

Question 11 pts

Within which of the following airway structures does the transition point between conducting and respiratory zones occur?

Group of answer choices



Bronchi

Bronchioles

Trachea



Alveoli

An older adult patient presents with a 10-year history of chronic cough and sputum production, particularly in the mornings. She has smoked 1 pack of cigarettes daily for 45 years but quit last year. Spirometry indicates a post-bronchodilator FEV1/FVC ratio of 0.65. Which of the following pathophysiological processes is most directly responsible for the excessive mucus production observed in this condition?

Group of answer choices



Decreased cilia function in the bronchi



Accumulation of inflammatory cells in the alveoli



Thickening of the arterial walls in the pulmonary circulation

Hyperplasia of the mucus-secreting glands in the bronchioles

Question 31 pts

A patient with silicosis undergoes spirometry, which shows a restrictive pattern. Which pathophysiological mechanism primarily contributes to their symptoms?

Group of answer choices



Destruction of alveolar walls

Excessive mucus production

Hyperreactivity of the airways



Thickening of the interstitial space

An adult patient is admitted to the ICU with severe pancreatitis. During the hospital stay, they develop sudden-onset severe dyspnea and hypoxemia requiring mechanical ventilation. Bilateral pulmonary infiltrates are seen on chest X-ray, and lab results show a decreased PaO₂/FiO₂ ratio. An echocardiogram is not indicative of heart failure. Which of the following best describes the primary mechanism behind refractory hypoxemia seen in this condition?

Group of answer choices



Decreased cardiac



output Right-to-left

cardiac shunt



Mismatch of ventilation and perfusion (V/Q mismatch)

Central nervous system depression

Question 51 pts

An older adult woman with chronic bronchitis presents for a routine check-up