QUESTION 68 - Respiratory

A 76yo woman with a 45 pack year smoking history presents with a six-month history of worsening dry cough. HRCT scans of the thorax are shown below.

Based on these scans, which of the following is the most likely cause of her cough?
A. Chronic bronchitis
B. Emphysema
C. Interstitial pulmonary fibrosis
D. Bronchiolitis obliterans
E. Bronchiectasis

CT shows honey-combing in the peripheral areas of the lower lobes. This is consistent with IPF.

EMPHYSEMA
Panlobular emphysema

HRCT shows a paucity of vascular structures in both lower lobes, most evident in the anterior-basal segment of the right lower lobe. Courtesy of Paul Stark, MD.

BRONCHIECTASIS
Cylindrical bronchiectasis
HRCT shows scarring with bibasilar loss of volume in the posterobasal and laterobasal segments of both lower lobes. The segmental bronchi are mildly distended and distorted (arrows). They are wider in diameter than their accompanying segmental pulmonary artery branches and are close together. These changes are probably due to a previous, incompletely resolved pneumonia. Courtesy of Paul Stark, MD.

INTERSTITIAL PULMONARY FIBROSIS
Honeycomb cysts in IPF/UIP

Idiopathic pulmonary fibrosis/usual interstitial pneumonia with bilateral, small subpleural honeycomb cysts which are separated by normal parenchyma. The anterior segmental bronchus of the left upper lobe is slightly dilated, consistent with mild traction bronchiectasis. Courtesy of Paul Stark, MD.

BRONCHIOLITIS OBLITERANS
Bronchiolitis obliterans with organizing pneumonia
High-resolution CT scan in bronchiolitis obliterans with organizing pneumonia (BOOP). Asymmetric ground glass opacities are seen, with a predominantly peripheral distribution (arrows). Courtesy of Paul Stark, MD.

Caption: Picture 10. Chronic bronchitis. A CT scan shows hyperlucency due to hypovascularity and bullae formation diffusely, predominantly in upper lobes.