



Diffuse lung disease

- What have we learned?
- Radiology and the pathologist
 - Describing diffuse lung diseaseAn approach to diffuse lung disease
 - Lung volumesDisease location and the effect of gravity
 - Physiologic basis for distribution
 CT opacities
 - Secondary lobule
- Case illustrations











An approach to diffuse lung disease

- Radiograph
 - Distribution
 - Opacity
- Computed tomography (CT)



Lung volumes

- Reduced
- Pathology distal to the airway
- Fibrosis
 IPF, asbestosis, sarcoidosis, chronic hypersensitivity pneumonitis
- Increased





An approach to diffuse lung disease

- Radiograph
- Computed tomography (CT)
 - Distribution
 - Opacity





































CT opacities

- The current language of CT opacities
 - CT opacities
 - Basic
 Combined
 - Traction bronchiectasis
 - Honeycombing













<section-header><section-header><list-item><list-item><list-item><list-item><list-item><list-item>



- Basic
- Combined
 Mosaic attenuation

- Mosaic anenuation



CT opacities

BasicCombined

Mosaic attenuationCrazing paving







Honeycombing

• Dilated respiratory bronchioles Diagnostic problem





Secondary lobule

- As defined by Miller
- Smallest unit demarcated by connective tissue septa
- 1 2.5 cm – Polyhedral
- Most useful diagnostically - Readily identified on
 - HRCT

 - Gross examinationHistologic section
 - Explains HRCT appearance
 - Broad range of lung diseasesEspecially diffuse lung disease





Secondary lobule Core structures Parenchyma 0 Septal structures





Secondary lobule

- Core structures
- BronchiolePulmonary artery
- Lymphatics
- Parenchyma
 - Alveoli
- Alveolar wall capillary bed
- Septal structures
 - Pulmonary veinsLymphatics

Co

Abnormal patterns

- Centrilobular
- Perilobular
- Panlobular
- Random























<section-header> Abnormal patterns Centrilobular Bronchiolar Peribronchiolar Vascular Vascular Sarcoidosis Sarcoidosis</l





















