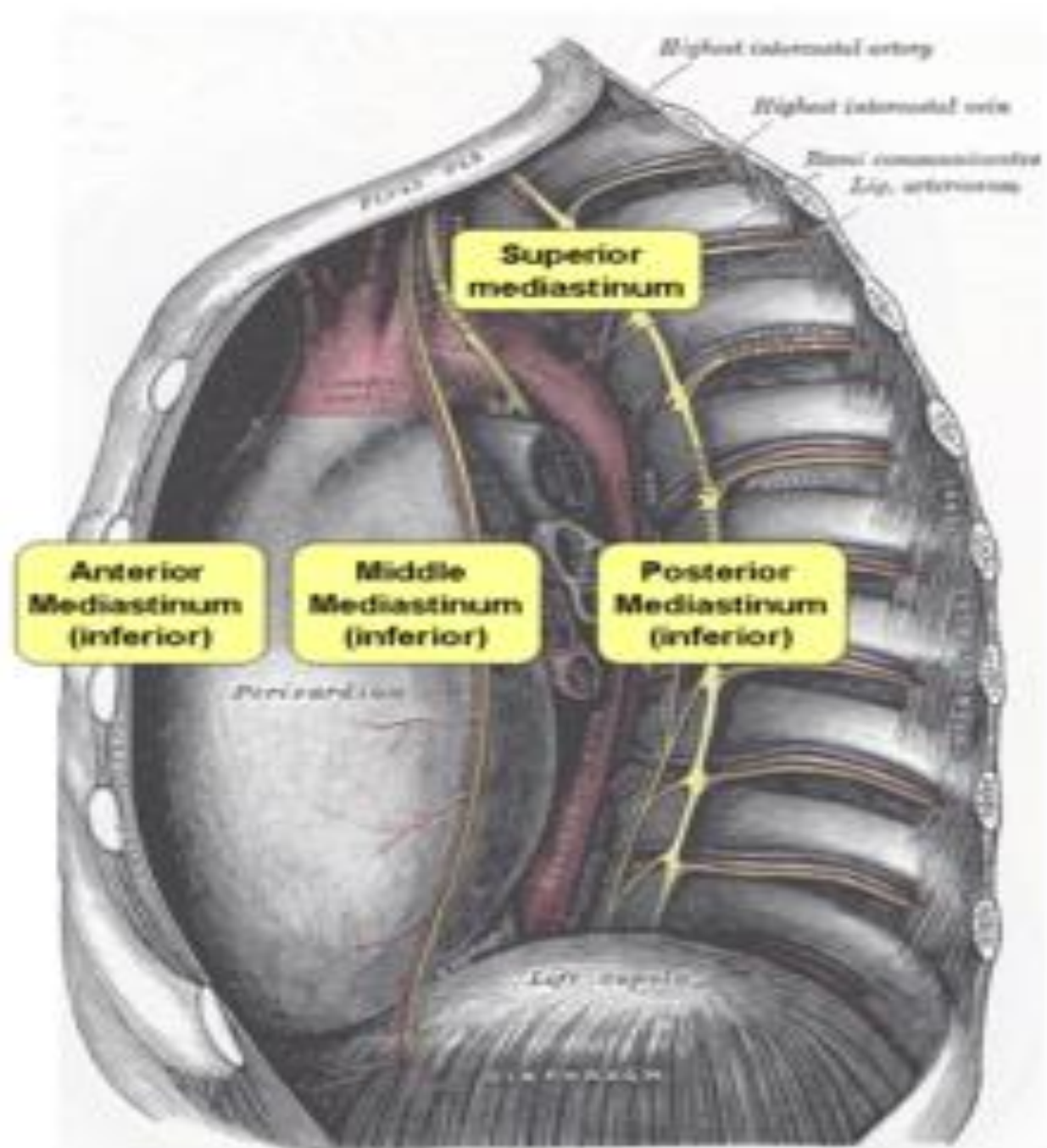
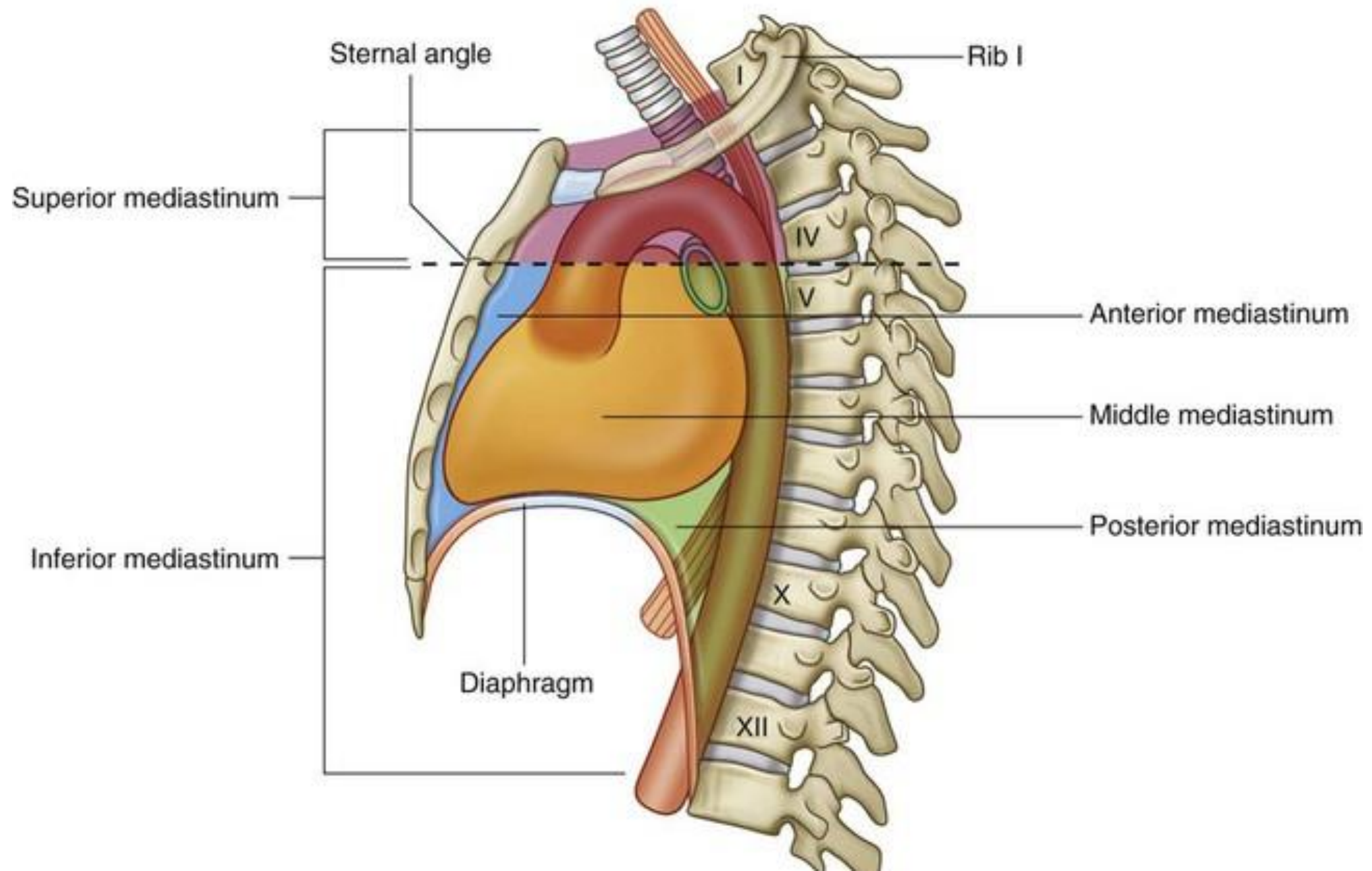
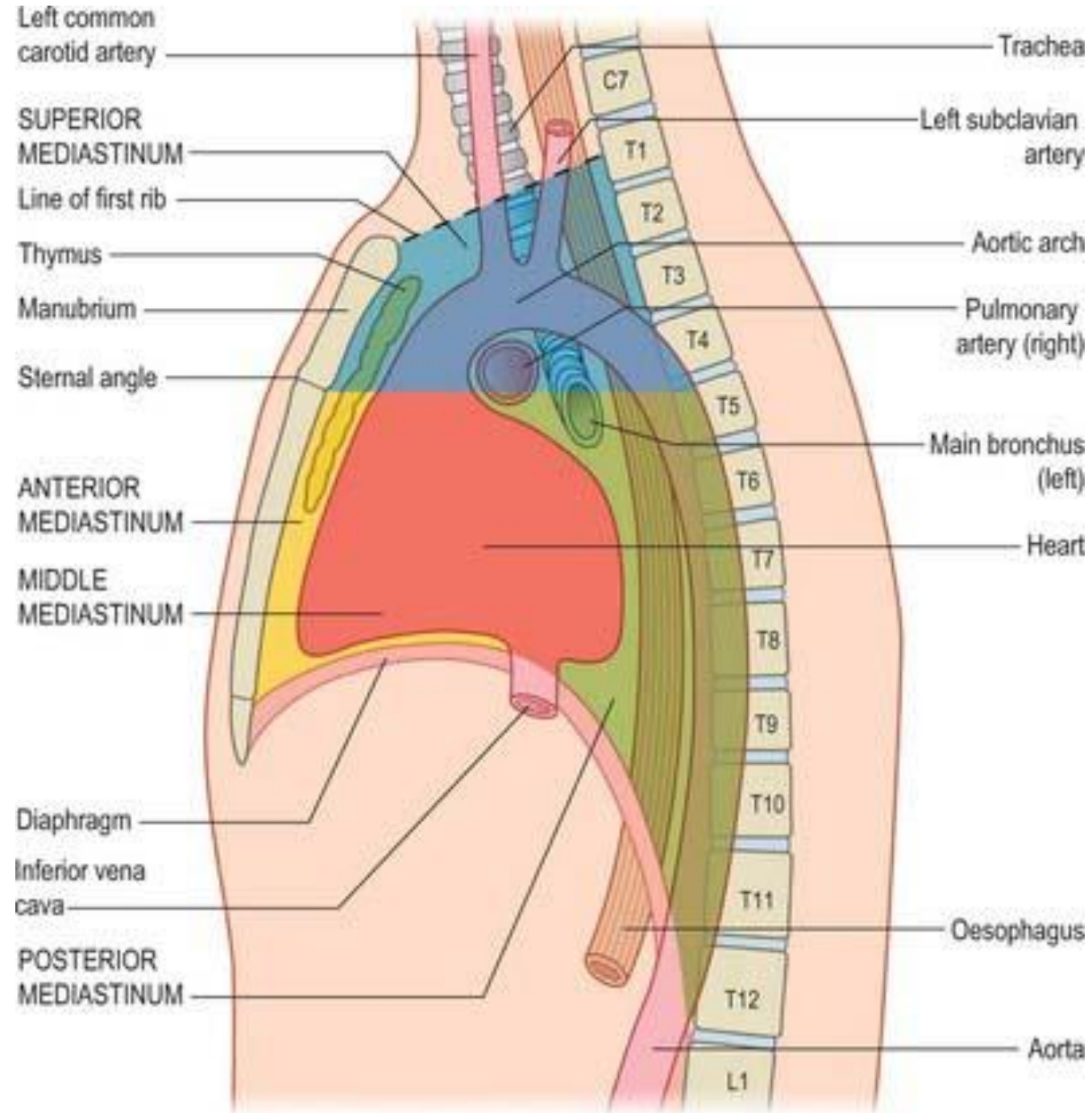


# Mediastinum

- The Mediastinum(mid way) is a group of structures in the thorax, surrounded by loose connective tissue.
- It is the central compartment of the thoracic cavity.
- It contains the heart, the great vessels of the heart, the esophagus, the trachea , the phrenic nerve, the cardiac nerve, the thoracic duct , the thymus and the lymph nodes of the central chest.







- The mediastinum lies between the right and left pleura.
- It extends from the sternum in-front to the vertebral column behind, and contain all the thoracic organs except lungs.
- The superior mediastinum extends from the upper level of the pericardium with it's upper limit at the superior thoracic aperture and it's lower limit at the thoracic plane which runs from the sternal angle ( the joint between the manubrium and the body of the sternum) to the intervertebral disc of T4-T5.

# Significant findings at the level of thoracic plane

1. The start and end of the aortic arch.
2. The upper margin of the superior vena cava.
3. The crossing of the thoracic duct.
4. The bifurcation of trachea.
5. The bifurcation of the pulmonary trunk.
6. The level of the sternal angle (Angle of Louis)
7. The level of rib 2 where it attaches to the sternum via second costal cartilage.
8. The body of vertebrae T4.
9. The drainage of azygos vein in to the superior vena cava.
10. The left recurrent laryngeal nerve recurring under ligamentum arteriosum.
11. Tracheo bronchial lymph nodes
12. Superficial and deep parts of cardiac plexus.

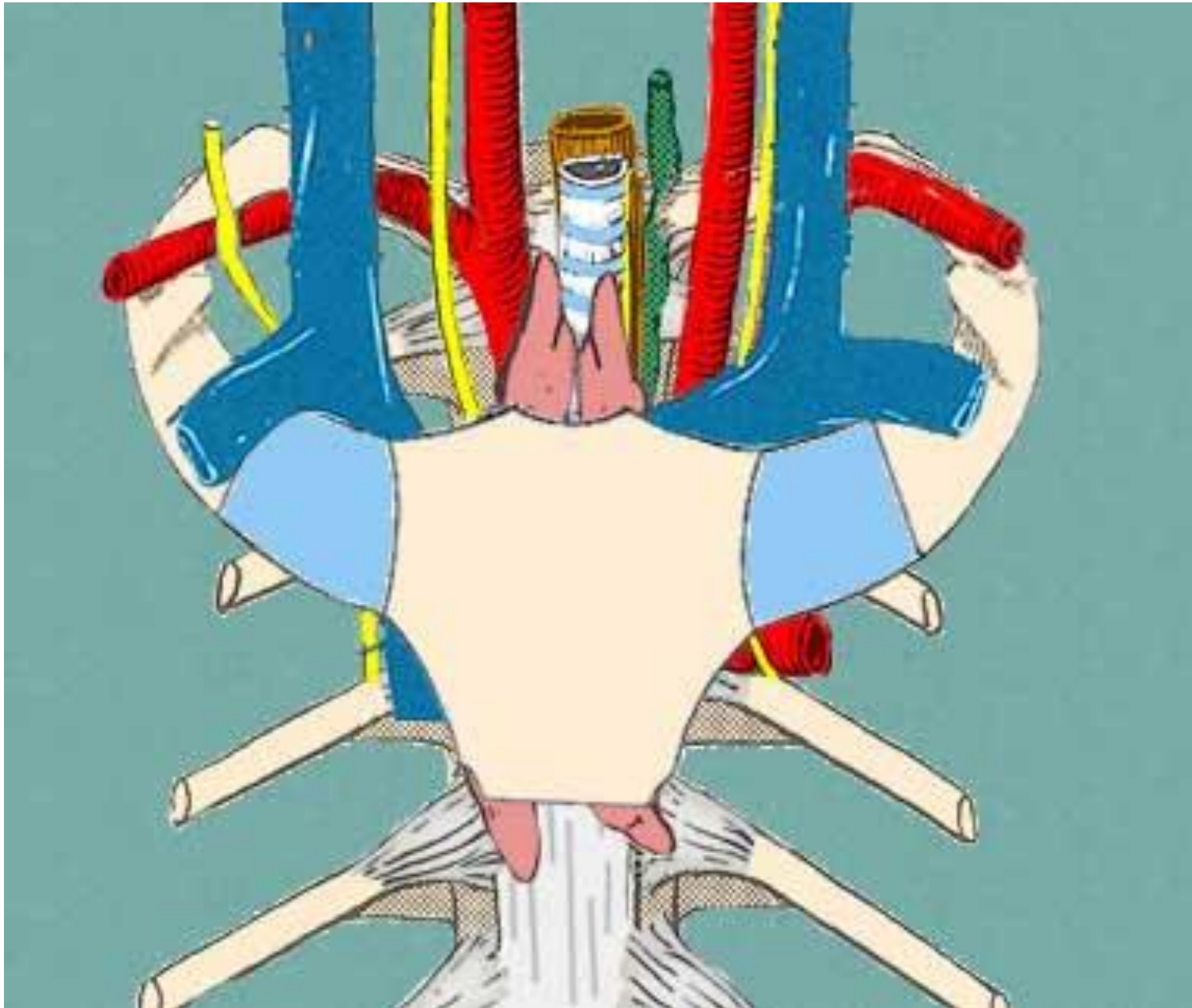
# Superior Mediastinum

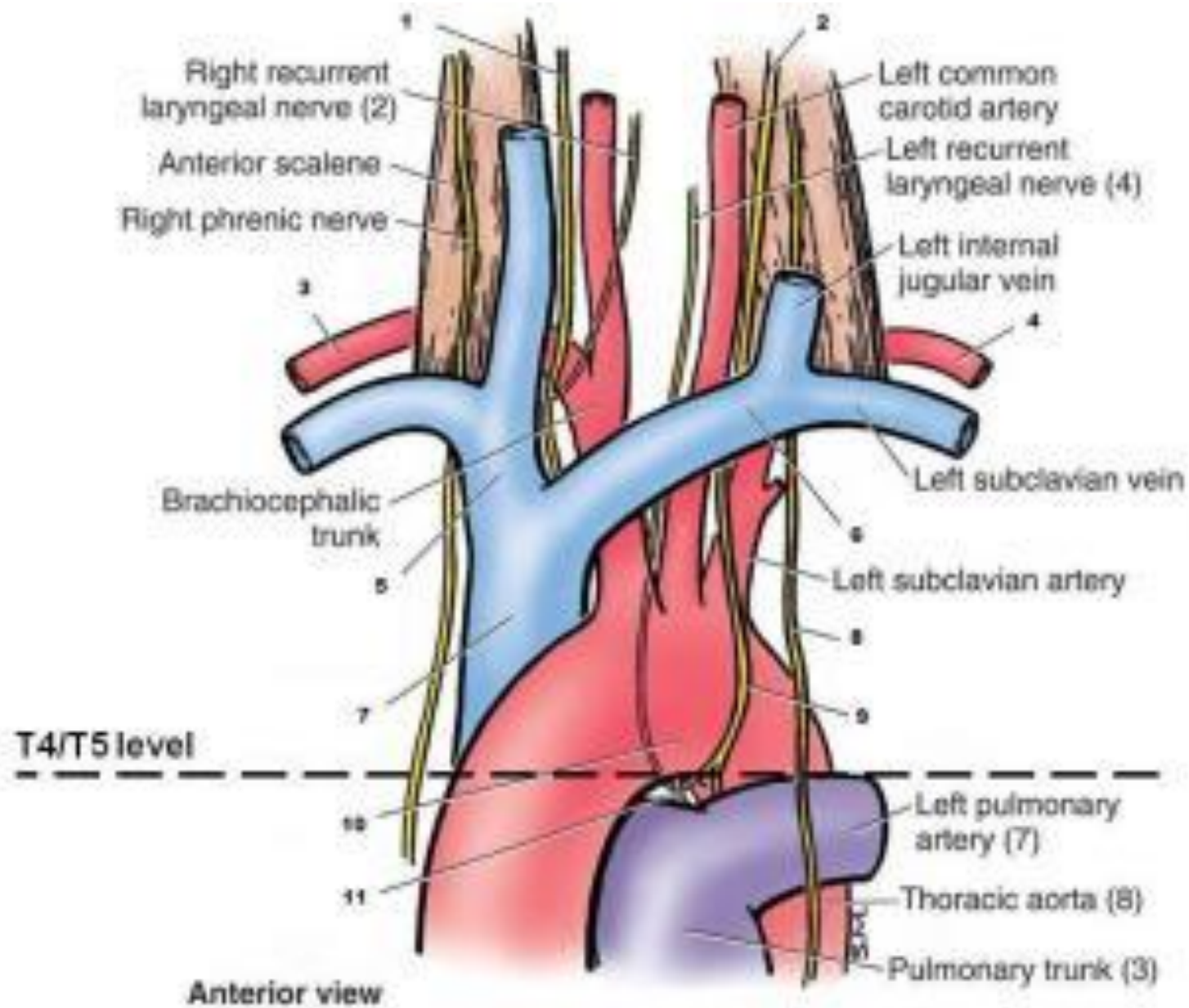
- Superior mediastinum is bounded by
  1. Superiorly by the thoracic inlet, the upper opening of the thorax.
  2. Inferiorly by the transverse thoracic plane, a slightly oblique plane passing posteriorly from the junction of the manubrium and body of the sternum ( sternal angle of Louis) to the junction of the fourth and fifth thoracic vertebrae. (see also thoracic vein).
  3. Laterally by the plurae.
  4. Anteriorly by the manubrium of the sternum.
  5. Posteriorly by the first four thoracic vertebral bodies.

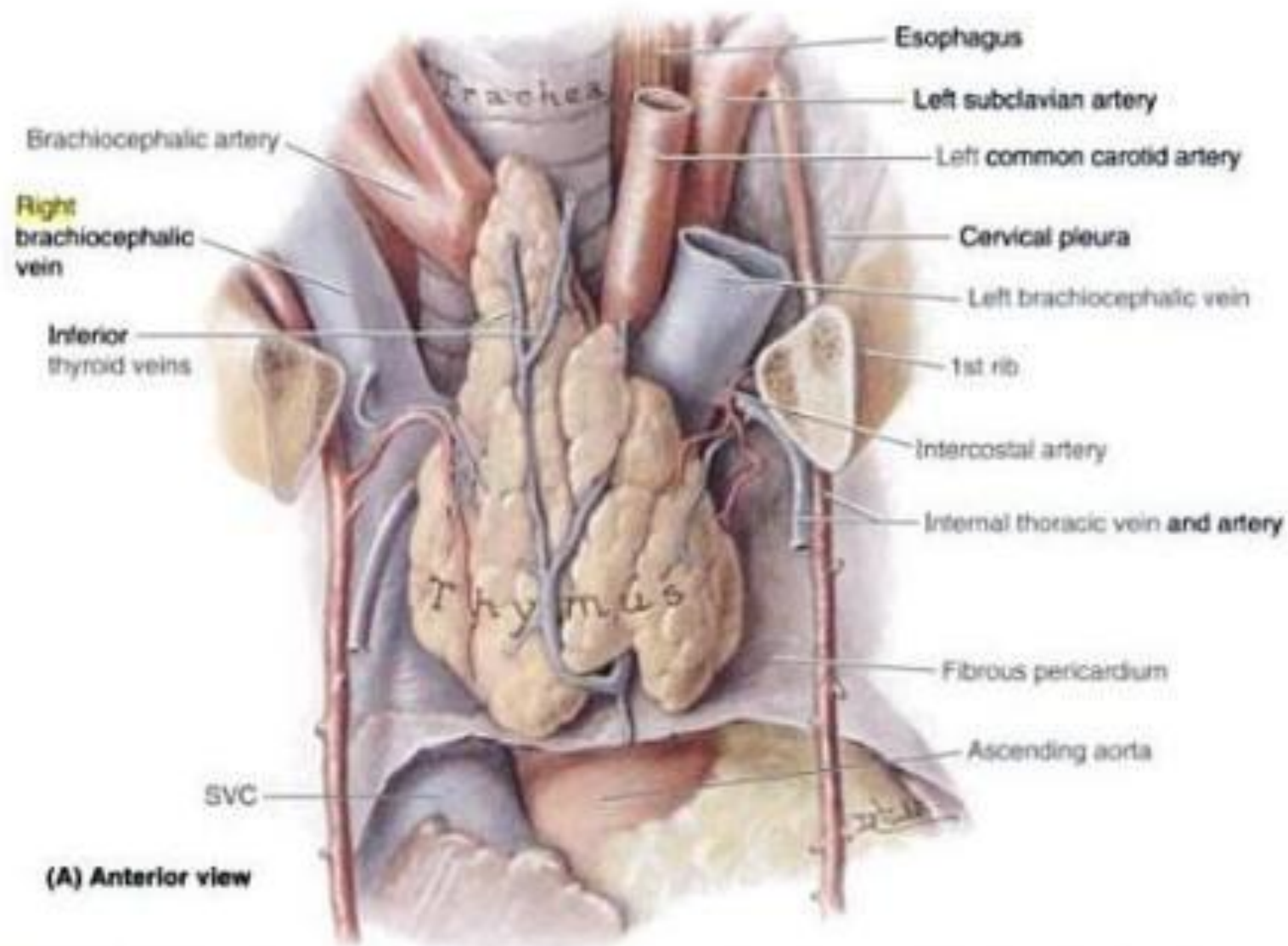


- Arteries aortic arch.
- Brachiocephalic artery
- Thoracic portion of the left common carotid and the left subclavian.
- Veins , brachiocephalic veins and
- Upper half of the superior vena cava.
- Left highest intercostal vein
- Nerves vagus nerve
- Cardiac nerve
- Superficial and deep cardiac plexuses.
- Phrenic nerve.
- Left recurrent laryngeal nerve.

- Trachea
- Esophagus
- Thoracic duct
- Remaining of thymus
- Some lymph glands
- Anterior longitudinal ligament.







**Figure 1.55. Dissections of superior mediastinum. A.** In this superficial dissection, the sternum and ribs have been excised and the pleurae removed. It is unusual to see such a distinct thymus in an adult; usually it is impressive during puberty but subsequently regresses and becomes largely replaced by fat and fibrous tissue. SVC, superior vena cava.

# Anterior mediastinum

- Bounded
- Laterally pleura
- Posteriorly by the pericardium
- Anteriorly by the sternum, the left transverse thoracic and the fifth , sixth and seventh costal cartilage.
- Contents quantity of loose areolar tissue
- Some lymphatic vessels which ascends from the convex surface of the liver
- Two or three anterior mediastinal lymph nodes
- The small mediastinal branches of the internal thoracic artery
- Thymus

# Middle Mediastinum

- Contains the heart
- Enclosed in the pericardium
- The ascending aorta
- The lower half of the superior vena cava with the azygos vein opening in to it.
- The bifurcation of the trachea and the two bronchi.
- The pulmonary artery dividing in to it's two branches.
- The right and left pulomanary veins.
- The phrenic nerves
- Some bronchial lymphatic glands
- The pericardiophrenic vessels

# Posterior mediastinum

- It's bounded
  - Anteriorly by the pericardium (in front of )
  - Inferiorly by the thoracic surface of the diaphragm (below)
  - Superiorly by the transverse thoracic plane (above). This plane is marked by an imaginary line travelling through the manubriosternal joint to the dividing line between the fourth and fifth thoracic vertebrae.
  - Posteriorly by the bodies of the vertebral column from the lower border of the fifth to twelfth thoracic vertebra. (behind)
  - Laterally by the mediastinal pleura (on either side)



# Contents

- Artery thoracic part of the descending aorta
- Veins –azygos vein
- The hemi azygos vein and the accessory hemi azygos vein
- Nerve- Vagus nerve
- splanchnic nerve
- Sympathetic chain
- Esophagus
- Thoracic duct
- Some lymph glands

## **Mediastinum:**

It is the partition between the two pleural cavities and lungs. It includes a large number of structures  
It is subdivided into:

- Superior mediastinum
- Inferior mediastinum : anterior, middle and posterior

### **Superior mediastinum:**

Esophagus  
Trachea  
Arch of Aorta  
Big branches of Aortic arch  
Brachiocephalic ( innominate) veins  
Upper half of superior vena cava  
Phrenic nerves  
Vagi nerves

### **Middle mediastinum:**

Pericardium  
Heart  
Pulmonary trunk  
Ascending Aorta  
Lower half of SVC  
Upper part of IVC  
Bifurcation of trachea

### **Posterior mediastinum:**

Esophagus  
Descending thoracic Aorta  
Azygos and hemiazygos veins  
vagi

Sternal  
angle

