

# Mediastinum

## superior mediastinum

**\*\* Boundaries:**

- ✓ **Anteriorly:** manubrium sterni.
- ✓ **Posteriorly:** upper 4 thoracic vertebrae.
- ✓ **Superiorly:** inlet of the thoracic cavity.
- ✓ **Inferiorly:** the imaginary plane from the sternal angle to the lower border of T4/T5.

**Contents of Superior Mediastinum**

- 1) **Sternothyroid and sternohyoid muscles.**
- 2) **Thymus gland.**
- 3) **Large veins:**
  - a. Left brachiocephalic vein.
  - b. Right brachiocephalic vein.
  - c. Upper half of superior vena cava.
- 4) **Large arteries:**
  - A. Arch of the aorta.
  - B. Brachiocephalic artery.
  - C. Left common carotid artery.
  - D. Left subclavian artery.
- 5) **Trachea**
- 6) **Oesophagus**
- 7) **Right and left vagus nerves.**
- 8) **Right and left phrenic nerves**
- 9) **Thoracic duct.**
- 10) **Lymph nodes.**
- 11) **Left recurrent laryngeal nerve.**
- 12) **Left superior intercostal vein.**
- 13) **Cardiac plexus**

## inferior mediastinum

### Anterior mediastinum

**\*\* Boundaries:**

- ✧ **Anteriorly:** The body of the sternum.
- ✧ **Posteriorly:** the pericardium and the heart.
- ✧ **Superiorly:** the horizontal transverse thoracic plane
- ✧ **Inferiorly:** the diaphragm.
- ✧ **On each side:** the pleura and lung.

**\*\* Contents**

- 1) **Thymus gland.**
- 2) **Superior and inferior of sterno-pericardial ligaments.** They connect the fibrous pericardium to the back of the body of the sternum.
- 3) **Sternocostalis muscle.**
- 4) **Few lymph nodes.**
- 5) **Loss areolar connective tissue** ★
- 6) **Mediastinal branches of internal thoracic artery.** ★

### Middle mediastinum

**\*\* Boundaries:**

- ✧ **Anteriorly:** anterior mediastinum.
- ✧ **Posteriorly:** posterior mediastinum.
- ✧ **Superiorly:** The horizontal transverse thoracic plane
- ✧ **Inferiorly:** the diaphragm
- ✧ **On each side:** the pleura and lung.

**\*\* Contents**

- 1) **The heart and pericardium**
- 2) **Beginning and termination of:**
  - A. **Aorta** and pulmonary trunk.
  - B. **SVC** and **IVC**.
  - C. **4 pulmonary veins.**

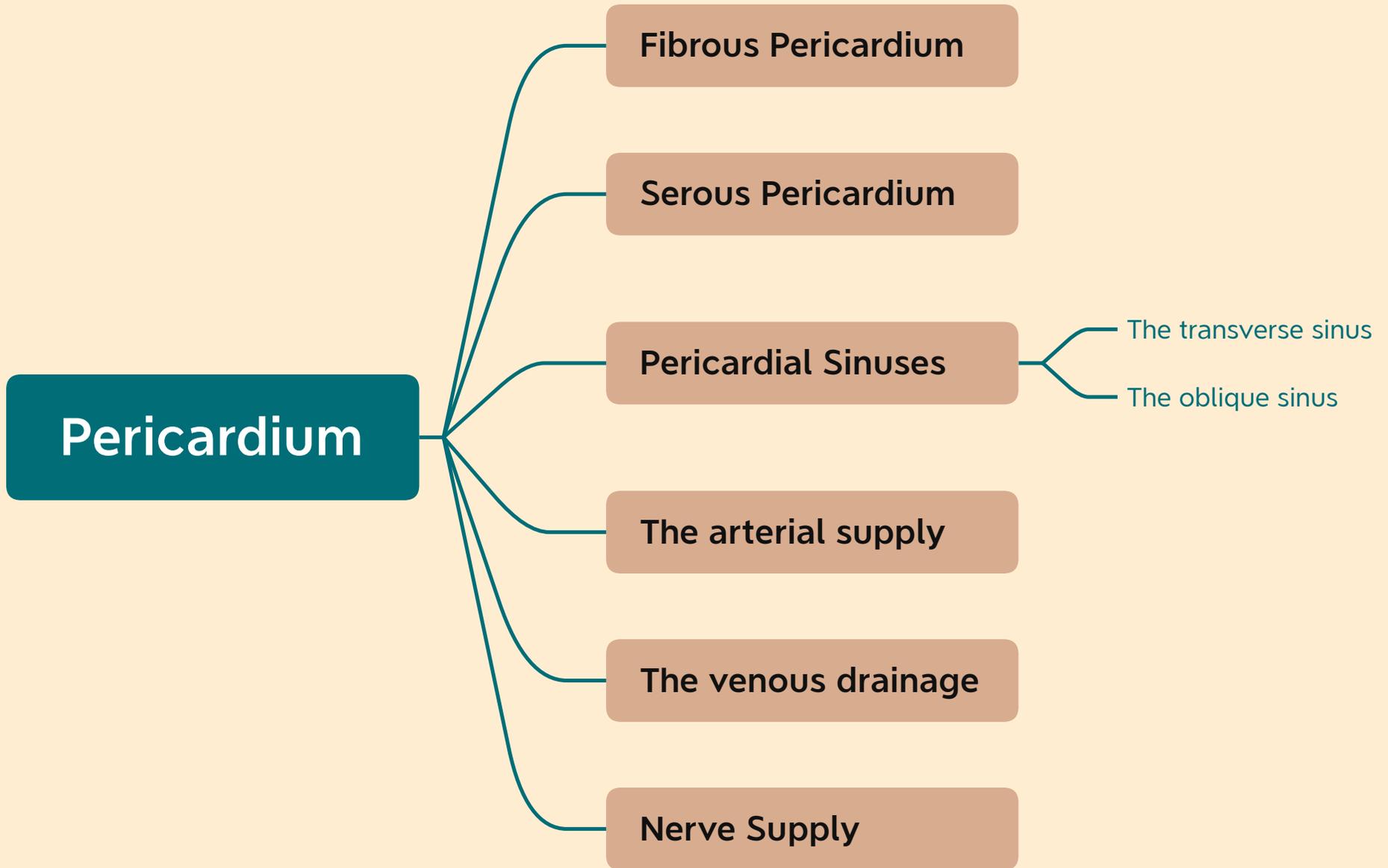
### Posterior mediastinum

**\*\* Boundaries:**

- ✓ **Anteriorly:** pericardium.
- ✓ **Posteriorly:** The bodies of T5 to T12 thoracic vertebrae.
- ✓ **Superiorly:** The horizontal transverse thoracic plane
- ✓ **Inferiorly:** diaphragm.
- ✓ **On each side:** pleura and lung.

**\*\* Contents**

- 1) **Oesophagus and oesophageal nerve plexus.**
- 2) **Descending thoracic aorta.**
- 3) **Thoracic duct.**
- 4) **Azygos vein.**
- 5) **Hemiazygos vein.**
- 6) **Accessory hemiazygos vein.**
- 7) **Right and left vagus nerves.**
- 8) **Sympathetic chains**
- 9) **Posterior mediastinal lymph nodes.**
- 10) **Pre-vertebral muscles.**
- 11) **Anterior longitudinal ligament.**



# Pericardial Sinuses.

	the transverse sinus	the oblique sinus
	passage above the heart	space behind the heart
Defination	Between <ul style="list-style-type: none"> <li>ascendingaorta and pulmonary trunk <small>Defination</small></li> <li>the superior vena cava, left atriumand pulmonary veins <small>Defination</small></li> </ul>	Between <ul style="list-style-type: none"> <li>the left atrium <small>Defination</small></li> <li>the fibrous pericardium — posterior to which lies the oesophagus. <small>Defination</small></li> </ul>
Formation	It is formed by the reflection of the visceral pericardium from the front of the 2 atria to the back of the ascending aorta and pulmonary trunk.	It is formed by the reflection of the visceral layer at the upper part of the posterior aspect of the left atrium to lined the fibrous pericardium.
Benefits	temporary ligature	A hand passed from below easily enters the oblique sinus, but the fingertips can only pass up as far as a double fold of serous pericardium that separates the oblique and transverse sinuses from each other
Boundaries	Anteriorly, ascending aorta and pulmonary trunk.	Anteriorly: posterior wall of the left atrium.
	Posteriorly, SVC and 2 atria.	Posteriorly: Fibrous pericardium which separate the sinus from the contents of the posterior mediastinum.
	Superiorly, Right pulmonary artery.	Superiorly: it is closed by reflection of the visceral layer from the back of the left atrium to fibrous pericardium.
	Inferiorly, reflection of the visceral pericardium from the front of the 2 atria to the back of the great vessels.	Inferiorly (opening of the sinus): continues with the pericardial cavity.  Right side: I.V.C and 2 right pulmonary veins.  Left side: 2 left pulmonary veins.

## الموضوع الرئيسي

	The arterial supply of the pericardium	The venous drainage of the pericardium	Nerve Supply of the Pericardium
mainly	branch of the internal thoracic artery — (the pericardiophrenic artery)	the brachiocephalic (or internal thoracic) veins — tributaries — Pericardiophrenic veins	fibrous pericardium and the parietal layer — the phrenic nerves.
		the azygos venous system — Variable tributaries	visceral layer { <ul style="list-style-type: none"> <li>branches of the sympathetic trunks</li> <li>the vagus nerves.</li> </ul>
Smaller contributions	terminal branch of the internal thoracic artery. — Musculophrenic artery		
	the first branches of the aorta. — Coronary arteries (visceral layer of serous pericardium only)		
	branches of the thoracic aorta { <ul style="list-style-type: none"> <li>Bronchial</li> <li>esophageal</li> <li>superior phrenic arteries</li> </ul>		