THE TRACHEA AND BRONCHIAL TREE

The trachea connects to the larynx superiorly and ends inferiorly in a keel-shaped structure called the carina. The trachea is composed of the tracheal rings which are hyaline cartilage. The posterior surface of the trachea has smooth muscle called the trachealis muscle that allows for the food in the esophagus to bulge into the trachea. The trachea branches into the right primary bronchus and the left primary bronchus which form part of the lungs.

Answer choices:
- right primary bronchus
- carina
- trachea
- left primary bronchus
- tracheal ring
- trachealis muscle
THE PATHWAY OF AIR

The lungs are like large sponges filled with microscopic spaces. Air travels to these spaces by the bronchial tree. The trachea splits at the level of the lungs into two primary bronchi. Each lung has a primary bronchus that divides to secondary bronchi. These divide further to tertiary bronchi which divide into smaller branches. Finally bronchi become bronchioles and these lead to smaller sacs where the exchange of oxygen and carbon dioxide occurs between the lungs and blood. Shade the major segments of the bronchial tree.

The air from the bronchioles moves into the alveolar ducts which are part of the clusters called alveolar sacs. The air flows into the alveolar duct which is a conduit to the individual alveoli (alveolus singular) and these are the areas where there is an exchange of oxygen and carbon dioxide between the air and blood. Capillaries are situated next to the alveoli and there are two thin set of membranes—one of the alveolus and one of the capillary—that allow the exchange of oxygen and carbon dioxide. Additionally there are type II alveolar cells (septal cells) that secrete a material called surfactant. This substance reduces the surface tension of the lungs, allowing them to expand more easily. Color in the structures of the alveolar sacs and the associated structures.

Answer choices:
- secondary bronchus
- bronchus
- bronchioles
- red blood cells
- alveolar sac
- cartilage
- tertiary bronchus
- pulmonary artery
capillaries
- pulmonary vein
- alveolar ducts
- alveoli