What are the Lungs? Lobes, Segments and Hilum

Worksheet

The lungs are divided by fissures into lobes - three on the right, two on the left - and further into bronchopulmonary segments, with the hilum marking where the bronchus, vessels, and nerves enter each lung.

Questions

1. How many bronchopulmonary segments does the right lung typically have?

A) 6
B) 8
C) 10
D) 12

2. What structure occupies the anterior indentation of the left lung?

A) Liver
B) Heart (cardiac notch)
C) Spleen
D) Esophagus

3. The hilum of the lung is located on which surface?

A) Costal surface
B) Diaphragmatic surface
C) Mediastinal surface
D) Apex

4. Which fissure is unique to the right lung?

A) Oblique fissure
B) Horizontal (transverse) fissure
C) Cardiac notch
D) Lingular fissure

5. A CT scan shows a mass in the right lung between the horizontal and oblique fissures. Which lobe is it in?

6. Why does the left lung have a cardiac notch but the right lung does not?

7. During lung transplant surgery, which structures must be reconnected at the hilum?

8. Define: How many lobes does the right lung have?

9. Define: How many lobes does the left lung have?

10. Define: What separates the lobes of the lungs?

Answer Key

1. C) 10 - The right lung usually has 10 bronchopulmonary segments.

2. B) Heart (cardiac notch) - The heart's leftward tilt creates a cardiac notch in the left lung.

3. C) Mediastinal surface - The hilum sits on the mediastinal surface of each lung.

4. B) Horizontal (transverse) fissure - The horizontal fissure is found only in the right lung, separating the upper from the middle lobe.

5. The right lung's 3 lobes are separated by 2 fissures The horizontal fissure separates the upper lobe from the middle lobe The oblique fissure separates the middle/upper from the lower lobe A mass between both fissures lies in the middle lobe.

6. The heart is tilted leftward in the thorax The left lung's anterior border indents to accommodate it This notch, plus the lingula, replaces the middle lobe seen on the right.

7. The hilum is the lung's root, where vessels and airway enter Structures include the main bronchus, pulmonary artery, and two pulmonary veins Plus bronchial vessels, lymphatics, and autonomic nerves All must be anastomosed for the transplant to function.

8. 3 - superior, middle, inferior.

9. 2 - superior, inferior (plus the lingula).

10. Fissures - the oblique fissure (both lungs) and horizontal fissure (right lung only).