HRCT SCANNING PROTOCOL CHECKLIST FOR PATIENTS WITH SUSPECTED ILD

PRIOR TO SCAN[1]

- ❑ Review HRCT script for patient information, including:
  - Patient's age and sex
  - Relevant clinical history, including possible exposures or history of pertinent diseases—particularly connective tissue disorders—and the presence of any clinical symptoms that may indicate the cause of lung disease

SETTING HRCT PARAMETERS[2]:

The ATS/ERS/JRS/ALAT Clinical Practice Guideline recommends the following scanning protocol to optimize image interpretation of HRCT scans

- ❑ Noncontrast examination
- ❑ Volumetric acquisition with a selection of:
  - ❍ Sub-millimetric collimation
  - ❍ Shortest rotation time
  - ❍ Highest pitch
  - ❍ Tube potential and tube current, appropriate to patient size
  - ❍ Use of techniques available to avoid unnecessary radiation exposure (eg, tube current modulation)
- ❑ Reconstruction of thin-section CT images (≤1.5 mm):
  - ❍ Contiguous or overlapping
  - ❍ High-spatial-frequency algorithm
  - ❍ Iterative reconstruction algorithm if validated on the CT unit (if not, filtered back projection)
- ❑ Number of acquisitions
  - ❍ Supine: inspiratory and expiratory scans
  - ❍ Prone: only inspiratory scans
  - ❍ Inspiratory scan should be obtained at full inspiration
- ❑ Recommended radiation dose for the inspiratory volumetric acquisition: 1-3 mSv*

ALAT, Latin American Thoracic Society; ATS, American Thoracic Society; CT, computed tomography; ERS, European Respiratory Society; HRCT, high-resolution computed tomography; ILD, interstitial lung disease; JRS, Japanese Respiratory Society.

*Dose for the inspiratory volumetric acquisition. Strong recommendation to avoid "ultralow-dose CT" (<1 mSv).

IMAGE REPORTING CHECKLIST FOR HRCT SCANNING PATTERNS

DOCUMENTING APPROPRIATE SCANNING PATTERN[2]

Note the description and location of abnormalities, the presence of any typical features, and importantly, the absence of exclusionary features for the differential diagnosis.

	UIP	Probable UIP	Indeterminate for UIP	Alternative diagnosis
CT FEATURES				
Honeycombing	❑			
Peripheral bronchiolectasis	❑	❑		
Mild GGO	❑	❑	❑*	
Reticulation	❑	❑	❑*	
Distortion			❑*	
Pulmonary ossification	❑			
Cysts				❑
Marked mosaic attenuation				❑
Predominant GGO				❑
Profuse micronodules				❑
Centrilobular nodules				❑
Nodules				❑
Consolidation				❑
Non-specific features of lung infiltration			❑†	
PREDOMINANT DISTRIBUTION				
Subpleural lung (peripheral)	❑	❑	❑*	
Peribronchovascular lung (central)				❑
Perilymphatic				❑
Diffuse	❑‡			
Anterior lung				❑
Posterior lung	❑	❑		
Upper lung				❑
Mid lung				❑
Lower lung	❑	❑	❑	
Symmetrical	❑			
Asymmetrical	❑‡			
Homogeneous				
Heterogeneous	❑	❑		
Absence of predominant distribution			❑†	

References: 1. American College of Radiology. ACR-STR practice parameter for the performance of high-resolution computed tomography (HRCT) of the lungs in adults. https://www.acr.org/-/media/ACR/Files/Practice-Parameters/HRCT-Lungs.pdf. Accessed November 16, 2021. **2.** Raghu G et al. *Am J Respir Crit Care Med*. 2018:198(5):e44-e68.

*These features of the indeterminate pattern can be considered "early UIP pattern."
†These features of the indeterminate pattern can be considered "truly indeterminate."
‡Occurs occasionally.

GGO, ground glass opacity; UIP, usual interstitial pneumonia.

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