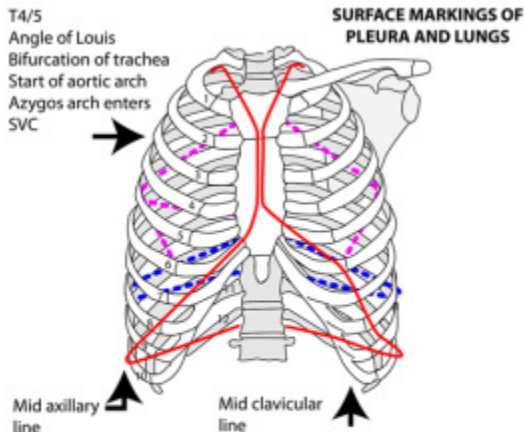


Thoracic Surface Anatomy

THORAX - SURFACE MARKINGS



Pleura 2-4-6-8-10-12
Continuous Red line, starting 1" (2.5cm) above mid point of medial 1/3 of clavicle. Meet in midline at rib 2, left side then diverges at rib 4 to make room for the heart, whilst right continues parasternally to rib 6. Both cross rib 8 in the mid-clavicular line, then rib 10 in the mid-axillary line. Both reach posterior chest just below rib 12.

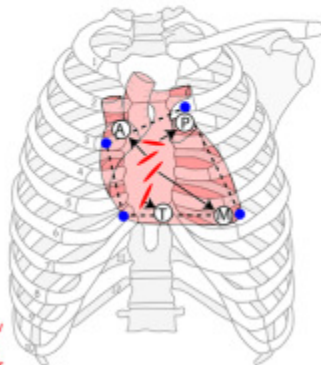
Lungs 2 less than pleura
Blue dotted lines indicate lower extension of lungs in expiration. Below ribs 6, the lungs extend to 2 rib spaces less than the pleura.

Fissures 3-6-4-5
 (purple dotted lines)
 Oblique: spine of T3 vertebra to rib 6 anteriorly along medial border scapula
 Horizontal (on R only): rib/costal cartilage 4 to rib 5 in mid-axillary line.

HEART

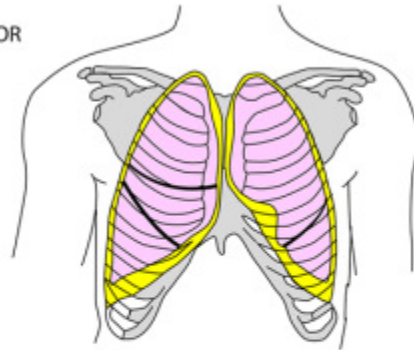
- BORDERS:** ●-●-●-●
- 2cc - 3cc - 6cc - 5 1/2
- VALVES:** ———
- P - A - M - T
- AUSCULTATION:** ↗
- P - 2L (parasternal space)
 A - 2R (parasternal space)
 M - 5L (mid clavicular line)
 T - Lower left sternal border

As the valves open and close they produce sounds that appear to be transmitted in the direction of the flow of blood. Thus, by picturing the heart and the positions of the four valves it is easy to work out the likely points for maximal audibility of the sounds.



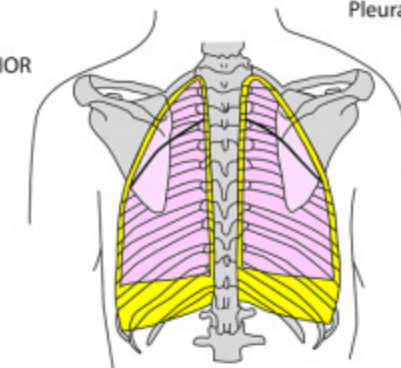
PLEURAL AND LUNG SURFACE MARKINGS

ANTERIOR VIEW



Lung is purple
 Pleura is yellow

POSTERIOR VIEW



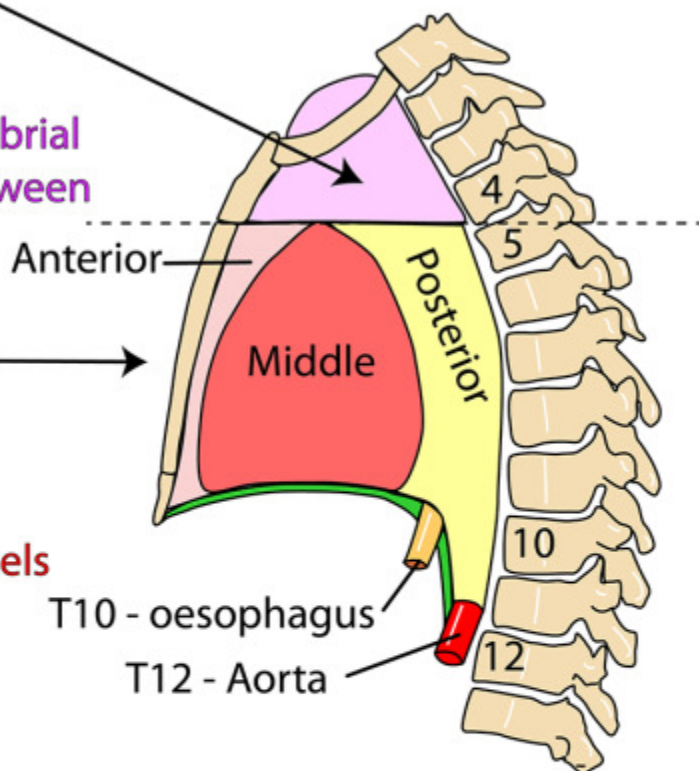
Note that the pleura extends just below the 12th rib posteriorly. This is important in approaching the kidney surgically from behind

DIVISIONS OF THE MEDIASTINUM

Superior mediastinum

From 1st rib to a line joining the sternomanubrial junction to the disc between T4 and T5

Inferior mediastinum
Divided into 3
Ant: Thymus
Mid: Heart
Post: Oesophagus & vessels

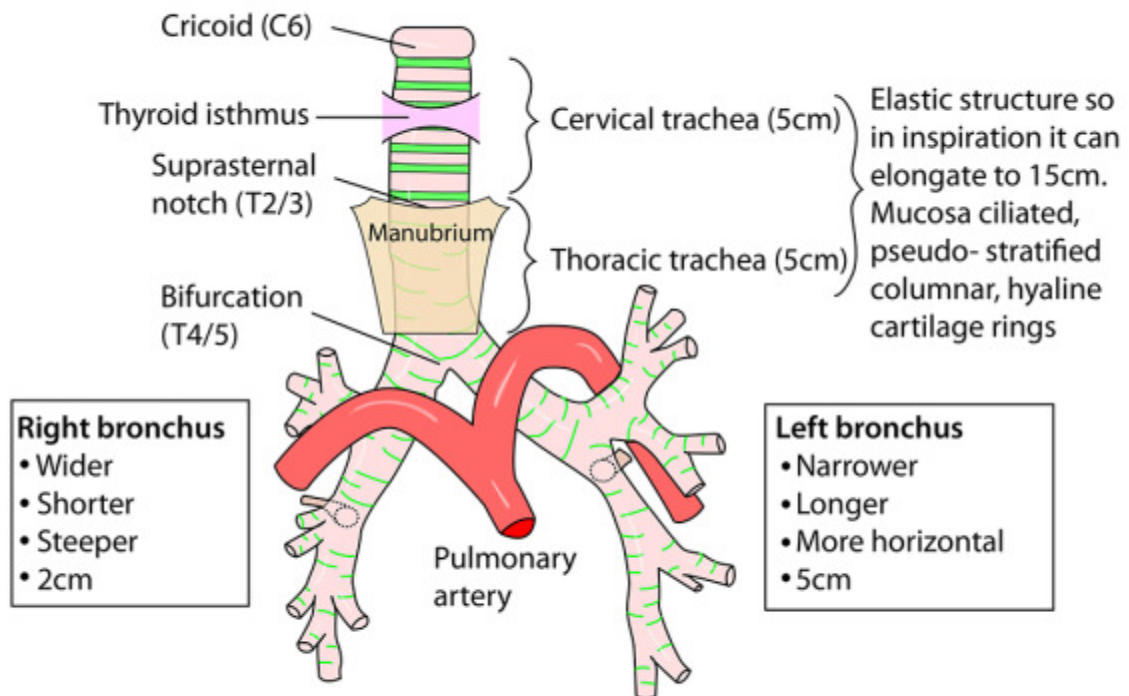


MEDIASTINUM

The area in the thorax that lies between the lungs. Note that although the lungs reach up above the front of the 1st rib, the mediastinum does not.

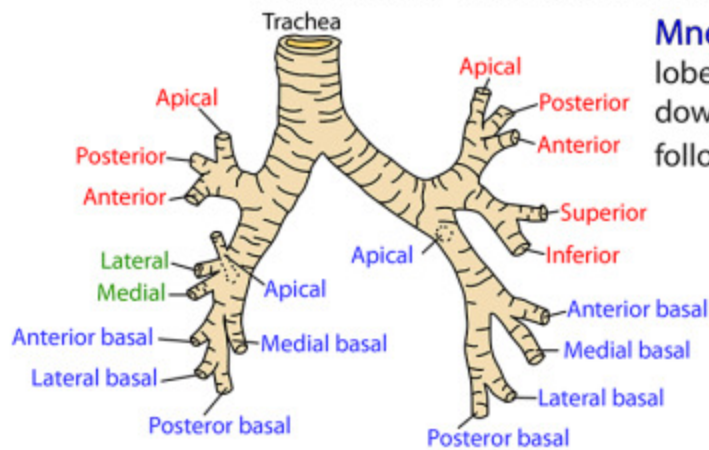
The great vessels lie in the superior mediastinum, the thymus and fat in the anterior part of the inferior, the heart in the middle and the oesophagus & aorta in the posterior parts of the inferior mediastinum

RELATIONS OF TRACHEA & BRONCHI



Inhaled foreign bodies are more likely to enter the right main bronchus and then pass into the apical bronchus of the right lower lobe - the first one that points posteriorly

BRONCHOPULMONARY SEGMENTS



Mnemonic: Starting on right at upper lobe, working down right lobe then down left lobe the segments are as follows: **APALM APALM APAIS APAL**

PARASYMPATHETIC (vagus)

Vasodilatation
Bronchoconstriction
Increase glandular secretions
Sensation

SYMPATHETIC (chain)

Vasoconstriction
Bronchodilatation (beta 2)
Suppress glandular secretion (alpha)

BRONCHI

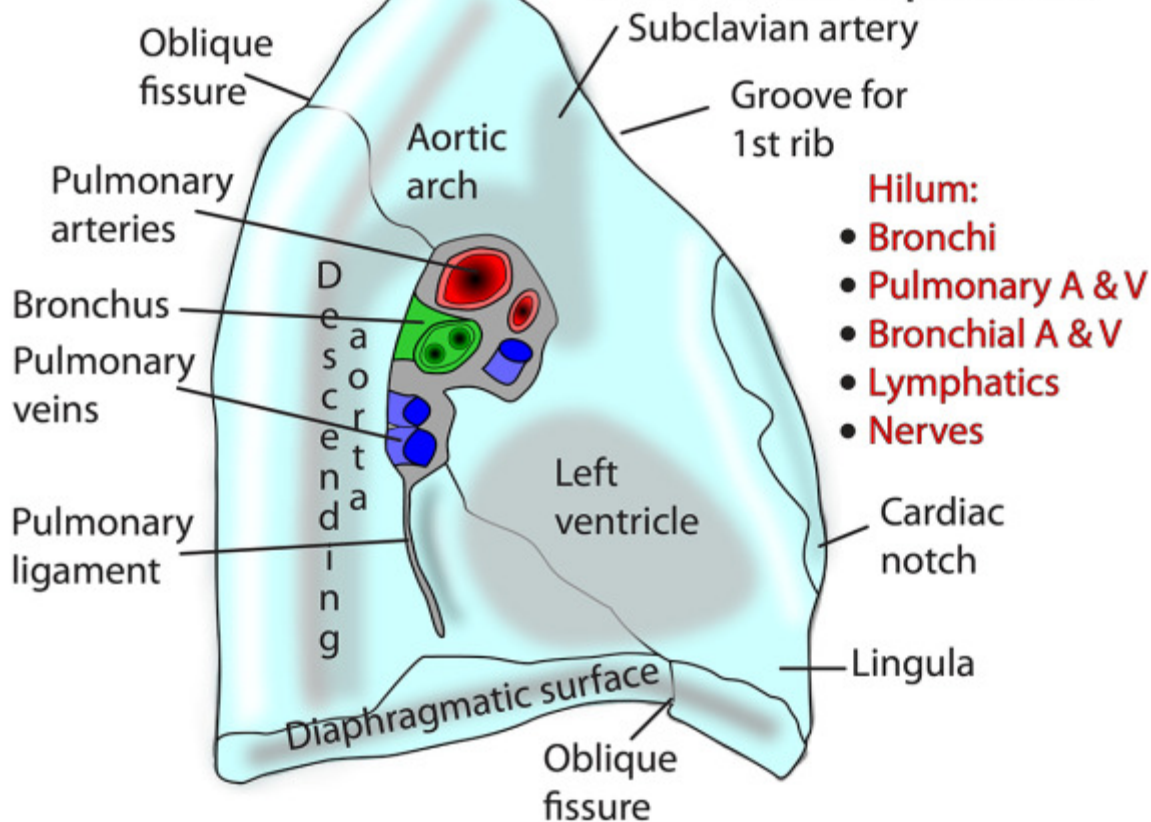
Blood supply: Bronchial arteries from aorta (2 on left, 1 on right)

Venous drainage: On right -azygos, left - hemiazygos. Also a little via bronchial veins and pulmonary veins

Nerve Supply: Pulmonary plexus at hilum

Lymph: Hila nodes then carina then tracheobronchial then thoracic duct and right lymphatic duct

MEDIAL SURFACE OF LEFT LUNG (Postmortem impressions)



MEDIAL SURFACE OF RIGHT LUNG (Postmortem impressions)

