Chest/Cardiac
## ASD

<table>
<thead>
<tr>
<th></th>
<th>Right Side</th>
<th>Left Side</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atrium</td>
<td>Enlarged</td>
<td>No change</td>
</tr>
<tr>
<td>Ventricle</td>
<td>Enlarged</td>
<td>No change</td>
</tr>
<tr>
<td>Vasculature</td>
<td>Increased</td>
<td>Aorta no change</td>
</tr>
</tbody>
</table>
Pulmonary Arterial Hypertension

• Precapillary:
  – L to R shunts, emboli, Primary pulm htn

• Parenchymal

• Postcapillary
  – CHF, veno-occlusive dz, mitral stenosis
Ankylosing Spondylitis

- Upper lobe interstitial disease DDx:
  - Pneumoconiosis
  - Ank Spon
  - Granulomatous disease
  - EG
  - Sarcoid
Asbestosis

- Interstitial fibrosis with basilar predominance

- 20% will lack pleural findings

- May have round atelectasis and/or thick bands of fibrosis
Lower Lobe Interstitial Lung Disease

- Collagen vascular dz
- Idiopathic
- Asbestosis
Interstitial Pneumonias

• Recognize pattern and provide DDx

• Need clinical information to make specific diagnosis

• Idiopathic pulmonary fibrosis is a clinical syndrome with morphologic pattern of UIP
Spontaneous pneumothorax secondary to PCP

- Nontraumatic causes of pneumothorax:
  - Primary
  - Secondary
    - COPD
    - Infection(PCP)
    - Connective Tissue Dz –lymphangioleiomyomatosis
    - Immunologic: EG
    - Neoplasms, congenital, pneumoconiosis
Lymphangitic carcinomatosis

• DDx:
  - Sarcoidosis
  - lymphoma
  - silicosis
  - disseminated tuberculosis
  - disseminated fungal infection.
Left Atrial Myxoma

DDx of CXR

- Mitral Stenosis (rheumatic heart dz)
- Mitral Regurgitation
- Secondary Valve dysfunction: endocarditis, mass, thrombus
Panlobular emphysema is characterized by uniform destruction of the pulmonary lobule, leading to widespread areas of abnormally low attenuation. Pulmonary vessels in the affected lung appear fewer and smaller than normal. Panlobular emphysema appears diffuse or most severe in the lower lobes.
CENTRILOBULAR EMPHYSEMA
# Allergic bronchopulmonary aspergillosis

## Types of Aspergillosis

<table>
<thead>
<tr>
<th>Type</th>
<th>Lung Structure</th>
<th>Immune Status</th>
<th>Pathology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allergic (ABPA)</td>
<td>Normal</td>
<td>Hypersensitivity</td>
<td>Hypersensitivity -&gt; bronchiectasis, mucus plugging</td>
</tr>
<tr>
<td>Aspergilloma</td>
<td>Preexisting cavity</td>
<td>Normal</td>
<td>Saprophytic growth in preexisting cavity</td>
</tr>
<tr>
<td>Semiinvasive</td>
<td>Normal</td>
<td>Normal or impaired</td>
<td>Chronic local growth, local cavity formation</td>
</tr>
<tr>
<td>Invasive</td>
<td>Normal</td>
<td>Severely impaired</td>
<td>Vascular invasion, parenchymal necrosis</td>
</tr>
</tbody>
</table>

## Immune Status

- **Hypersensitivity**
  - ABPA
- **Normal**
  - Aspergilloma
- **Mild suppression**
  - Semiinvasive
- **Severe suppression**
  - Invasive form
Allergic bronchopulmonary aspergillosis
- “finger in glove”
- mycetoma
INVASIVE ASPERGILLOSION
Goodpastures

• DDx:
  – Edema
  – Pneumonia
  – Hemorrhage
  – Cells(tumor, etc.)
  – protein
TWO WEEKS LATER
LOEFFLERS SYNDROME

- Simple pulmonary eosinophilia (idiopathic)
- Transitory, migratory areas of parenchymal consolidation often peripheral
- Patients have few symptoms
Eosinophilic Lung Disease

- **SECONDARY**
  - Drugs (NSAID, PCN, SULFA)
  - Parasites, Fungi
  - Connective Tissue Disease

- **IDIOPATHIC**
  - Simple pulmonary eosinophilia
  - Acute eosinophilic pneumonia (sick)
  - Chronic eosinophilic pneumonia
  - Hypereosinophilic Syndrome (multi organ)
Coarctation

• figure 3
Pulmonary Venous Hypertension

- **Findings:** enlarged heart and septal (Kerley B) lines (arrow), indicating elevated pulmonary venous pressures and interstitial pulmonary edema.

- Elevation of pulmonary venous pressures is often caused by left heart failure, fluid overload or renal insufficiency.

- Radiographic findings of pulmonary venous hypertension include cardiac enlargement, upper zone pulmonary vascular dilatation (pulmonary vascular redistribution), and peribronchial thickening.
CAVITARY LUNG LESION

- **C**ancer (squamous cell)
- **A**utoimmune disease (Wegners, R.A.)
- **V**ascular (septic emboli)
- **I**nfection (abscess, fungul, TB echinococcus)
- **T**rauma (pneumatocele)
- **Y**oung = congenital (sequestration, hernia, bronchogenic cyst)