30-year-old ENT resident
Intermittent fever x 2 months
Cough
New onset hemoptysis
Tuberculosis
41-year-old man
Asthma
Nasal polyps
Shortness of breath
Allergic bronchopulmonary aspergillosis
“Finger in Glove”
48-year-old woman with AML
Neutropenic fever
Angioinvasive aspergillosis
“Air Crescent”
52-year-old woman
Cough, fever, and fatigue
Widespread crackles on exam
Cryptogenic Organizing Pneumonia
Atoll Sign
COP
Chronic Eosinophilic Pna
32-year-old man
Smoker
Chronic and dyspnea
Weight loss
Alveolar Proteinosis
Alveolar Proteinosis
“Crazy Paving”
Alveolar Proteinosis
Ground-Glass Opacity

No reticulation
- Fibrosis / honeycombing
  - Honeycombing
    - Diff Dx

Reticulation
- Septal thickening
  - Active dz likely
- NSIP
  - “Crazy Paving”
    - Edema
    - PCP, CMV
    - Hemorrhage
    - Alv proteinosis
Increased Lung Opacity

Vessels obscured

Consolidation

Vessels not obscured

Ground-glass opacity
Ground Glass
17-year-old boy with cough
Cystic Fibrosis
Mosaic Perfusion: CF
66-year-old man
Progressive dyspnea, fatigue, and weight loss
Expiratory
Hypersensitivity Pneumonitis
Expiratory

HP
HP: Ground Glass Opacity
Centrilobular Nodules/GGO
HP: Air Trapping
HP: Head Cheese Sign
HP: End-stage Head Cheese
66-year-old man with dry cough
Sarcoid
Sarcoid
Nodules

Perilymphatic  Random  Centrilobular

“Tree-in-bud”
Perilymphatic Nodules

- Subpleural / pleural
- Peribronchovascular
- Septal
- Diffuse, patchy distribution
Random Nodules

- Random distribution relative to secondary lobule
- Diffuse, uniform distribution
- Pleural nodules present
- Usually well-defined
Centrilobular Nodules

- Focal, multifocal, or diffuse
- In or near small airways/vessels
- 0.5 - 1 cm away from pleura
- NO pleural nodules
- Often ill-defined or ground-glass
- “Tree-in-bud” -- infection
66-year-old man
HIV positive
High fever
Miliary TB
56-year-old woman with fever and cough
Endobronchial Pneumonia
Bronchopneumonia
“Tree-in-bud”
MAC
Lung Destruction, Cysts

Subpleural
- No visible walls
  - Emphysema

Intraparenchymal
- Visible walls
  - Cysts: Histiocytosis
  - Cysts: LAM
  - Pneumatoceles
  - Cystic bronchiectasis
Centrilobular Emphysema
Langerhans Cell Histiocytosis