

Bronchiectasis

The British Thoracic Society (BTS) recommends performing a baseline chest x ray (CR) in people with suspected bronchiectasis followed by a thin section (< or equal to 1 mm slice thickness) CT scan to confirm the diagnosis.² According to the American College of Radiology (ACR), CR is relatively insensitive but is usually appropriate and often performed as initial imaging for evaluation of associated conditions and exclusion of diseases that cause similar symptoms.³ High resolution CT chest (HRCT) is considered the most accurate imaging modality for the diagnosis of bronchiectasis.⁴ The ACR states that CT chest WO is usually appropriate for suspected bronchiectasis to identify and characterize the severity and distribution of bronchiectasis and to evaluate any associated parenchymal lung diseases.³ CT chest can help identify an etiology, such as allergic bronchopulmonary aspergillosis, Primary Ciliary Dyskinesia, tracheobronchomegaly, or a foreign body.^{2,4}

MRI chest for suspected bronchiectasis is not recommended because. It is inferior to CT for evaluating lung parenchyma, and its use is mainly limited to research settings.³

CR is often the initial chest imaging exam to evaluate acute conditions in people with bronchiectasis, such as pneumonia or hemoptysis. CT chest WO is usually appropriate for the evaluation of complications and assessing changes in clinical status.³ CT chest with contrast may be appropriate in the setting of a suspected acute infection and associated complication, such as abscess.³ The BTS recommends a CT chest for people with a deteriorating clinical status, such as worsening symptoms, increased frequency or severity of acute exacerbations, or decreasing lung function.² They recommend a CT chest with contrast if PE is suspected. CTA chest with contrast may be appropriate in the setting of hemoptysis to identify dilated bronchial arteries or systemic collateral vessels and for pre-procedure planning.^{3,4}

High quality evidence in favor of repeated imaging is lacking.⁴ CR may not show structural changes. Repeat HRCT carries the risk of increased radiation. Patients with diseases associated with bronchiectasis may be evaluated with CT to help guide therapy and provide prognostic information.³ The current indication for repeat HRCT is clinical deterioration.²

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2. Hill AT, Sullivan AL, Chalmers JD, et al. British Thoracic Society Guideline for bronchiectasis in adults. *Thorax* 2019; 74(Supple 1): 1-69. <http://dx.doi.org/thoraxjnl-2018-212468>.
3. Little BP, Walker CM, Bang TJ, et al. ACR appropriateness criteria: tracheobronchial disease. 2024.
4. Ledda, RE, Balbi M, Milone F, et al. Imaging in non-cystic fibrosis bronchiectasis and current limitations. *BJR Open* 2021; 3: 20210026.

