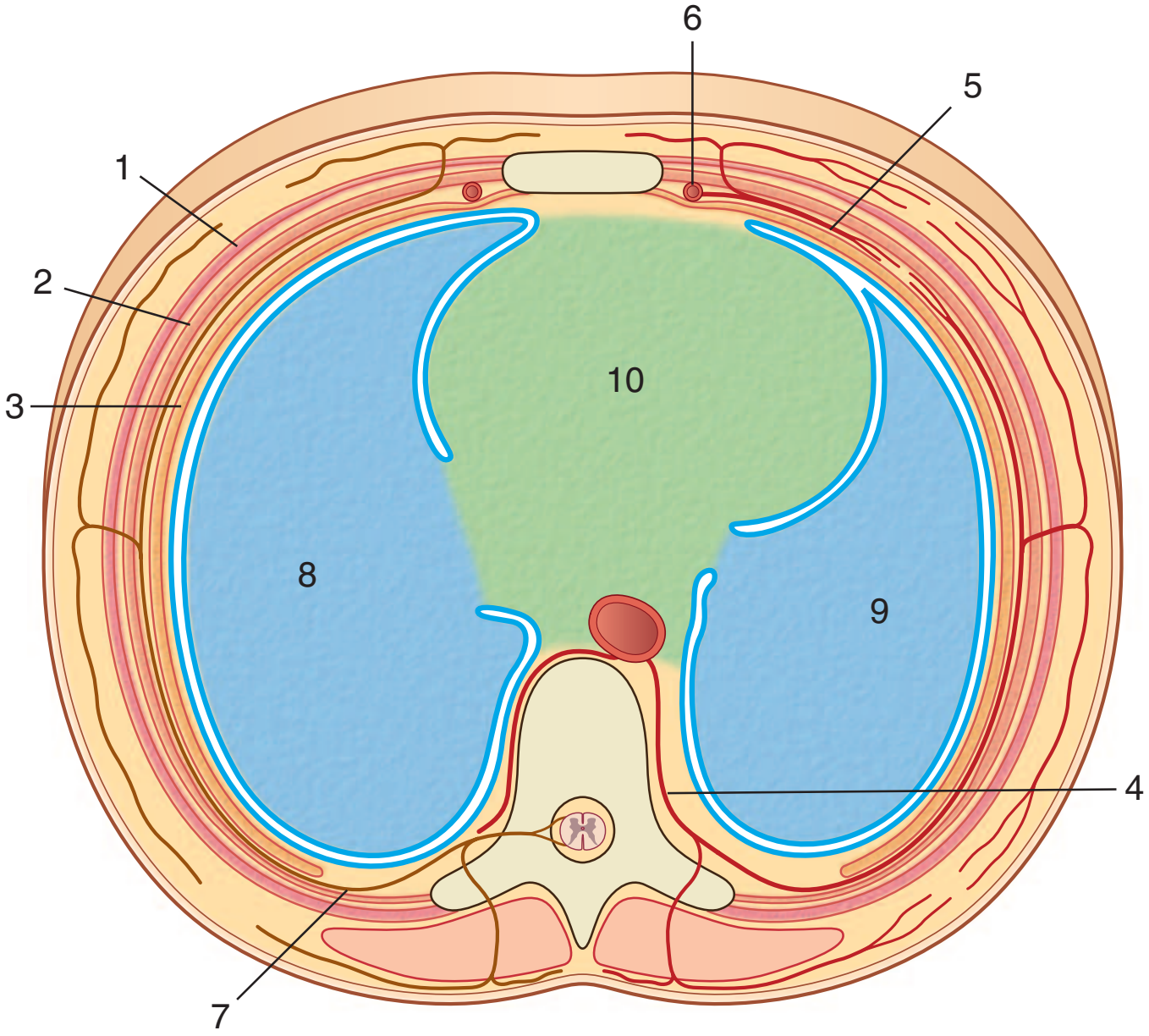
Identify the indicated structures.



THORACIC CAVITY

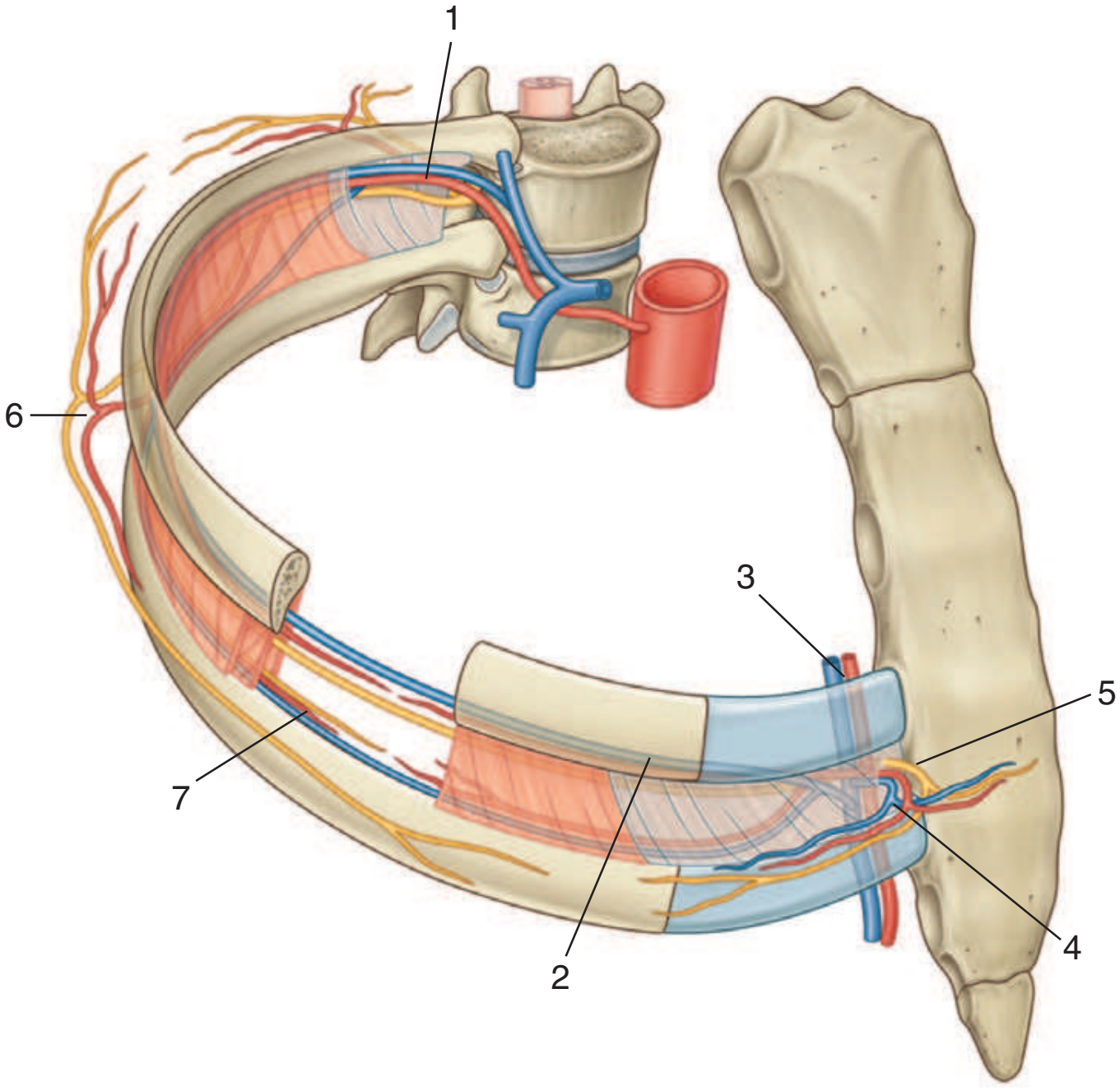
1. External intercostal muscle
2. Internal intercostal muscle
3. Innermost intercostal muscle
4. Posterior intercostal artery
5. Anterior intercostal artery
6. Internal thoracic artery
7. Anterior ramus of spinal nerve (intercostal nerve)
8. Right lung
9. Left lung
10. Mediastinum

IN THE CLINIC:

- **The thoracic cavity is subdivided into left and right pleural cavities, each surrounding a lung, and the mediastinum. Therefore, problems in one pleural cavity do not necessarily affect the other cavity. Also, the mediastinum can be entered surgically without opening the pleural cavities.**

Figure from Gray's Anatomy for Students, *3rd edition, p. 152.*

Identify the indicated structures in an intercostal space.



INTERCOSTAL SPACE WITH NERVES AND VESSELS

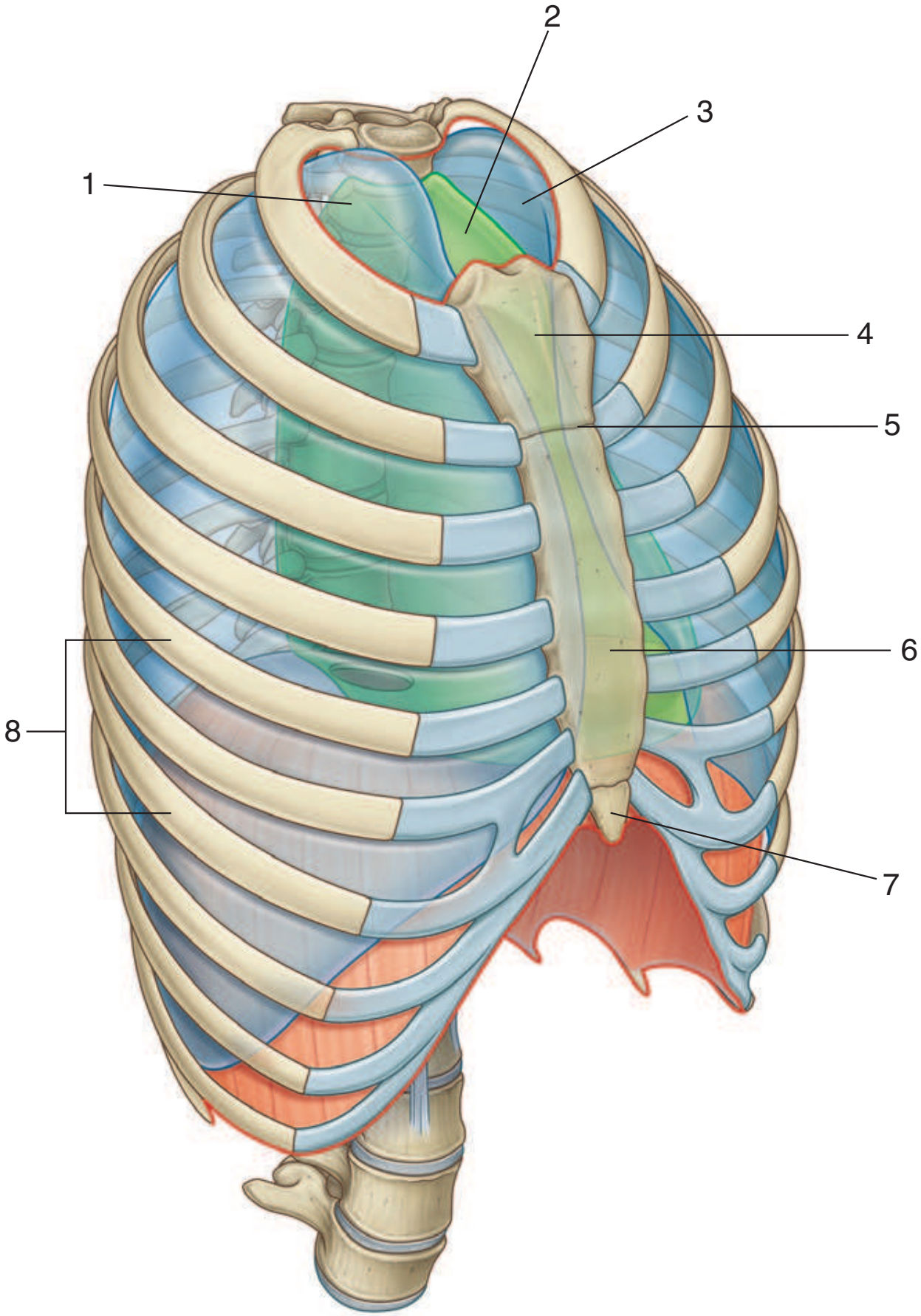
1. Posterior intercostal artery and vein
2. Anterior intercostal artery and vein
3. Internal thoracic artery and vein
4. Anterior perforating branches of intercostal vessels
5. Anterior cutaneous branch of intercostal nerve
6. Lateral branches of intercostal nerve and vessels
7. Collateral branches of intercostal nerve and vessels

IN THE CLINIC:

- **To remove air from the pleural cavity a tube must be inserted. The tube is inserted over the superior aspect of the rib because insertion at the inferior border of the rib could injure the intercostal vein, artery, and nerve lying in the costal groove.**

Figure from Gray's Anatomy for Students, *3rd edition, p. 151.*

Identify the labeled parts of the thoracic wall and cavity.



PLEURAL CAVITY

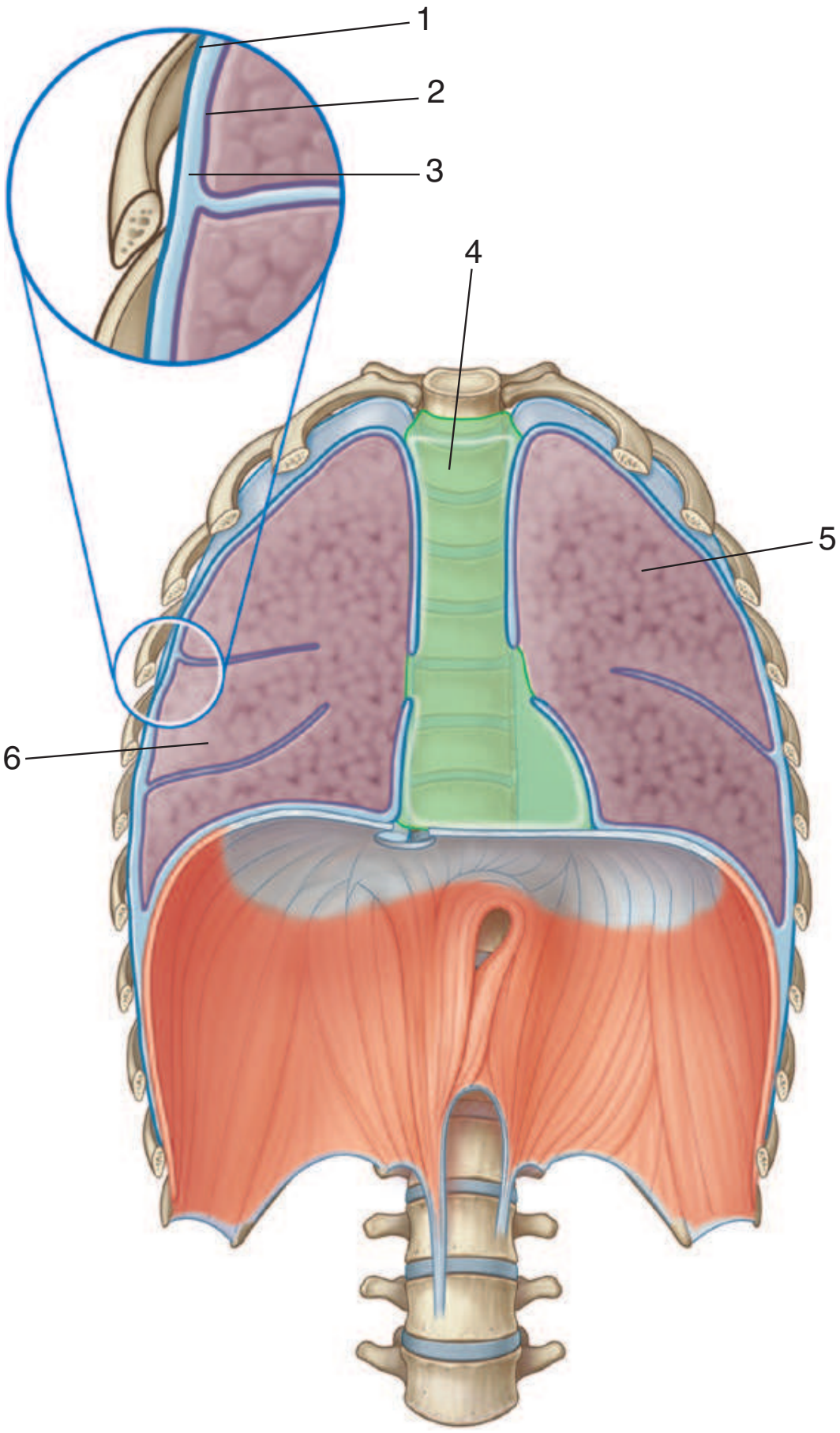
1. Right pleural cavity
2. Mediastinum
3. Left pleural cavity
4. Manubrium of sternum
5. Sternal angle
6. Body of sternum
7. Xiphoid process
8. Ribs

IN THE CLINIC:

- **The pleural cavities extend above rib I into the root of the neck. Trauma or injury to the root of the neck can involve the superior extension of the pleura. Conversely, pathologic processes in the superior extension of the pleura can involve the root of the neck.**

Figure from Gray's Anatomy for Students, *3rd edition, p. 123.*

Identify the indicated structures.



PLEURA

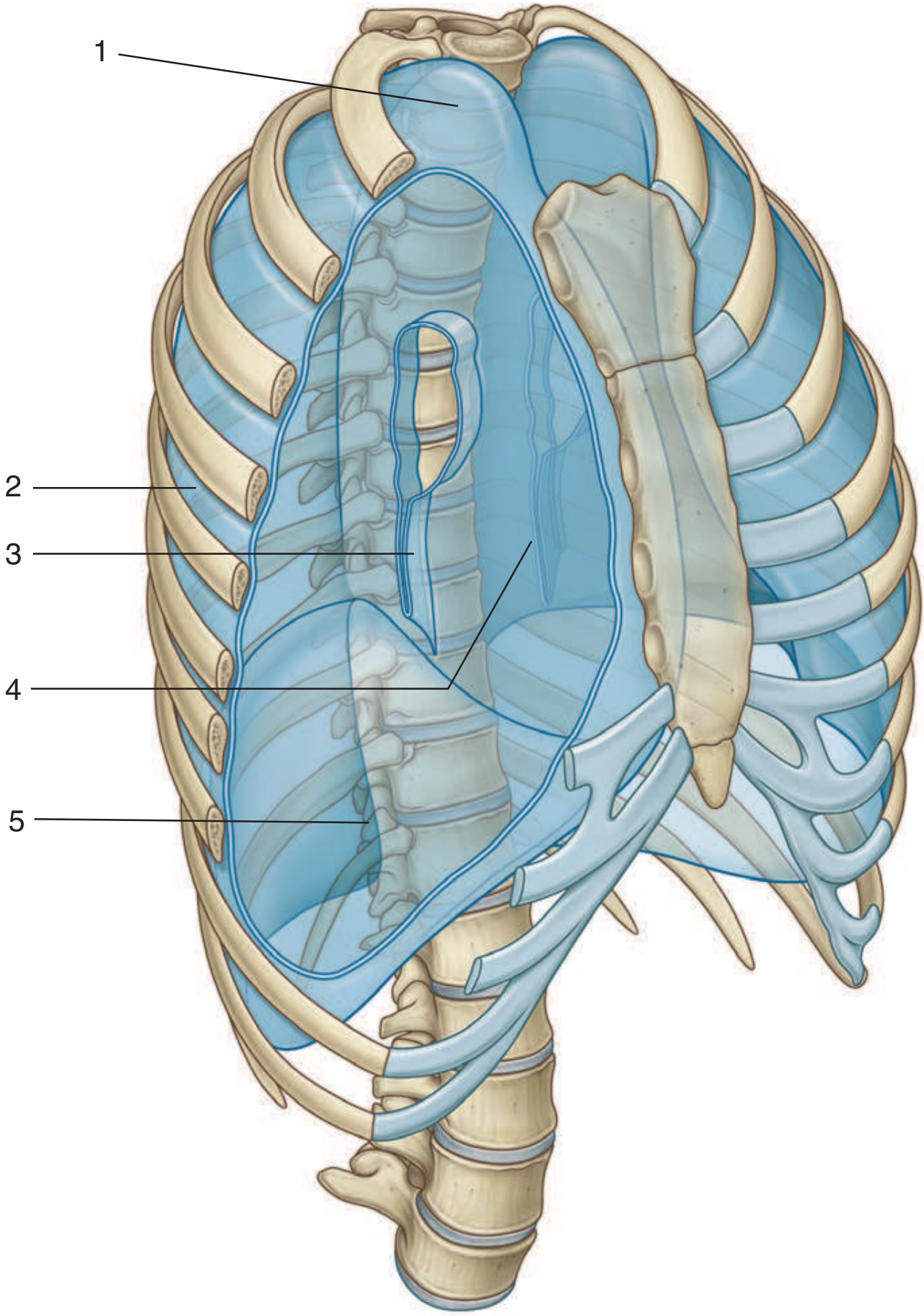
1. Parietal pleura
2. Visceral pleura
3. Pleural cavity
4. Mediastinum
5. Left lung
6. Right lung

IN THE CLINIC:

- **Each pleural cavity is a potential space enclosed between the visceral and parietal pleurae. They normally contain only a very thin layer of serous fluid (approximately 15 mL). The surface of the lung is covered by visceral pleura, which directly opposes and freely slides over the parietal pleura attached to the thoracic wall.**

Figure from Gray's Anatomy for Students, *3rd edition, p. 163.*

Identify the indicated parts of the parietal pleura.



PARIETAL PLEURA

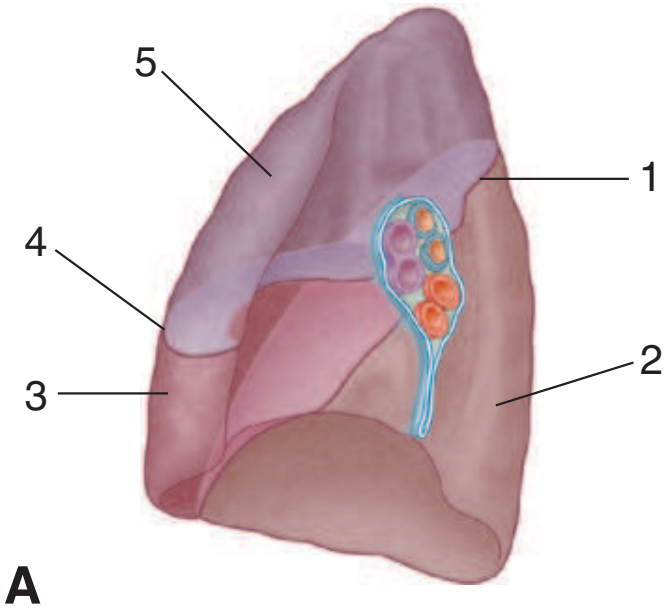
1. Cervical pleura
2. Costal part
3. Pulmonary ligament
4. Mediastinal part
5. Diaphragmatic part

IN THE CLINIC:

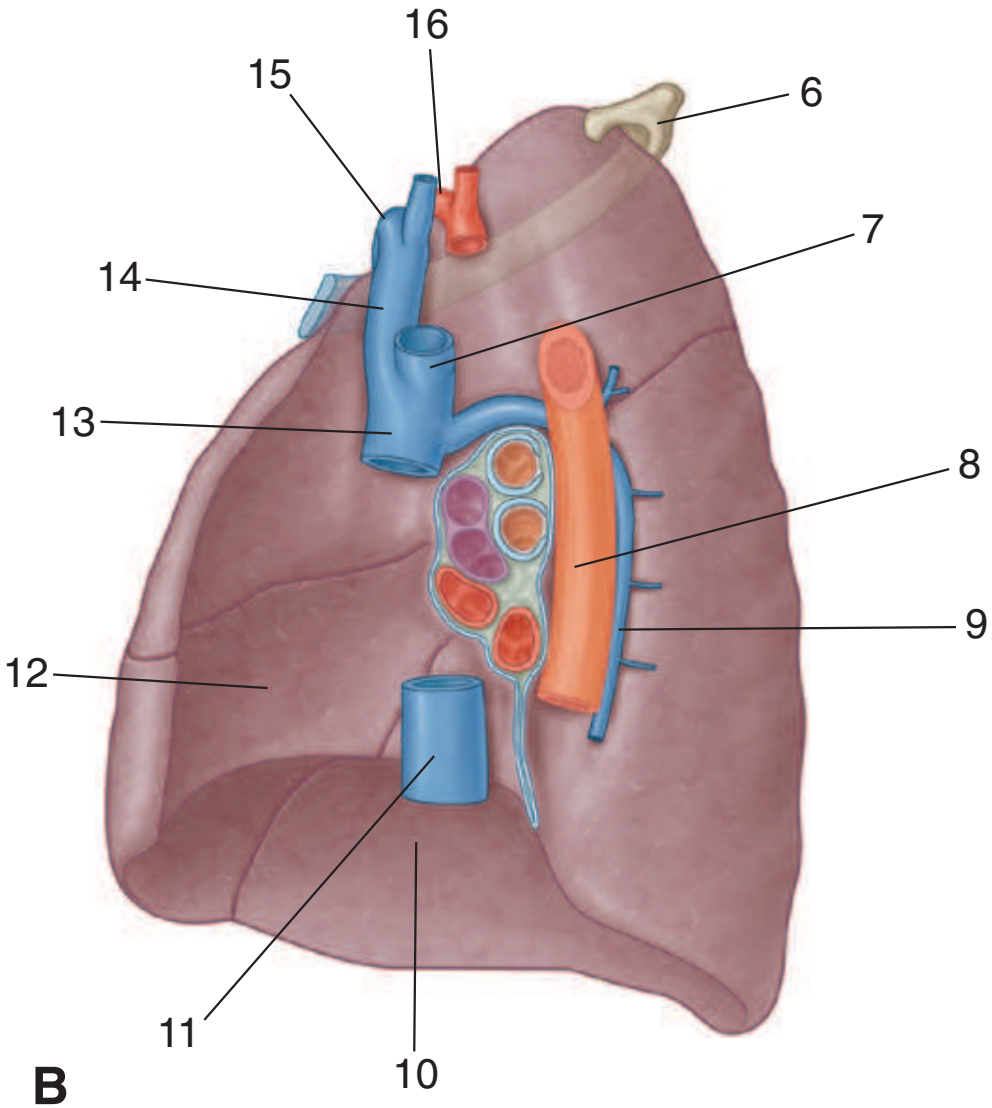
- **The parietal pleura is innervated by general somatic afferent (GSA) fibers and is very sensitive to painful stimuli, such as the insertion of a chest tube. The visceral pleura is innervated by general visceral afferent (GVA) fibers and is relatively insensitive to painful stimuli.**

Figure from Gray's Anatomy for Students, *3rd edition, p. 164.*

Identify the indicated parts of the right lung in A and structures related to the right lung in B.



A



B

RIGHT LUNG

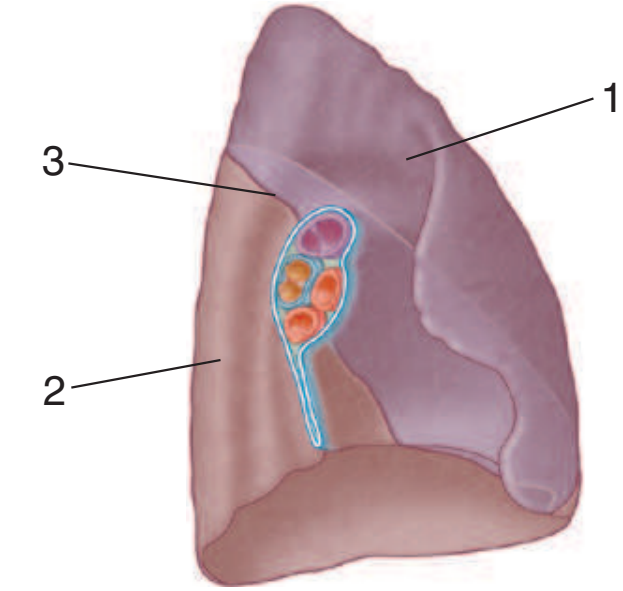
1. Oblique fissure
2. Inferior lobe
3. Middle lobe
4. Horizontal fissure
5. Superior lobe
6. Rib I
7. Left brachiocephalic vein
8. Esophagus
9. Azygos vein
10. Diaphragm
11. Inferior vena cava
12. Heart
13. Superior vena cava
14. Right brachiocephalic vein
15. Subclavian vein
16. Subclavian artery

IN THE CLINIC:

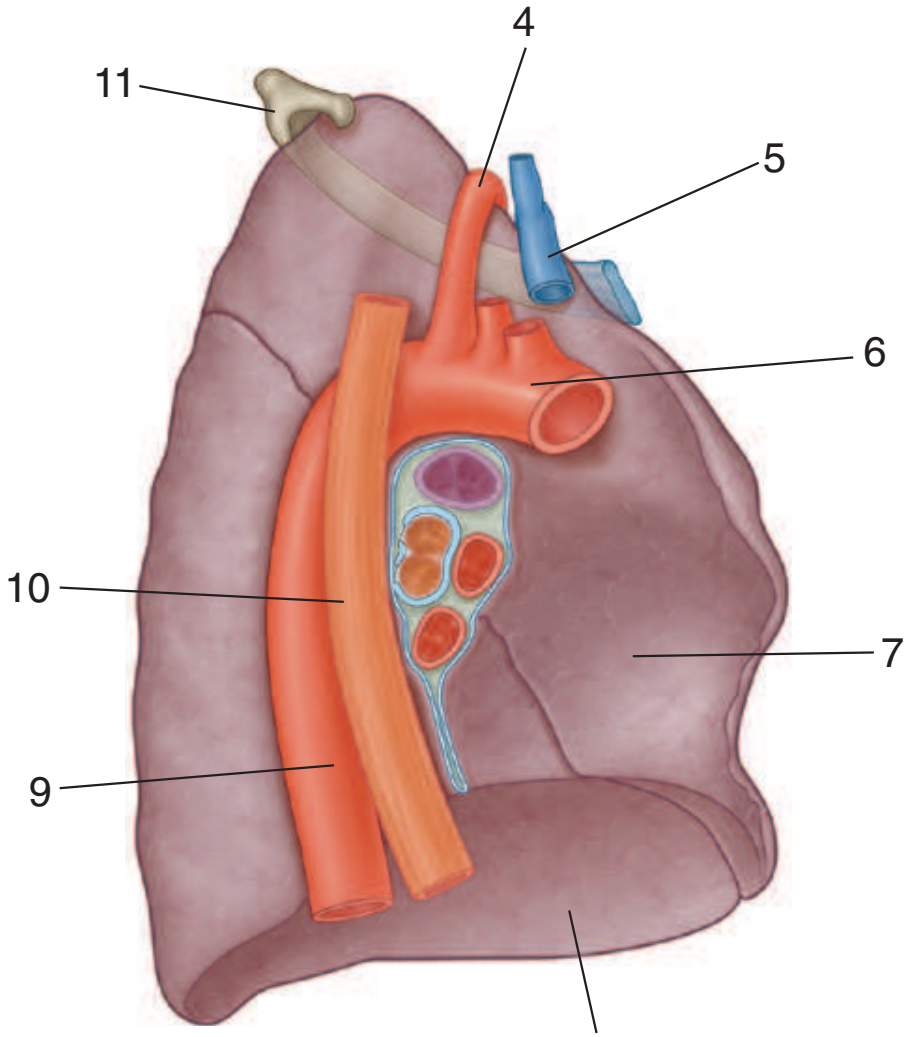
- **The largest surface of the superior lobe is in contact with the upper part of the anterolateral wall, and its apex projects into the root of the neck. The surface of the middle lobe lies mainly adjacent to the lower anterior and lateral walls. The costal surface of the inferior lobe is in contact with the posterior and inferior walls. When listening to breath sounds from each of the lobes, the stethoscope must be positioned on the areas of the thoracic wall related to the specific underlying lobe.**

Figure from Gray's Anatomy for Students, *3rd edition, p. 170.*

Identify the indicated parts of the left lung in A and structures related to the left lung in B.



A



B

LEFT LUNG

1. Superior lobe
2. Inferior lobe
3. Oblique fissure
4. Left subclavian artery
5. Left brachiocephalic vein
6. Aortic arch
7. Heart
8. Diaphragm
9. Thoracic aorta
10. Esophagus
11. Rib I

IN THE CLINIC:

- **The largest surface of the superior lobe is in contact with the upper part of the anterolateral wall, and the apex of this lobe projects into the root of the neck. The costal surface of the inferior lobe is in contact with the posterior and inferior walls. When listening to breath sounds from each of the lobes, the stethoscope must be positioned on the areas of the thoracic wall related to the specific underlying lobe.**

Figure from Gray's Anatomy for Students, *3rd edition, p. 171.*