

وسهلا



أهلا

يُمنع أخذ السلايدات بدون
إذن المحرر واي اجراء
يخالف ذلك يقع تحت طائلة
المسؤولية القانونية
جميع المعلومات للاستخدام
التعليمي فقط

الأستاذ الدكتور يوسف حسين

كلية الطب - جامعة مؤتة - الأردن

دكتورة من جامعة كولونيا ألمانيا

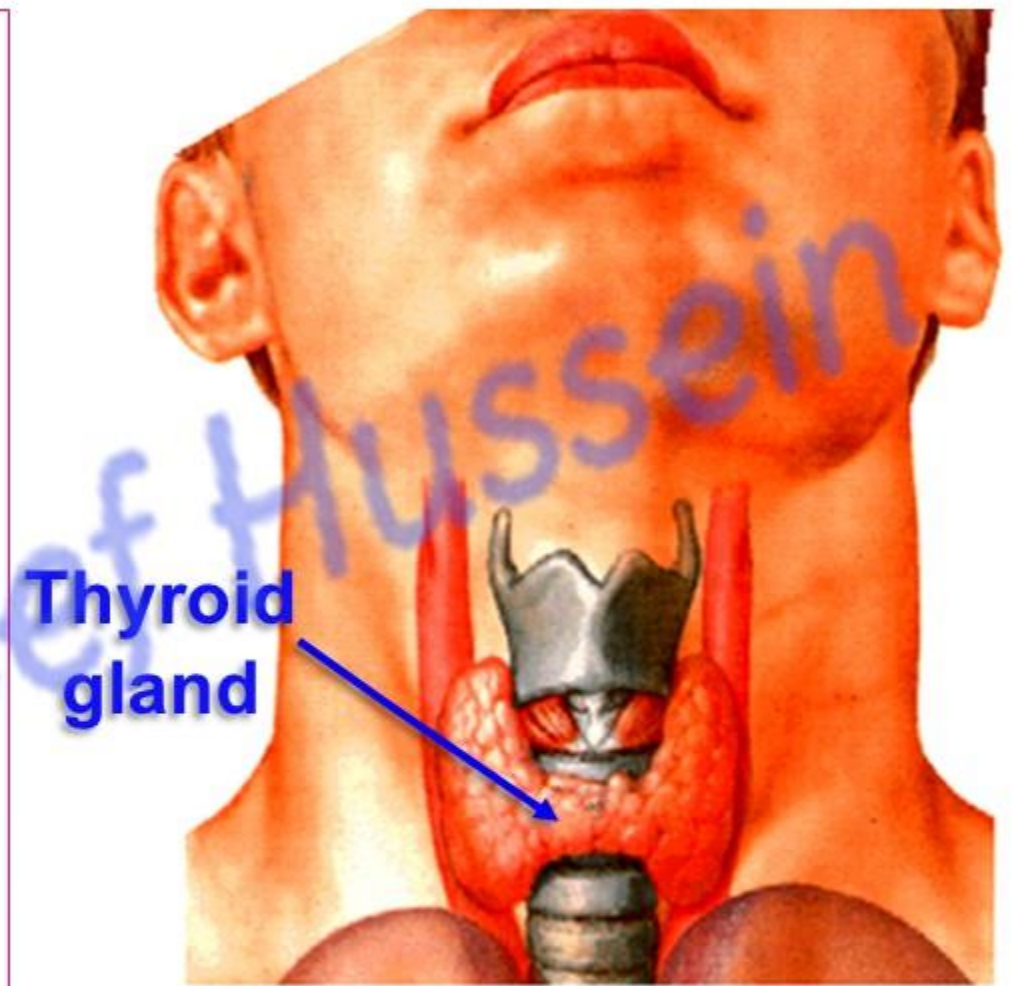
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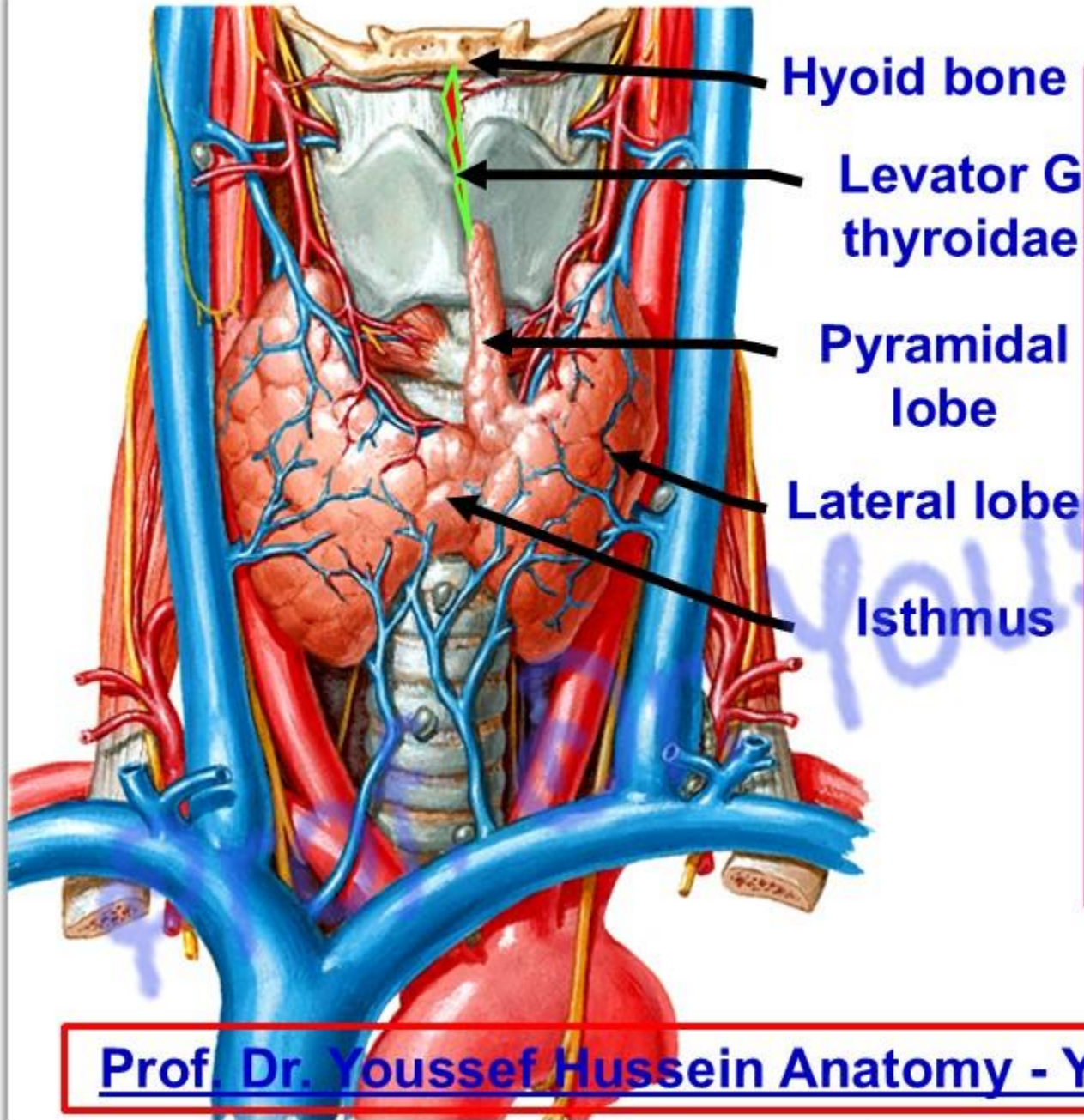
اليوتيوب د. يوسف حسين

Thyroid gland

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- **Weight** is about 25 grams (slightly heavier in female).
- It is the **largest endocrine gland** in the body
- It lies on the front and sides of the lower part of neck
- **It is highly vascular** endocrine gland
- It produces **thyroxine** and **thyrocalcitonin**, hormones which are essential for metabolism and growth.
- The thyroid takes **iodine** from food to produce thyroid hormones.

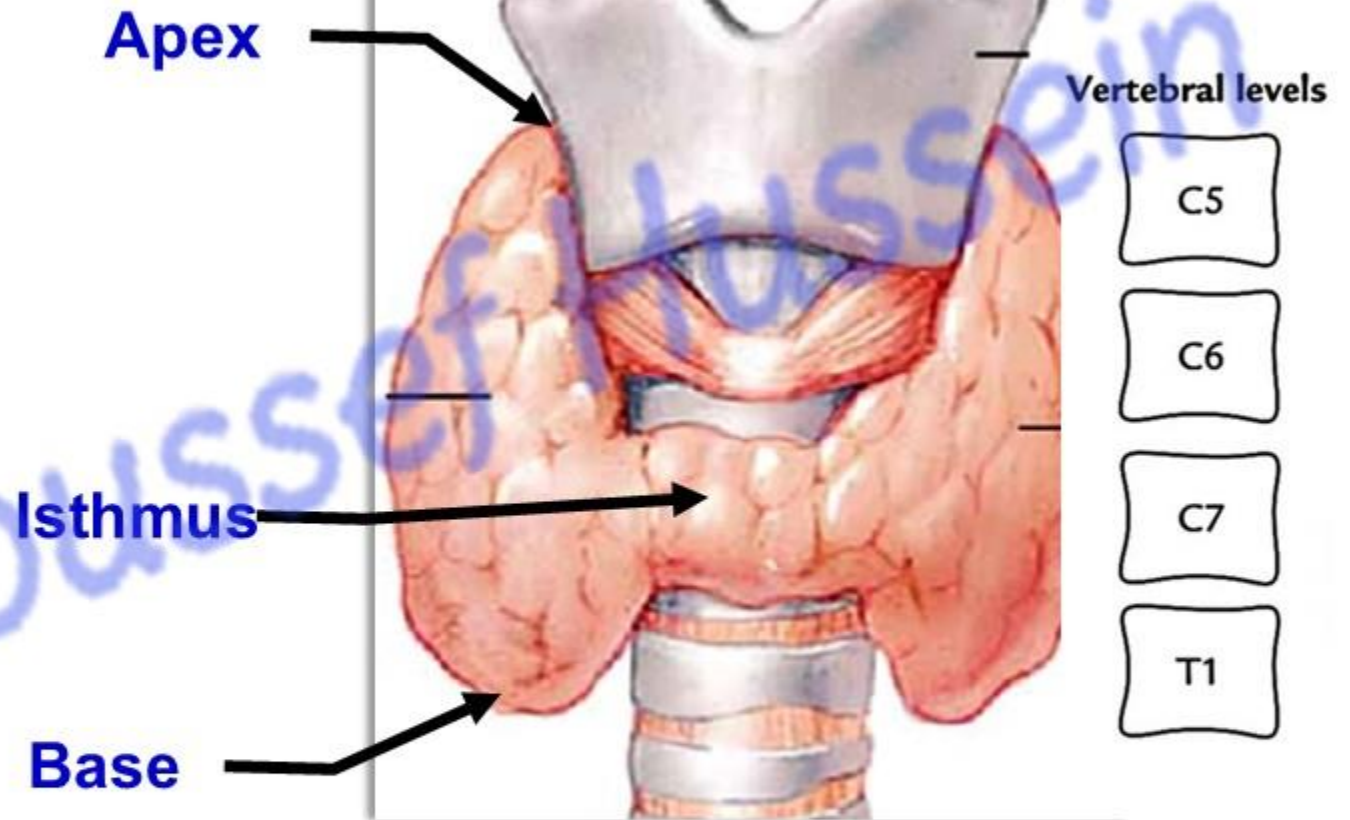




- **Shape:** butterfly, it is formed of:
- **2 lateral lobes:** each lobe is pear-shaped (apex above).
- A narrow median **isthmus** connecting the 2 lateral lobes.
- A small **pyramidal lobe** project upwards from isthmus and connected to hyoid bone by a fibromuscular band called **levator glandulae thyroideae** (remnant of thyroglossal duct).

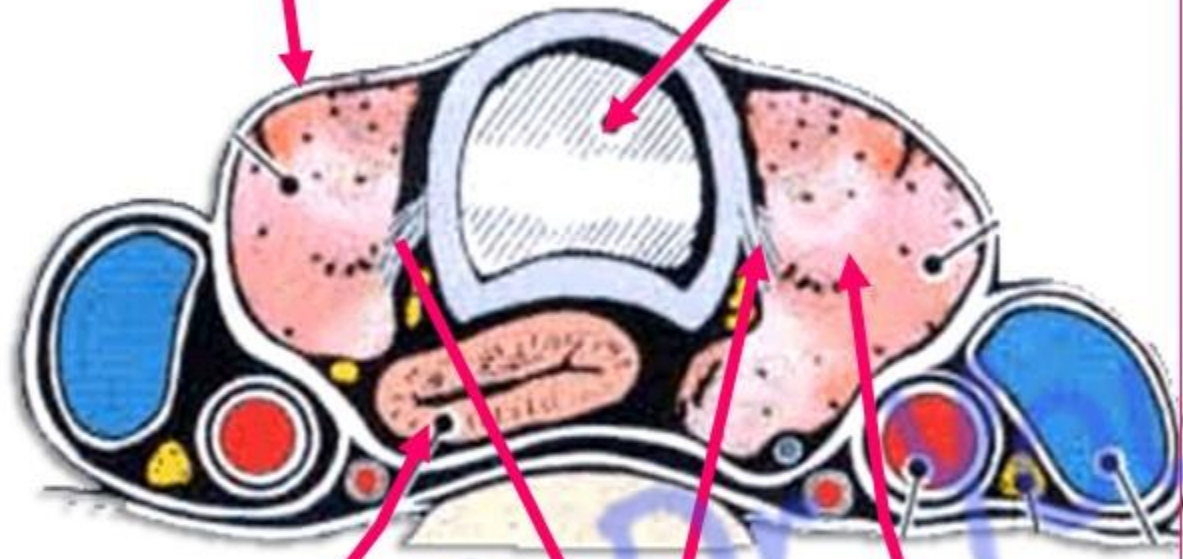
- **Extensions**

1. **Apex** of each lobe directed upward and reaching up to **oblique line of thyroid cartilage**.
2. **Base** reaches the level **5th or 6th** tracheal ring.
3. **Isthmus** opposite the **2nd, 3rd and 4th** tracheal rings.
4. **Posteriorly**: the lateral lobe lies opposite C 5, 6, 7 and T1 vertebrae.



Pretracheal layer
of deep fascia

Cricoid cartilage



Esophagus

Thyroid lobe

Suspensory
ligament of Berry

T.S.

• Capsules of thyroid gland

- The gland has 2 capsules:

(1) **Inner true** capsule (**fibrous**) enclosing the gland.

(2) **Outer false** capsule from pretracheal layer of deep fascia.

- The **false capsule** is thickened forming **suspensory ligament of Berry** which fixes gland to **cricoid cartilage of larynx** that is responsible for **movement of gland up and down** during swallowing.

- It is a critical surgical landmark because it is located near the recurrent laryngeal nerve, requiring careful dissection to avoid damaging the nerve



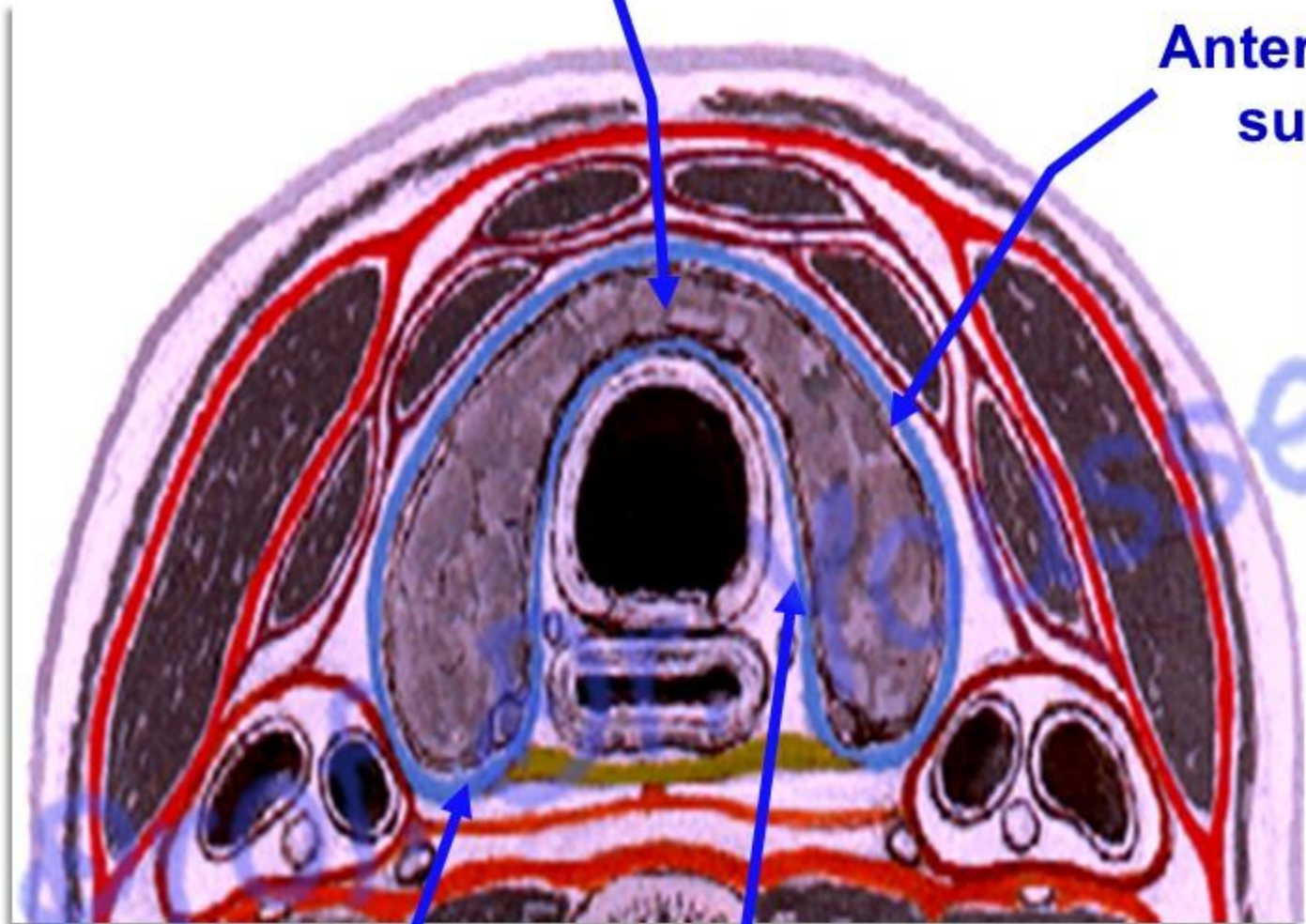
Relations of Thyroid gland

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Surfaces

Isthmus

Anterolateral surface

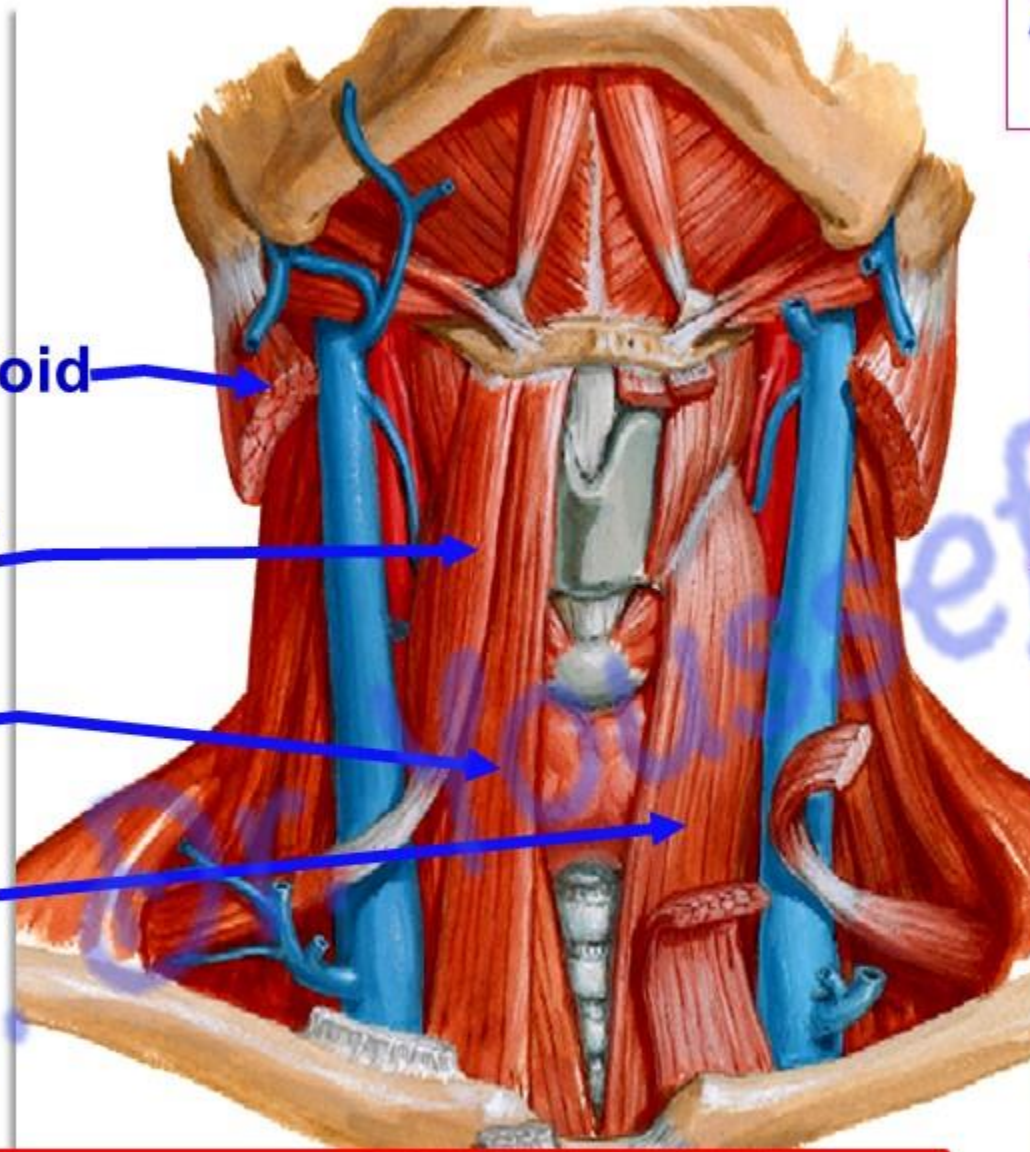


Posterior surface

Medial surface

Anterolateral Relations of thyroid lobe **5 S**

- **S**kin, superficial fascia (containing platysma) and deep fascia

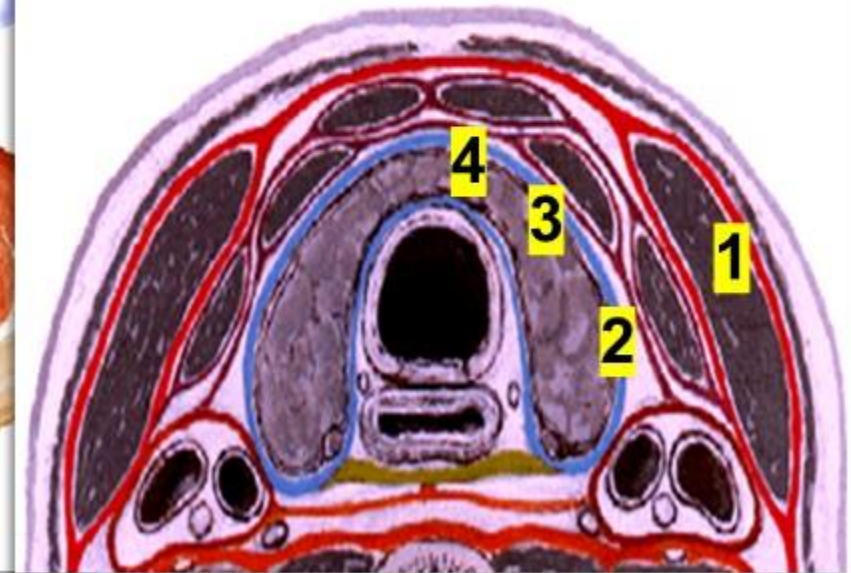


1. Sternocleidomastoid M

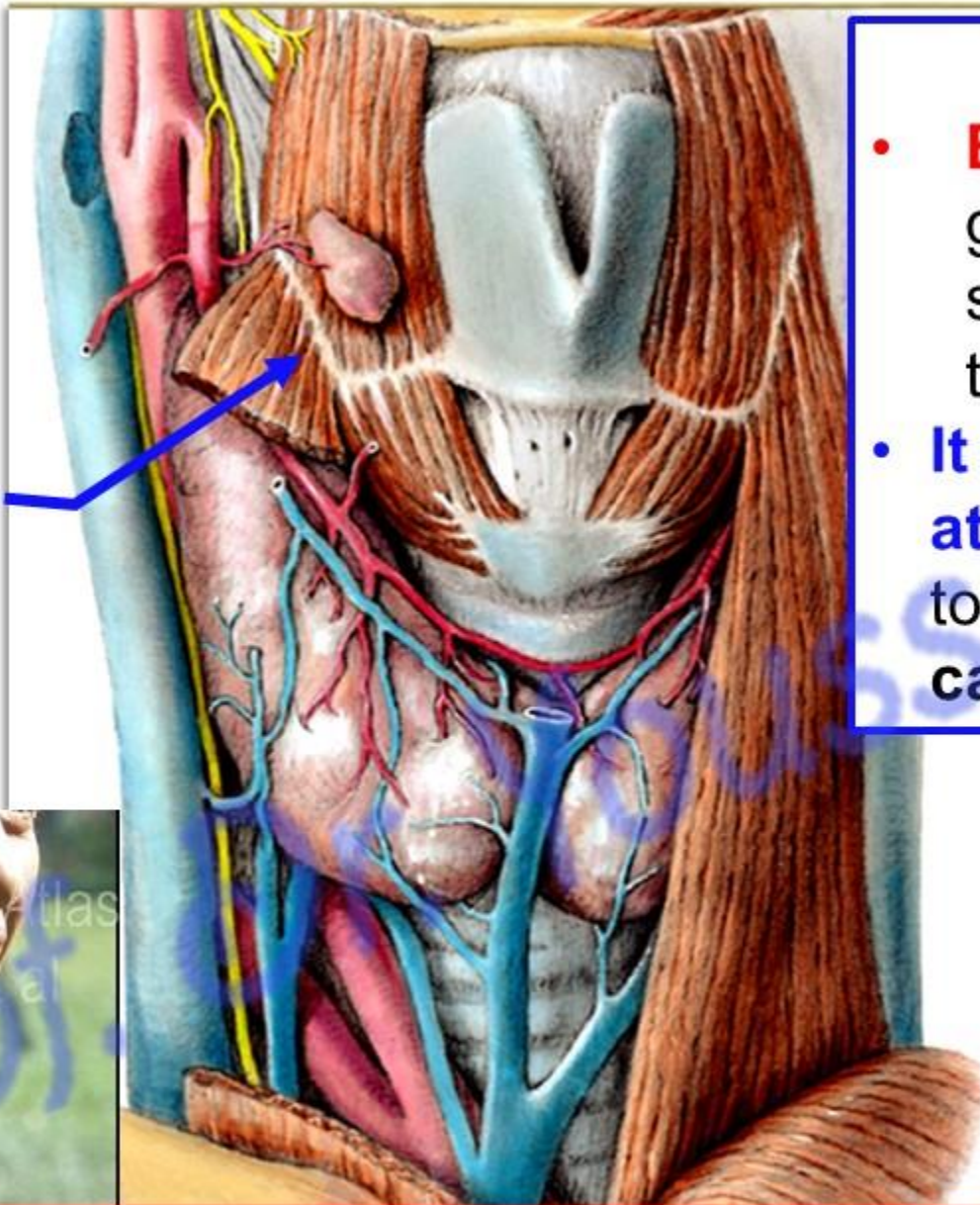
2. Superior belly of Omohyoid M

3. Sternothyroid M

4. Sternohyoid M



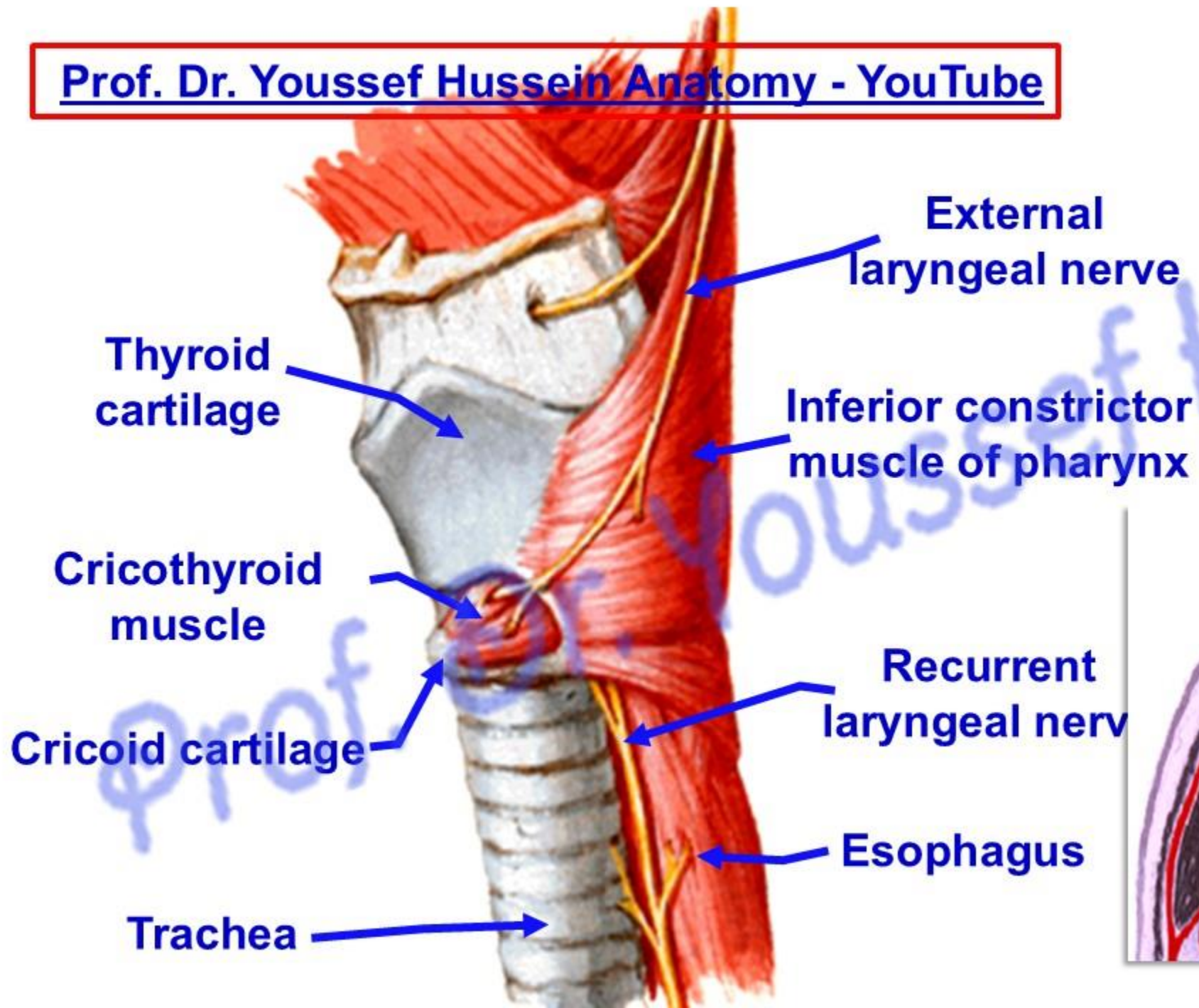
**Sternothyroid
Muscle**



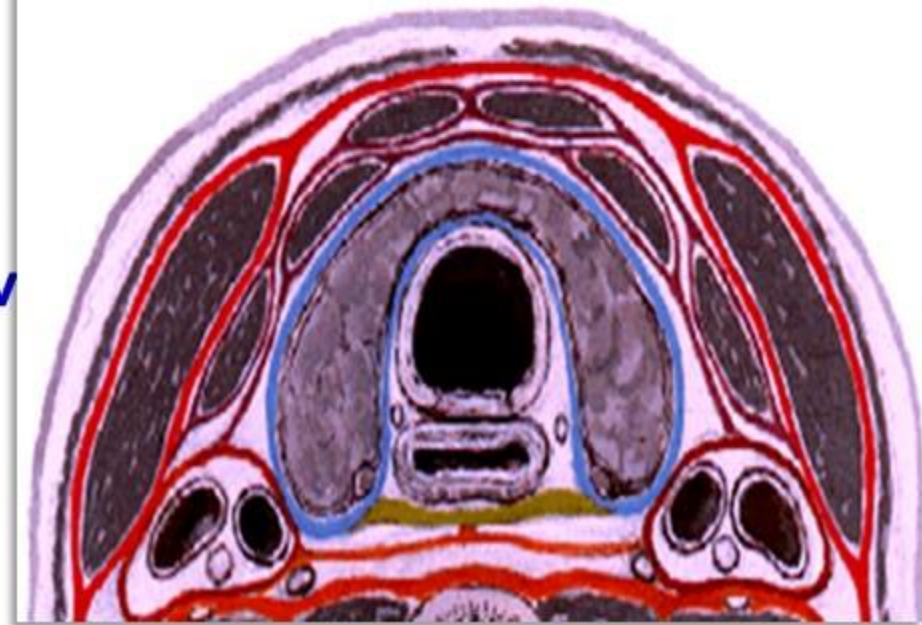
- **Retrosternal goiter**
- **Enlargement of thyroid gland:** The gland may extend down behind the sternum leading to compression on the **trachea and great vessels.**
- **It does not extend upward due to attachment of sternothyroid muscle to oblique line of the thyroid cartilage.**



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- **Medial Relations of thyroid lobe**
 - **2 tubes**
 - **2 nerves**
 - **2 cartilages**
 - **2 muscles**

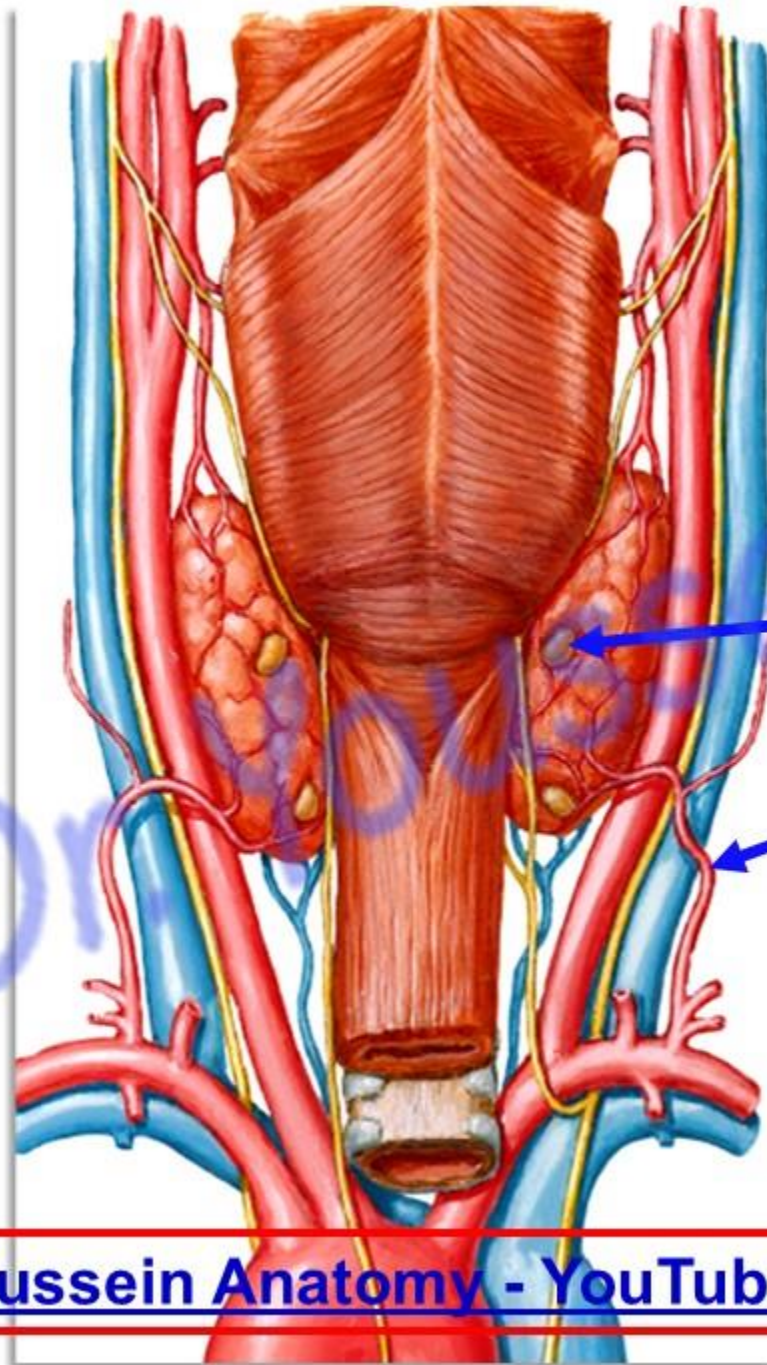


• **Posterior Relations
of thyroid lobe**

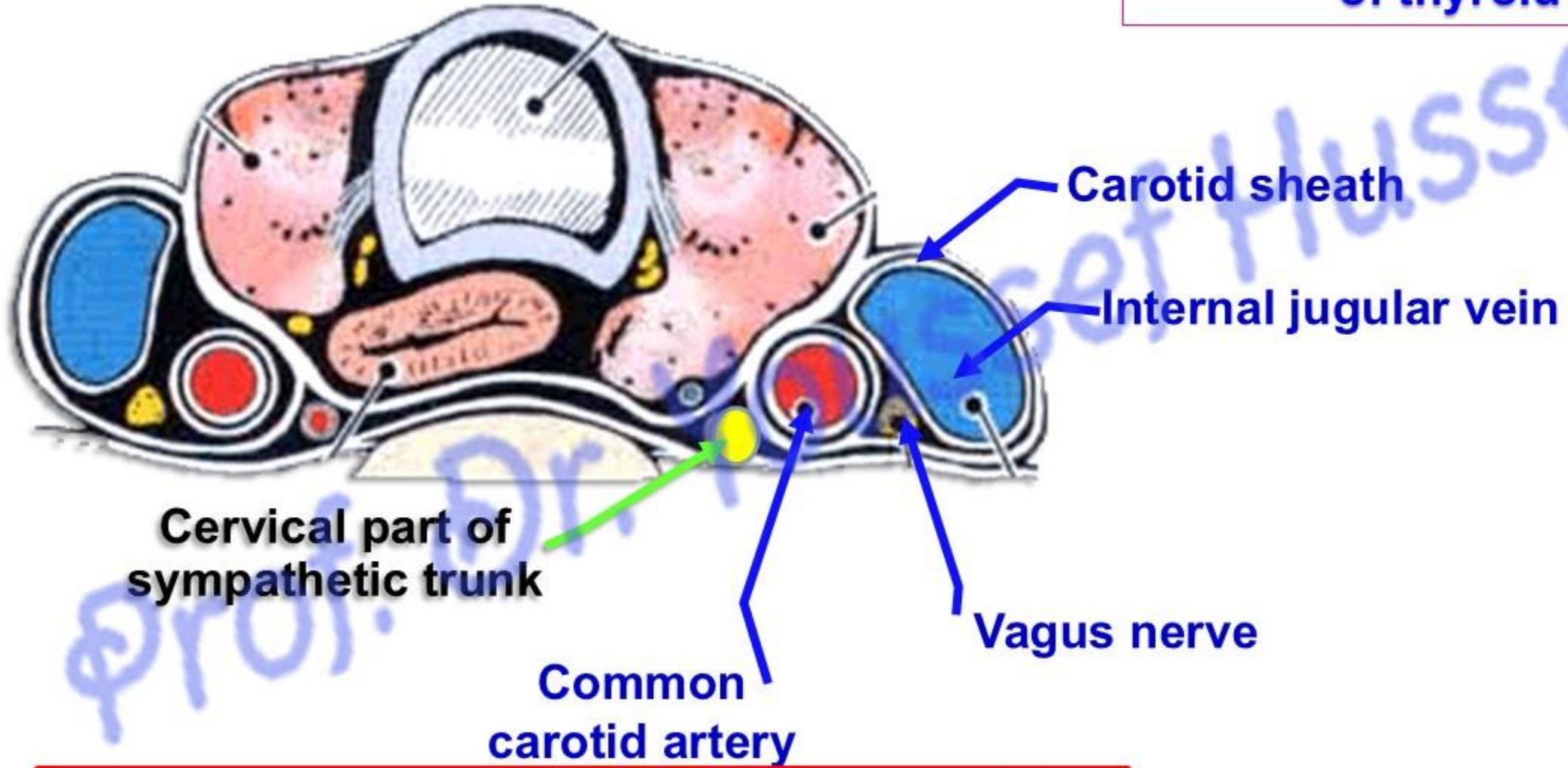
- **Thoracic duct (on left side).**

Parathyroid gland

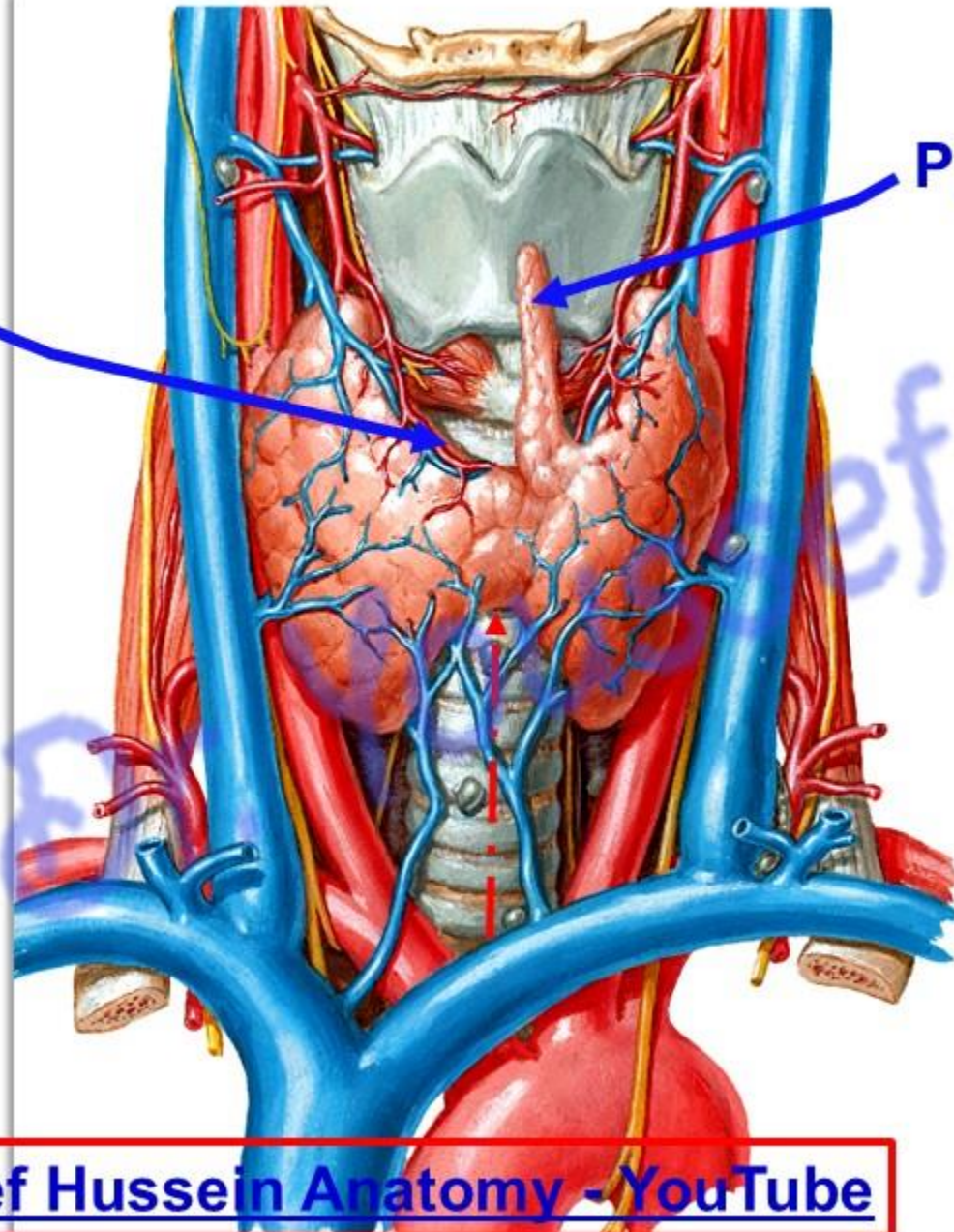
**Inferior thyroid
artery**



• **Posterolateral Relations of thyroid lobe**



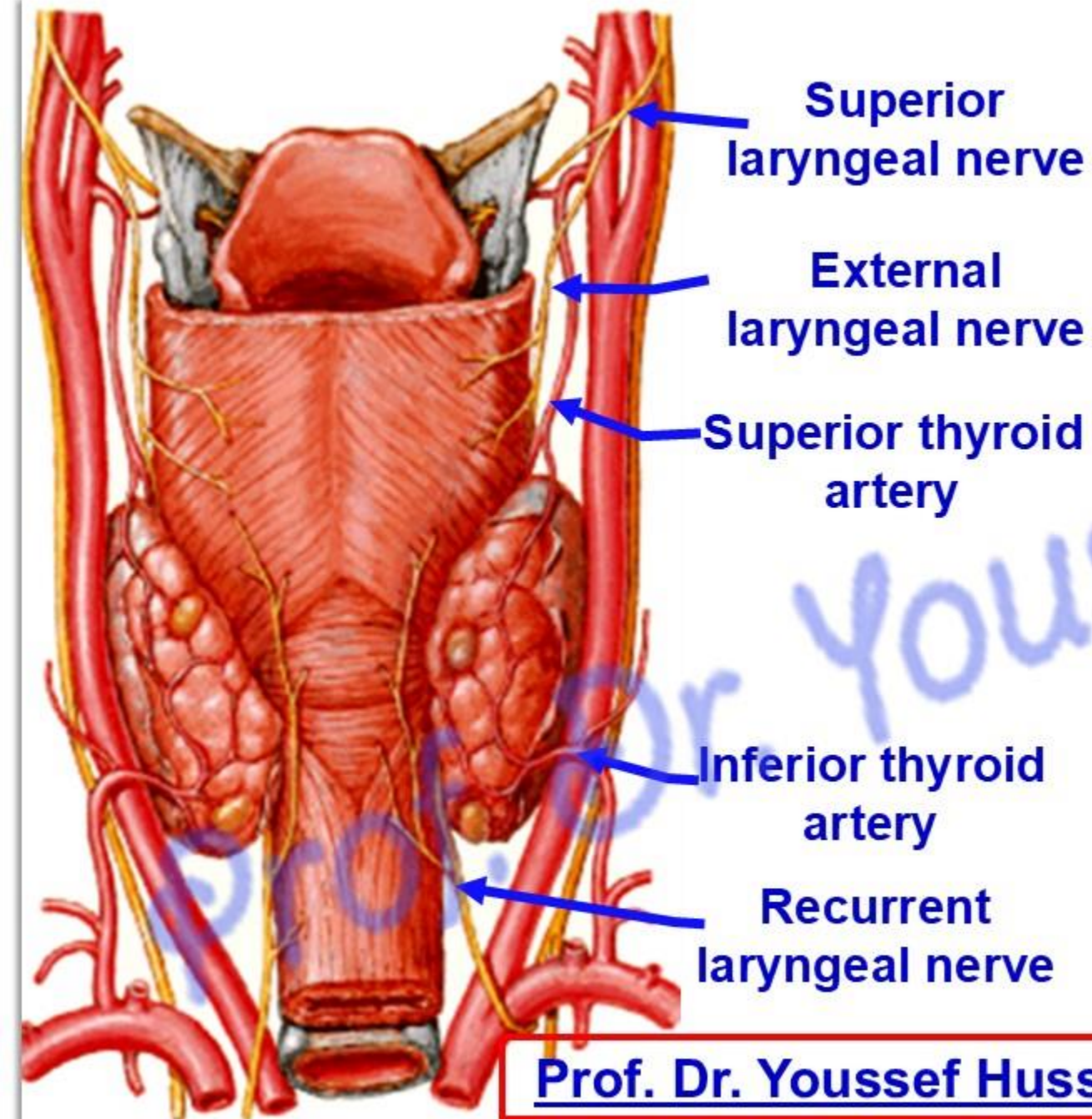
**Anastomosis
between right and
left superior
thyroid arteries**



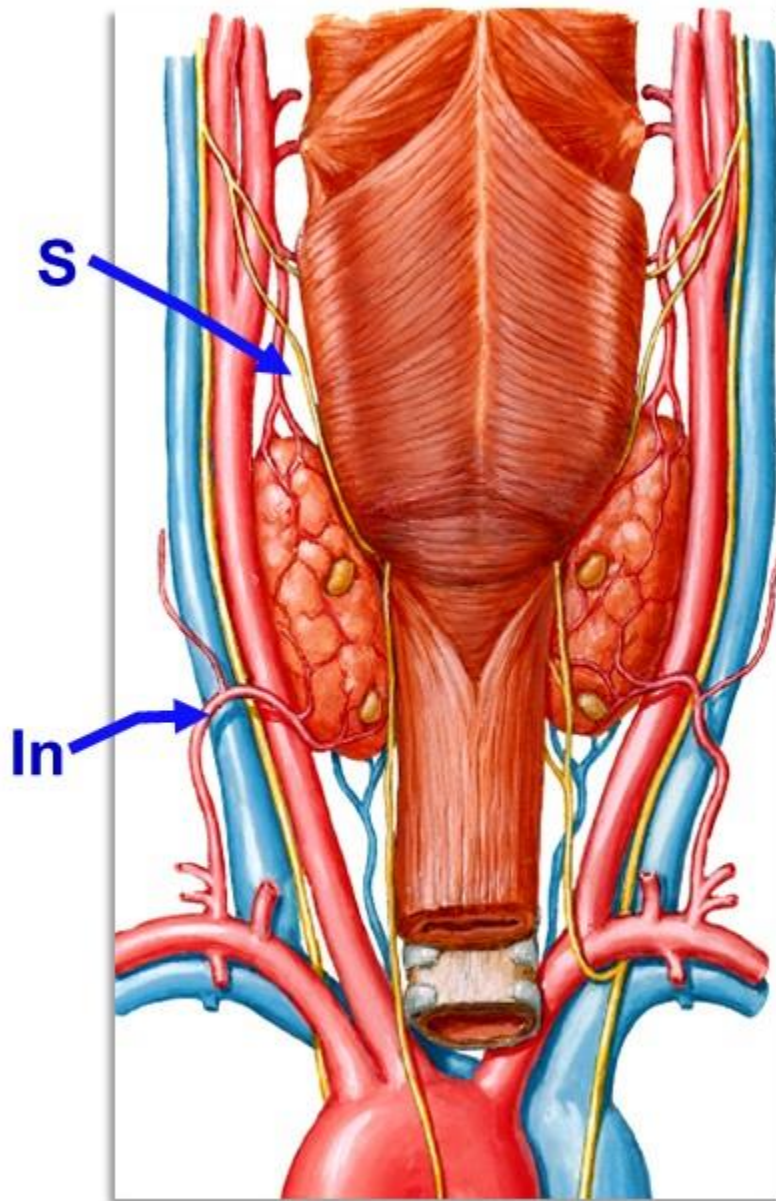
Pyramidal lobe

- **Superior relations of isthmus** (Pyramidal lobe and anastomosis between R. and L. thyroid arteries)

- **Posterior relations of isthmus** 2nd, 3rd and 4th tracheal rings.



- **Nerves related to the gland**
 - **External laryngeal nerve:**
 - It descends downwards with superior thyroid artery to apex of lateral lobe.
 - To avoid injury of nerve during thyroidectomy, ligate superior thyroid artery **at upper pole** of the gland.
 - **Recurrent laryngeal nerve**
 - It ascends between trachea and esophagus closely related to inferior thyroid artery.
 - To avoid injury of nerve during thyroidectomy, Ligate the inferior thyroid artery **lateral to the thyroid gland, away from the trachea.**



- **Superior thyroid artery**

- **Origin:** from the external carotid artery.
- **Course :** it descends downwards and medially deep to the infrahyoid muscles to the apex of the lateral lobe. It is accompanied by **external laryngeal nerve**.

- **Inferior Thyroid artery**

- **Origin;** a branch of **thyrocervical trunk** from the first part of subclavian artery.
- **Course:** It ascends on **medial** border of the **scalenus anterior**, At the level of the C6 vertebra, it curves medially behind carotid sheath to reach the posterior surface of the thyroid lobe. It is related to **recurrent laryngeal nerve**

- **Thyroid ima artery is branch from the arch of the aorta**

Superior thyroid vein

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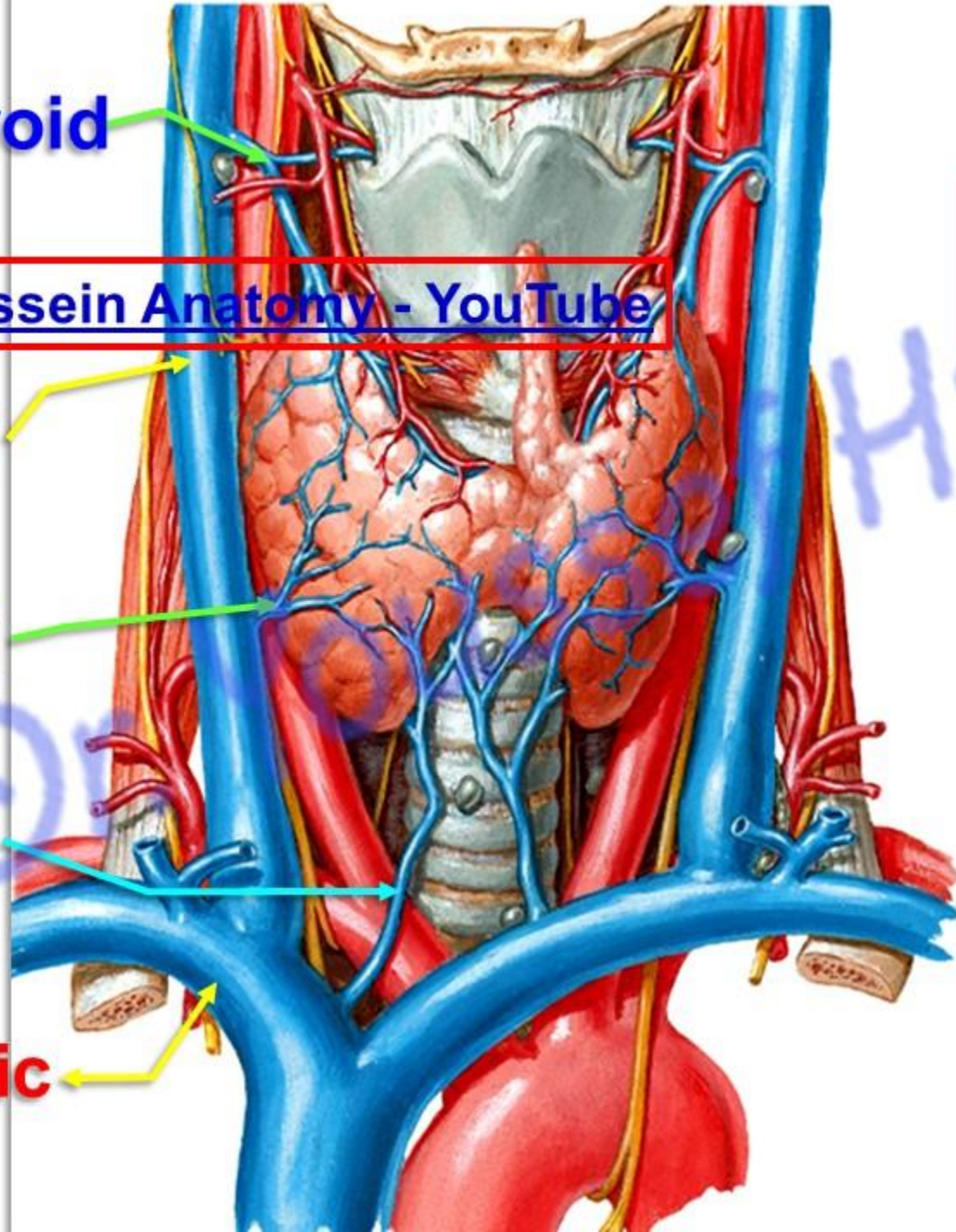
Venous drainage

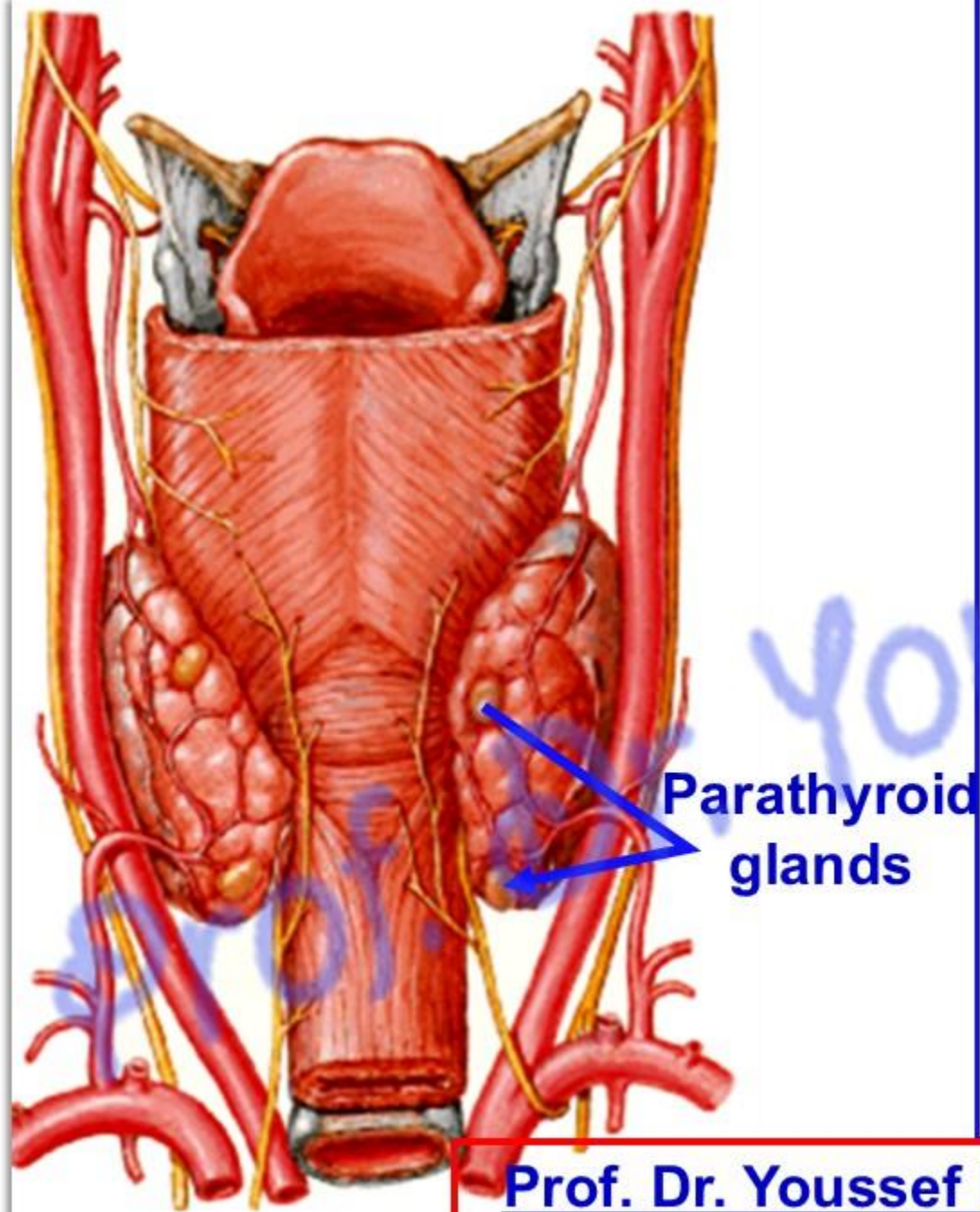
Internal jugular vein

Middle thyroid vein

Inferior thyroid vein

Brachiocephalic vein





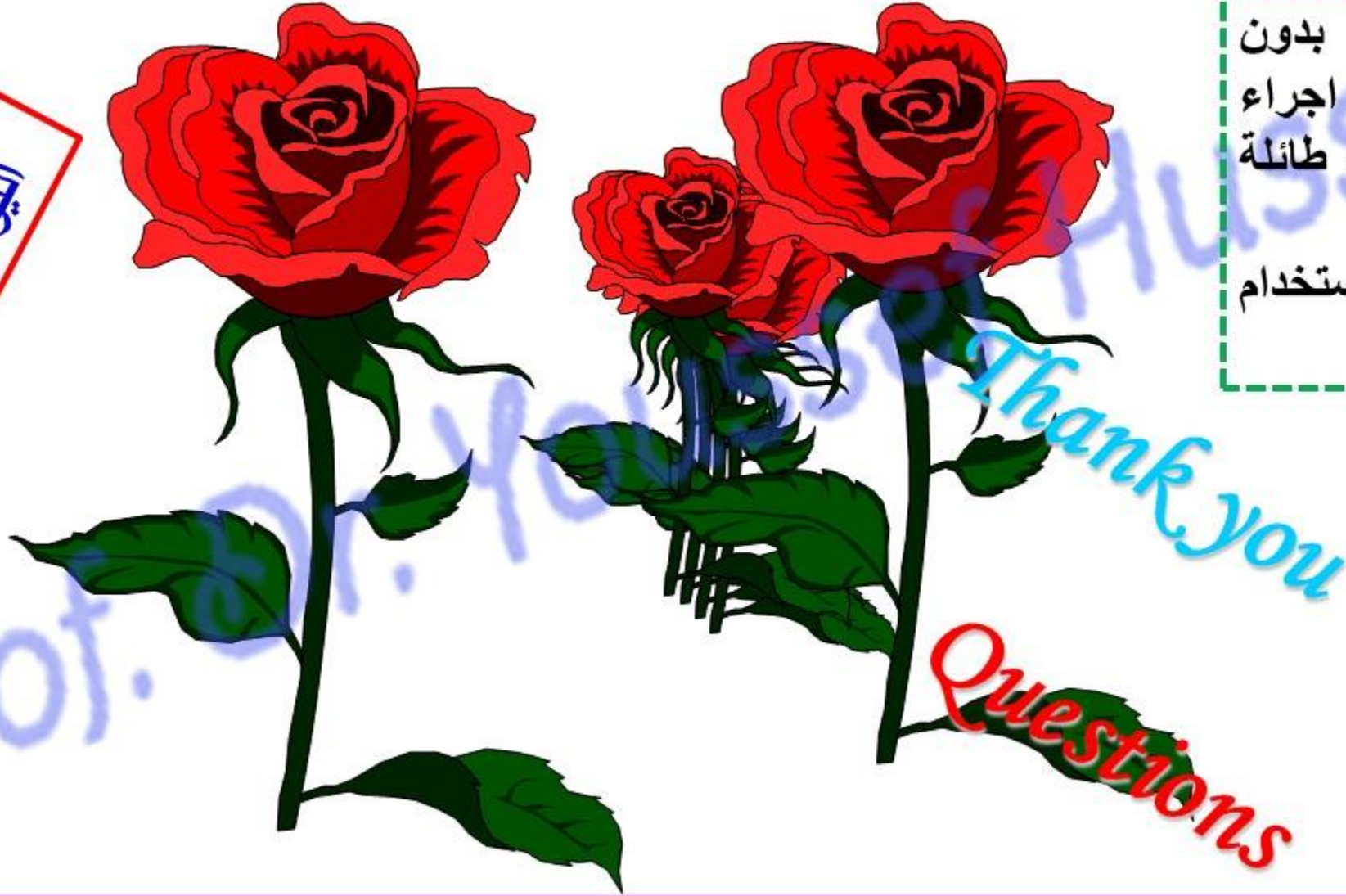
- Parathyroid glands

- Four yellowish brown ovoid in the posterior surface of thyroid gland
- They supplied by inferior thyroid vessels.
- **It secretes parathyroid hormones that regulates serum calcium**
- **Subtotal thyroidectomy** must be done to avoid injury of the parathyroid glands
- **If excised during thyroidectomy,** reimplantation in subcutaneous tissue, or muscle of the forearm (Brachioradialis Muscle) or neck (**Sternocleidomastoid Muscle**)

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Thank You
Questions

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