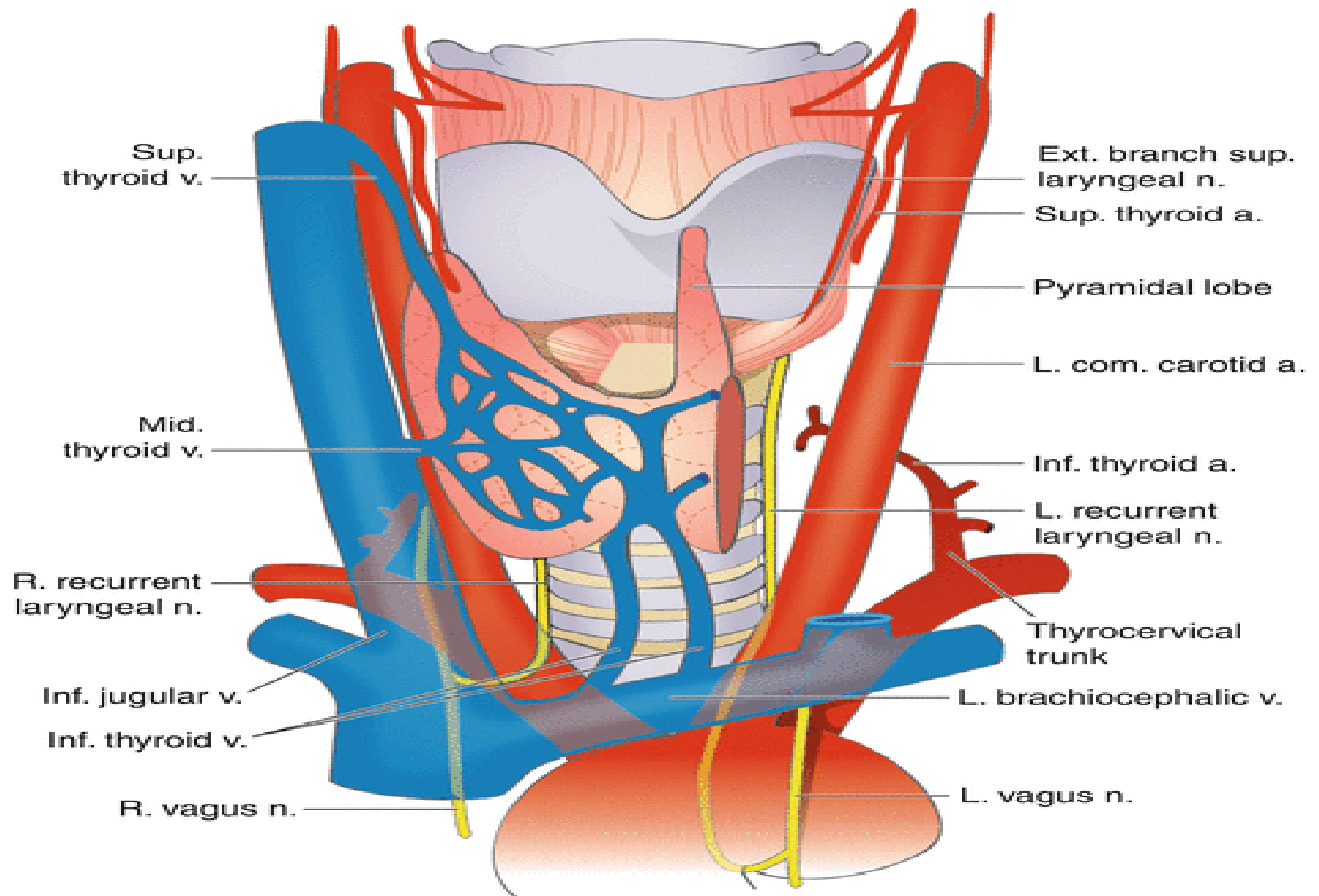
Attached ---- oblique line on the lamina of thyroid cartilage

Relation ---- superior thyroid artery, external laryngeal nerve

**BASE** lies at the level of 4 to 5 tracheal rings

Relation – inferior thyroid artery, recurrent laryngeal nerve





Sup.  
thyroid v.

Mid.  
thyroid v.

R. recurrent  
laryngeal n.

Inf. jugular v.

Inf. thyroid v.

R. vagus n.

Ext. branch sup.  
laryngeal n.

Sup. thyroid a.

Pyramidal lobe

L. com. carotid a.

Inf. thyroid a.

L. recurrent  
laryngeal n.

Thyrocervical  
trunk

L. brachiocephalic v.

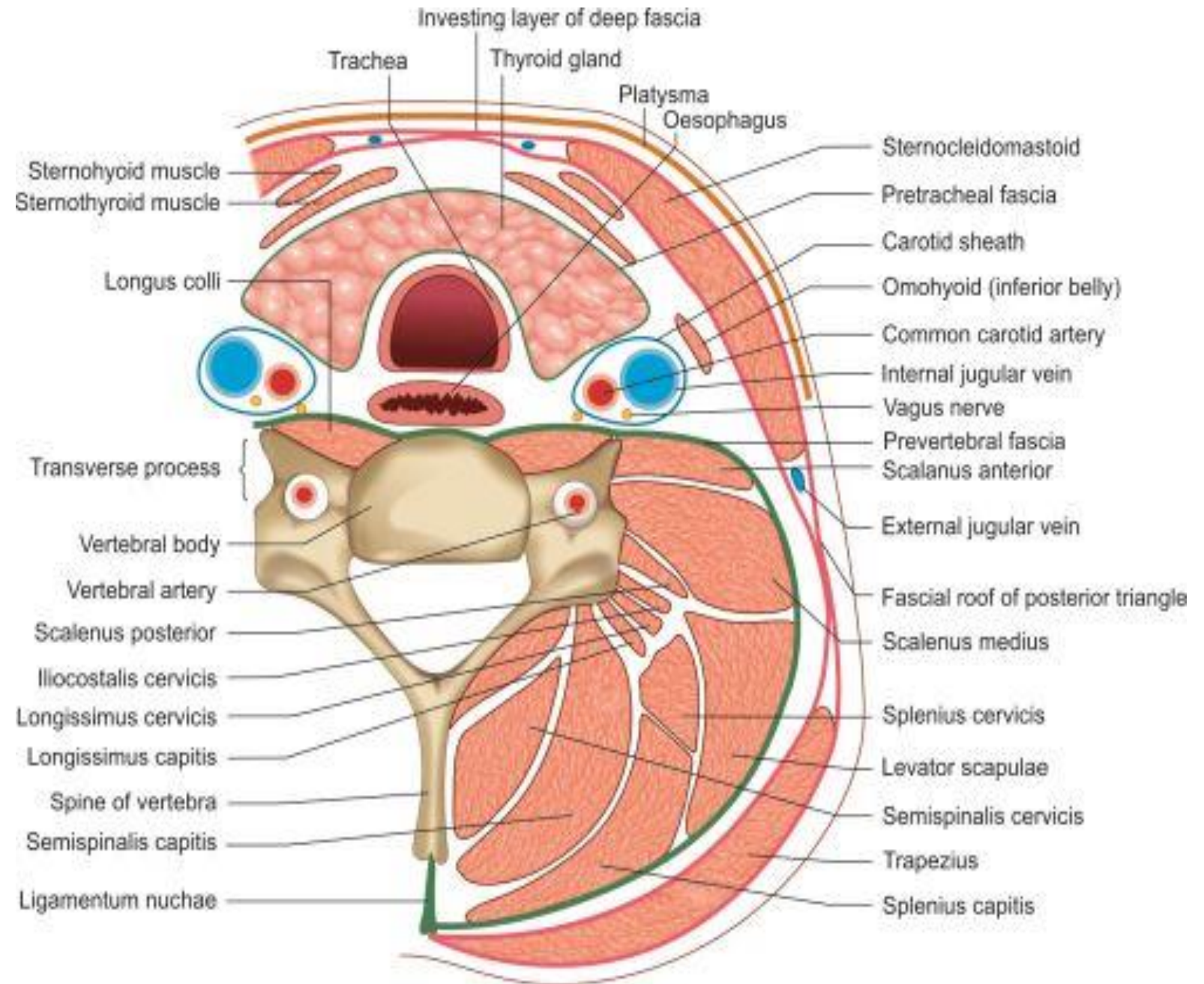
L. vagus n.

# SURFACES

- Anterolateral

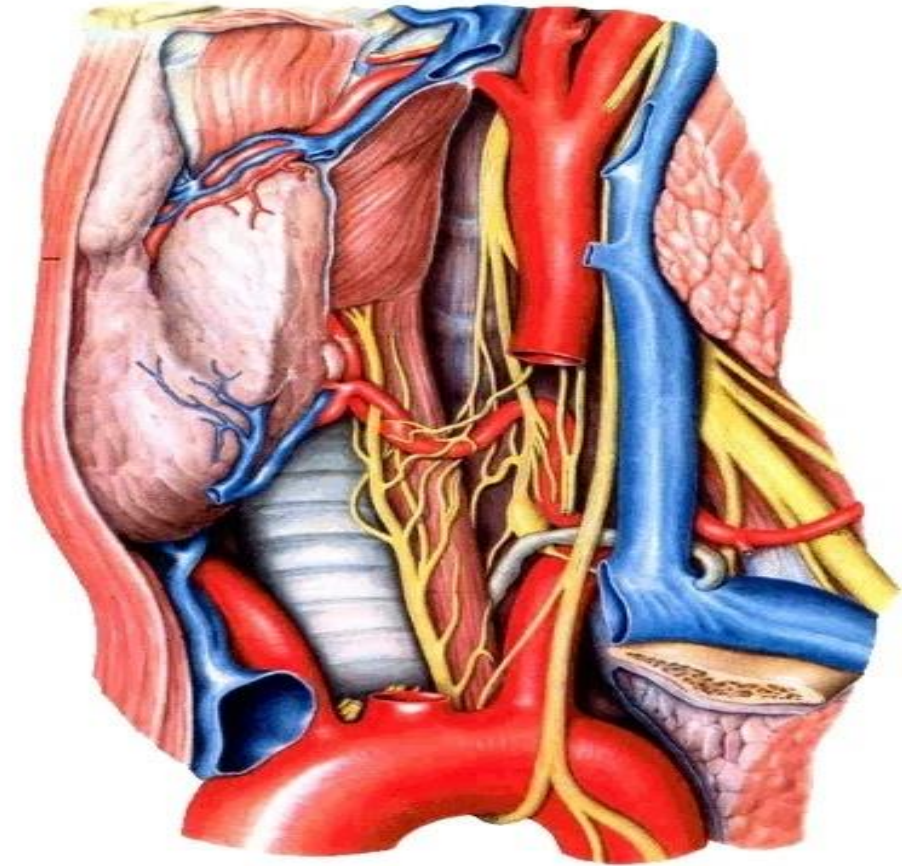
- Posterolateral

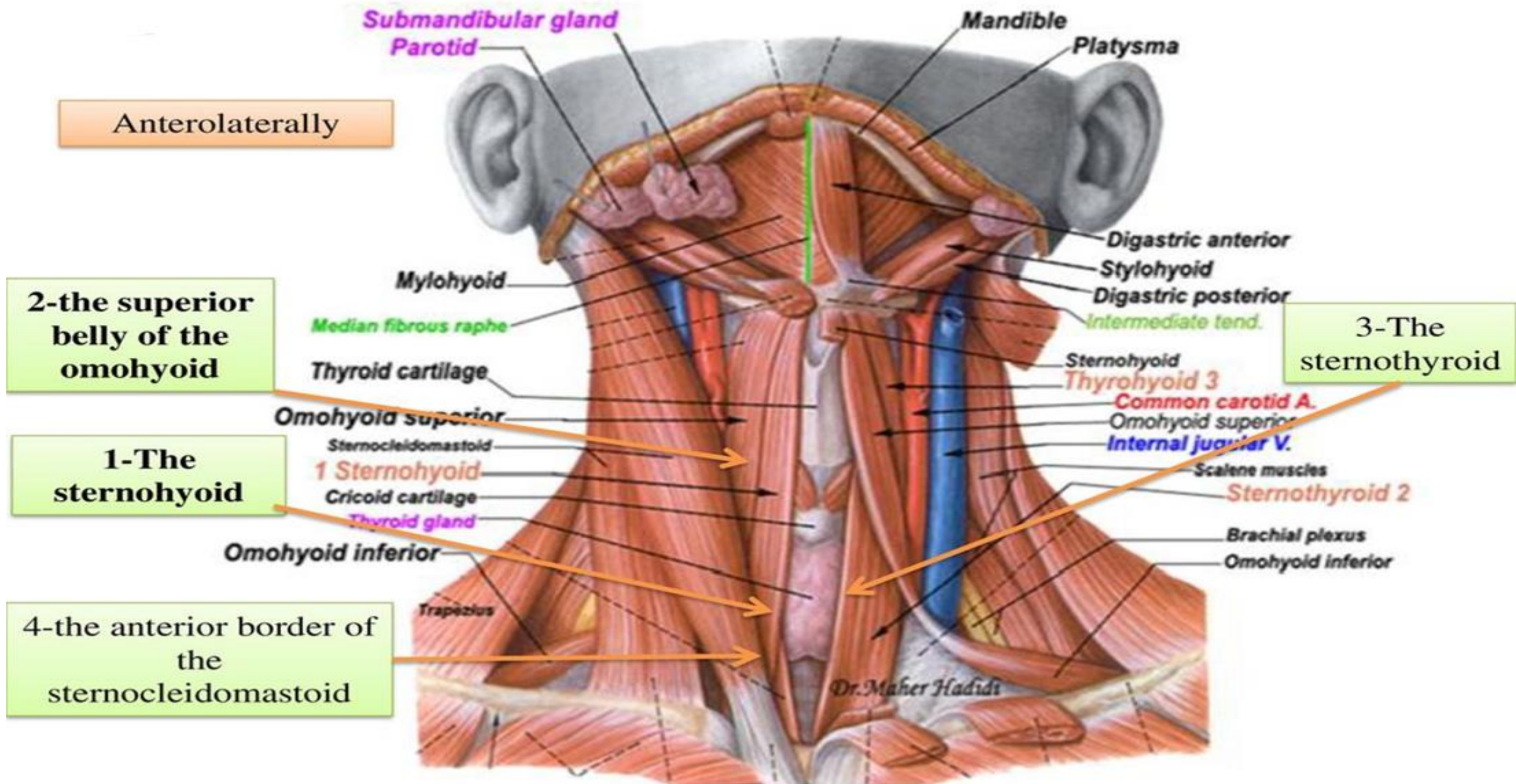
- Medial



# Relations of the thyroid gland

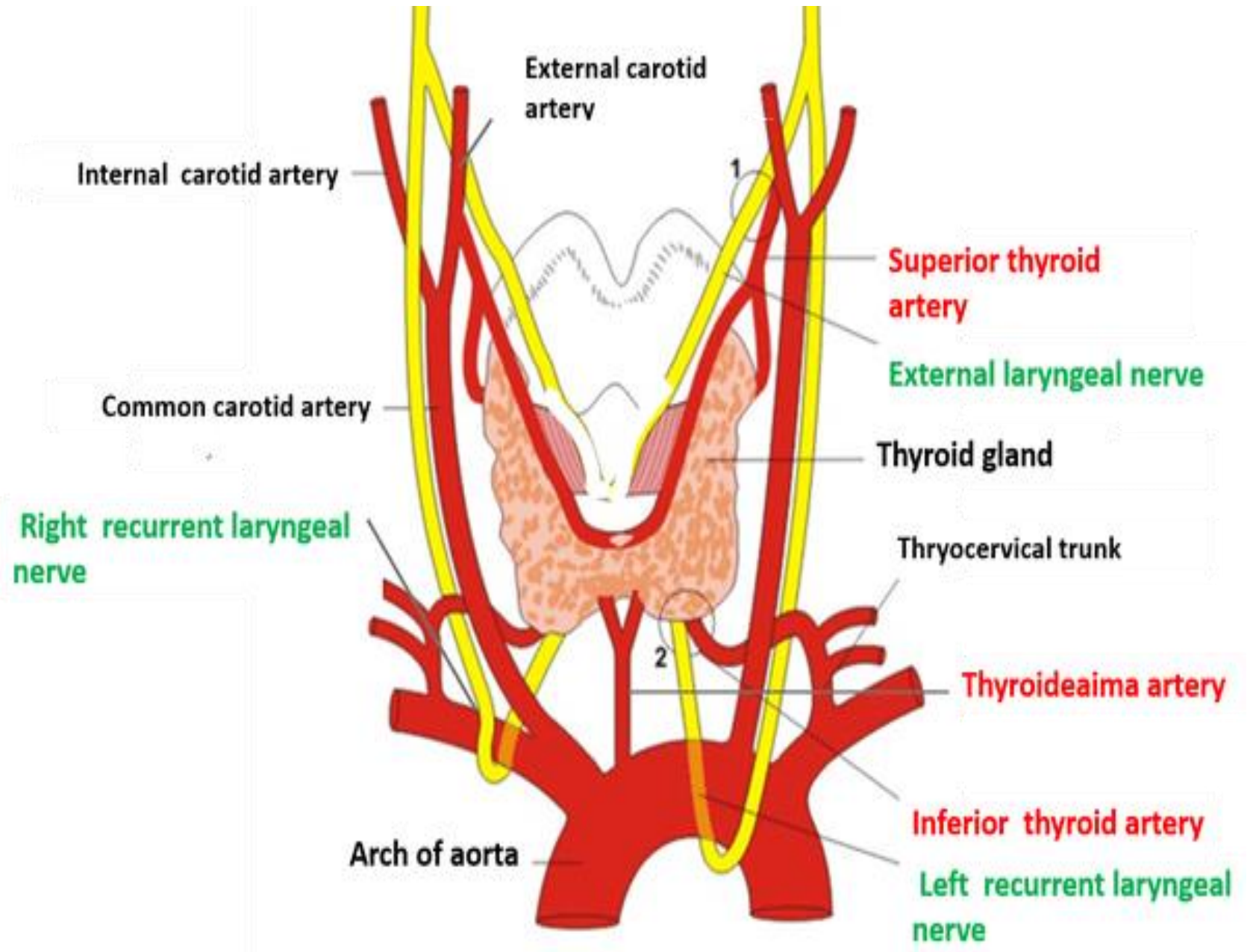
- **Anteriorly:**
  - Skin
  - superficial fascia
  - investing fascia
  - Infrahyoid muscles and pretracheal fascia
- **Posteromedially:**
  - Larynx and trachea
  - Pharynx and esophagus
  - Recurrent laryngeal nerve
- **Posterolaterally:**
  - Carotid sheath with common carotid a., internal jugular v., and vagus n.
  - Cervical sympathetic trunk





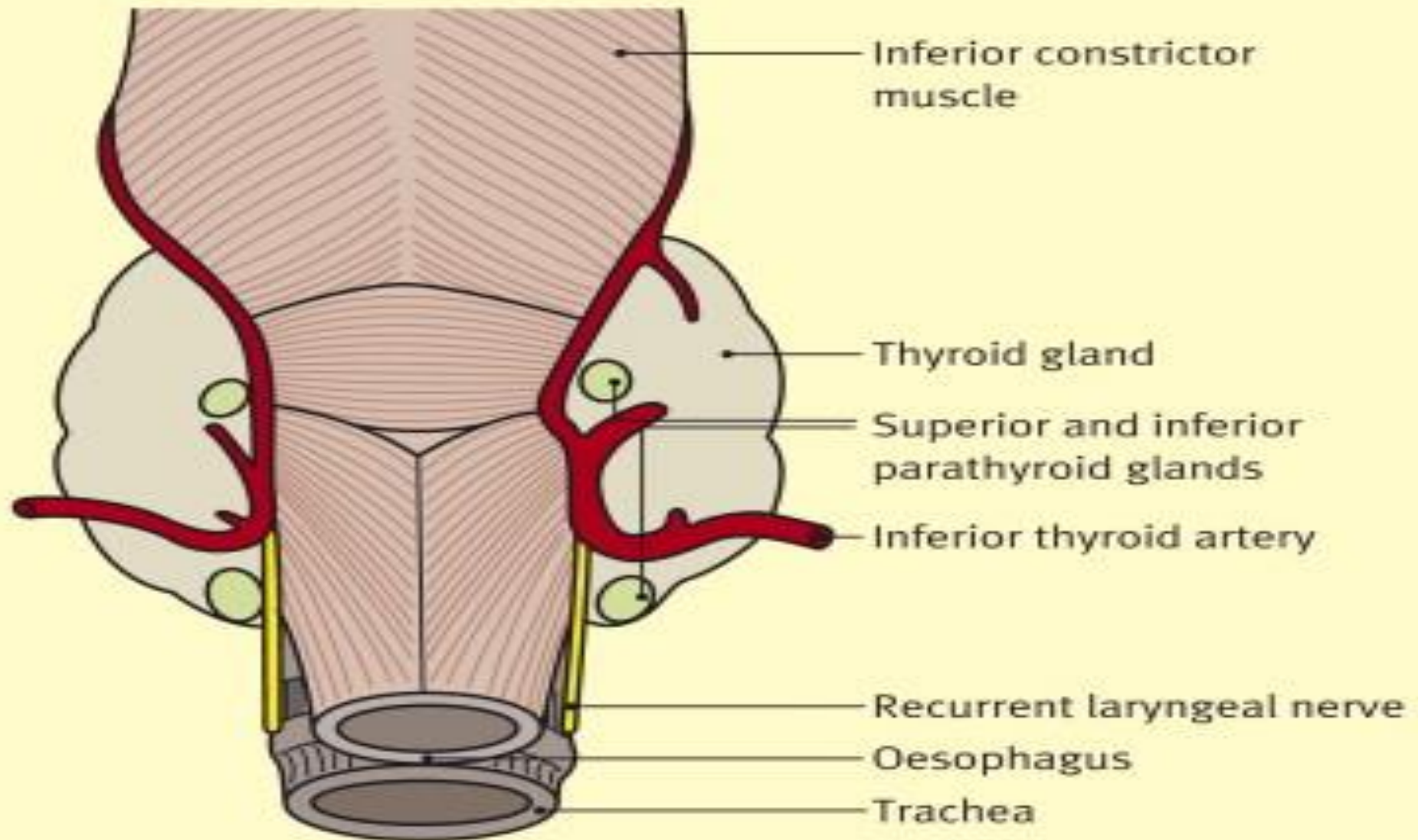
# BORDERS

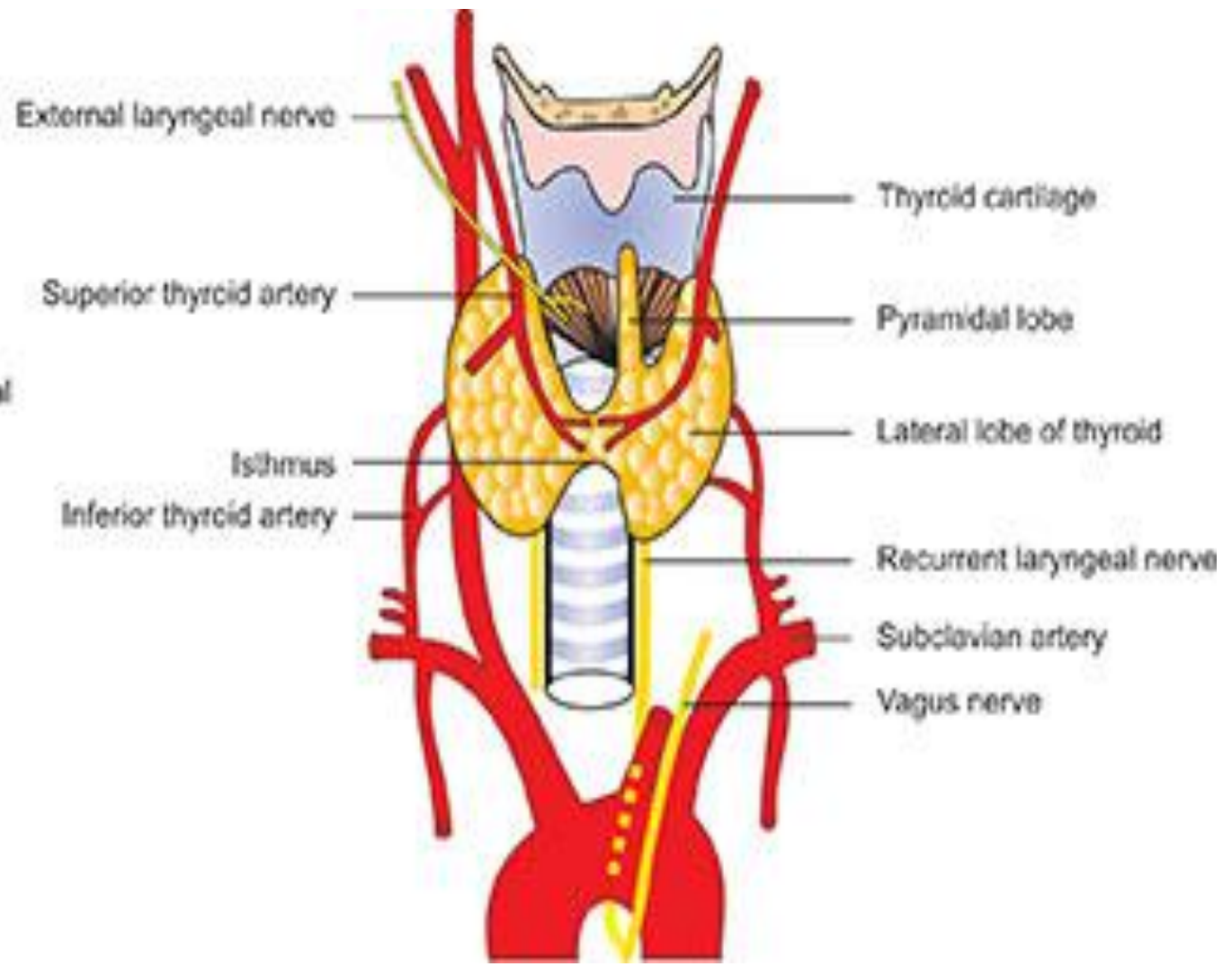
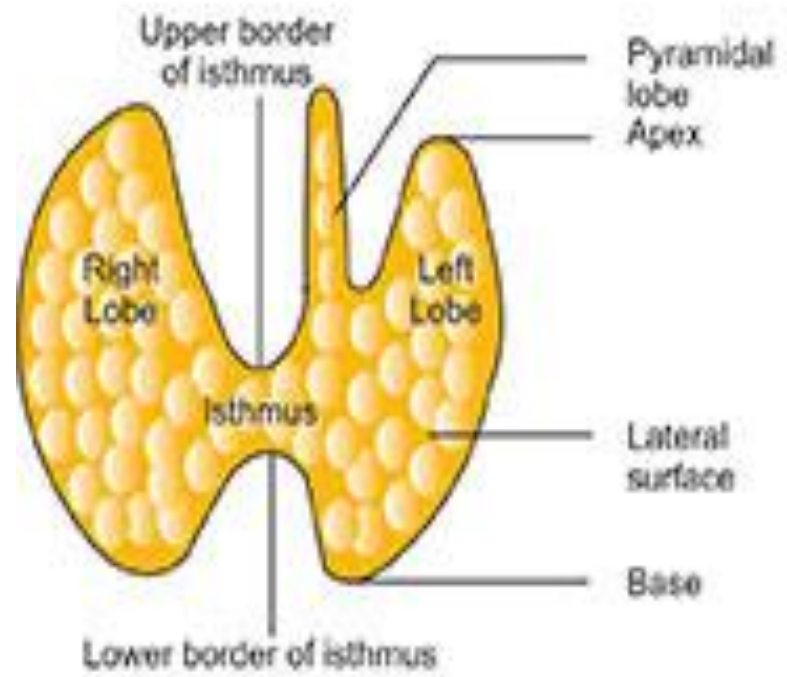
- Anterior border ----  
Superior thyroid artery
- Posterior border ----  
superior and inferior parathyroid glands, anastomosis of superior and inferior thyroid artery





## Posterior aspect of the thyroid gland

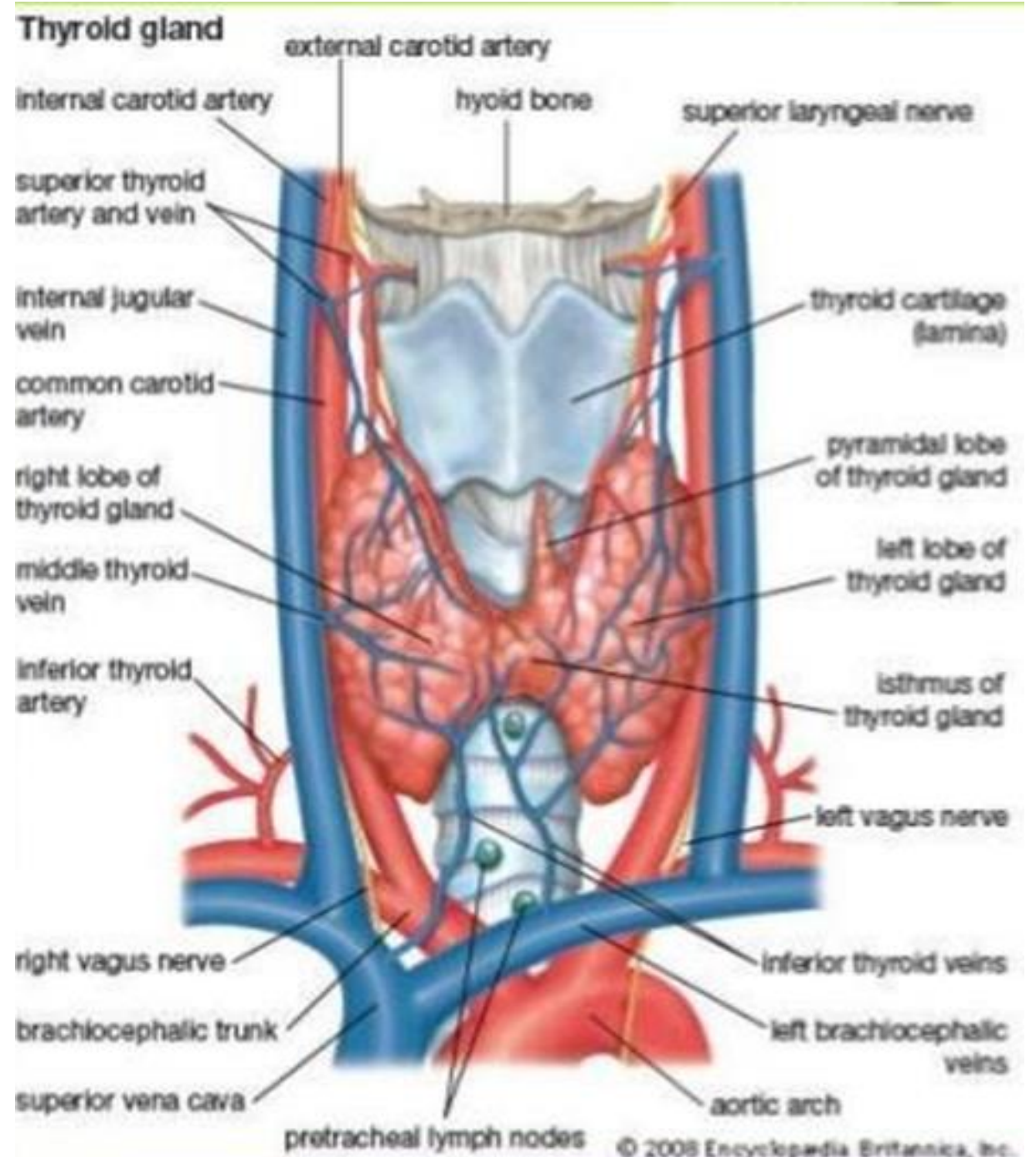


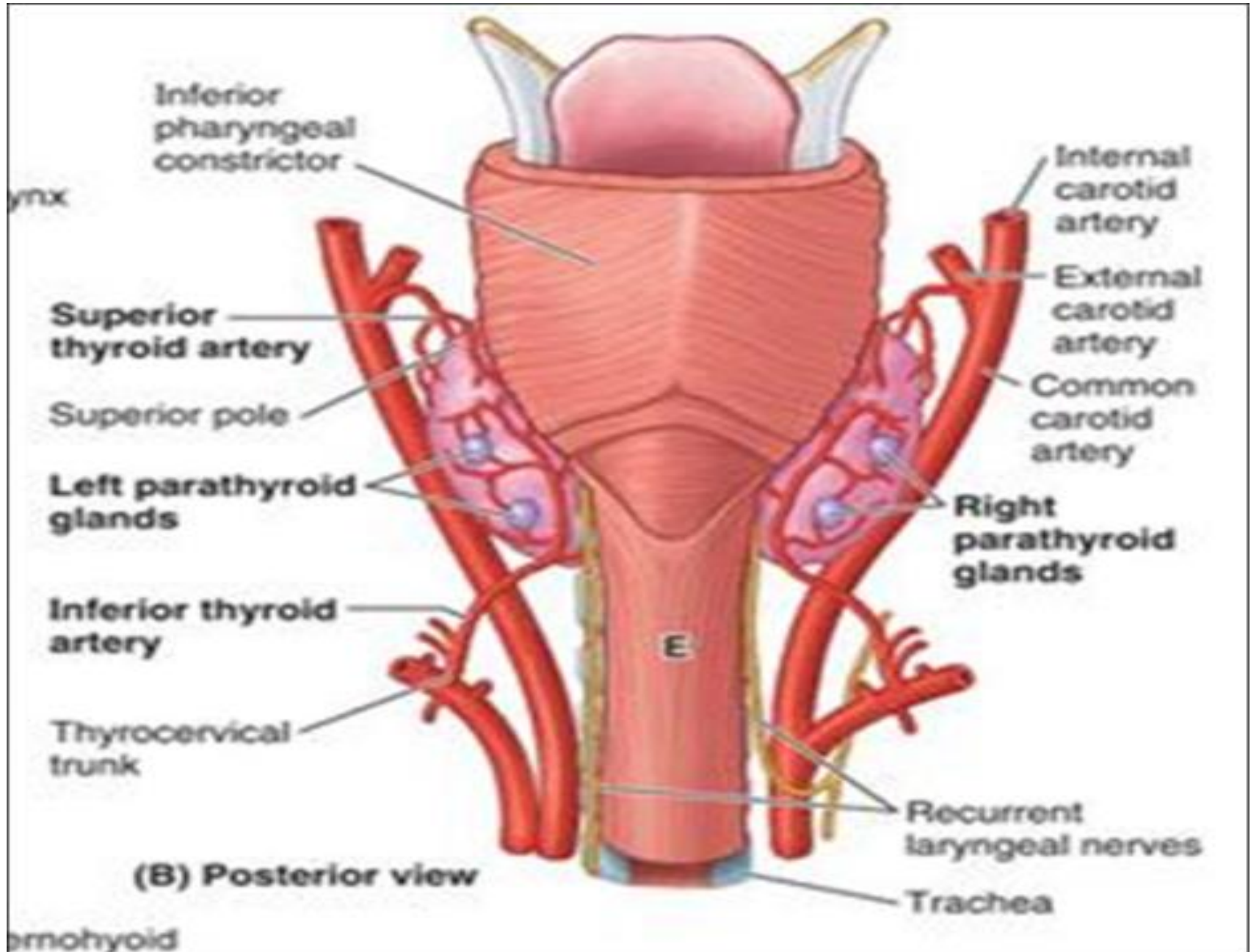


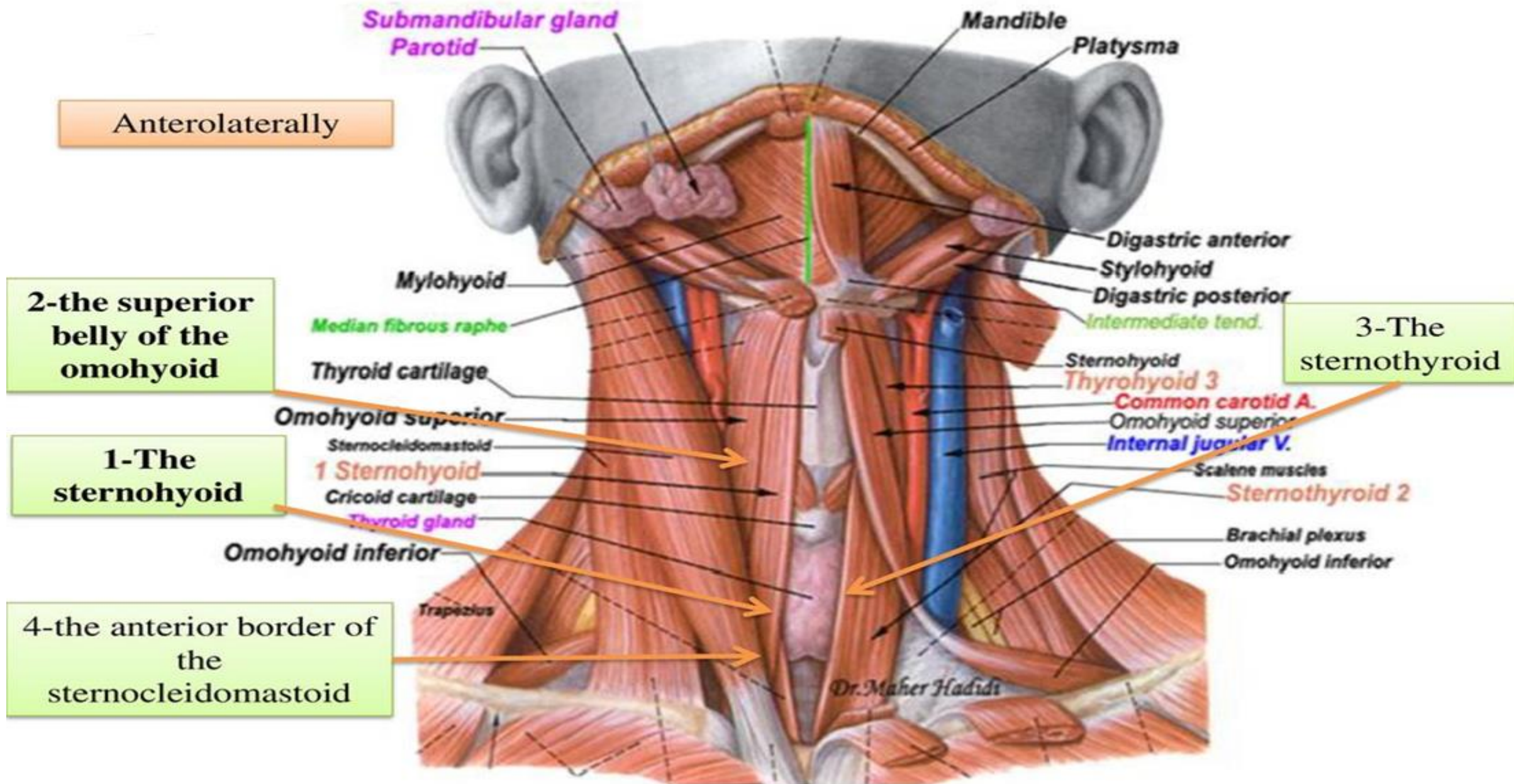
# ISTHIMUS ... RELATIONS

- Anterior surface
- Posterior surface
- Superior border
- Inferior border

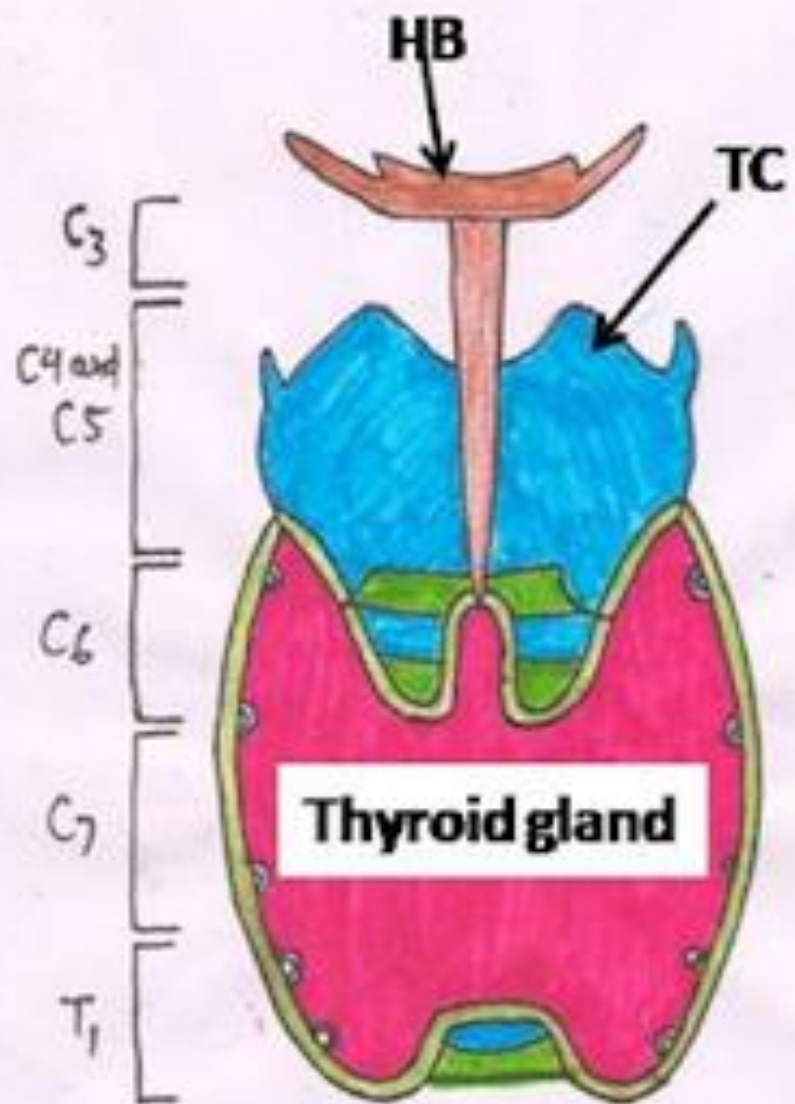
## PYRAMIDAL LOBE



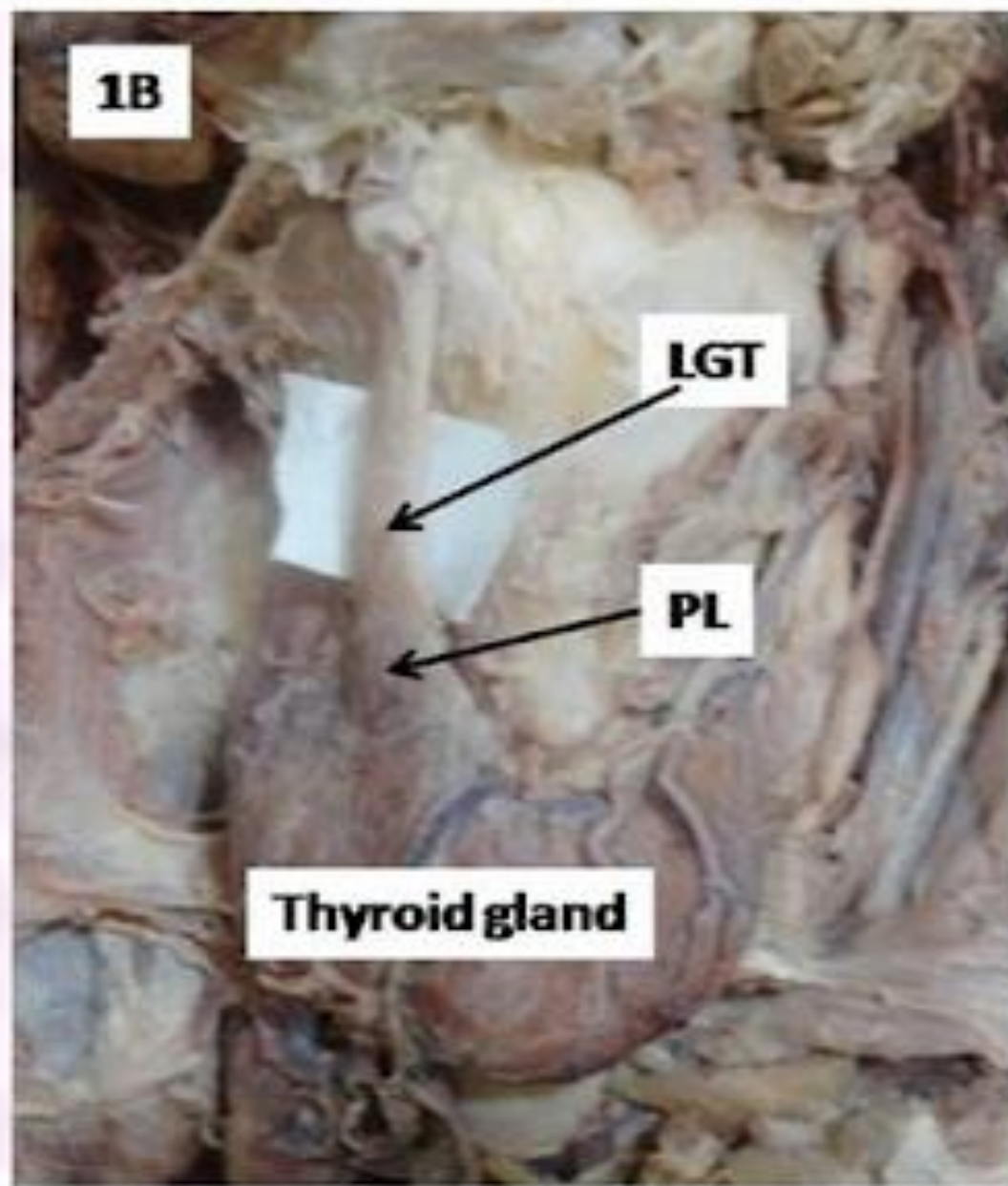




**1A**

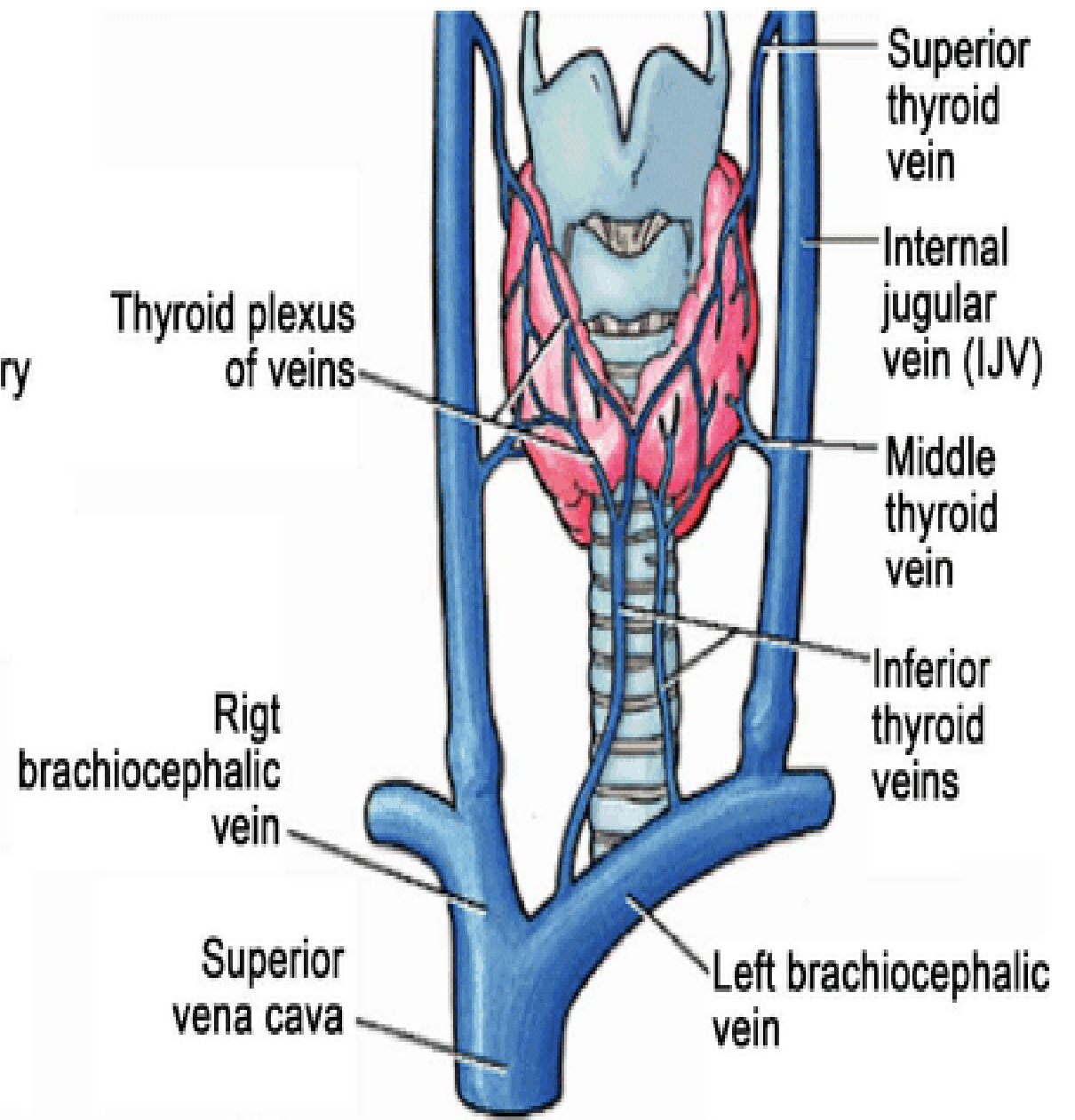
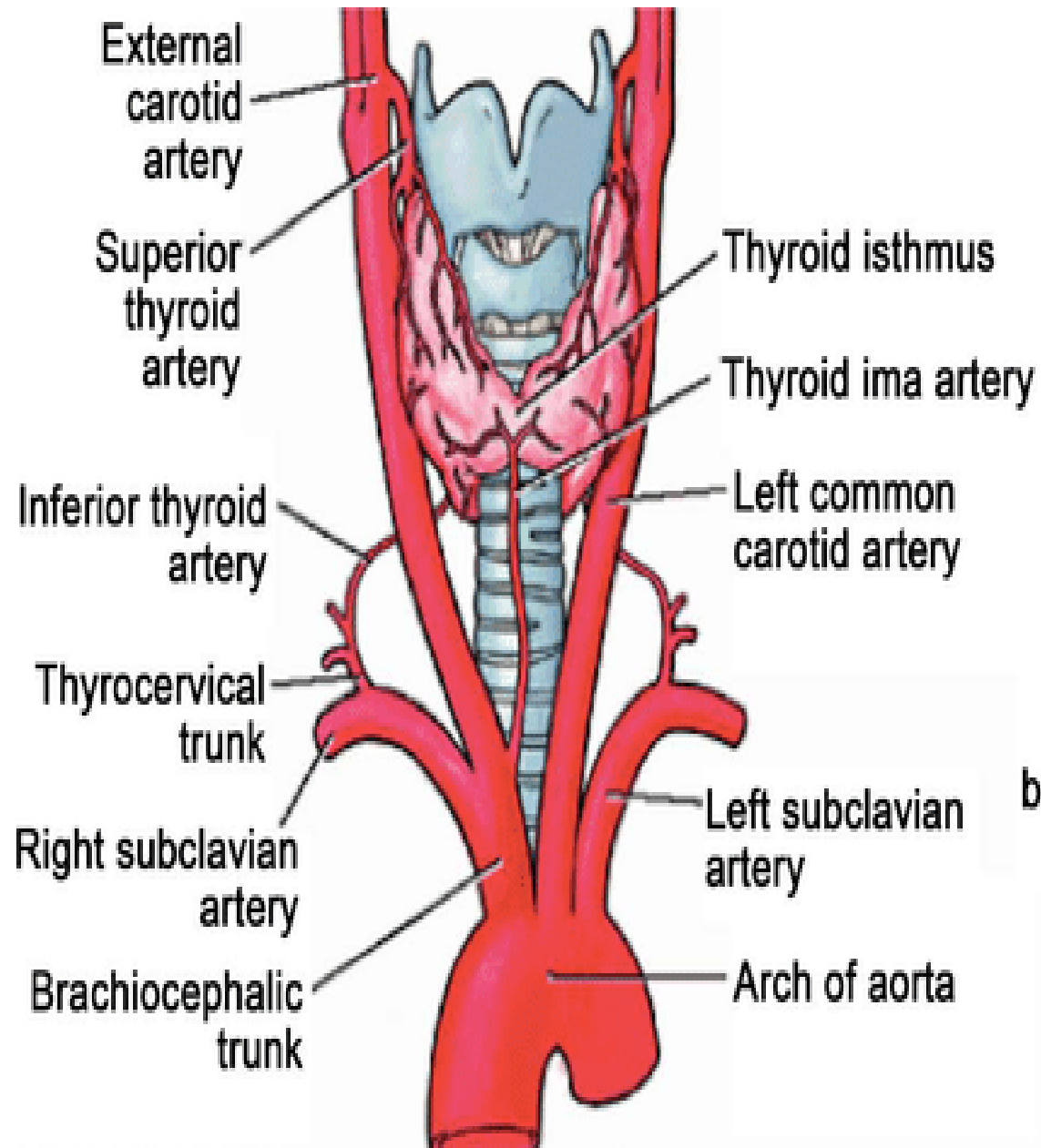


**1B**



# Blood SUPPLY

- Superior thyroid artery
- Inferior thyroid artery
- Thyroidea imma 3%
- Superior thyroid vein ---- Internal jugular vein
- Middle Thyroid vein ---- Internal jugular vein
- Inferior thyroid vein ---- left brachiocephalic vein





# LYMPHATIC DRAINAGE

- Upper part ---- prelaryngeal nodes, deep cervical nodes
- Lower part ---- pre tracheal nodes, deep cervical nodes

## Thyroid gland

•Lymph drains to

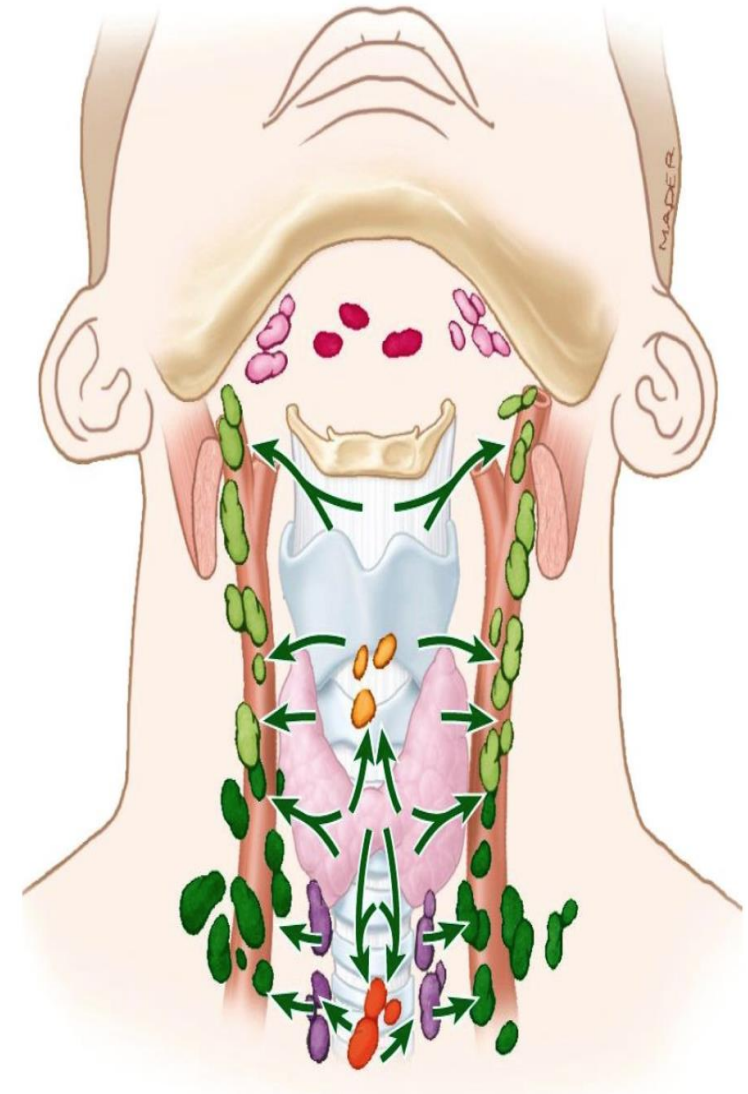
- **prelaryngeal nodes**
- **pretracheal nodes**
- **paratracheal nodes**

•Then to

**superior deep cervical nodes**

or

**inferior deep cervical nodes**



# NERVE SUPPLY

- Superior, middle, inferior cervical sympathetic ganglia

## Nerve supply

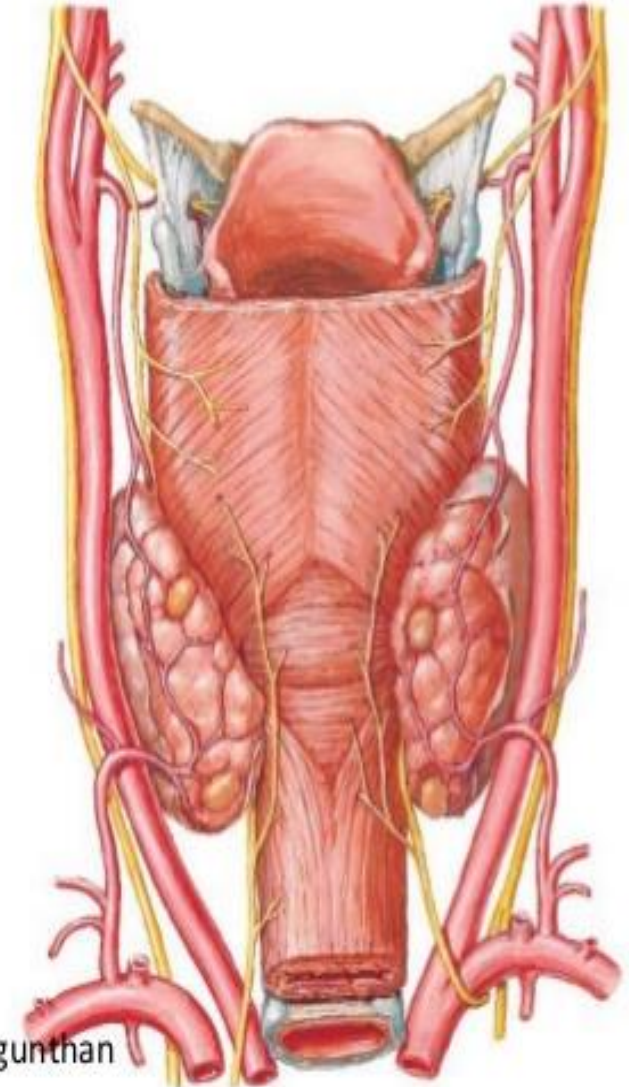
1. Sympathetic nerves
2. Parasympathetic nerves

### Sympathetic nerves:

- From sup., middle & inf. cervical ganglion
- Vasomotor supply

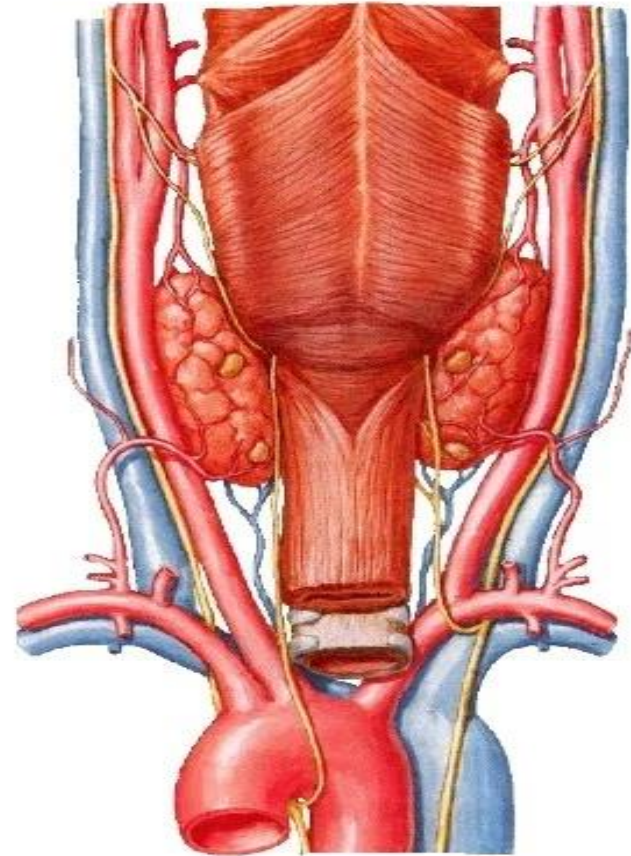
### Parasympathetic nerves:

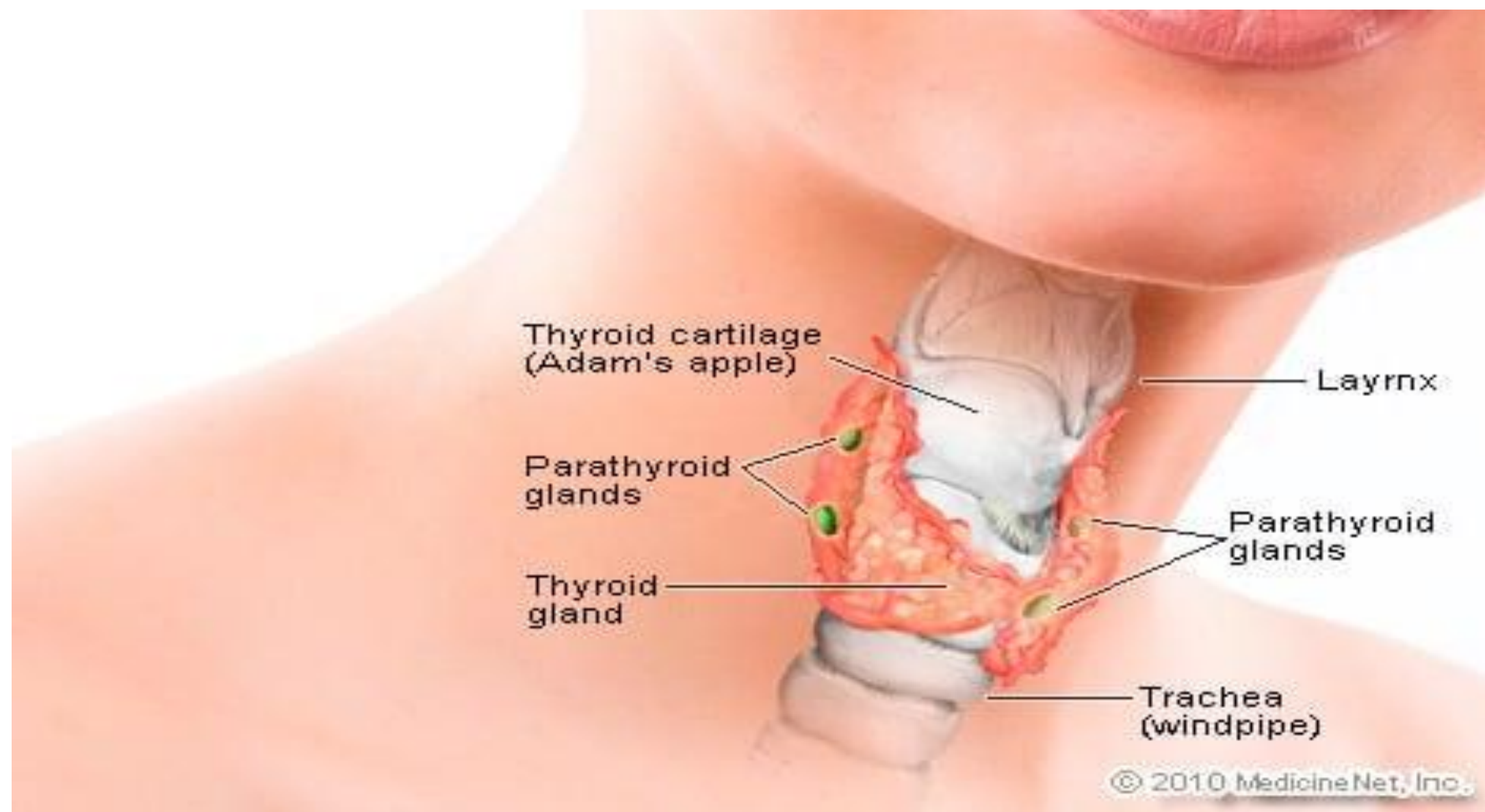
- From vagus & recurrent laryngeal nerves



# Parathyroid gland

- Yellowish-brown, ovoid bodies
- Position
  - Two superior parathyroid glands: lie at junction of superior and middle third of posterior border of thyroid gland
  - Two inferior parathyroid glands: lie near the inferior thyroid artery, close to the inferior poles of thyroid gland
- Function: regulate calcium and phosphate balance and is therefore essential for life





superior thyroid  
artery and vein

thyroid gland

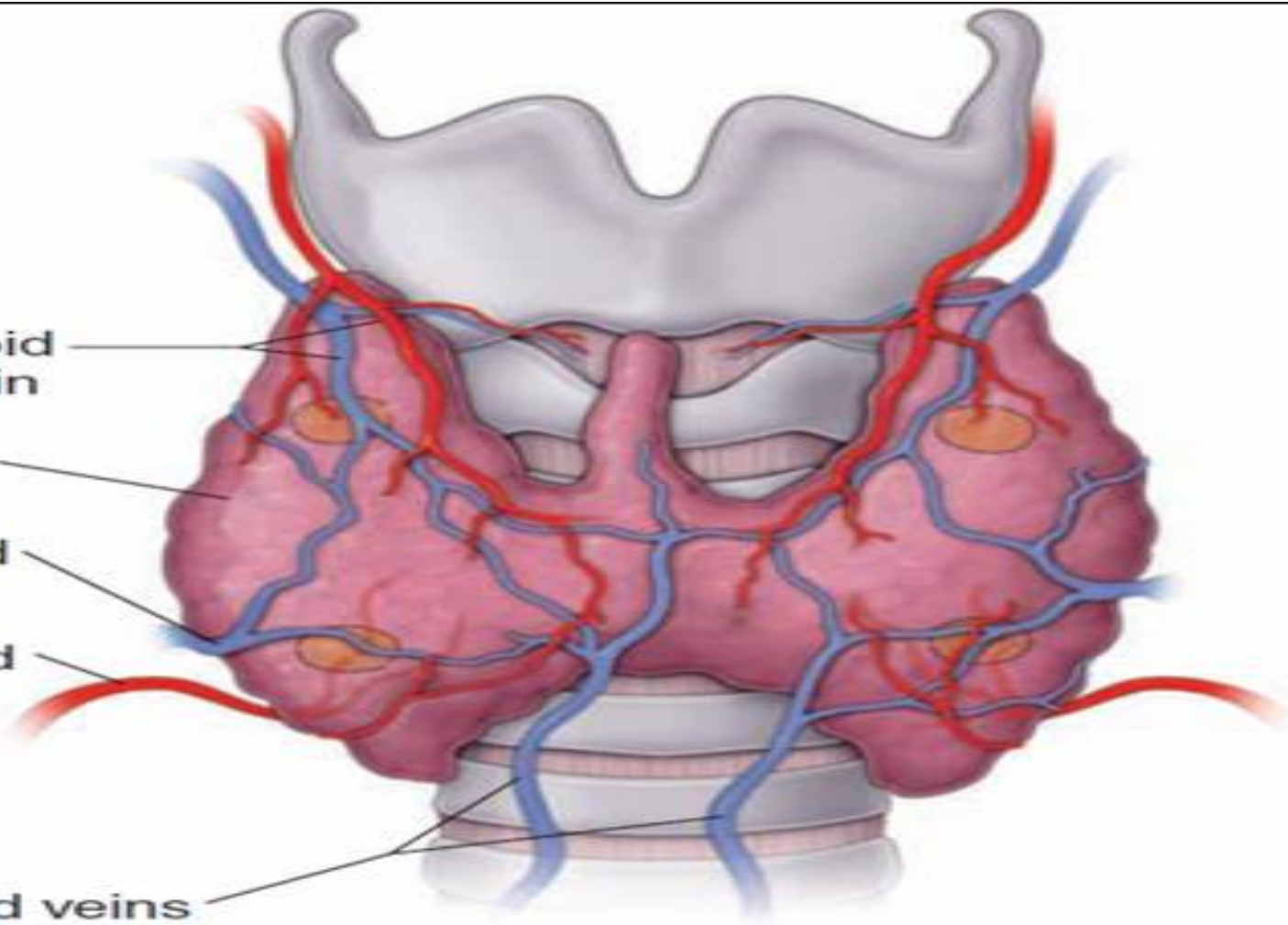
middle thyroid  
vein

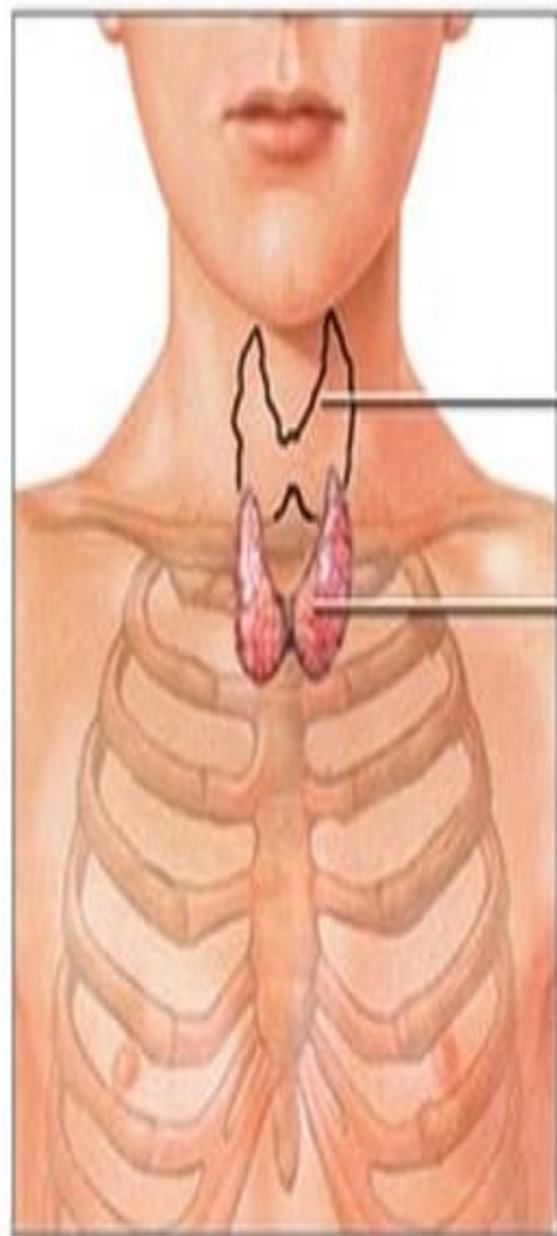
inferior thyroid  
artery

inferior thyroid veins



indicates locations of parathyroid glands  
on the posterior surface of the lateral lobes

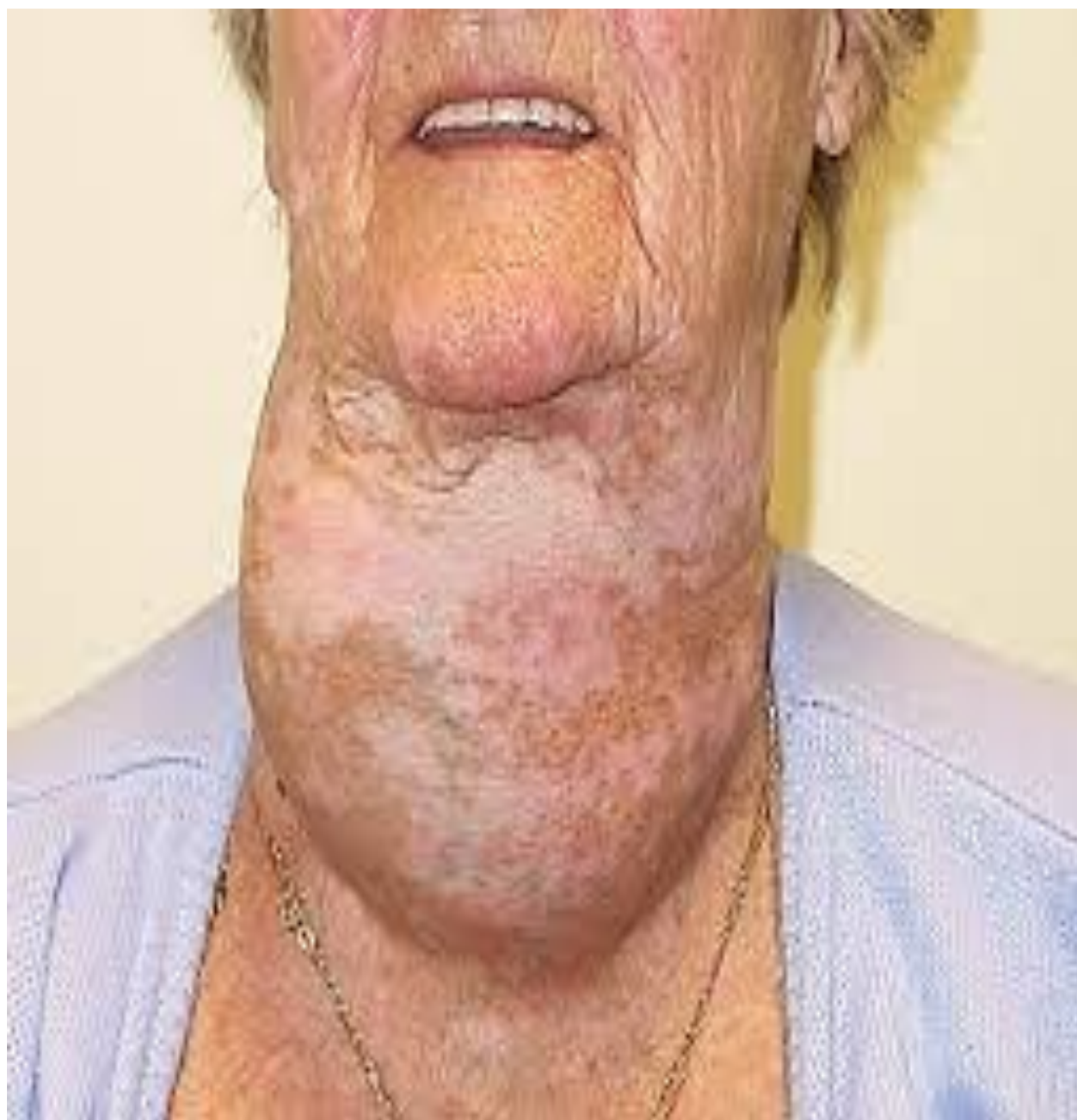




Normal location  
of thyroid gland

Retrosternal  
thyroid











Thank you.....!!!