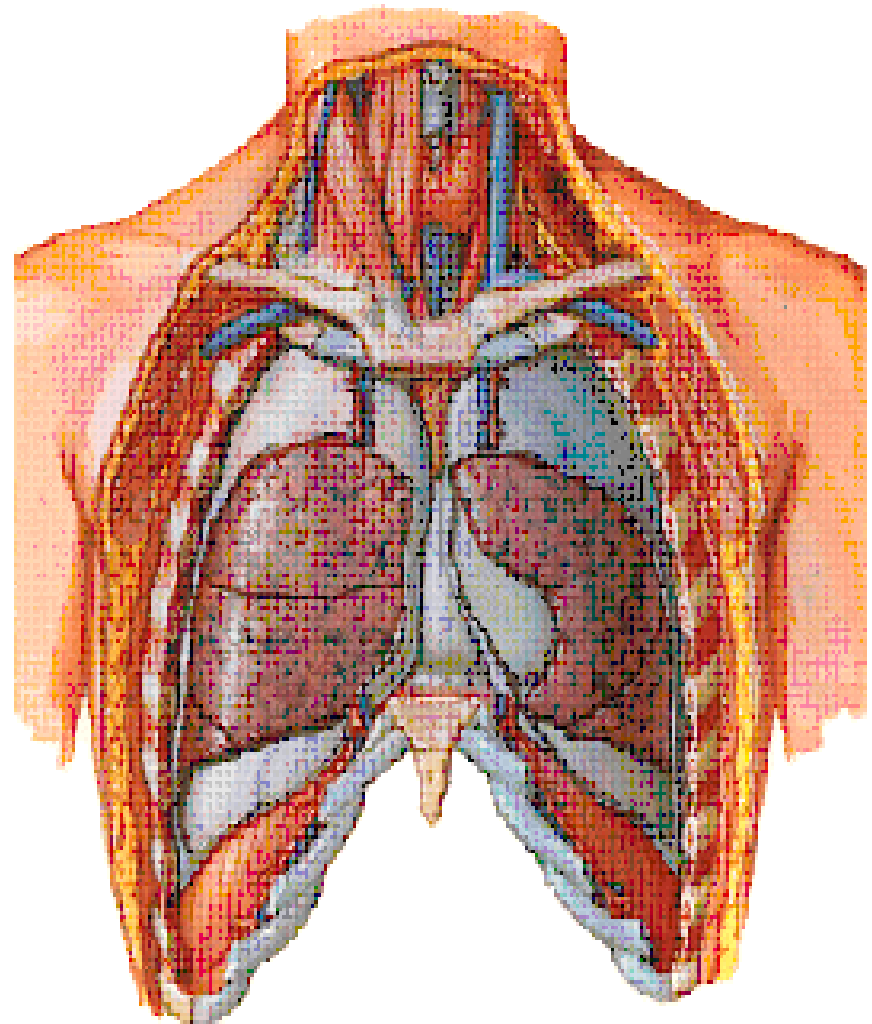


Lungs

- Organs of respiration
- Two, lie on either side of mediastinum surrounded by the right & left pleural cavities
- Right lung is larger

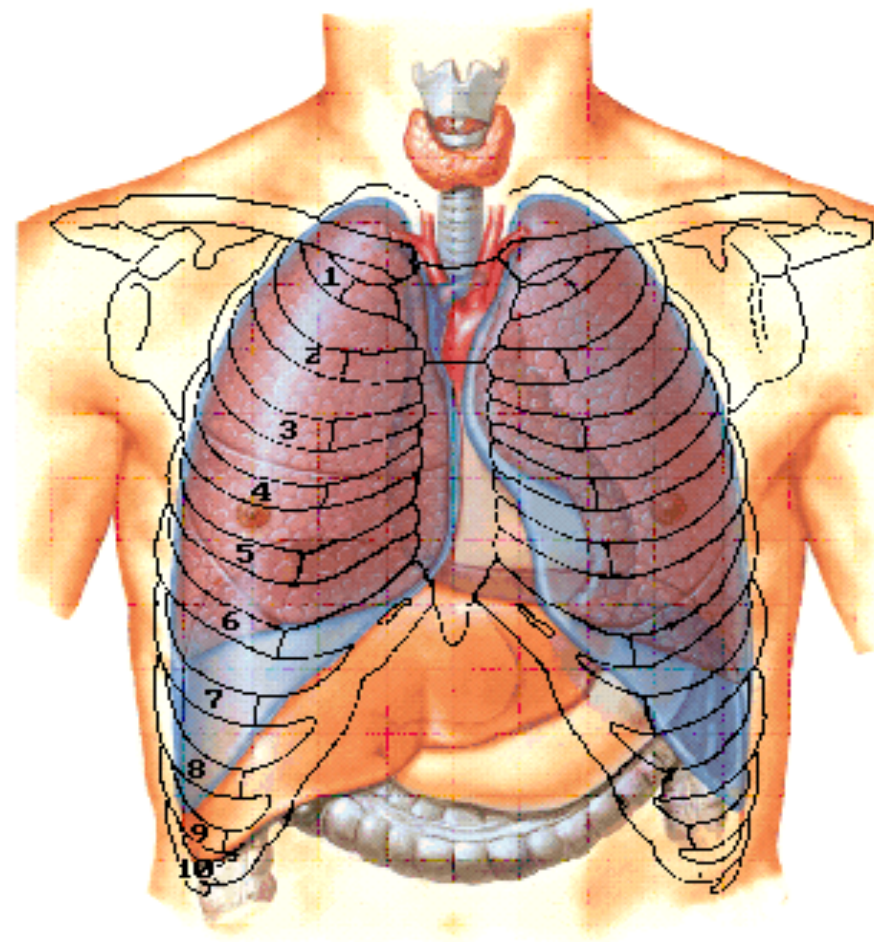
Lungs in Situ

Anterior View



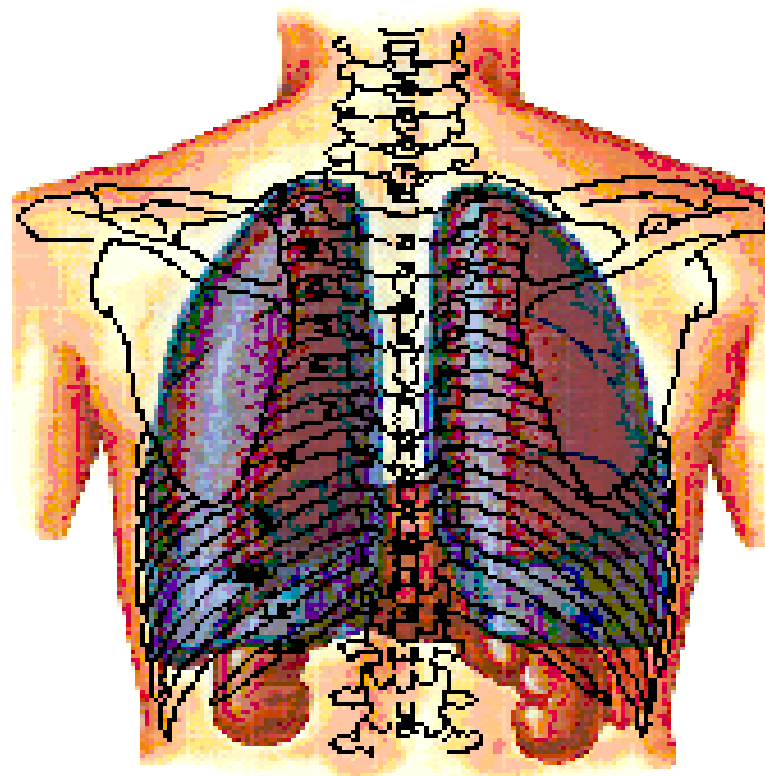
Topography of Lungs

Anterior View



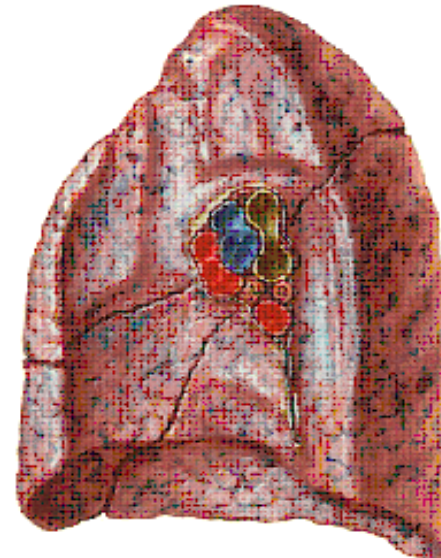
Topography of Lungs

Posterior View

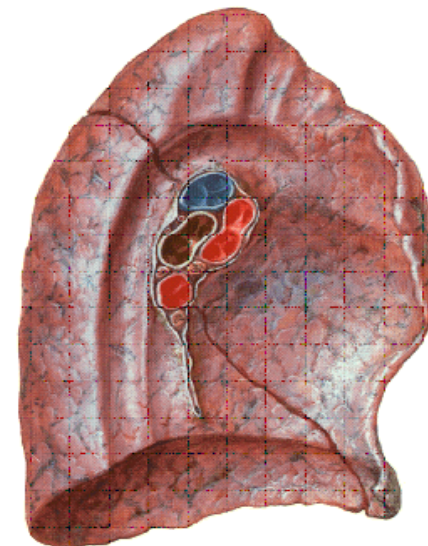


- Each lung is cone shaped, with a
- Base
- Apex
- Two surface-
costal
mediastinal
- Three borders-
Inferior
Anterior
Posterior

Right Lung
Medial View



Left Lung
Medial View

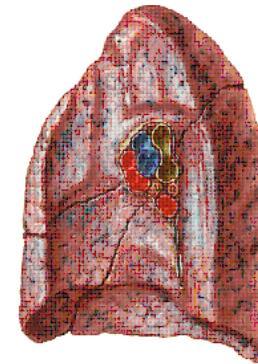


- **Fissures & lobes of lungs-**
- ***Oblique fissure***: cuts into whole thickness of lung

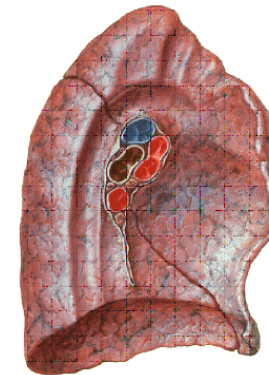
Passes obliquely downward & forward, crossing the posterior border about 2.5 inches above the apex & the inferior border about 2 inches from the median plane

- Present in both the lungs
- ***Transverse fissure***: Runs horizontally at the level of fourth costal cartilage & meets the oblique fissure in the midaxillary present in right lung
- ***Lobes*** - 3 lobes in the right lung
- 2 lobes in the left lung

Right Lung
Medial View

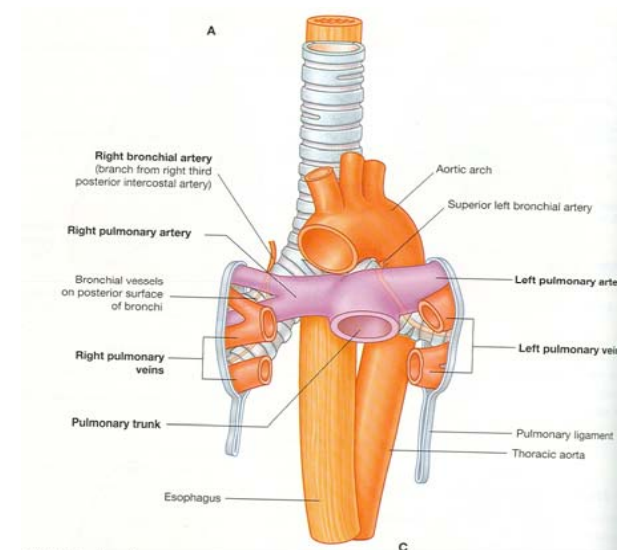
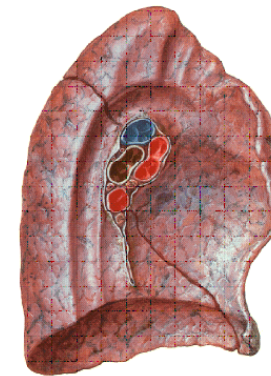


Left Lung
Medial View

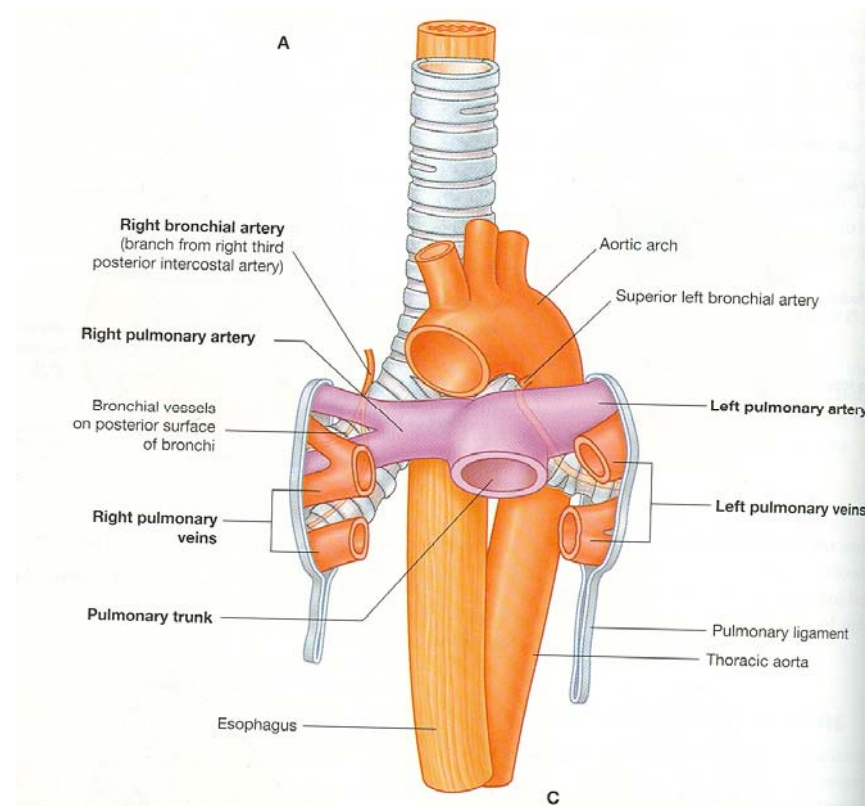


- **Root** - Short tubular collection of the structures that attach the lung to structures in the mediastinum
- Covered by a sleeve of mediastinal pleura that reflects onto the surface as visceral pleura
- **Hilum**- Region outlined by the pleural reflection on the medial surface of lung where structure enter & leave
- **Pulmonary ligament**- Blade like fold of pleura project inferiorly from the root of the lung & extends from hilum to the mediastinum

Left Lung
Medial View

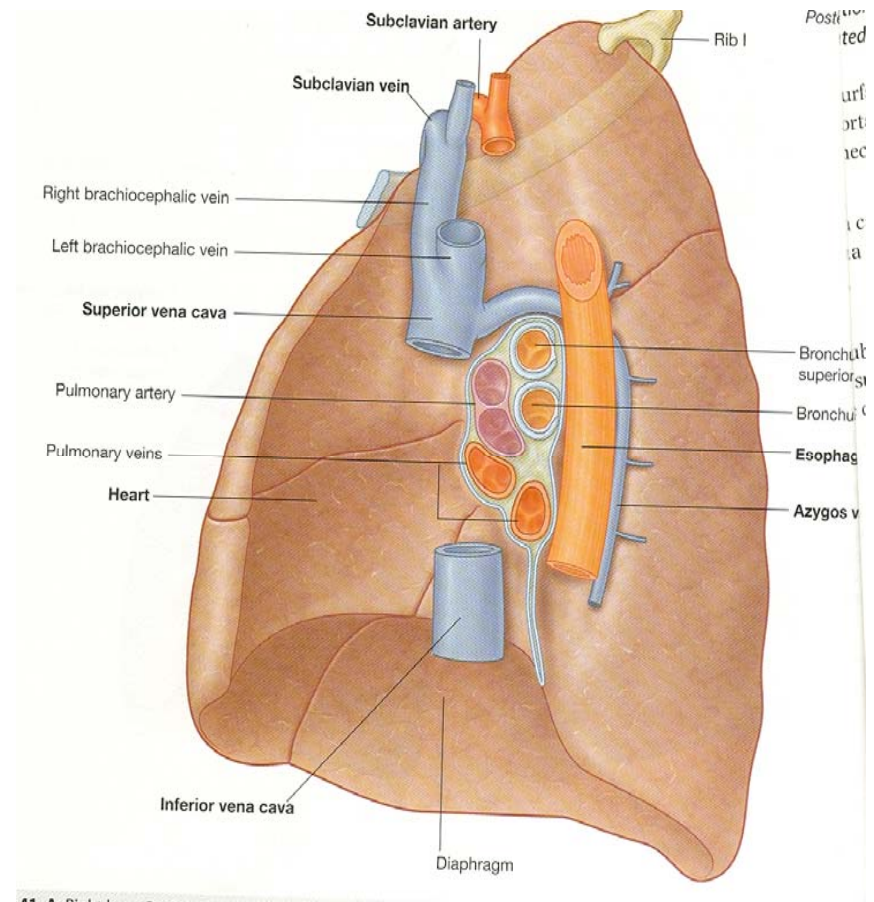
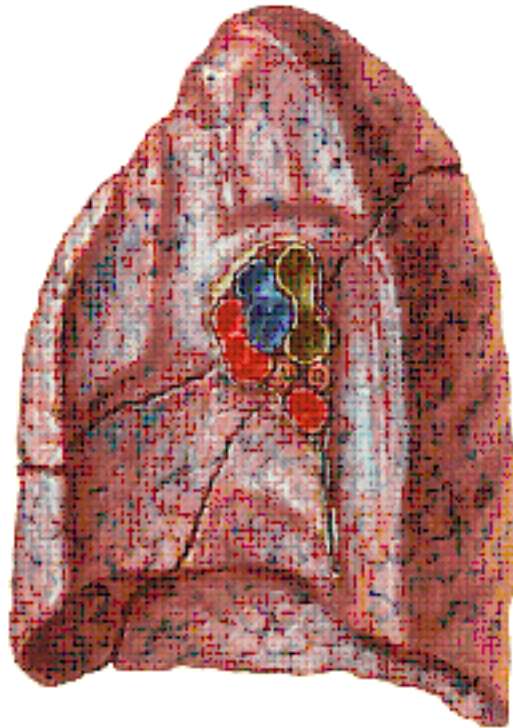


- Each root contains-
- A pulmonary artery
- Two pulmonary veins
- A main bronchus
- Bronchial vessels
- Nerves
- Lymphatics



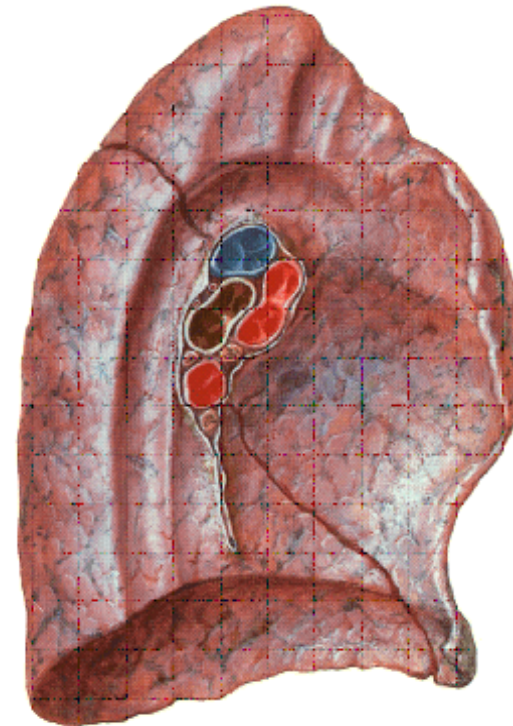
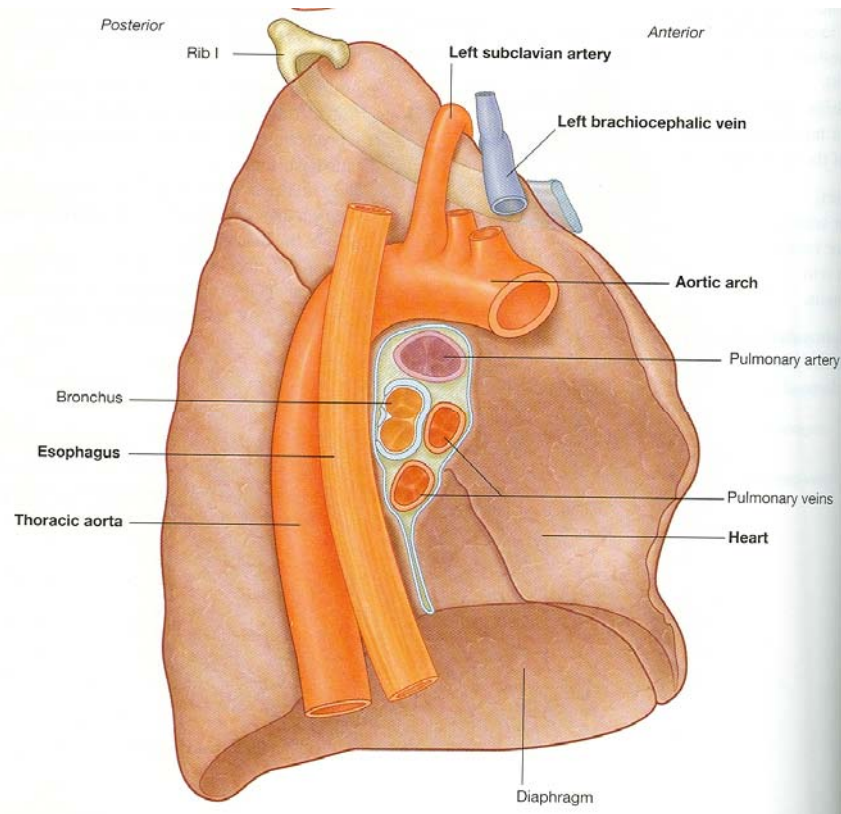
Right lung

Right Lung
Medial View



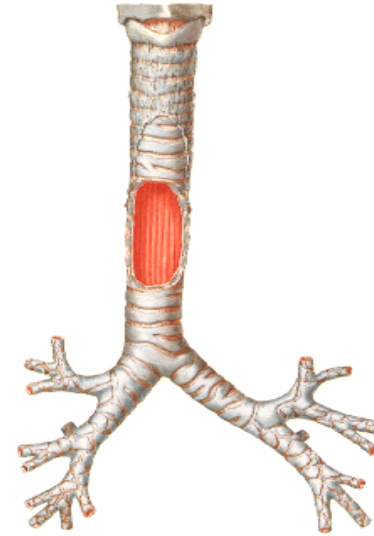
Left lung

Left Lung
Medial View



- **Bronchial tree-**
- Trachea (C6 TO t4)
- ↓
- Main bronchus (Rt & Lt)
- ↓
- Lobar bronchus
- ↓
- Segmental bronchus
- ↓
- Terminal bronchioles
- ↓
- Respiratory bronchioles
- ↓
- Pulmonary unit
(Alveolar duct, Atria,
Air saccules & Pulmonary
alveoli)

Trachea and Major Bronchi
Anterior View



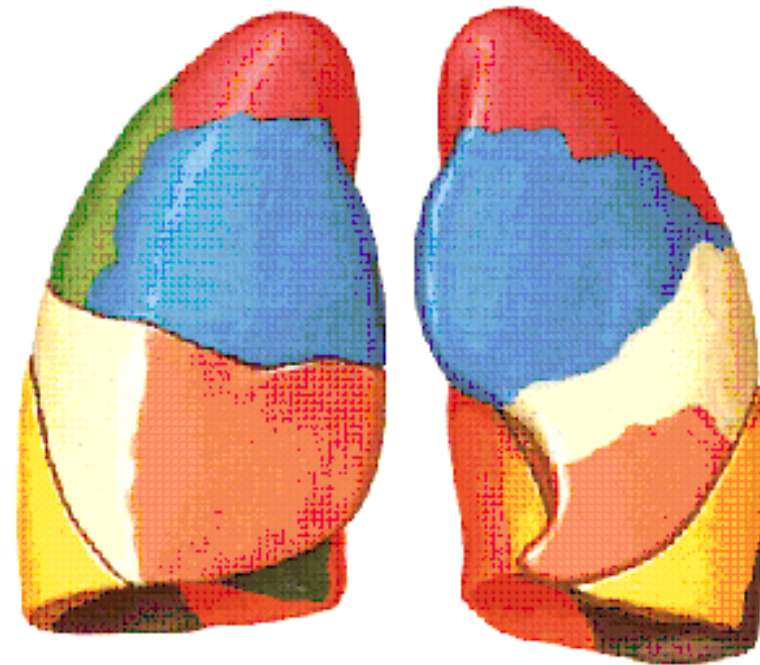
Intrapulmonary Airways
Schema



Bronchopulmonary segment

- Well defined sector of lung aerated by a tertiary or segmental bronchus
- Pyramidal in shape, apex directed towards root of lung
- Each segment has its own branch of pulmonary artery (dorsolateral to bronchus)
- Vein run in intersegmental plane
- So a bronchopulmonary segment is the smallest, functionally independent region of a lung that can be isolated & removed without affecting adjacent regions

Bronchopulmonary Segments
Anterior View



Right lung

Left lung

- 10 bronchopulmonary segments in each segments

- **Rt lung**

- Upper lobe
 - Apical
 - Anterior
 - Posterior

- Middle lobe
 - Lateral
 - Medial

- Lower lobe
 - Superior
 - medial basal
 - Anterior basal
 - lateral basal
 - Posterior basal

Lt lung

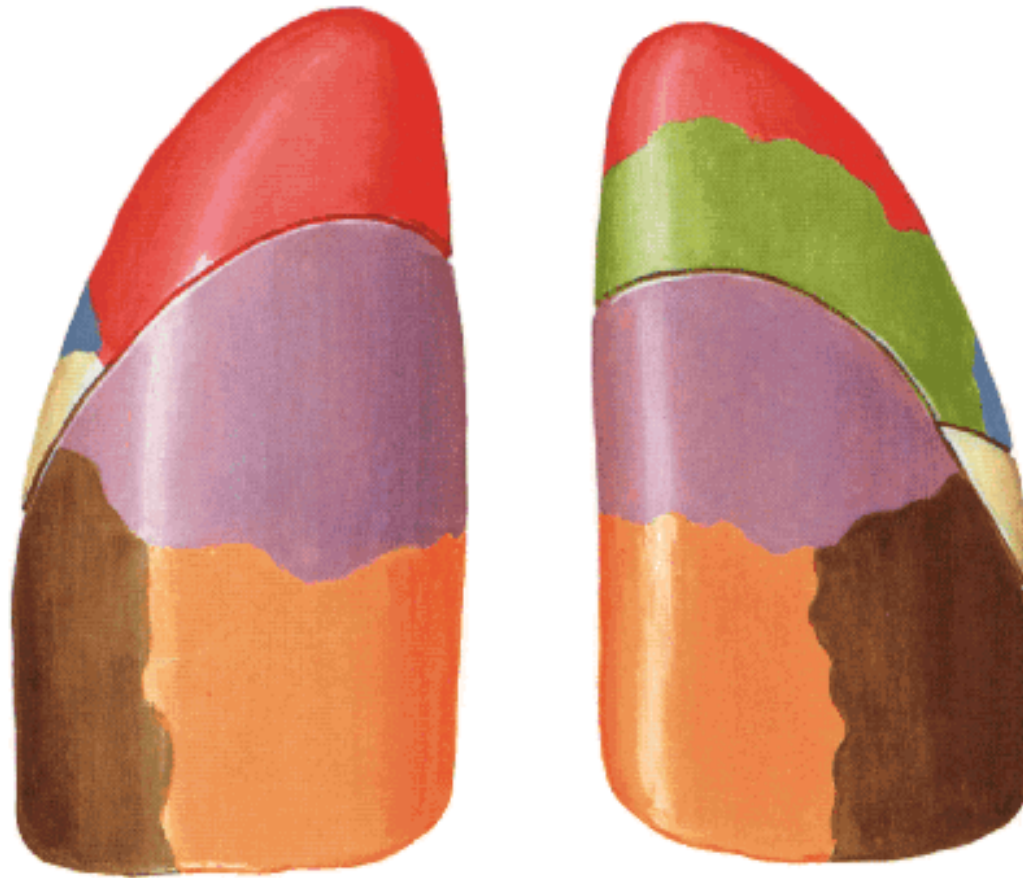
- Upper lobe
 - Apicoposterior
 - Anterior

- Superior lingular

- Lower lobe
 - Inferior lingular
 - Medial basal
 - Anterior basal
 - Lateral basal
 - Posterior basal

Bronchopulmonary Segments

Posterior View

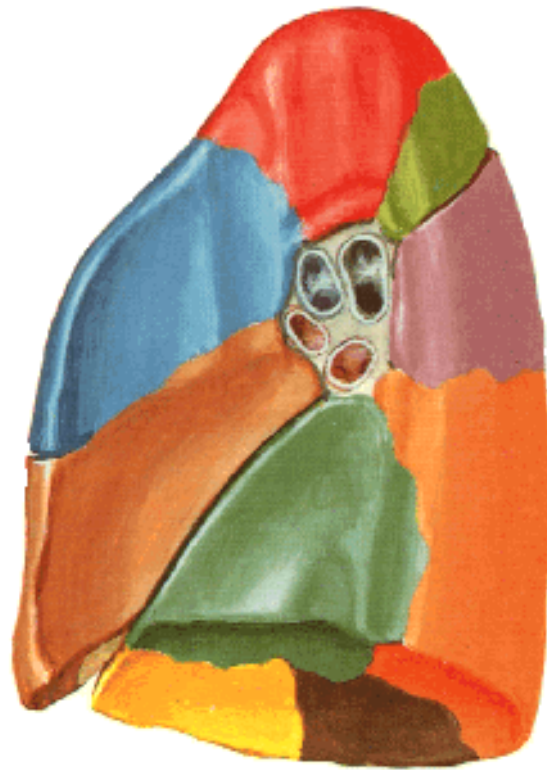


Left lung

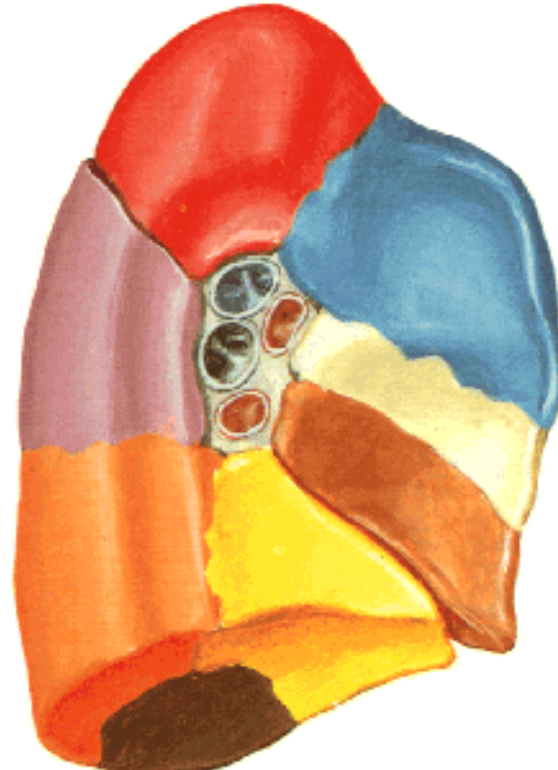
Right lung

Bronchopulmonary Segments

Medial Views



Right lung

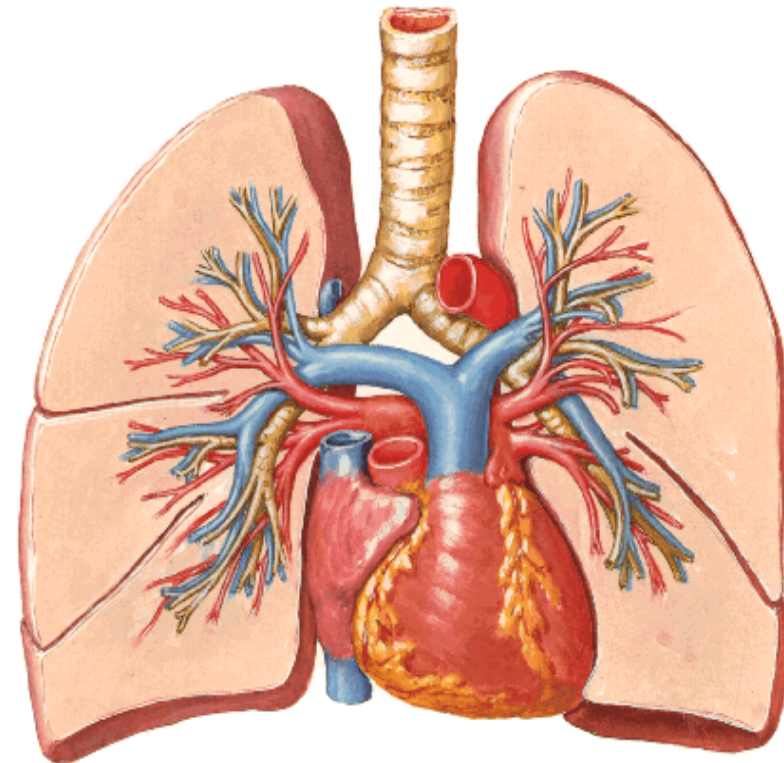


Left lung

Vascular supply of lungs

- **Pulmonary artery (PA)** supply deoxygenated blood to lungs
- Rt PA is longer
- Enters the root of the lung & branches in to arteries for superior middle & inferior lobe
- Lt PA is shorter
- **2 Pulmonary vein** (superior & inferior) on each side
- PV drain in to left atria
-

Pulmonary Arteries and Veins



- Bronchial arteries & veins constitute the nutritive vascular system of pulmonary tissue

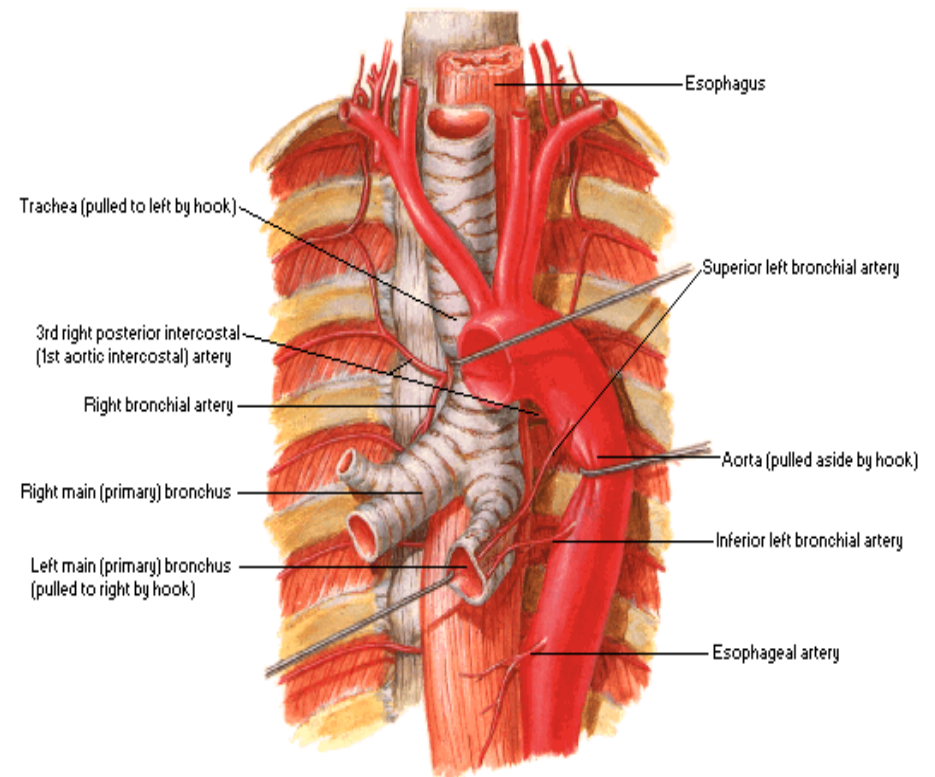
Rt bronchial artery - one

- Arises From Third Posterior intercostal artery or from left upper bronchial artery

Lt bronchial artery- two

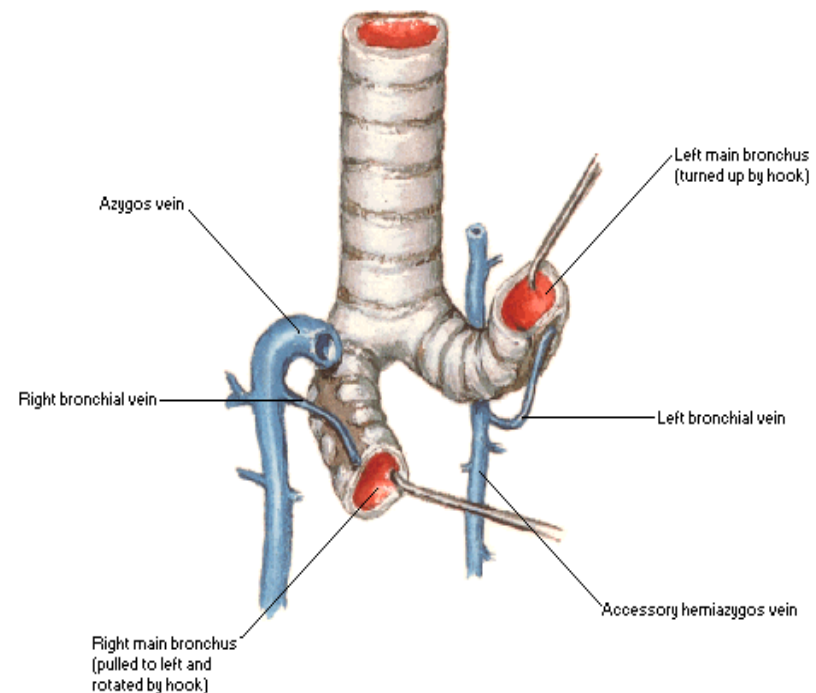
- arise from thoracic aorta
- superior arise at T5 level
- Inferior arise inferior to left bronchus

Bronchial Arteries



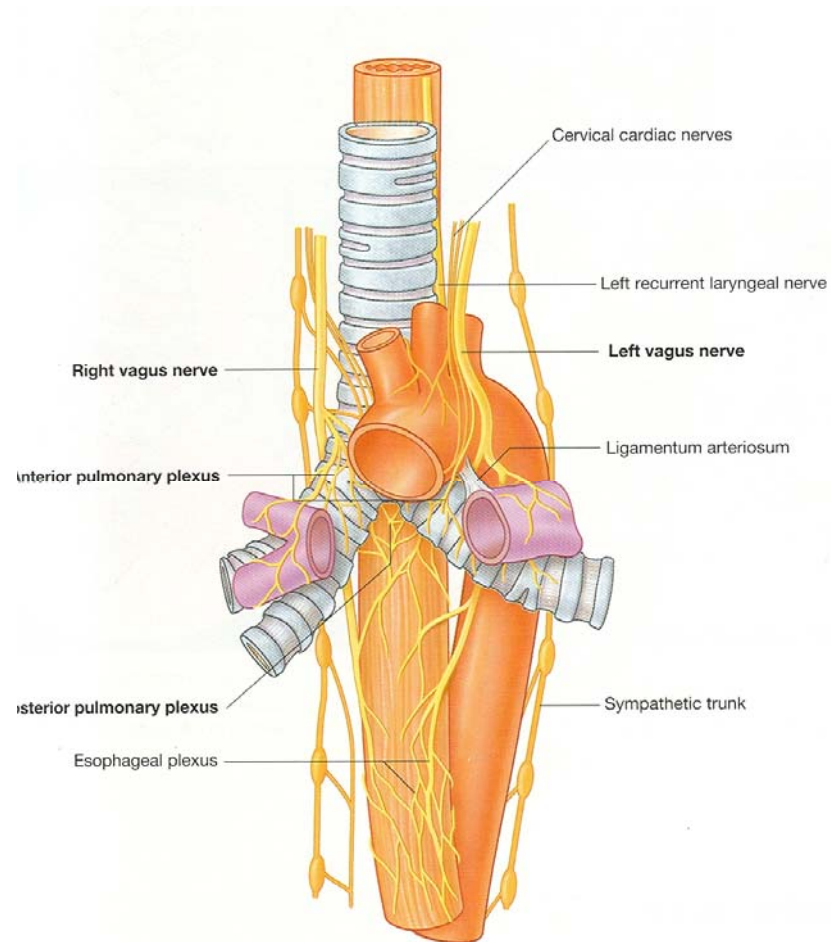
- Bronchial vein drain into pulmonary vein or left atrium and into
- Azygos vein on right
- Superior intercostal vein or hemiazygos vein on left

Bronchial Veins



Nerve supply

- Anterior & posterior pulmonary plexus
- These interconnected plexus is situated ant & posterior to tracheal bifurcation & main bronchus
- Parasympathetic Fibers Are Derived From Vagus these are motor to ,secretomotor & sensory
- Sympathetic fibers are derived from T2 to T5 and are inhibitory to muscle & glands



Lymphatic drainage

- Superficial, subpleural & deep lymphatic drain into tracheobronchial lymph nodes
- Efferents from these drain into Rt & Lt bronchomediastinal trunks
- These trunks drain into deep veins of neck or Rt lymphatic trunk & thoracic duct

Lymph Vessels and Nodes of Lung

