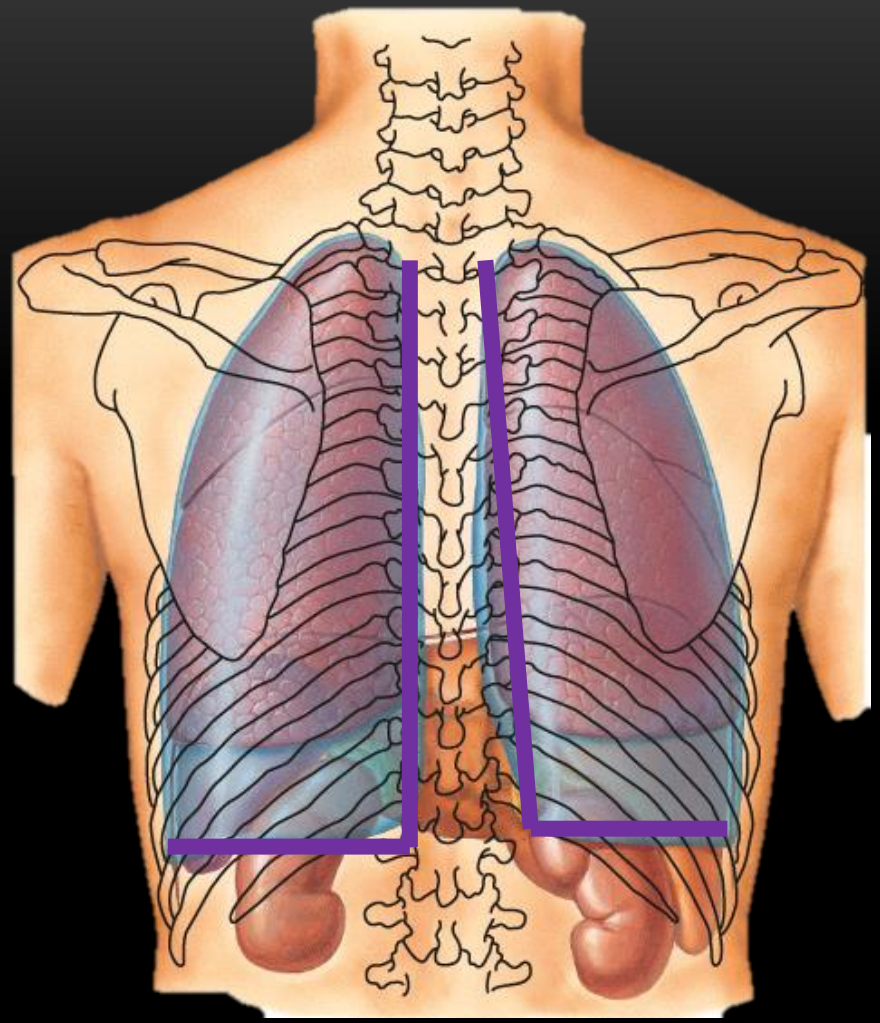
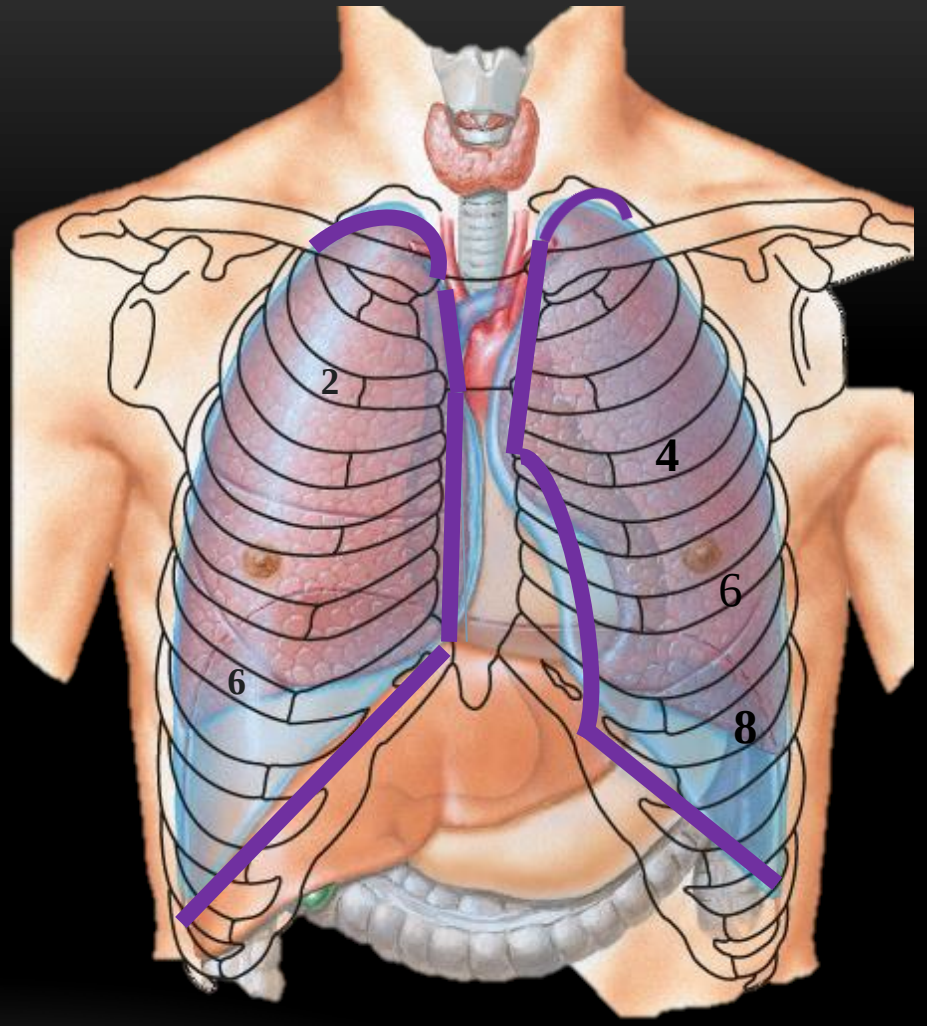
Pleura & Lungs





Surface Anatomy of the Pleura

Surface Anatomy of the Pleura

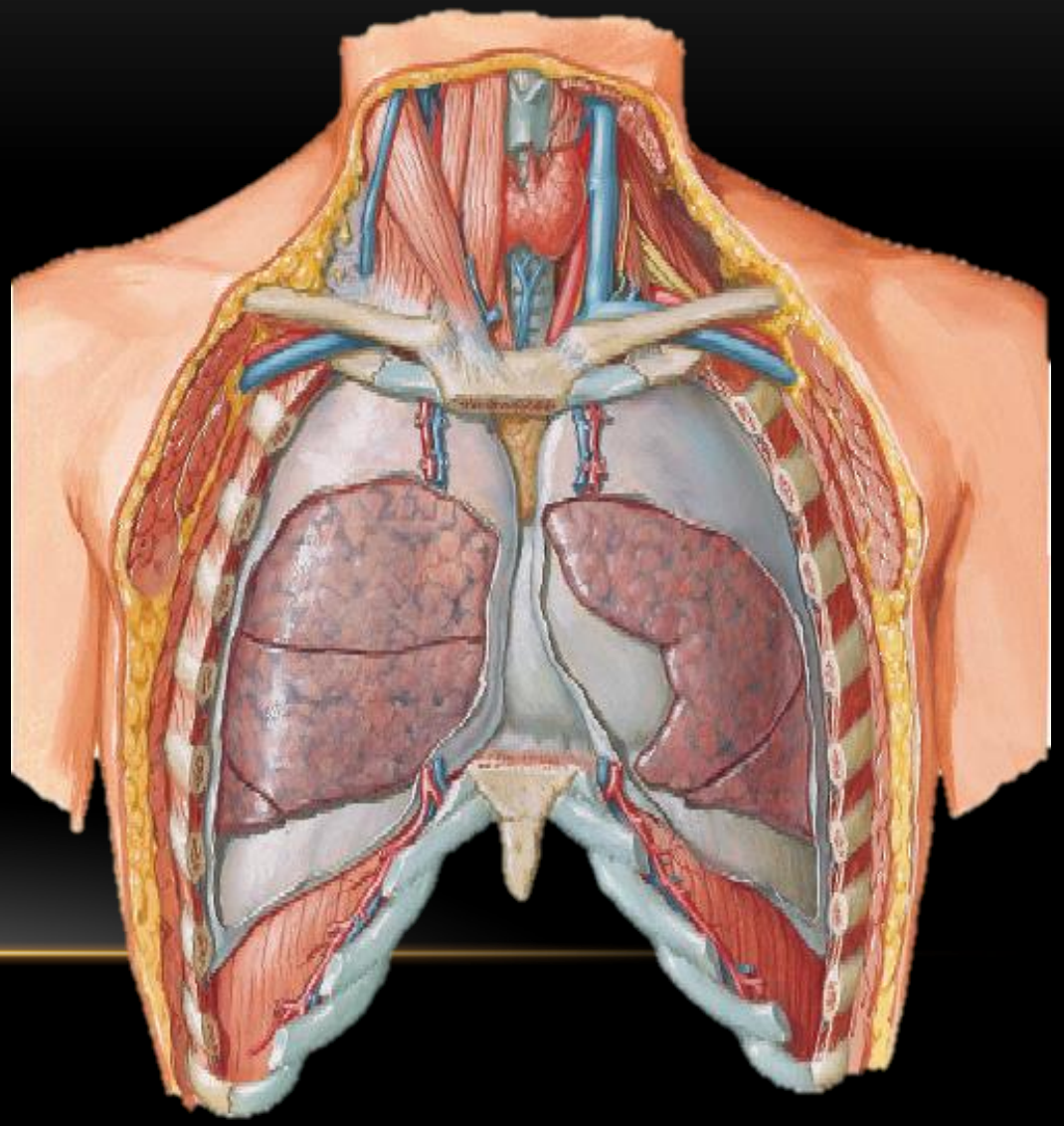
Apex (of each lung): lies one inch above the medial 1/3 of the clavicle.

Right pleura:

- **The anterior margin** extends vertically from sternoclavicular joint to 6th costal cartilage.
- **Inferior margin :** passes round chest wall, on the 8th rib in midclavicular line, 10th rib in mid-axillary line and finally reaching to the last thoracic spine.
- **Posterior margin :** along the vertebral column from the apex to the inferior margin.

Left pleura:

- **The anterior margin** extends from sternoclavicular joint to the level of 4th costal cartilage, then deviates for about 1 inch to left at 6th costal cartilage to form **cardiac notch.**



Surface Anatomy of the Lungs

Apex, anterior border and posterior border correspond nearly to the lines of pleura but are slightly away from the median plane.

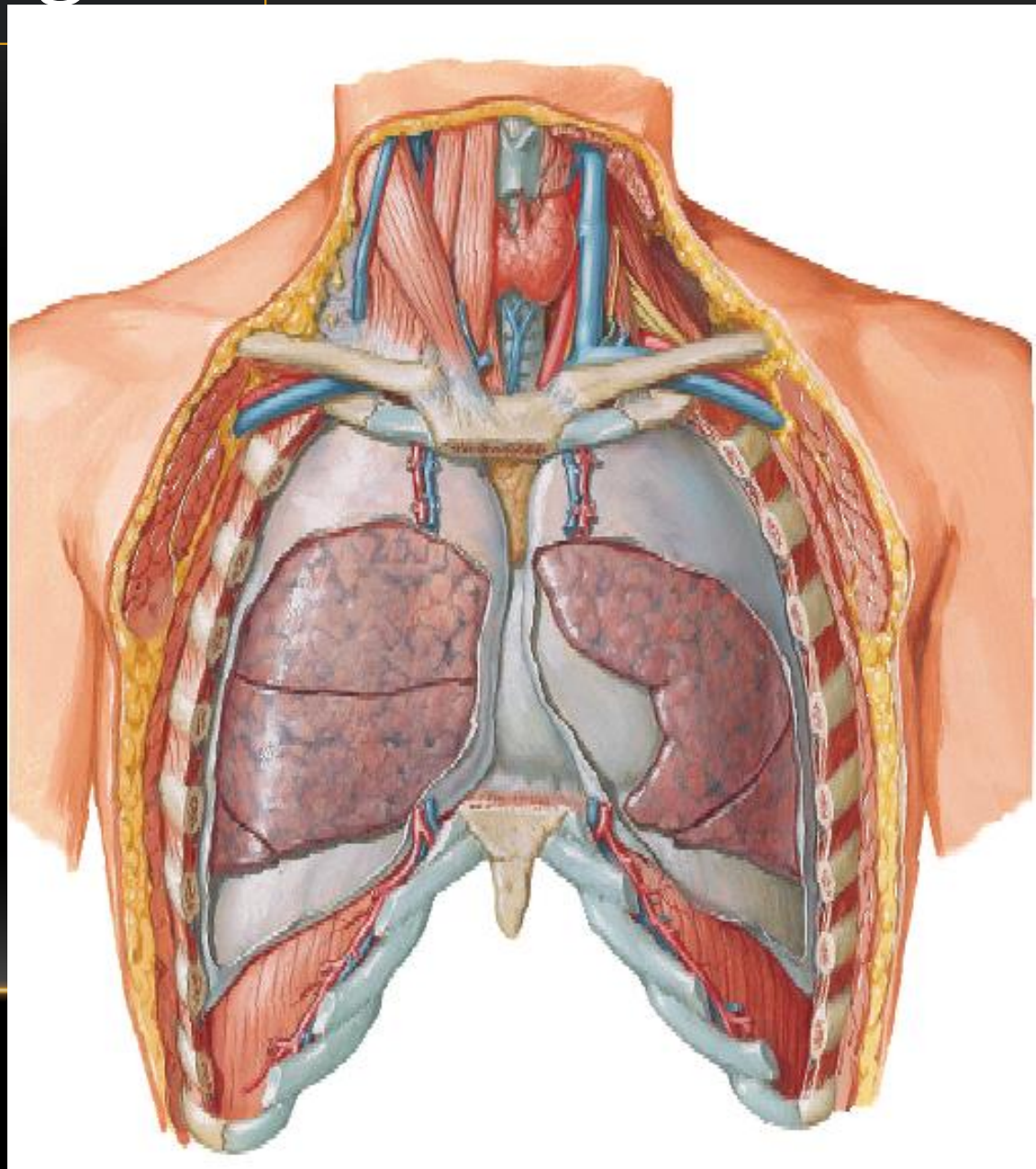
Inferior margin:

- as the pleura but more horizontal and finally reaching to the 10th thoracic spine.

Oblique fissure:

- represented by a line extending from 3rd thoracic spine, obliquely ending at 6th costal cartilage.

Transverse fissure only in right lung: represented by a line extending from 4th right costal cartilage to meet the oblique fissure.



The Pleura

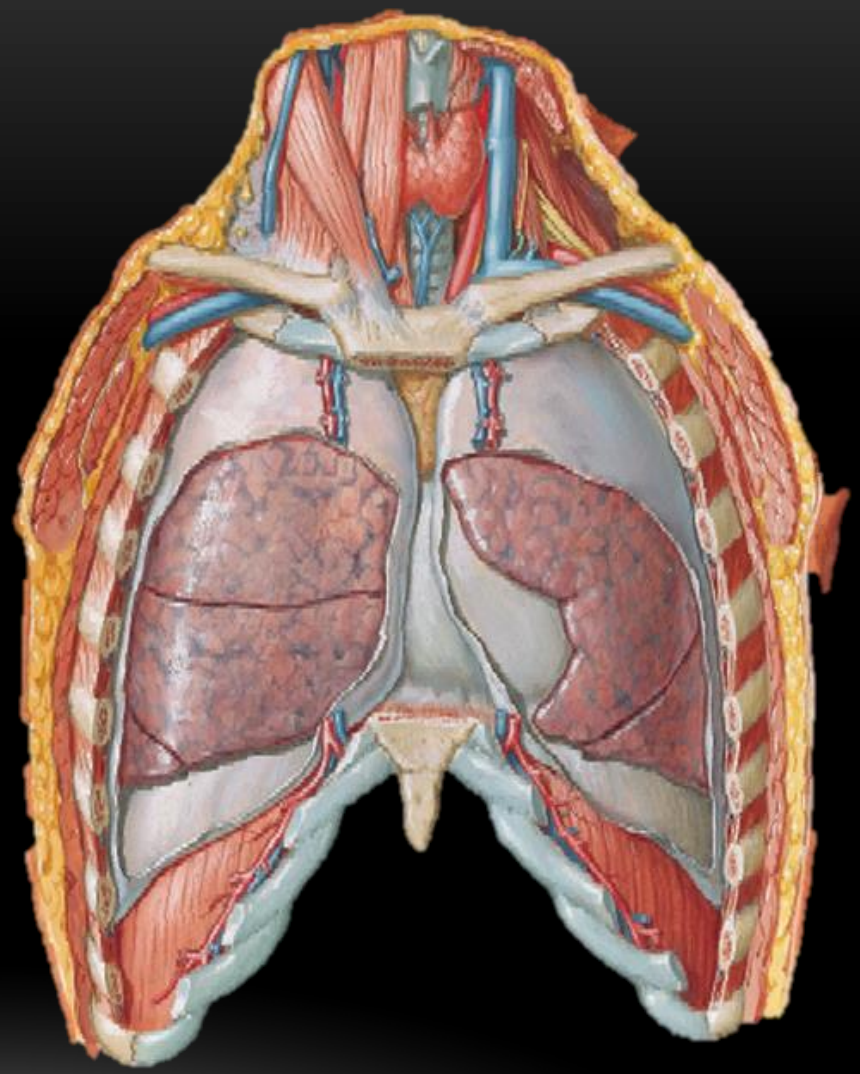
It is a closed serous sac which surrounds the lung and invaginated from its medial side by the root of lung.

It has 2 – layers:

- parietal pleura which lines the thoracic cavity.
- visceral pleura which surrounds the lung, separated by a pleural cavity.

Pleural cavity:

- Contains 5-10 ml. of serous fluid which lubricates both surfaces and allows the lungs to move free during respiration.



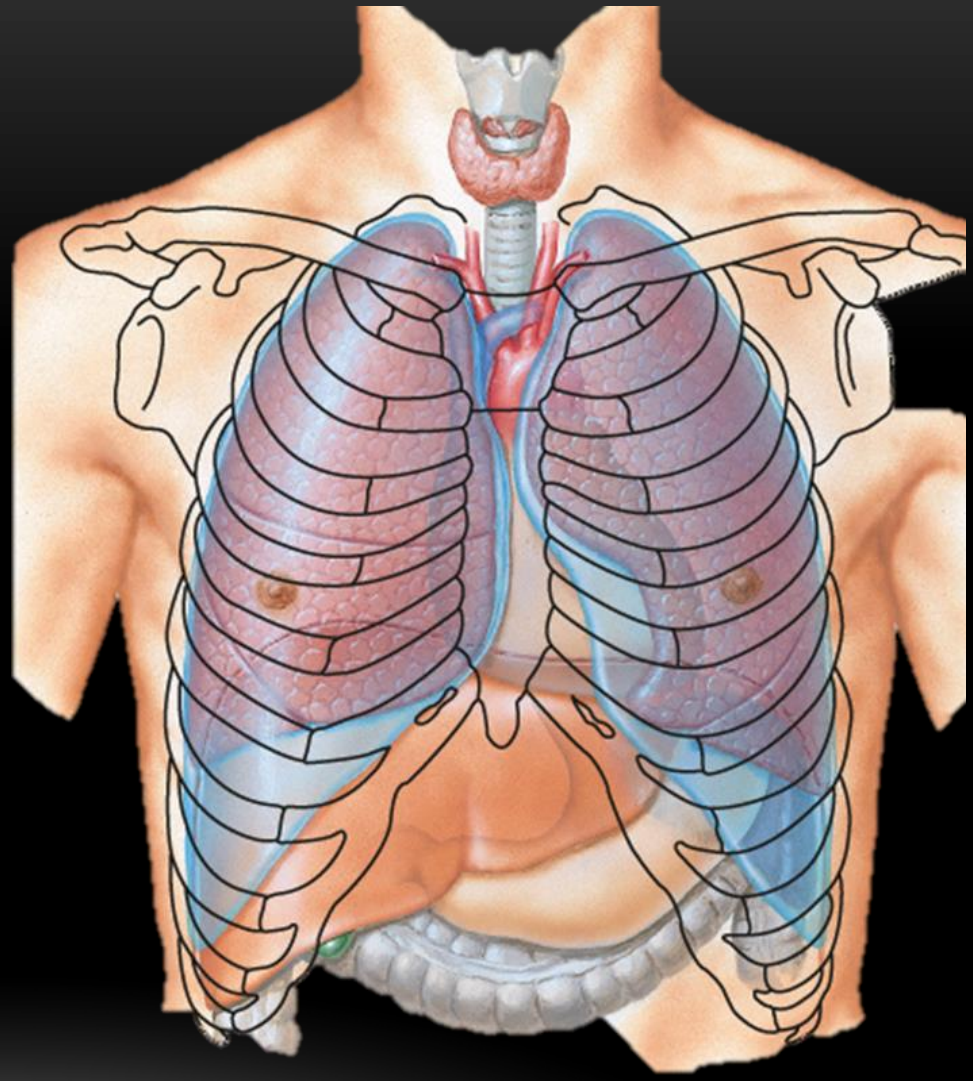
Parts of Parietal Pleura

1- Cervical pleura:
It is part of parietal pleura which protrudes up into the root of the neck.

2-Costal pleura:
It lines inner surface of ribs, costal cartilages, intercostal muscles and back of the sternum. Innervated by intercostal nerves.

3-Diaphragmatic pleura:
It covers upper surface of the diaphragm. Innervated medially by the phrenic nerve, and peripherally by the lower 6 intercostal nerves.

4-Mediastinal pleura: It covers mediastinal surface of the lung. Innervated by the phrenic nerve.



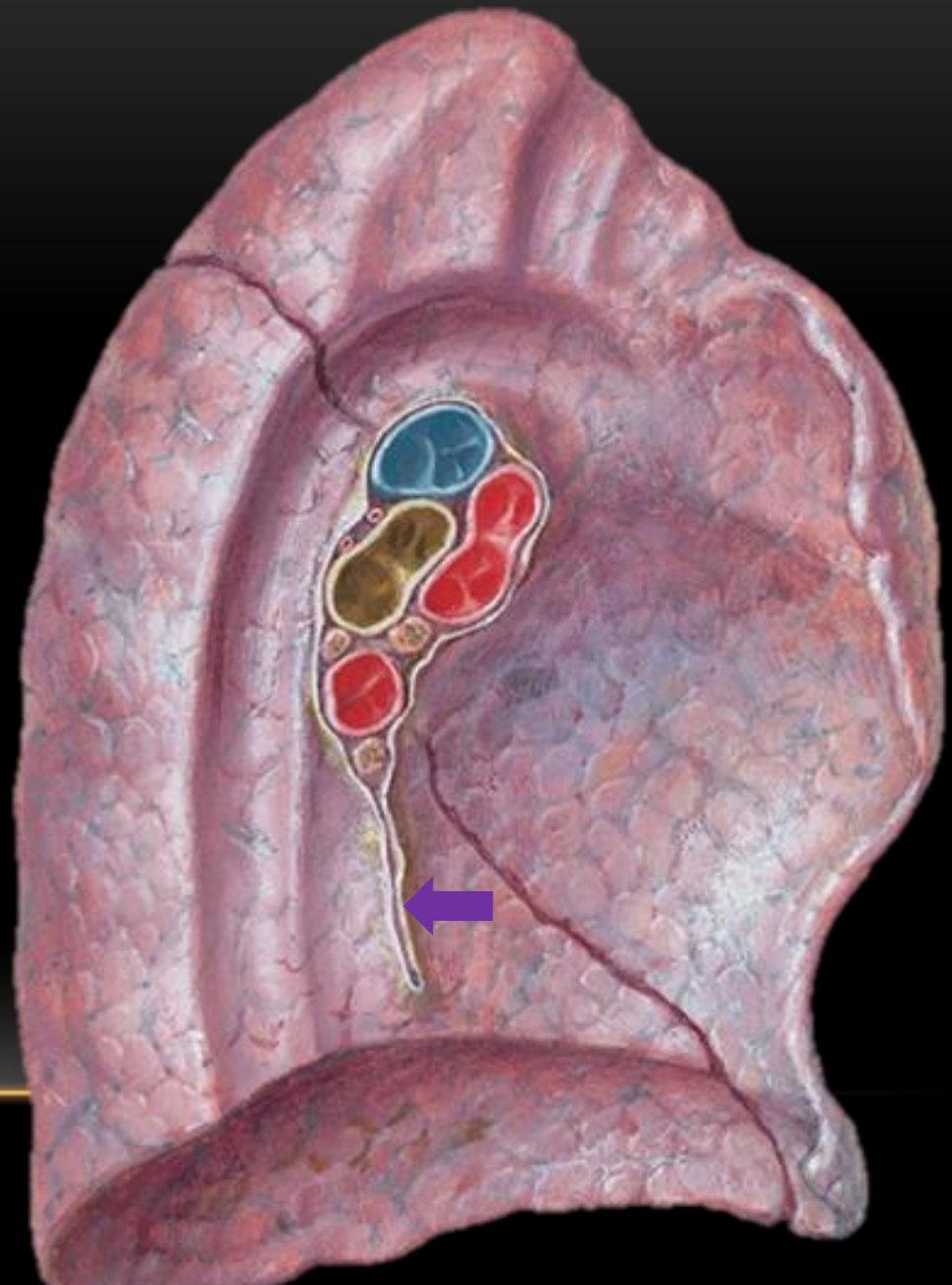
Visceral Pleura

Firmly covers outer surfaces of the lung and extends into its fissures.

The 2- layers (mediastinal parietal pleura & visceral pleura) are continuous with each other to form a tubular sheath (pleural cuff) that surrounding root of lung (vessels, nerves & bronchi) in the hilum of the lung.

On the lower surface of root of the lung, pleural cuff hangs down as a fold called pulmonary ligament.

Innervated by sympathetic fibres from pulmonary plexus.

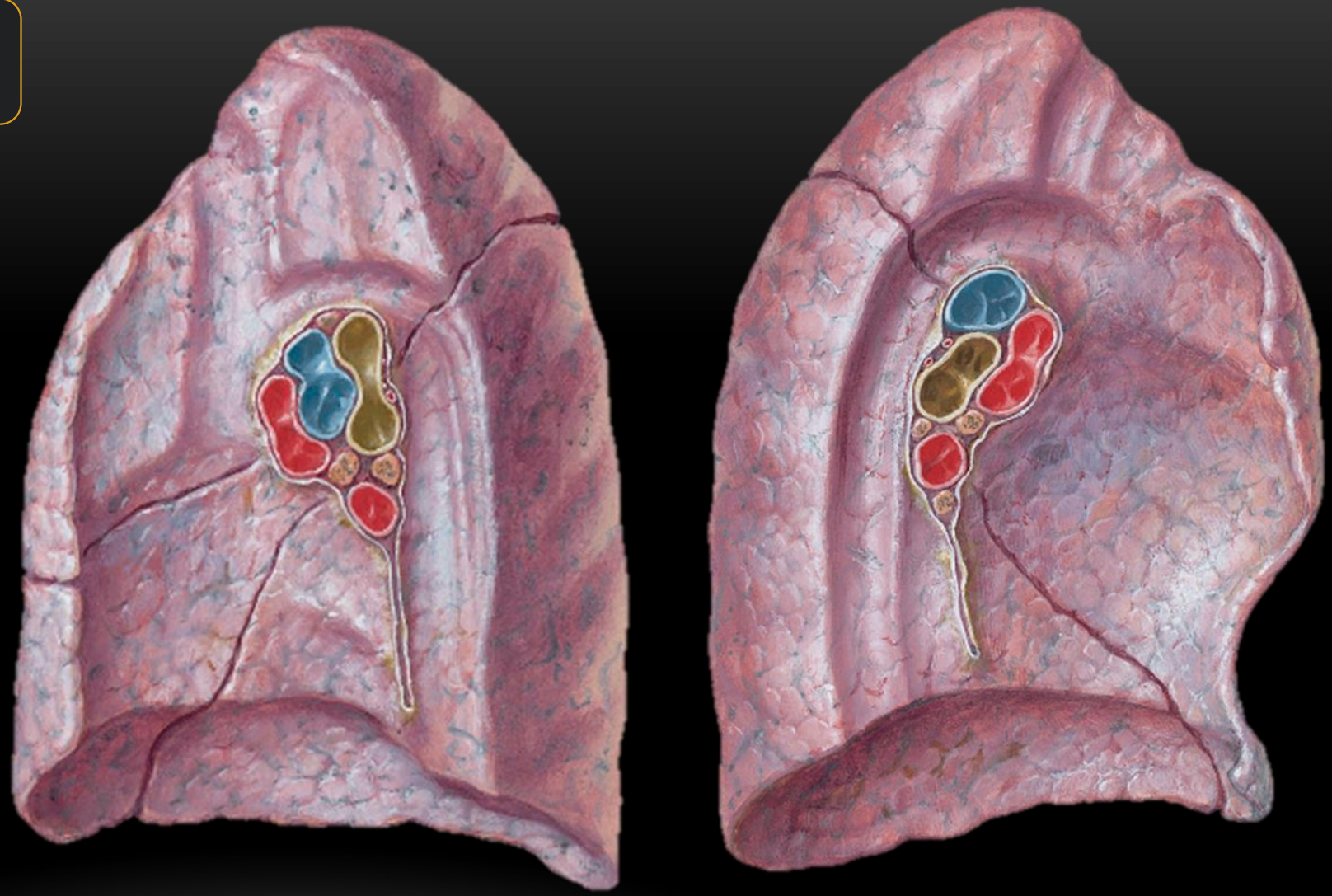


Lungs .. General ..1/3

Anterior border: is sharp, thin and overlaps the heart.

Anterior border of left lung presents a cardiac notch at its lower end + thin projection called the lingula below the cardiac notch.

Posterior border : is rounded, thick and lies beside the vertebral column



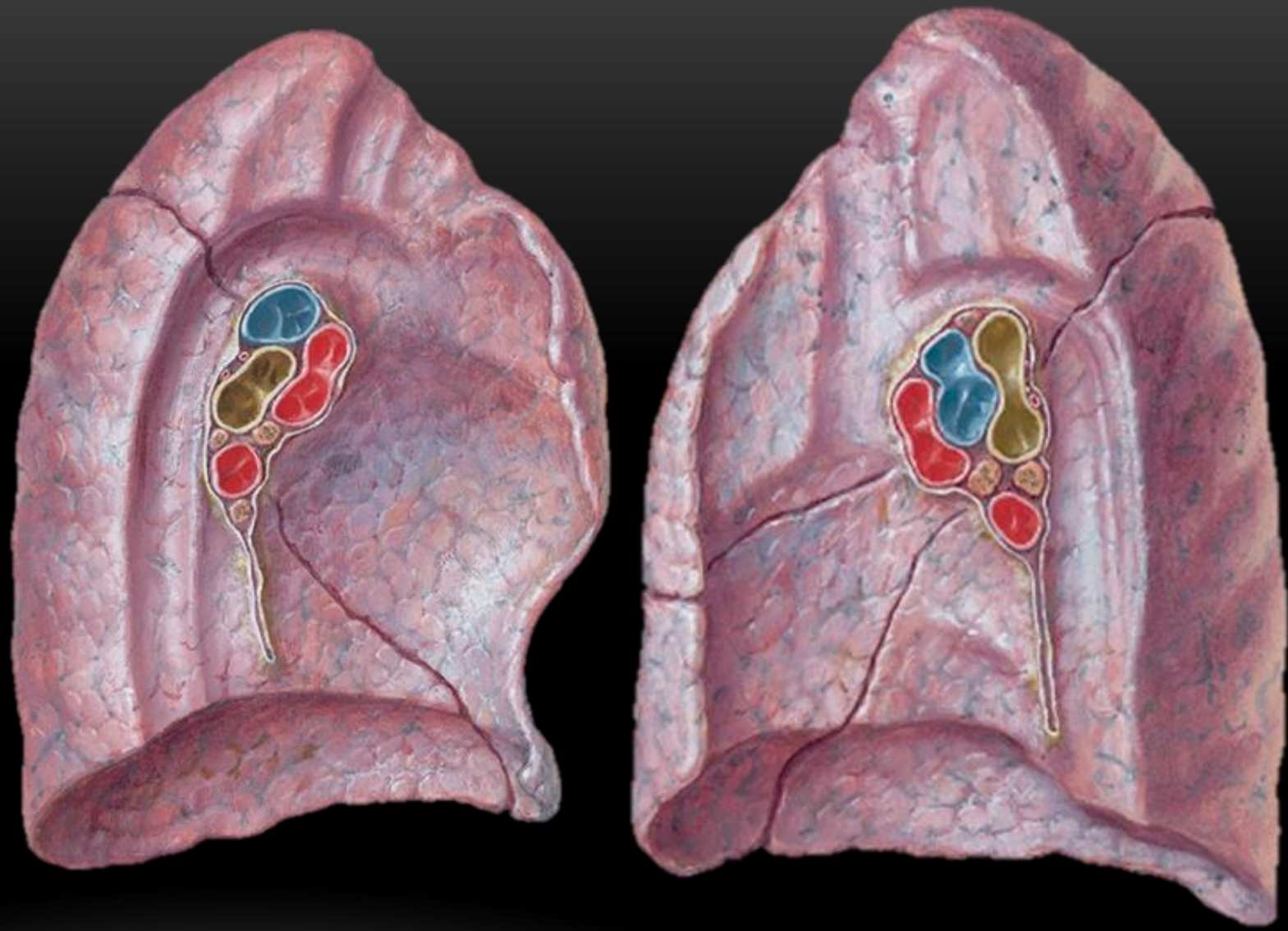
Lungs .. General ..2/3

The lung is conical in shape.

- It has an apex, a base and 2 surfaces.
- The costal surface of each lung borders the ribs (front and back).
- On the medial (mediastinal) surface, the bronchi, blood vessels, and lymphatic vessels enter the lung at the hilum.

Apex: projects into root of the neck (one inch above the medial 1/3 of the clavicle) and it is covered by cervical pleura.

Base: (inferior= diaphragmatic surface) is concave and rests on the diaphragm.



Lungs .. General ..3/3

Costal surface:

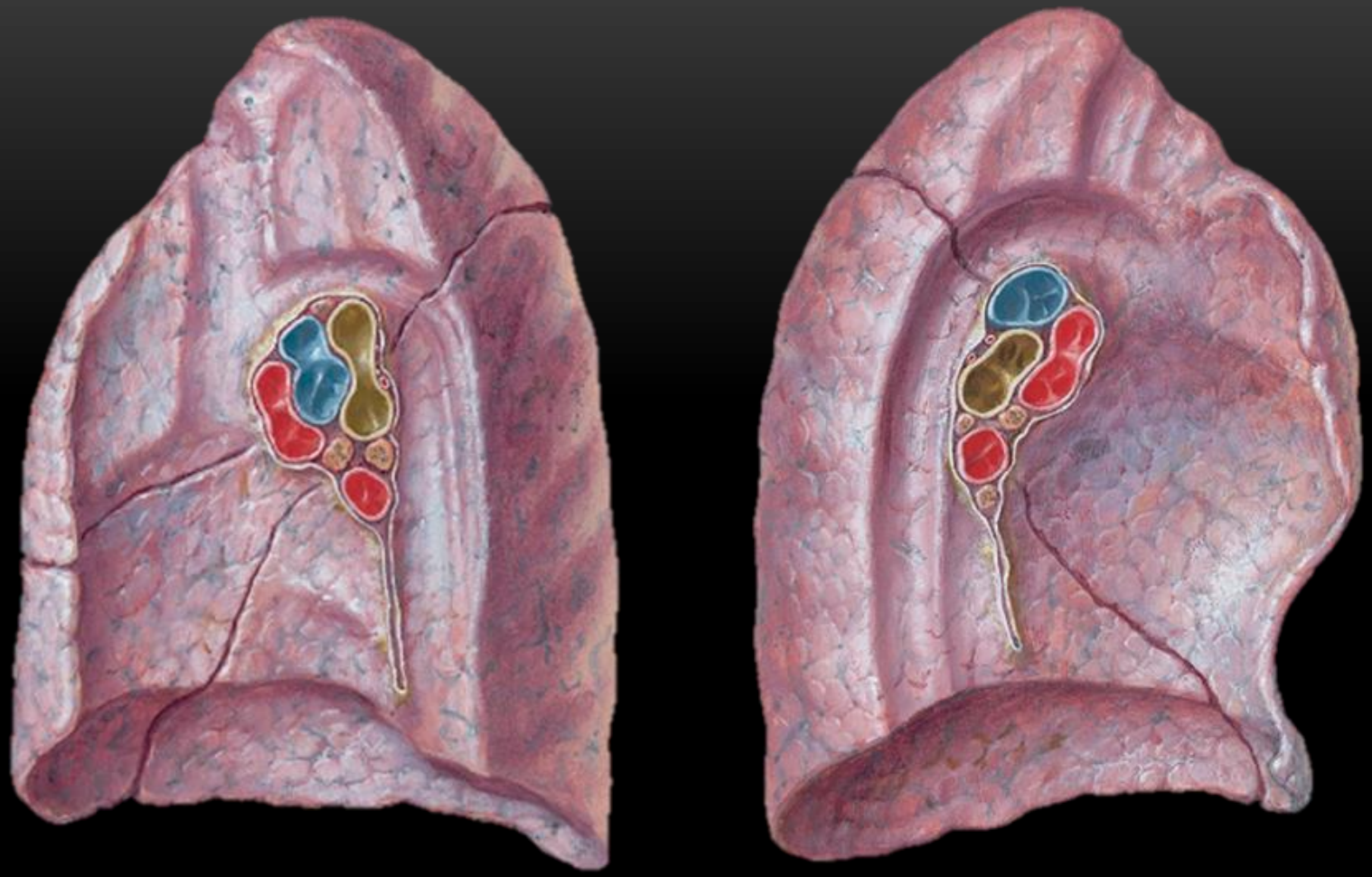
- Convex.
- Covered by costal pleura which separates lung from: ribs, costal cartilages & intercostal muscles.

Medial surface: It is divided into 2 parts:

- Anterior (mediastinal) part:
- Contains a hilum in the middle (it is a depression in which bronchi, vessels, & nerves forming the root of lung).

Posterior (vertebral) part:

- It is related to: bodies of thoracic vertebrae, intervertebral discs, posterior intercostal vessels & sympathetic trunk.



Right Vs Left Lung

	Right Lung	Left Lung
Number of Lobes	3	2
Number of Fissures	2	1
Volume	Larger	Smaller
Number of Bronchi	2	1
Shape	Shorter and Wider	Narrower but slightly longer
Base	More concave	Less concave
Weight	Heavier	Lighter
Cardiac Notch	Absent	Present
Lingula	Absent	Present
Hilum	Has two bronchi	Has one bronchus