

## Surface Markings of Heart, Lungs & Major Veins

### HEART

#### BORDERS:



2cc - 3cc - 6cc - 5 1/2

#### VALVES:



P - A - M - T

#### AUSCULTATION:



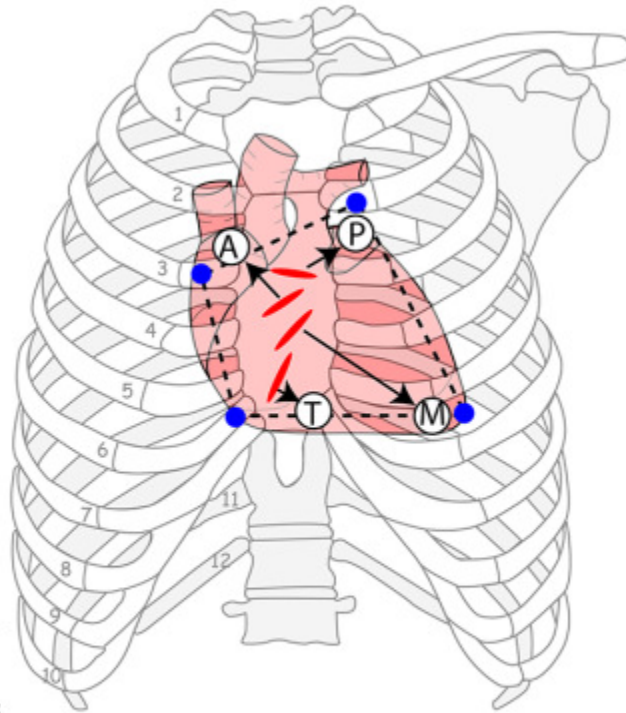
P - 2L (parasternal space)

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.



## PLEURA REFLECTIONS AND LUNG MARKINGS

### Pleura (red lines - 2 - 4 - 6 - 8 - 10 - 12)

Start 1 inch (2.5cm) above mid-point of medial one third of clavicle

Meet in the midline at rib 2

The left side diverges at rib 4 to make room for the heart

The right continues parasternally to rib 6

Both cross rib 8 in mid-clavicular line

Both cross rib 10 in mid-axillary line

Both reach the posterior chest just below rib 12

### Lungs (green lines)

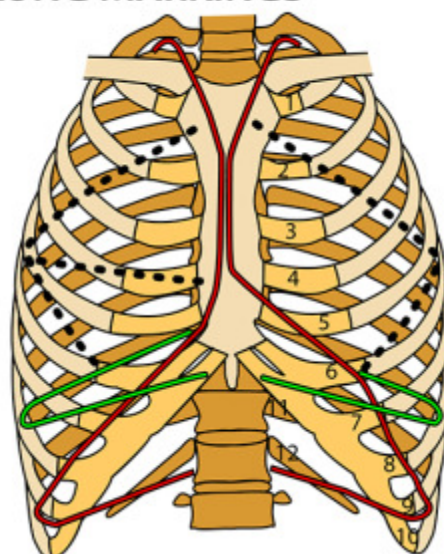
Below rib 6, the lungs extend 2 rib spaces less than the pleura in expiration

### Lung fissures (black dotted lines - 3 - 6 - 4 - 5)

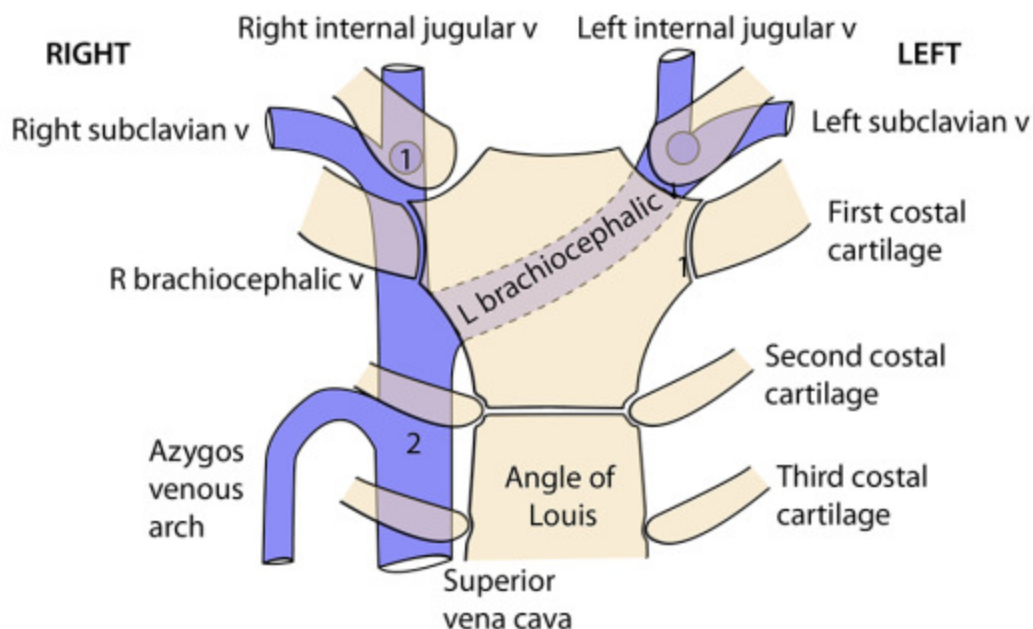
**Oblique** - Extends from the spine of T3 vertebra around the chest to rib 6

anteriorly. This corresponds approximately to the medial border of the scapula when the arm is abducted.

**Horizontal** - Extends on right from rib/costal cartilage 4 anteriorly to rib 5 in the mid-axillary line



## VEINS IN UPPER MEDIASTINUM AND LOWER NECK



- 1 Formation of brachiocephalic veins posterior to the sternoclavicular joints
- 2 Formation of the superior vena cava in the first right intercostal space, just inferior to the first costal cartilage