

# Kazakh-Russian Medical University

Independent Work

Theme: The lungs

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Group: 104A

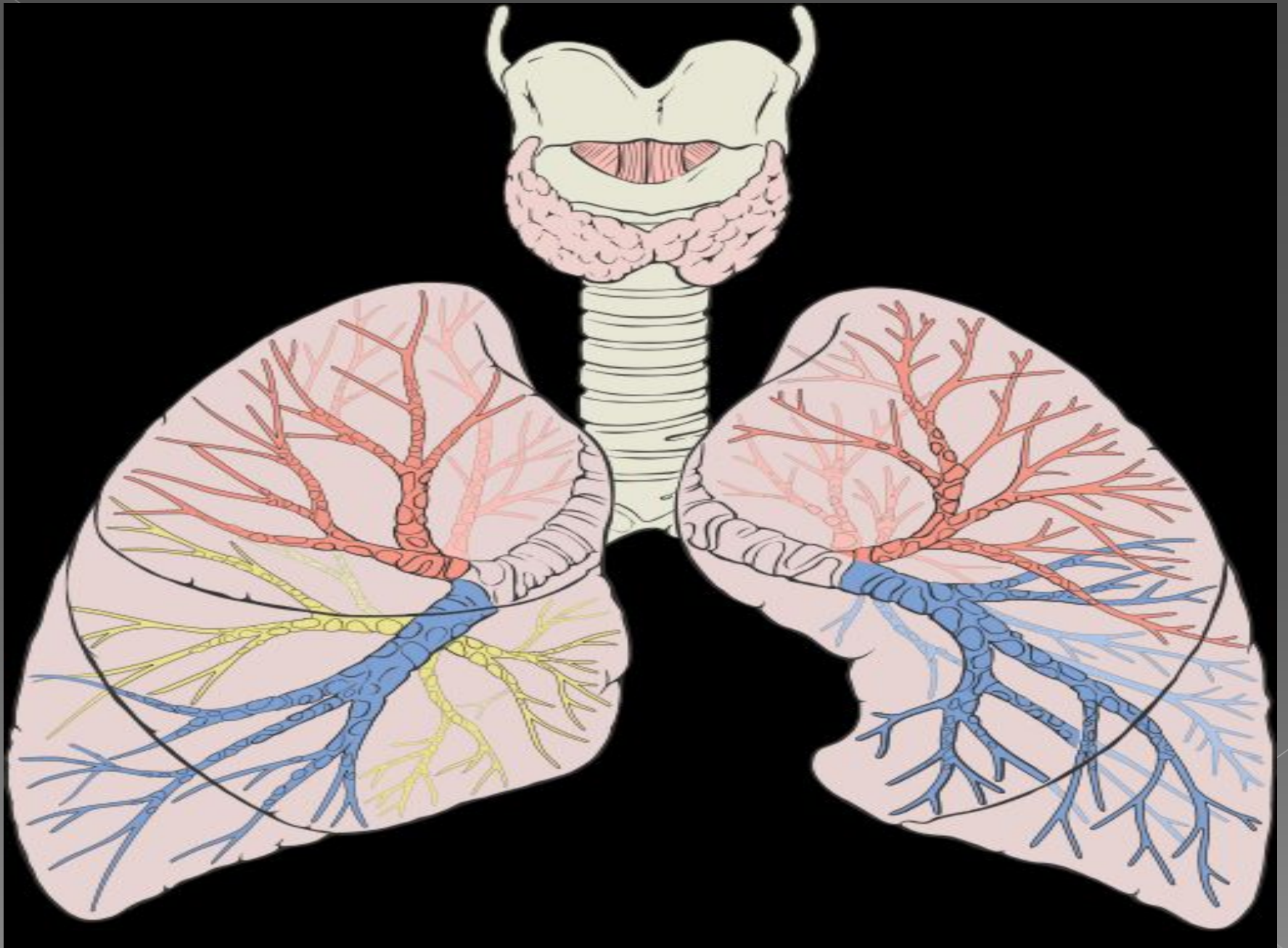
Checked by: Kosbatyrova N.B

# PLAN

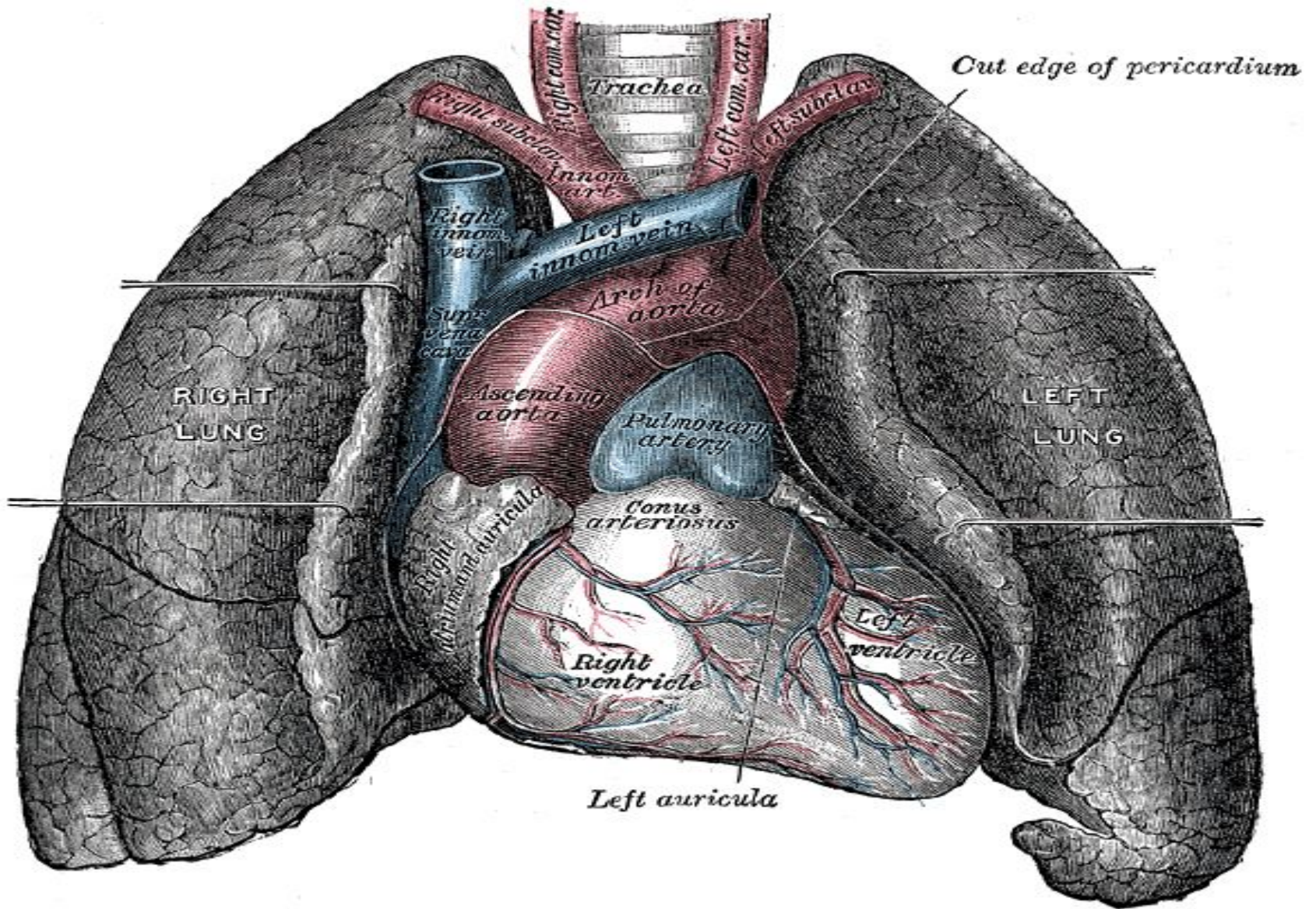
- ⦿ Lung
- ⦿ Structure
- ⦿ Right lung
- ⦿ Left lung

# Lung

- The lungs are the primary organs of respiration in humans and many other animals including a few fish and some snails. In mammals and most other vertebrates, two lungs are located near the backbone on either side of the heart. Their function in the respiratory system is to extract oxygen from the atmosphere and transfer it into the bloodstream, and to release carbon dioxide from the bloodstream into the atmosphere, in a process of gas exchange.



- In humans, the primary muscle that drives breathing is the diaphragm. Humans have two lungs, a right lung and a left lung. They are situated within the thoracic cavity of the chest. The right lung is bigger than the left, which shares space in the chest with the heart. The lungs together weigh approximately 1.3 kilograms (2.9 lb), and the right is heavier.



RIGHT LUNG

LEFT LUNG

Trachea

Out edge of pericardium

Right subclon. innom. art.

Right com. car.

Left com. car.

Left subclon. innom. art.

Right innom. vein

Supr. vena cava

Left innom. vein

Arch of aorta

Ascending aorta

Pulmonary artery

Conus arteriosus

Right auricula

Left auricula

Right ventricle

Left ventricle

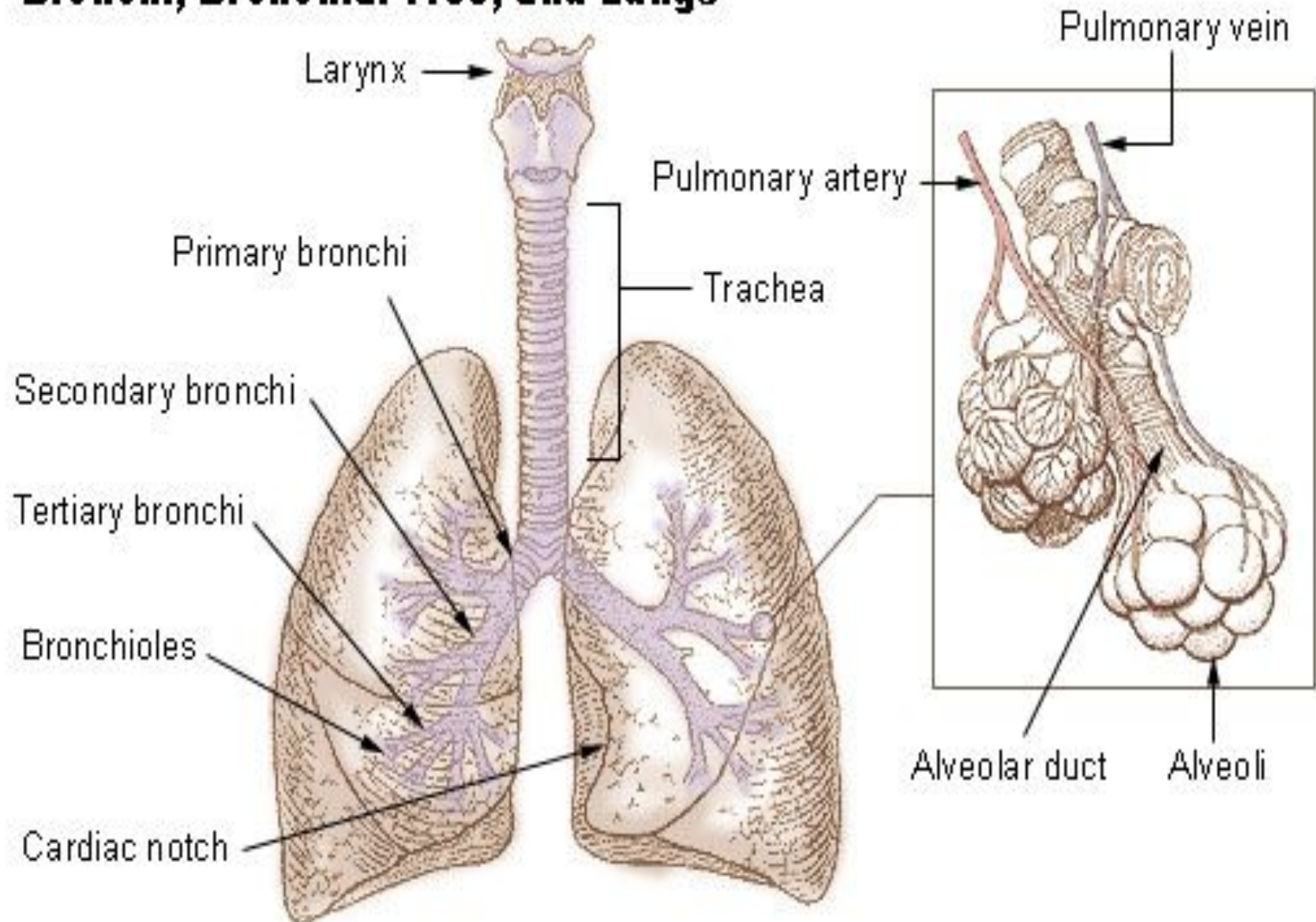
- The right lung has three lobes and the left has two. The lobes are further divided into bronchopulmonary segments and lobules. The lungs have a unique blood supply, receiving deoxygenated blood sent from the heart for the purposes of receiving oxygen (the pulmonary circulation) and a separate supply of oxygenated blood (the bronchial circulation).

# Structure

- The lungs are located in the chest on either side of the heart in the rib cage. They are conical in shape with a narrow rounded apex at the top and a broad base that rests on the diaphragm. The apex of the lung extends into the root of the neck, reaching shortly above the level of the sternal end of the first rib. The lungs stretch from close to the backbone in the rib cage to the front of the chest and downwards from the lower part of the trachea to the diaphragm.



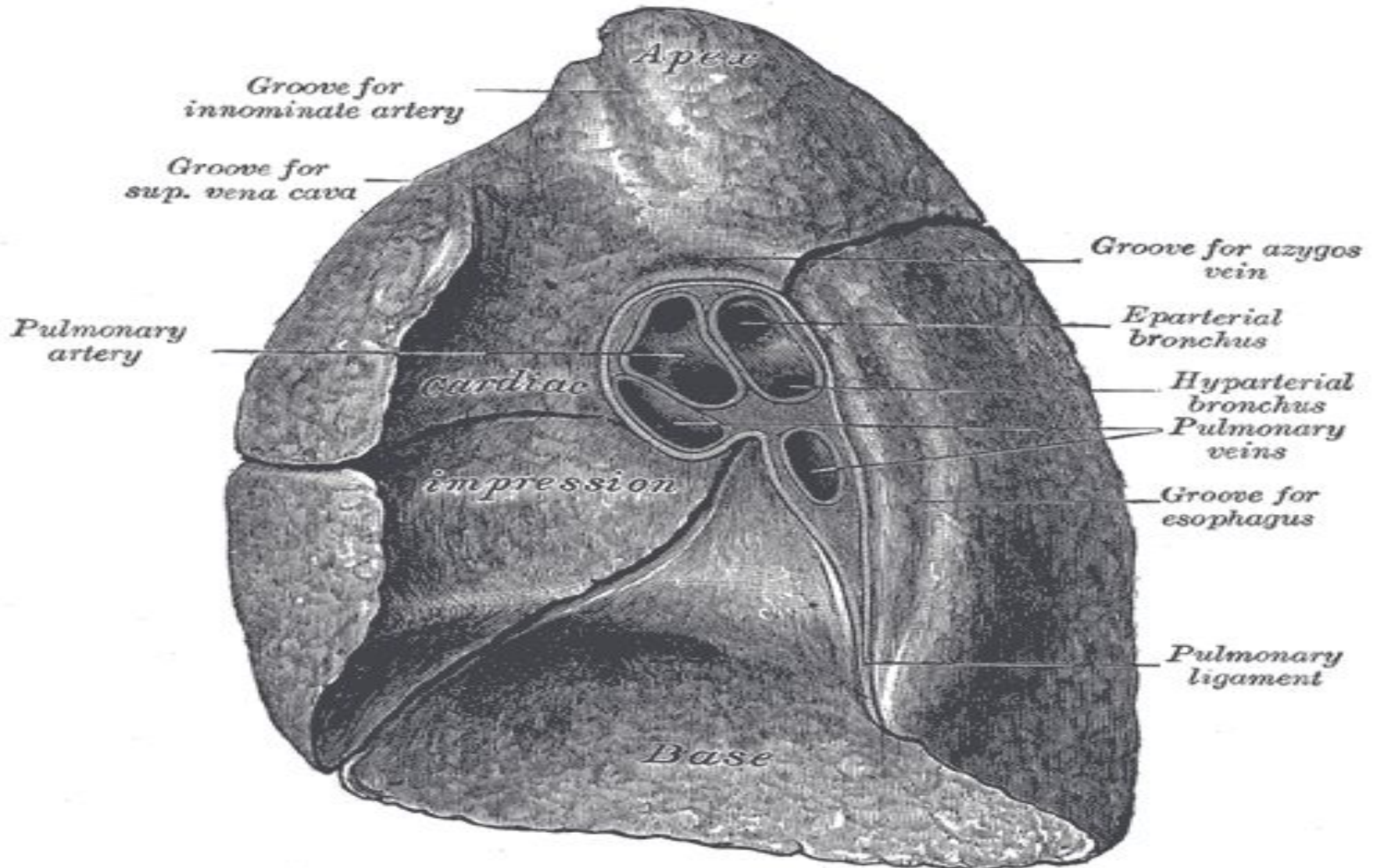
## Bronchi, Bronchial Tree, and Lungs



# Right lung

- The right lung has both more lobes and segments than the left. It is divided into three lobes, an upper, middle, and a lower, by two fissures, one oblique and one horizontal. The upper, horizontal fissure, separates the upper from the middle lobe. It begins in the lower oblique fissure near the posterior border of the lung, and, running horizontally forward, cuts the anterior border on a level with the sternal end of the fourth costal cartilage; on the mediastinal surface it may be traced backward to the hilum.

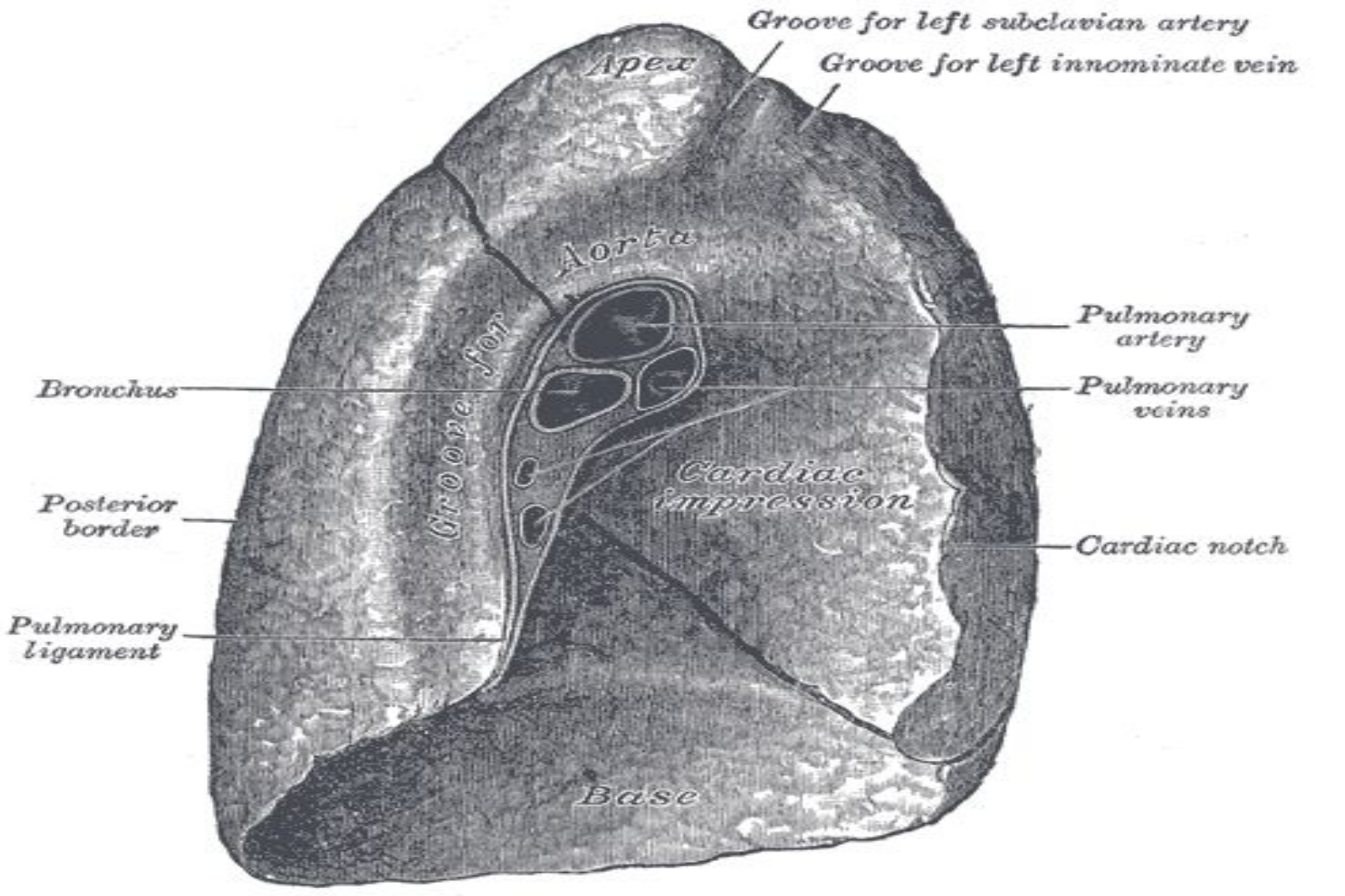
# right lung



# Left lung

The left lung is divided into two lobes, an upper and a lower, by the oblique fissure, which extends from the costal to the mediastinal surface of the lung both above and below the hilum. The left lung, unlike the right, does not have middle lobe, though it does have a homologous feature, a projection of the upper lobe termed the “lingula”. Its name means “little tongue”. The lingula on the left serves as an anatomic parallel to the right middle lobe, with both areas being predisposed to similar infections and anatomic complications. There are two bronchopulmonary segments of the lingula: superior and inferior.

# The left lung



# Questions

1.