UIP pattern

- IPF
- RA (Most common CTD)
- Scleroderma
- Asbestosis
- Drug toxicity

Usual Interstitial Pneumonia

- Idiopathic pulmonary fibrosis (IPF)
- Idiopathic usual interstitial pneumonia (UIP)
- Fibrosing idiopathic interstitial pneumonia with histologic pattern of UIP on surgical biopsy
- ~ 40% of all idiopathic interstitial pneumonias

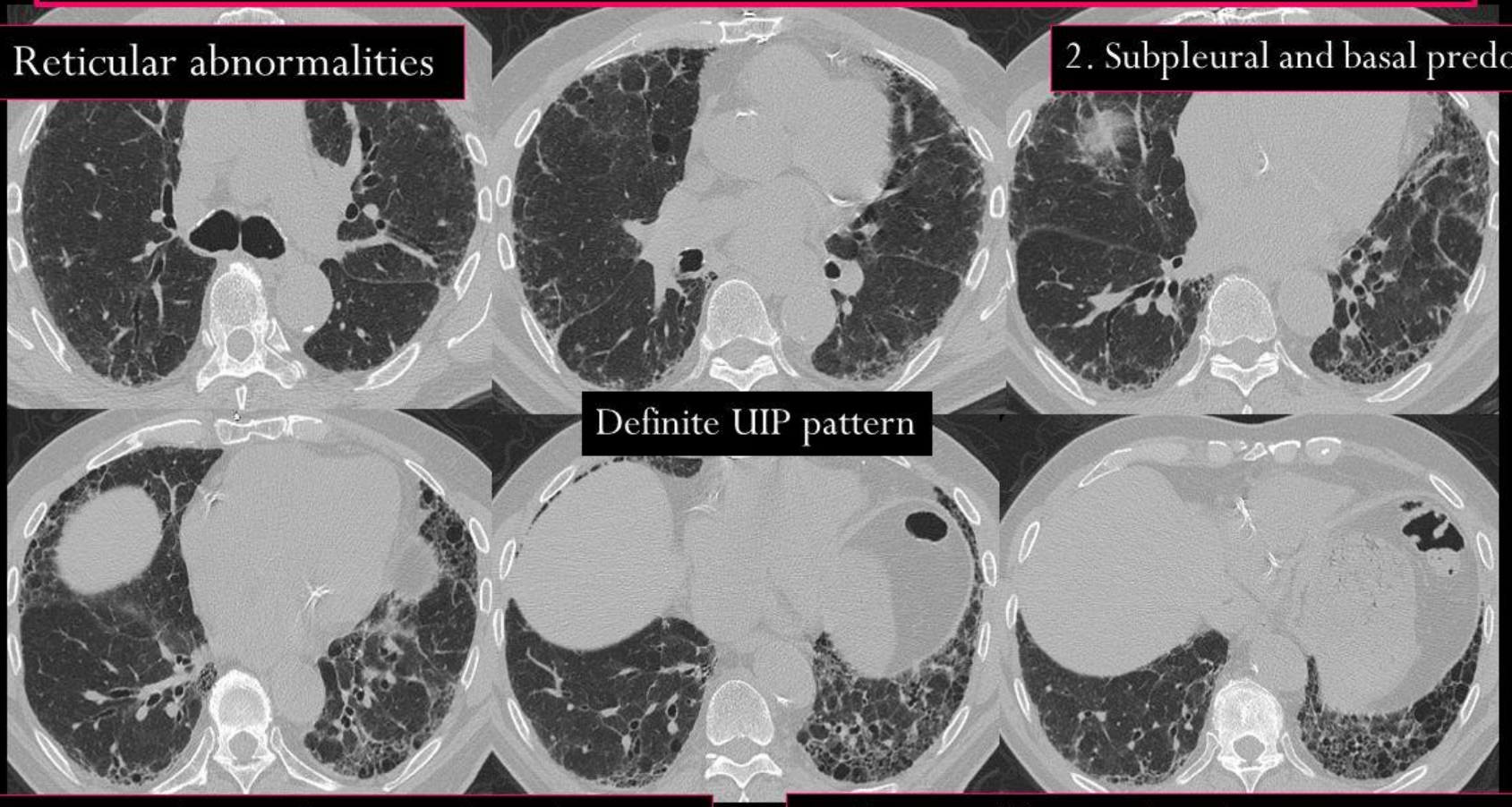
UIP

- Basilar predominant reticulation
- Traction bronchiectasis or bronchiolectasis
- Honeycombing
- Ground-glass opacities (less extensive than reticulation)
- Persistent/growing nodule/mass suggests lung cancer

Accordingly to the 2011 ATS/ERS guidelines, UIP pattern is defined by four criteria:

1. Reticular abnormalities

2. Subpleural and basal predominance



Definite UIP pattern

3. Honeycombing with traction bronchiectasis

4. Absence of features listed as «inconsistent with UIP»

Table 4. High-Resolution Computed Tomography Scanning Patterns

UIP	Probable UIP	Indeterminate for UIP	Alternative Diagnosis
Subpleural and basal predominant; distribution is often heterogeneous* Honeycombing with or without peripheral traction bronchiectasis or bronchiolectasis†	Subpleural and basal predominant; distribution is often heterogeneous Reticular pattern with peripheral traction bronchiectasis or bronchiolectasis May have mild GGO	Subpleural and basal predominant Subtle reticulation; may have mild GGO or distortion ("early UIP pattern") CT features and/or distribution of lung fibrosis that do not suggest any specific etiology ("truly indeterminate for UIP")	Findings suggestive of another diagnosis, including: • CT features: ° Cysts ° Marked mosaic attenuation ° Predominant GGO ° Profuse micronodules ° Centrilobular nodules ° Nodules ° Consolidation • Predominant distribution: ° Peribronchovascular ° Perilymphatic ° Upper or mid-lung • Other: ° Pleural plaques (consider asbestosis) ° Dilated esophagus (consider CTD) ° Distal clavicular erosions (consider RA) ° Extensive lymph node enlargement (consider other etiologies) ° Pleural effusions, pleural thickening (consider CTD/drugs)

Definition of abbreviations: CT = computed tomography; CTD = connective tissue disease; GGO = ground-glass opacities; RA = rheumatoid arthritis; UIP = usual interstitial pneumonia.

*Variants of distribution: occasionally diffuse, may be asymmetrical.

†Superimposed CT features: mild GGO, reticular pattern, pulmonary ossification.

UIP

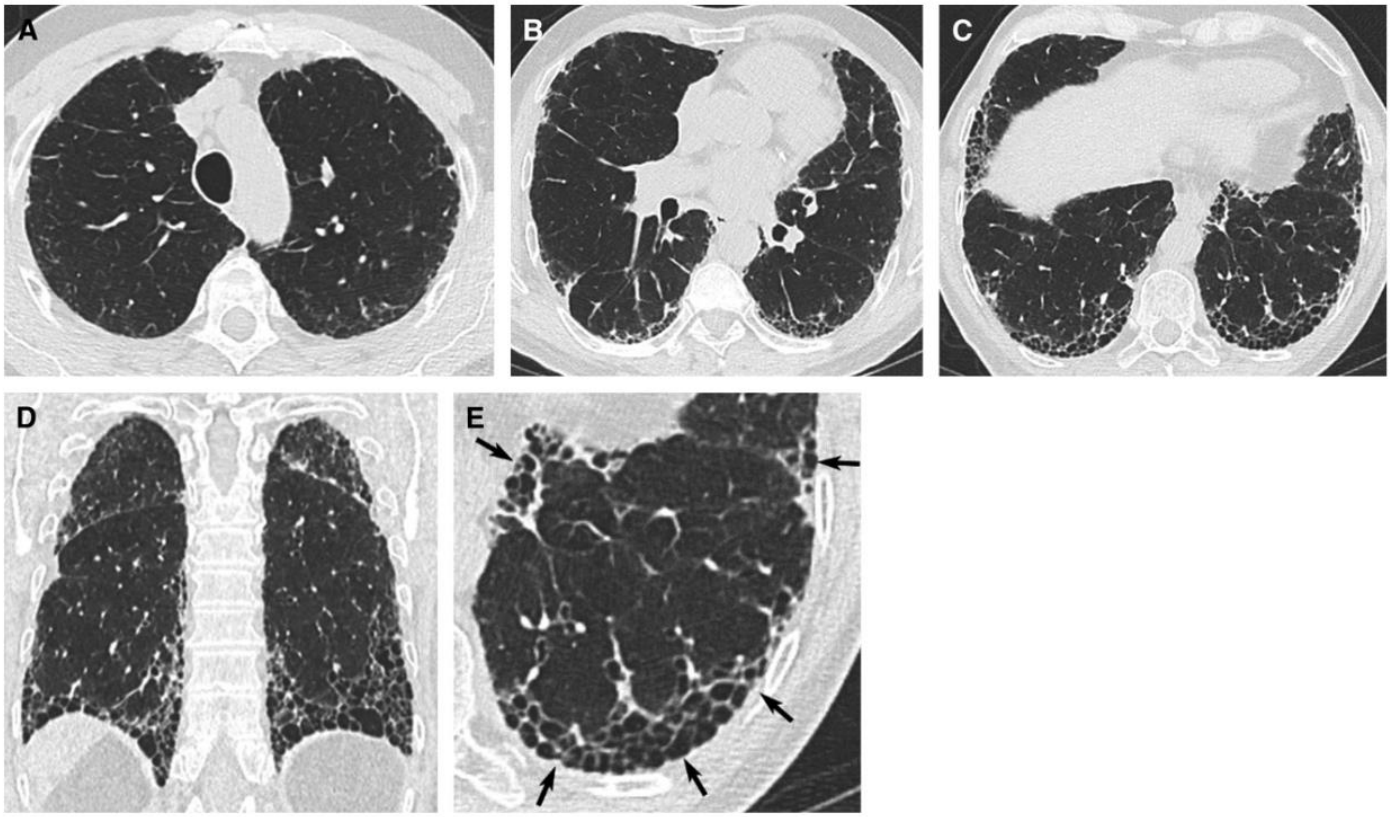


Figure 1. High-resolution computed tomography (CT) images demonstrating a usual interstitial pneumonia pattern. (*A–C*) Transverse CT section and (*D*) coronal reconstruction illustrating the presence of honeycombing with subpleural and basal predominance. Note the concurrent presence of mild ground-glass opacity. (*E*) Magnified view of the left lower lobe showing typical characteristics of honeycombing, consisting of clustered cystic airspaces with well-defined walls and variable diameters, seen in single or multiple layers (arrows).

Probable UIP

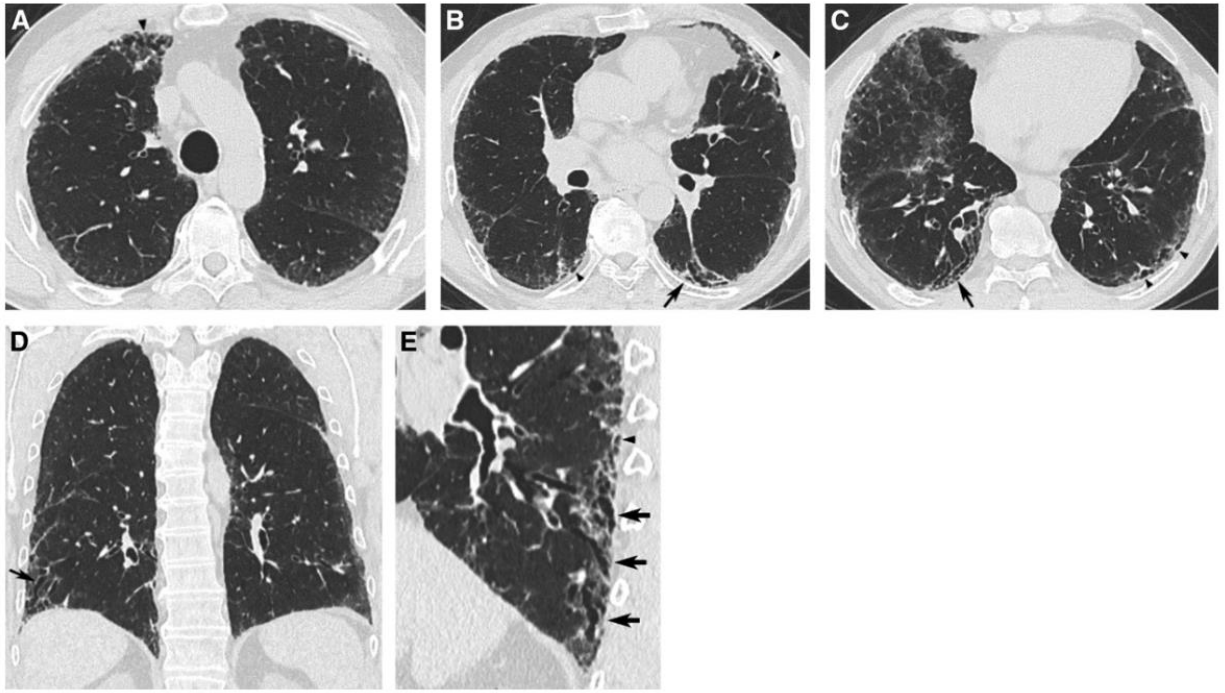


Figure 2. Probable usual interstitial pneumonia (UIP) pattern. (*A–C*) Transverse computed tomography (CT) section, (*D*) coronal reconstruction of both lungs, and (*E*) magnified sagittal view of the right lower lobe illustrating the presence of a reticular pattern with peripheral bronchiolectasis with subpleural and basal predominance. Depending on their orientation relative to the plane of the CT section, peripheral traction bronchiolectasis appear as tubular (arrows) or cystic (arrowheads) structures. Note the concurrent presence of mild ground-glass opacities in the subpleural areas of both lungs and the absence of honeycombing. UIP was proven at histology.

Indeterminant for UIP

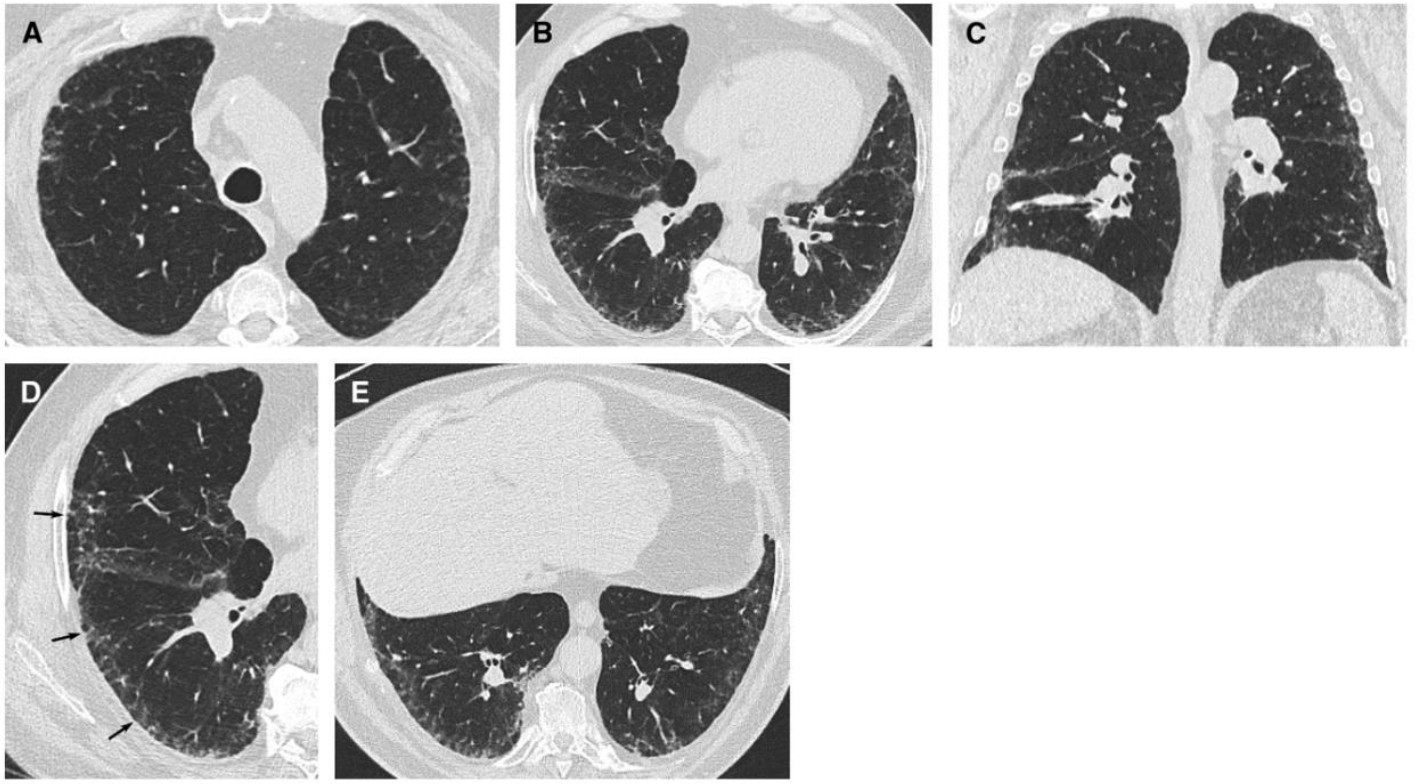


Figure 3. Indeterminate for usual interstitial pneumonia (UIP) pattern (early UIP pattern). (*A* and *B*) Transverse computed tomography (CT) section, (*C*) coronal reconstruction of both lungs, and (*D*) magnified view of the right lung in supine position showing ground-glass opacity and subtle reticulation in the subpleural areas (arrows) with a basal predominance. (*E*) Transverse CT section of the lower lung zones in prone position showing persistence of lung infiltration in nondependent areas, thus excluding gravitational abnormalities. UIP was proven at histology.

Acute exacerbation of IPF

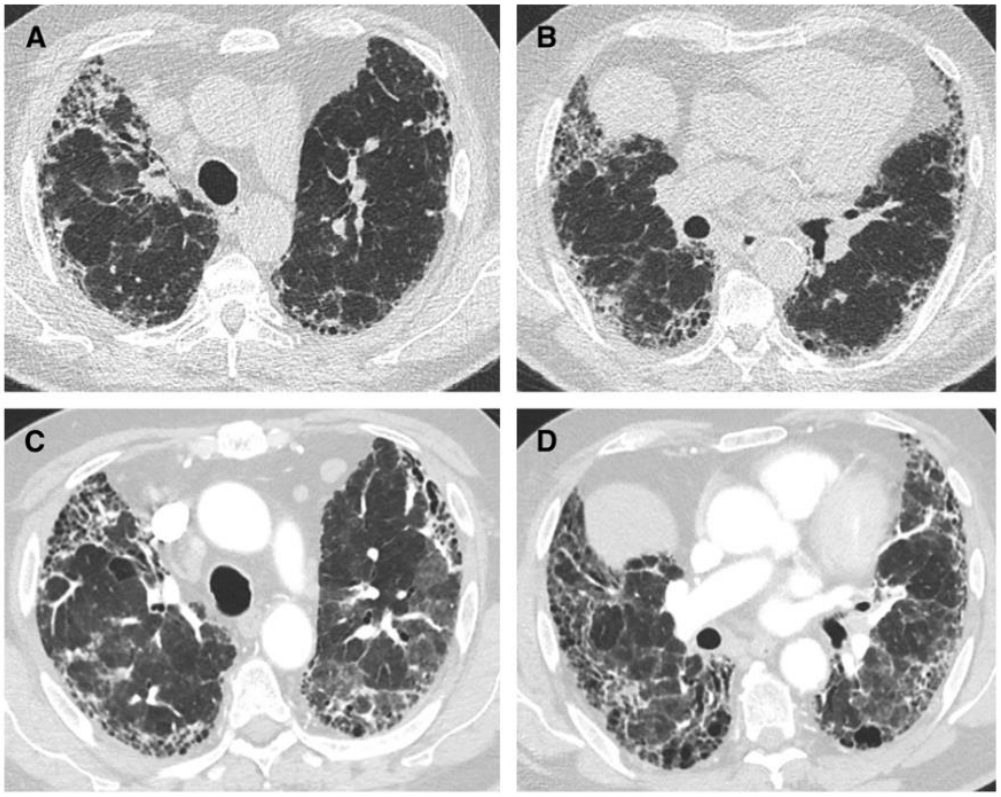
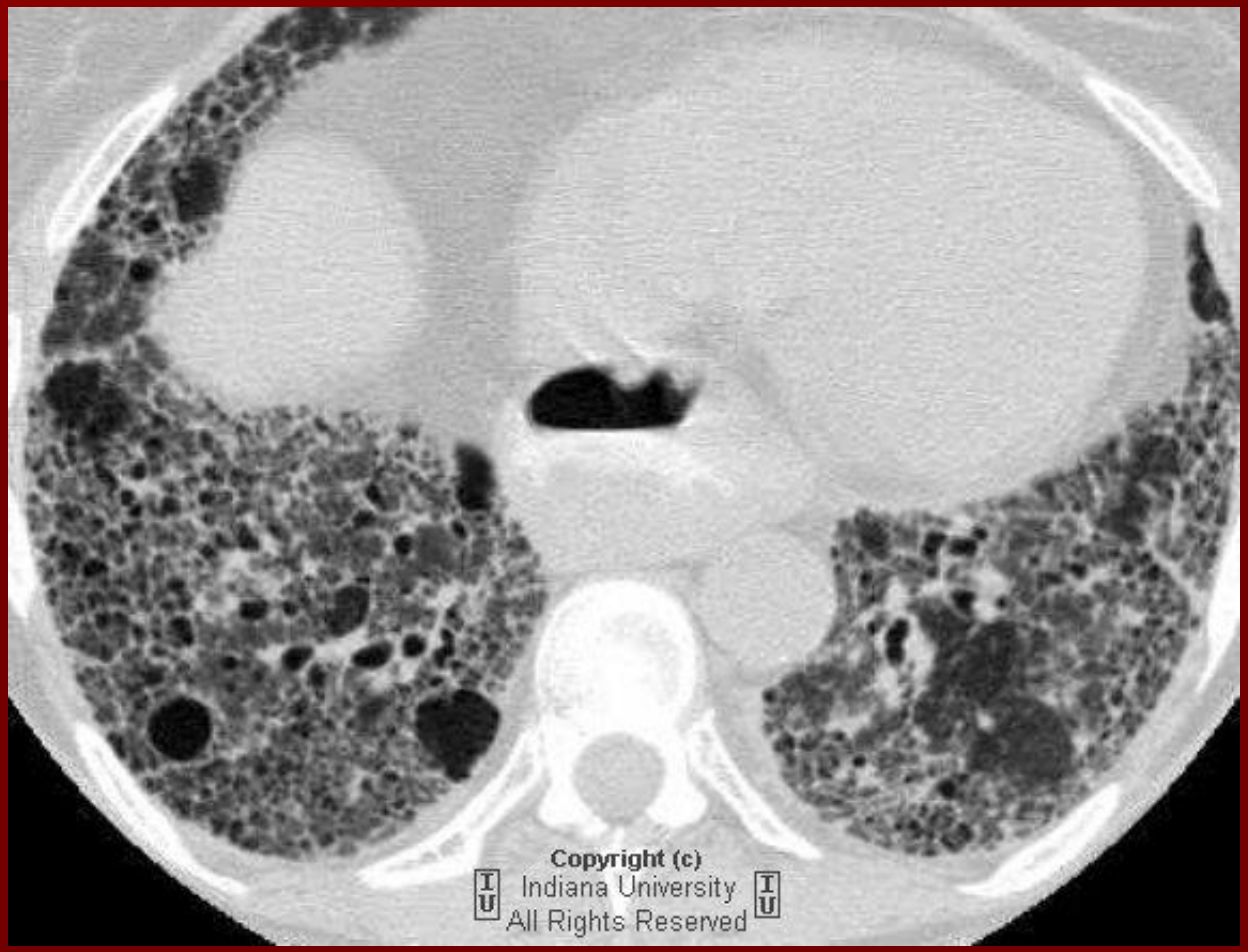


Figure 6. Acute exacerbation of idiopathic pulmonary fibrosis. (*A* and *B*) Transverse computed tomography sections obtained in the upper and mid lung zones and (*C* and *D*) during acute exacerbation showing newly developed, bilateral ground-glass opacification in both lungs on a background of usual interstitial pneumonia pattern.

Idiopathic pulmonary fibrosis



If less fibrosis in more ground glass think NSIP