

Large Airway Diseases: A Hidden Zone

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TRAUMA & EMERGENCY RADIOLOGY

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Disclosures

None

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Objectives

- Better understand neoplastic and non-neoplastic conditions affecting the large airways
- Utilize imaging tools to create a differential diagnosis of commonly encountered airway diseases

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Airway Cases

- Stenosis
 - Short or long segment
 - Focal or multifocal
- Atelectasis
 - Focal or lobar
- Bronchiectasis/bronchiolectasis
- Mucoïd impaction

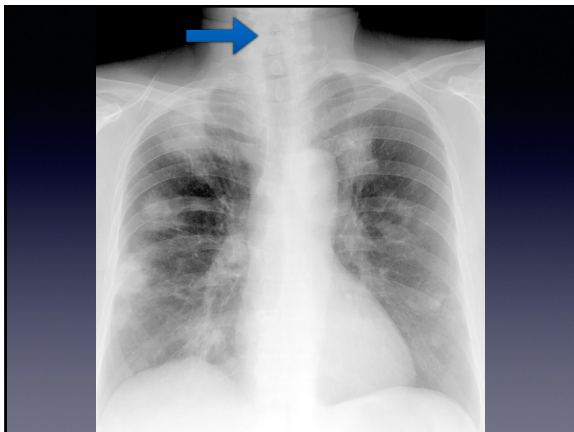
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Case I

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Airway Cases

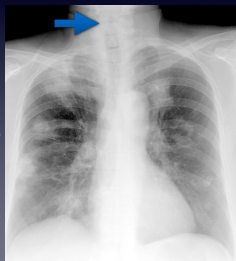
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Airway Cases

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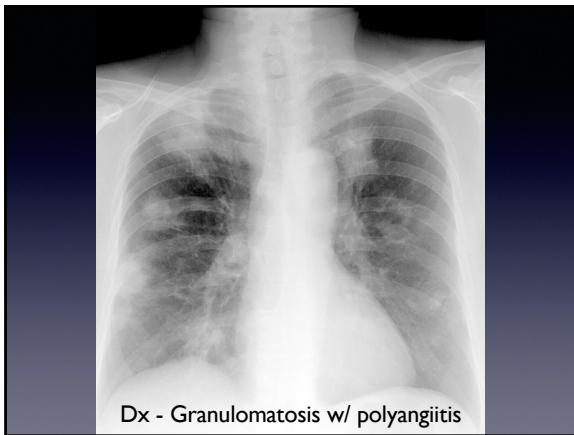
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Airway Cases

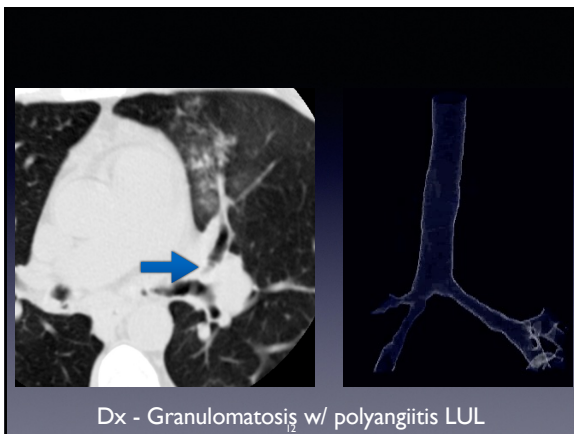
DDx - Short segment stenosis

- Neoplasm
 - SCC, adenoid cystic
 - Metastasis - commonly multifocal
- Inflammatory
 - Granulomatosis w/ polyangiitis (Wegener's)
 - Long-term intubation
 - Lung transplantation
- Extrinsic compression

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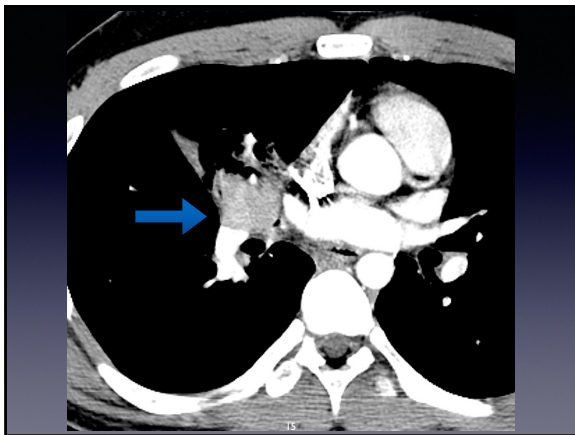
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Case 2

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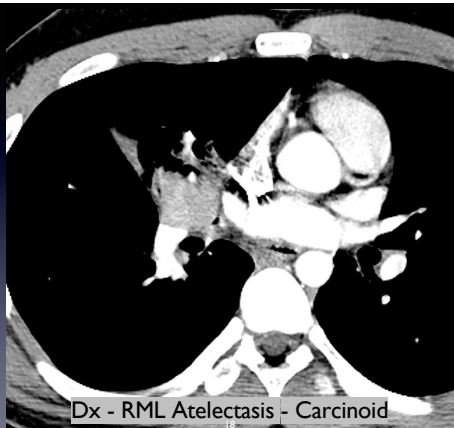
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Dx - RML Atelectasis - Carcinoid

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Airway Cases

DDx - Lobar atelectasis

- Neoplasm
 - Primary
 - Adenoid cystic carcinoma
 - Squamous cell carcinoma
 - Secondary
 - Lung carcinoma
 - Carcinoid
 - Metastasis

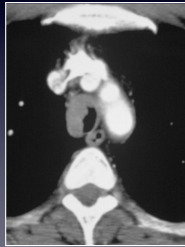
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Airway Cases

Airway Neoplasms - Primary

- Adenoid Cystic Carcinoma (40%)
 - young adults
 - well-marginated
 - typically, posterolateral airway
 - prognosis: favorable



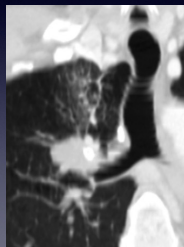
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Airway Cases

Airway Neoplasms - Primary

- Squamous Cell Carcinoma (55%)
 - older adults
 - invasive
 - lower third of trachea
 - prognosis: poor




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Airway Cases

Airway Neoplasms - Secondary

- Lung Carcinoma
 - most common
 - central location
 - squamous
 - small cell
 - prognosis: variable/poor



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Case 3

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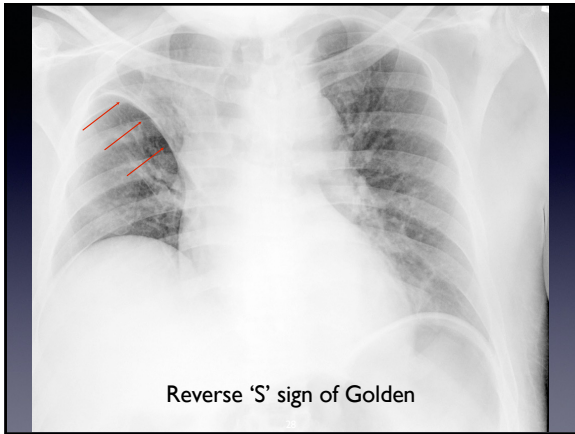
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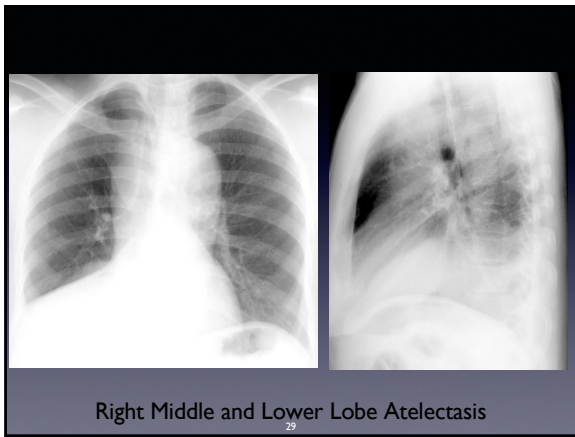


Dx - Left Upper Lobe Atelectasis

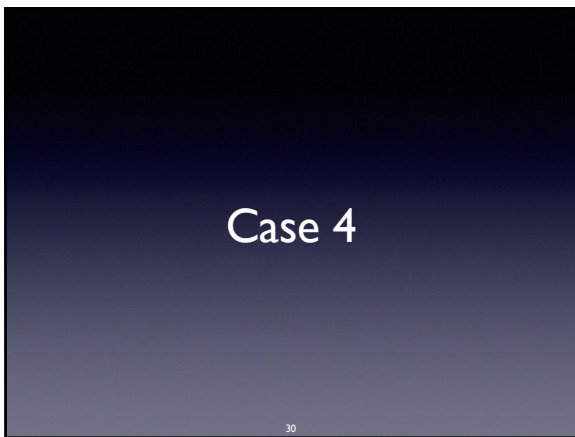
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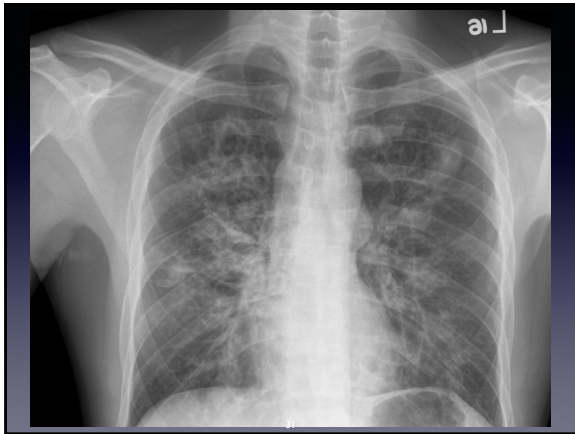
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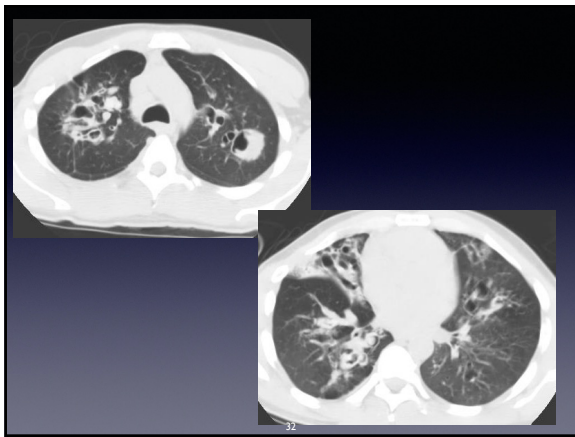
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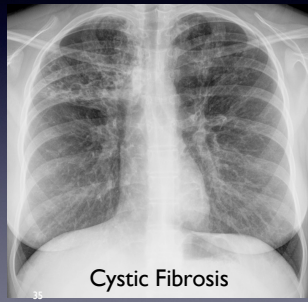
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Airway Cases

DDx - Bronchiectasis

- Congenital
 - Cystic fibrosis
 - Ciliary dyskinesia
 - Mounier-Kuhn
 - Williams-Campbell
 - Yellow-nail (rare)



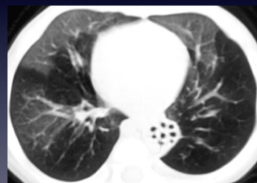
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Airway Cases

DDx - Bronchiectasis

- Acquired
 - Infection
 - Toxic inhalation
 - Central obstruction
 - Recurrent aspiration
 - Traction (pulmonary fibrosis)



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Toxic inhalation - Ammonia

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Airway Cases

DDx - Mucoïd impaction

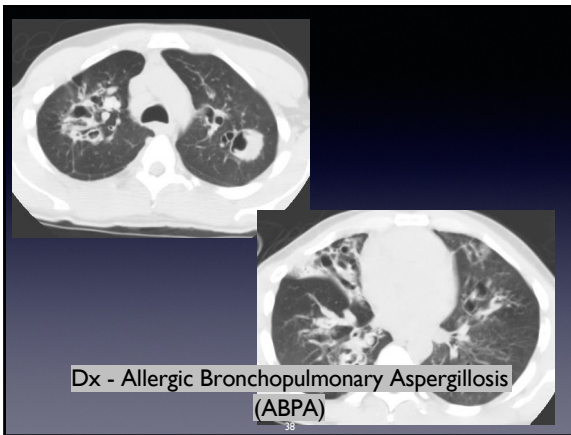
- Bronchiectasis
- Asthma
- ABPA
- Bronchial atresia
- Foreign body
- Neoplasm
 - Central location



Bronchial Atresia

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Dx - Allergic Bronchopulmonary Aspergillosis (ABPA)

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Questions?

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