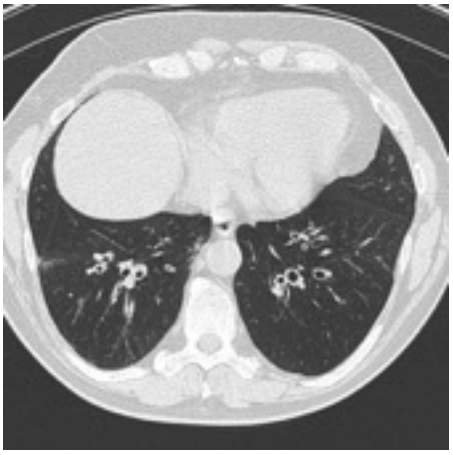
Clinical case 14: Computed tomography and bronchoscopy in bronchiectasis

NN is a 70 year old male with a one year history of barking cough, especially after lying down or sleeping. His cough improves in the upright position. He also complains of shortness of breath (WHO Dyspnea scale II). During the past several years he has been hospitalized several times for recurrent bronchitis, and has had at least two episodes of pneumonia requiring antibiotics. He has a history of adult onset asthma, and eczema. He has been taking inhaled bronchodilators, nasal sprays, Singulair, corticosteroids, and since more than two months has been on oral corticosteroids (Prednisone, currently tapered to 10 mg/day). He has bilateral bronchi and wheezing on auscultation of the trachea. Forced Expiratory Volume is 1.93 L (51% predicted) with 17% improvement after bronchodilators. Forced Vital Capacity is 2.62L (52% predicted), with 22% improvement after bronchodilators. Total Lung Capacity is 98% predicted, Residual Volume is 171% predicted, and Diffusion Capacity 89%. Computed tomography reveals bronchial thickening and lower lobe bronchiolitis.



After addressing items of the four boxes, briefly respond to the following questions:

1. List FIVE common bacterial infections associated with bronchiectasis and discuss their impact on prognosis and frequency depending on etiology of bronchiectasis.
2. Identify the role of chest computed tomography scanning in exploring the etiologies of bronchiectasis.
3. Explain at least THREE indications for bronchoscopy in patients with bronchiectasis.