Recognize pulmonary fibrosis on HRCT scans

HRCT IS THE GOLD STANDARD FOR ILD DIAGNOSIS[1–3]

HRCT provides useful diagnostic information[1–5]

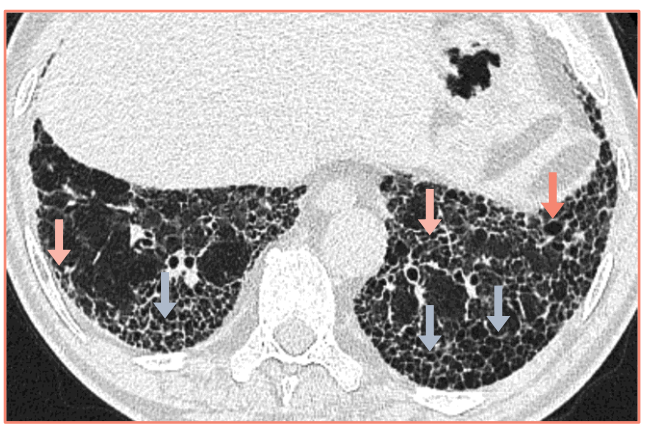
- Extent of fibrosis[2,6]
- Fibrotic features and fibrotic pattern[3–5]
- Inflammatory features[4]
- Other thoracic manifestations of CTD[7]

1 Requesting a chest HRCT:

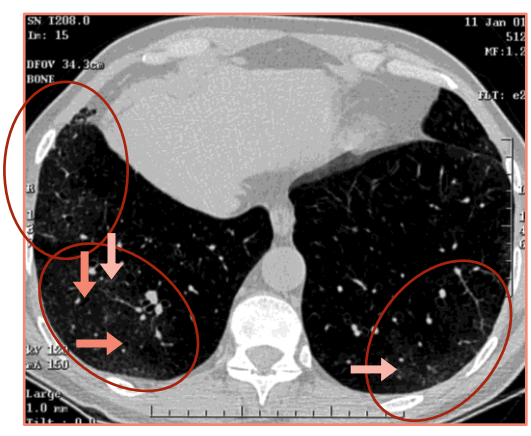
- ✓ State that the patient is being **evaluated for ILD**,[8,9] so an ILD-appropriate scanning protocol is used[3,9–11]
- ✓ Provide the radiologist with the patient's **clinical history**, including information on **PFTs** and/or **laboratory testing**[9,12]

2 Recognizing the two common HRCT patterns associated with fibrosing ILDs[13]

UIP*



Fibrotic NSIP*



honeycombing · intralobular reticulations · traction bronchiectasis · ground glass opacities

Common UIP features[8–10,14]

- Heterogeneous, subpleural basal distribution
- Mild ground glass opacification
- Honeycombing
- Reticular pattern with peripheral traction bronchiectasis or bronchiolectasis

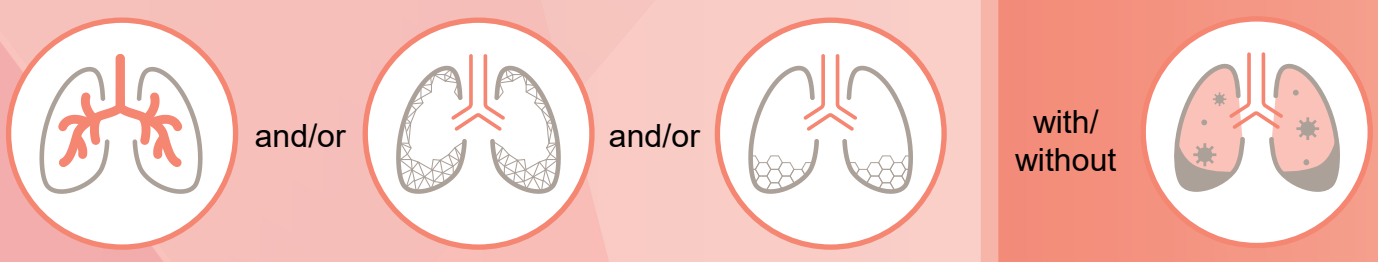
A UIP pattern has been associated with a worse prognosis in some CTD-ILDs[17–22]

Common fibrotic NSIP features[8,15,16]

- Homogeneous, subpleural basal distribution
- Subpleural sparing
- Ground glass opacification
- Little or no honeycombing
- Reticulation
- Traction bronchiectasis or bronchiolectasis
- Loss of lower lobe volume

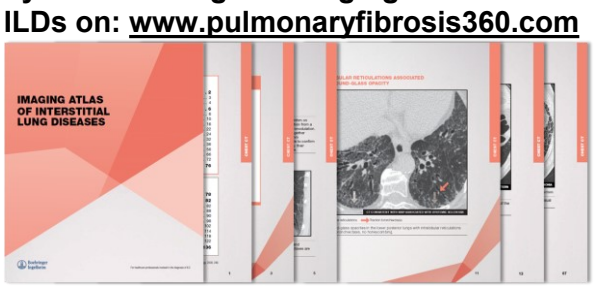
Remember the HRCT findings that indicate PULMONARY FIBROSIS IN ILDs[8,23]

TRACTION BRONCHIECTASIS and/or **RETICULATIONS** and/or **HONEYCOMBING** with/without **GROUND GLASS OPACITIES**



REQUEST A CHEST HRCT WHEN SUSPECTING PULMONARY FIBROSIS

Learn more about HRCT interpretation by downloading the Imaging Atlas of ILDs on: www.pulmonaryfibrosis360.com



Scan for more information

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CTD, connective tissue disease; CTD-ILD, connective tissue disease-associated interstitial lung disease; HRCT, high-resolution computed tomography; ILD, interstitial lung disease; NSIP, non-specific interstitial pneumonia; PFT, pulmonary function test; UIP, usual interstitial pneumonia.

References: 1. Khanna D et al. J Scleroderm Relat Dis 2022; 2. Geerts S et al. Sarcoidosis Vasc Diffuse Lung Dis 2017;34:326–35; 3. Chung J et al. J Vis Exp 2020;160:e60300; 4. Chiu Y-H et al. Respir Med 2021;187:106579; 5. Jacob J, Hansell DM. Respirology 2015;20:859–72; 6. Sverzellati N. Respir Res 2013;14(Suppl 1):S3; 7. Mira-Avendano I et al. Mayo Clin Proc 2019;94:309–25; 8. Gotway MB et al. Thorax 2007;62:546–53; 9. Chung JH, Goldin JG. Lung 2018;196:561–7; 10. Raghu G et al. Am J Respir Crit Care Med 2018;198:e44–68; 11. Prosch H et al. Eur Radiol 2012;23:1553–63; 12. Castillo C et al. J Med Radiat Sci 2021;68:60–74; 13. Wells AU et al. Eur Respir J 2018;51:1800692; 14. Raghu G et al. Am J Respir Crit Care Med 2011;183:788–824; 15. Kligerman SJ et al. Radiographics 2009;29:73–87; 16. Hansell DM et al. Radiology 2008;246:697–722; 17. Solomon JJ et al. Eur Respir J 2016;47:588–96; 18. Kim EJ et al. Eur Respir J 2010;35:1322–8; 19. Yunt ZX et al. Respir Med 2017;126:100–4; 20. Kelly CA et al. Rheumatology (Oxford) 2014;53:1676–82; 21. Marie I et al. Arthritis Rheum 2011;63:3439–47; 22. Cobo-Ibáñez T et al. Clin Rheumatol 2019;38:803–15; 23. Torres PPTES et al. J Bras Pneumol 2021;47:e20200096

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