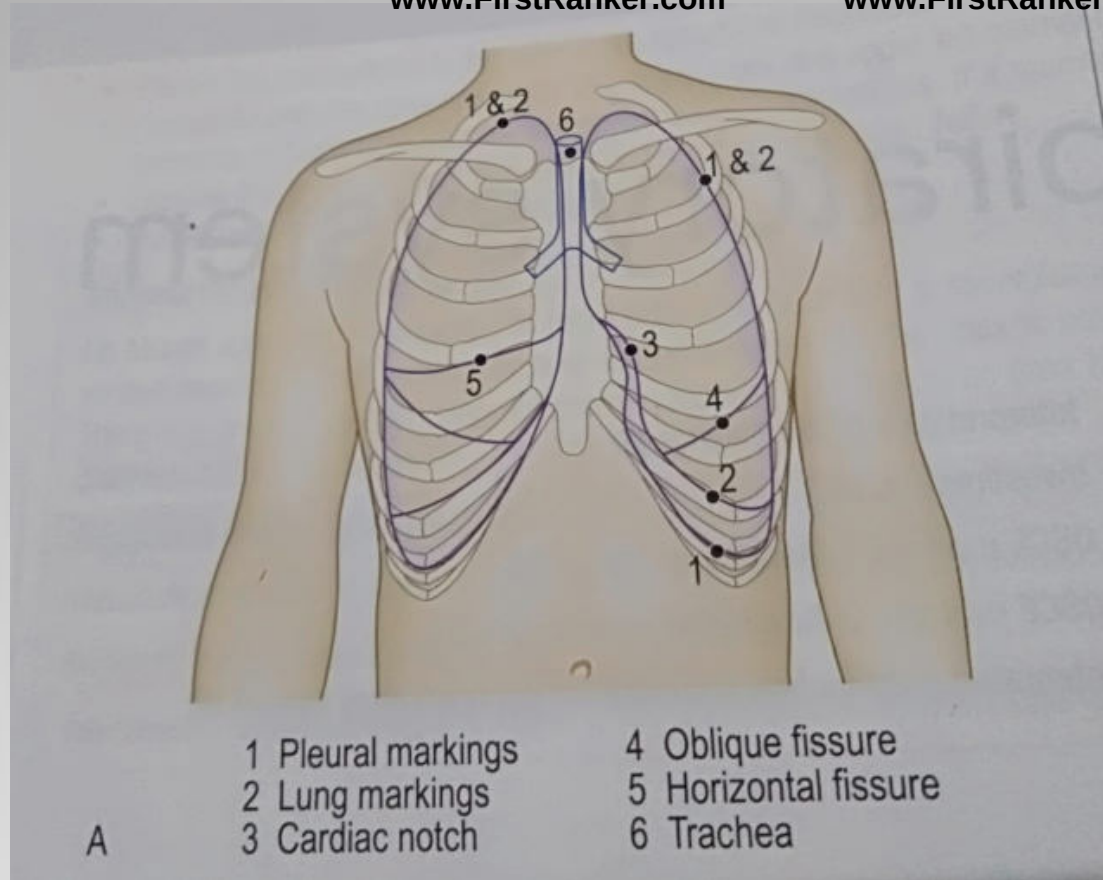


SURFACE ANATOMY OF LUNGS



SURFACE ANATOMY OF THORAX

Mark the following points

1. Right sternoclavicular joint
2. Midpoint of sternal angle
3. Midpoint of xiphisternal joint

This forms anterior margin of right pleural sac (costo mediastinal reflection)

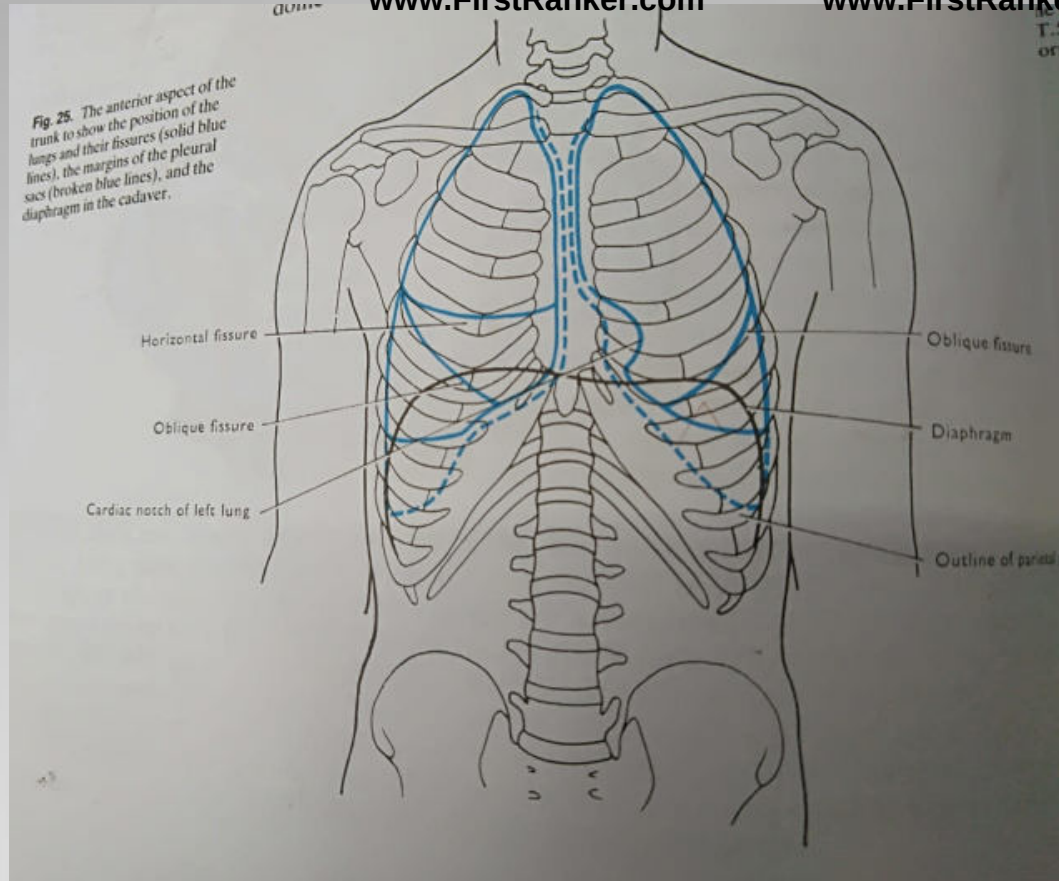
An arched line convex upwards lying above medial one third of clavicle, the summit 2.5cm above clavicle marks the dome of pleura

RIGHT PLEURAL MARKINGS

#A Curved line drawn around anterior , lateral` and posterior aspect of thorax , convex downwards passing through 8th rib in mid clavicular line, 10th rib in mid axillary line and a point 2cms right of midline at T12 level mark the inferior margin of pleural sac

A line drawn on back 2 cms from midline between C7 and T12 vertebrae marks the posterior margin

RIGHT PLEURAL MARKINGS



LUNGS , PLEURA AND FISSURES(ANTERIOR VIEW)

Dome of pleura , posterior and inferior margin are represented by the same lines as those on the right side.

ANTERIOR MARGIN

#MARK 1.Lt sternoc-lavicular joint

2.Midpoint of sternal angle

3.Mid sternum at the level of 4th costal cartilage

From mid sternum draw a line downwards and laterally to reach lateral margin of sternum and toward 6th costal cartilage 3cms from midline.

LEFT PLEURAL MARKINGS

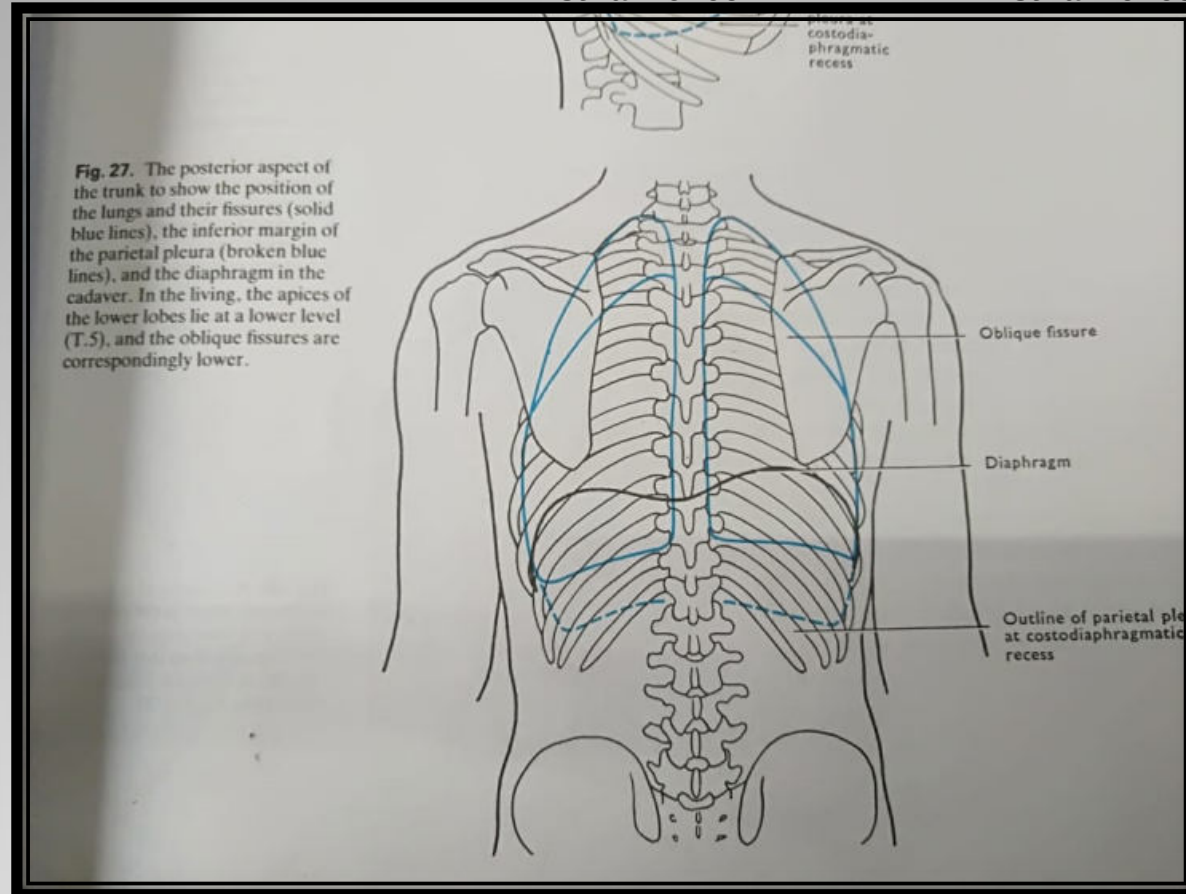
BORDERS OF LUNGS

RIGHT

- #Apex of lungs -cervical pleura
- #Anterior border of Rt lung-
costomediastinal reflection of
pleura
- #Inferior border-curved line lying
above the costo diaphragmatic
reflection of pleura(6th rib in
midclavicular line, 8th rib in
midaxillary line.
- #Posterior-T10 spine(2cms
lateral to midline)

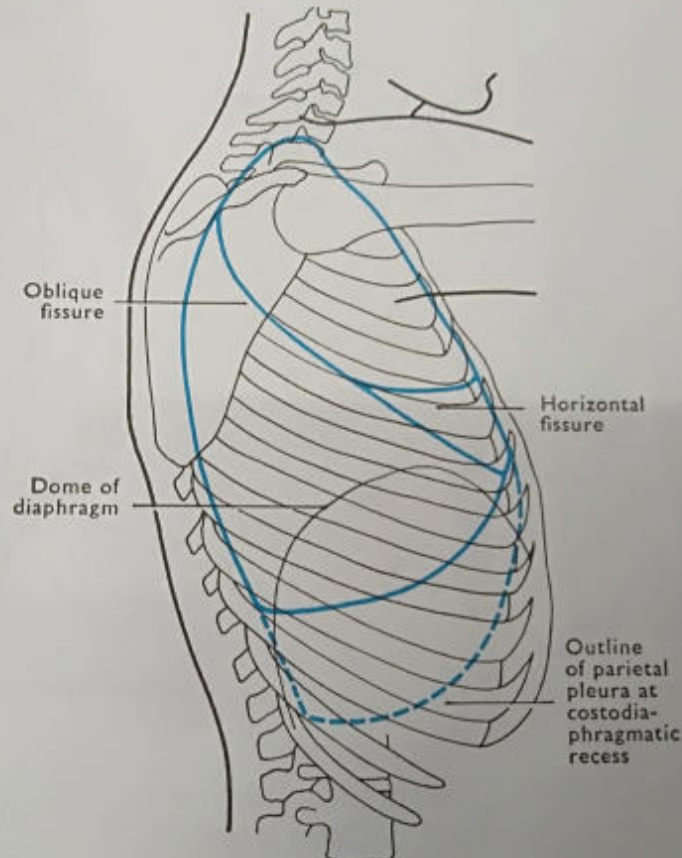
LEFT

- #Upper part of anterior border upto 4th costal cartilage follows the pleura
- #Below , due to the deep cardiac notch the border passes from midline sharply to the left and downwards so that at the level of 5th costal cartilage , it is about 3.5cm lateral to sternal margin and then curves downwards and medially to reach 6th costal cartilage at about 4 cms from medial plane.
- #Inferior border and posterior border same as that of right lung



POSTERIOR ASPECT OF TRUNK

Fig. 26. The right lateral aspect of the trunk to show the position of the right lung and its fissures (solid blue lines), the inferior margin of the parietal pleura (broken blue line), and the diaphragm in the cadaver.



RIGHT LATERAL ASPECT OF TRUNK

OBLIQUE FISSURE

#During the life fissure begins posteriorly on the posterior border of lung 2cms from midline at the level of T5

#It passes anteroinferiorly in a spiral course to meet the inferior margin at 6th costo chondral junction.

#After death due to the collapse , and diaphragm elevation upper end of oblique fissure- T3 in a cadaver.

HORIZONTAL FISSURE

#Right lung-Anterior
margin at the level of 4th
costal cartilage passing
backwards to meet
oblique fissure in mid
axillary line **plane**

- #The multitude of small airways within the lung parenchyma has a very large combined surface area-over 300 cmsq in the 3rd generation respiratory bronchioles.
- #Gas transport occurs largely by diffusion in the final segments.

BRONCHOPULMONARY SEGMENTS

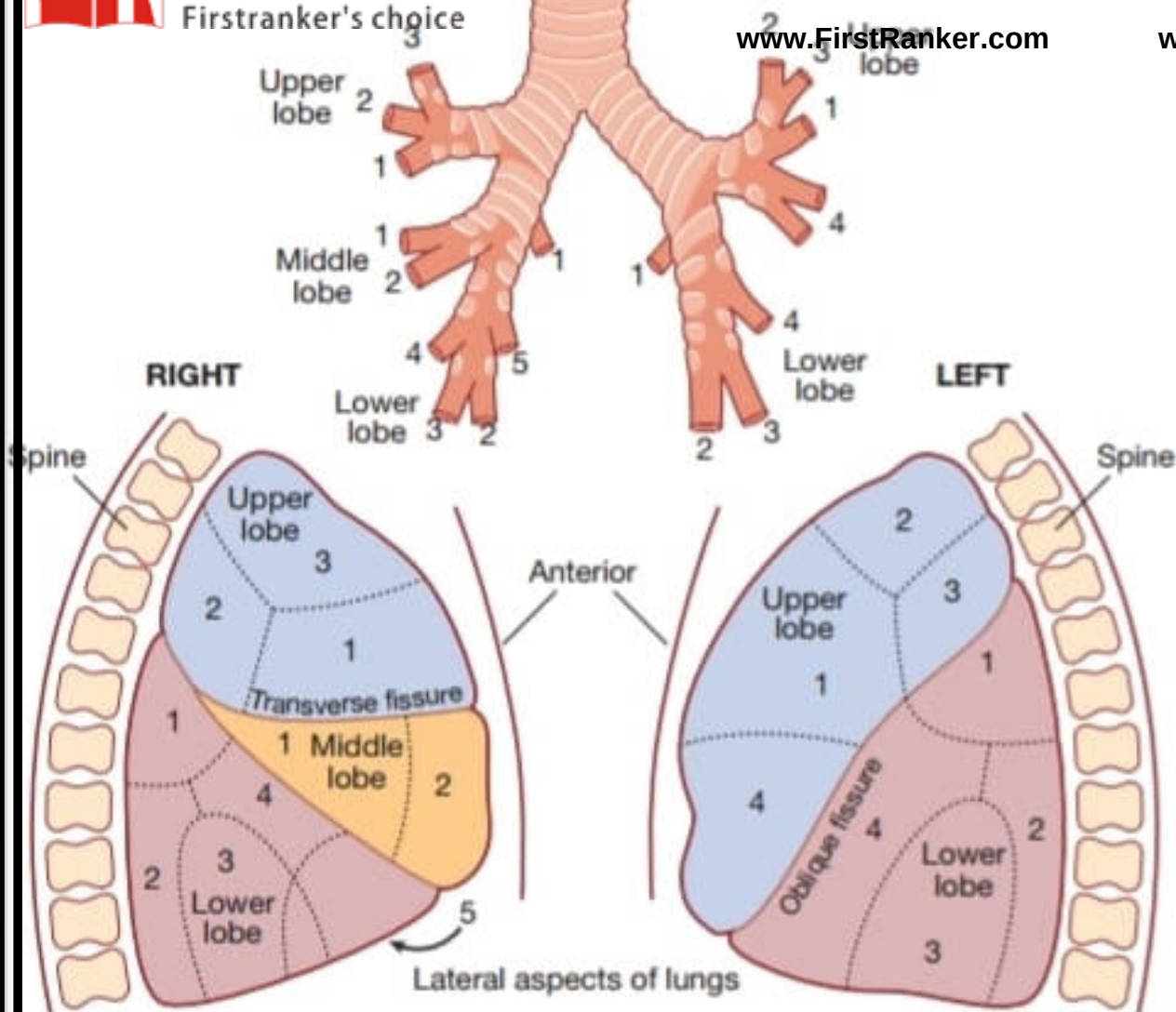


Fig. 19.1 The major bronchial divisions and the fissures, lobes and segments of the lungs. The angle of the oblique fissure means that the left upper lobe is largely anterior to the lower lobe. On the right, the transverse fissure separates the upper from the anteriorly placed middle lobe, which is matched by the lingular segment on the left side. The site of a lobe determines whether physical signs are mainly anterior or posterior. Each lobe is composed of two or more bronchopulmonary segments that are supplied by the main branches of each lobar bronchus.

Bronchopulmonary segments:

Right Upper lobe: (1) Anterior, (2) Posterior, (3) Apical. Middle lobe: (1) Lateral, (2) Medial. Lower lobe: (1) Apical, (2) Posterior basal, (3) Lateral basal, (4) Anterior basal, (5) Medial basal.

Left Upper lobe: (1) Anterior, (2) Apical, (3) Posterior, (4) Lingular. Lower lobe: (1) Apical, (2) Posterior basal, (3) Lateral basal, (4) Anterior basal.

Each lobe is composed by two or more broncho-pulmonary segments that are supplied by main branches of each lobar bronchus

- Bronchopulmonary segments are the well defined anatomical ,functional and surgical units of lung
- Characteristics features
- Pyramidal in shape,apex directed towards hilum,base towards surface of lungs
- It is aerated by segmental bronchus
- Each segment has its own artery,segmental branch of pulmonary artery

- Each segmnt has its own lymphatic drainage and autonomic supply
- CLINICAL CORRELATION
- Segmental resection of lungs-conservative lung surgery

RIGHT

#Upper Lobe

1. Anterior
2. Posterior
3. Apical

#Middle lobe

1. Lateral
2. Medial

#Lower Lobe

1. Apical
2. Posterior basal
3. Lateral basal
4. Anterior basal
5. Medial basal

LEFT

#Upper lobe

1. Anterior
2. Apical
3. Posterior
4. Lingular

#Lower lobe

1. Apical
2. Posterior basal
3. Lateral basal
4. Anterior basal

BRONCHO PULMONARY SEGMENTS