Brief History

- Name: 林XX
- Sex: female
- Age: 43 years old
- Occupation: housewife
- Married status: married

Chief Complaint

- Cough with mucoid sputum for more than 5 years

Present Illness

- History of bronchiectasis
- Regular felt chest tightness, cough with mucoid sputum, paroxysmal cough at mid-night, short of breath and dyspnea.

Personal History

- Food allergy: nil
- Drug allergy: nil
- Smoking: denied
- Betel nut chewing: denied
- Alcohol drinking: denied

Past History

- Medical history: bronchiectasis with regular follow-up in our hospital.
- Surgical history: denied

Family History

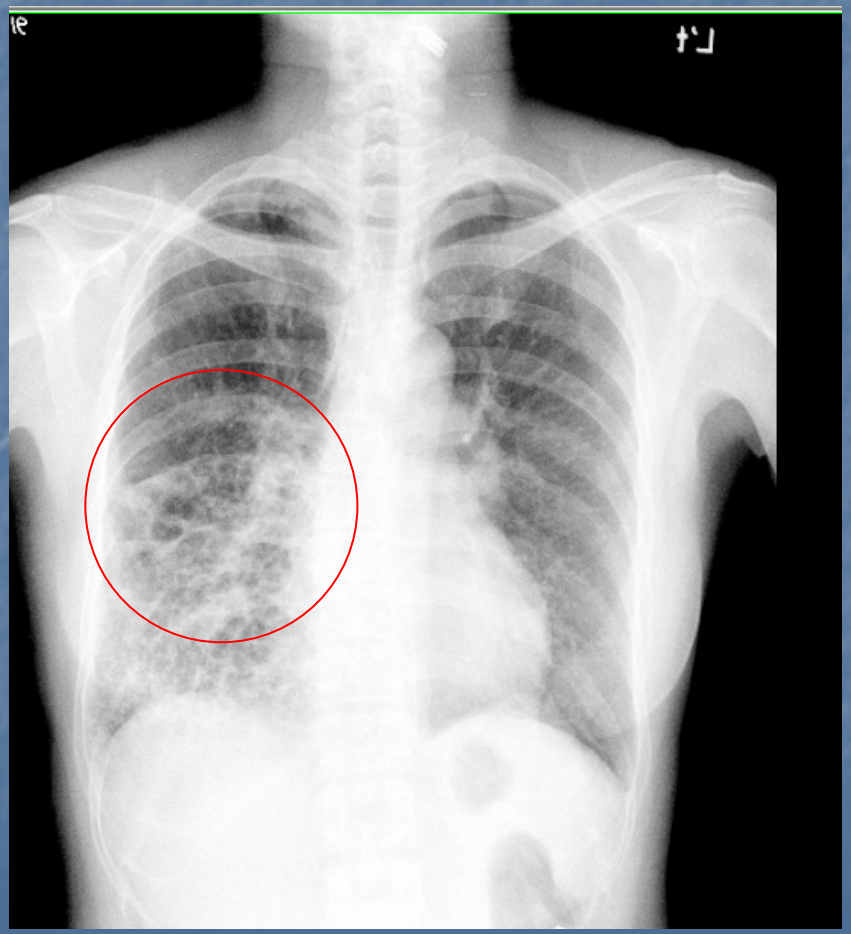
- Grandfather: asthma

Lab Data

- **細菌檢查(病歷號：07615975)**

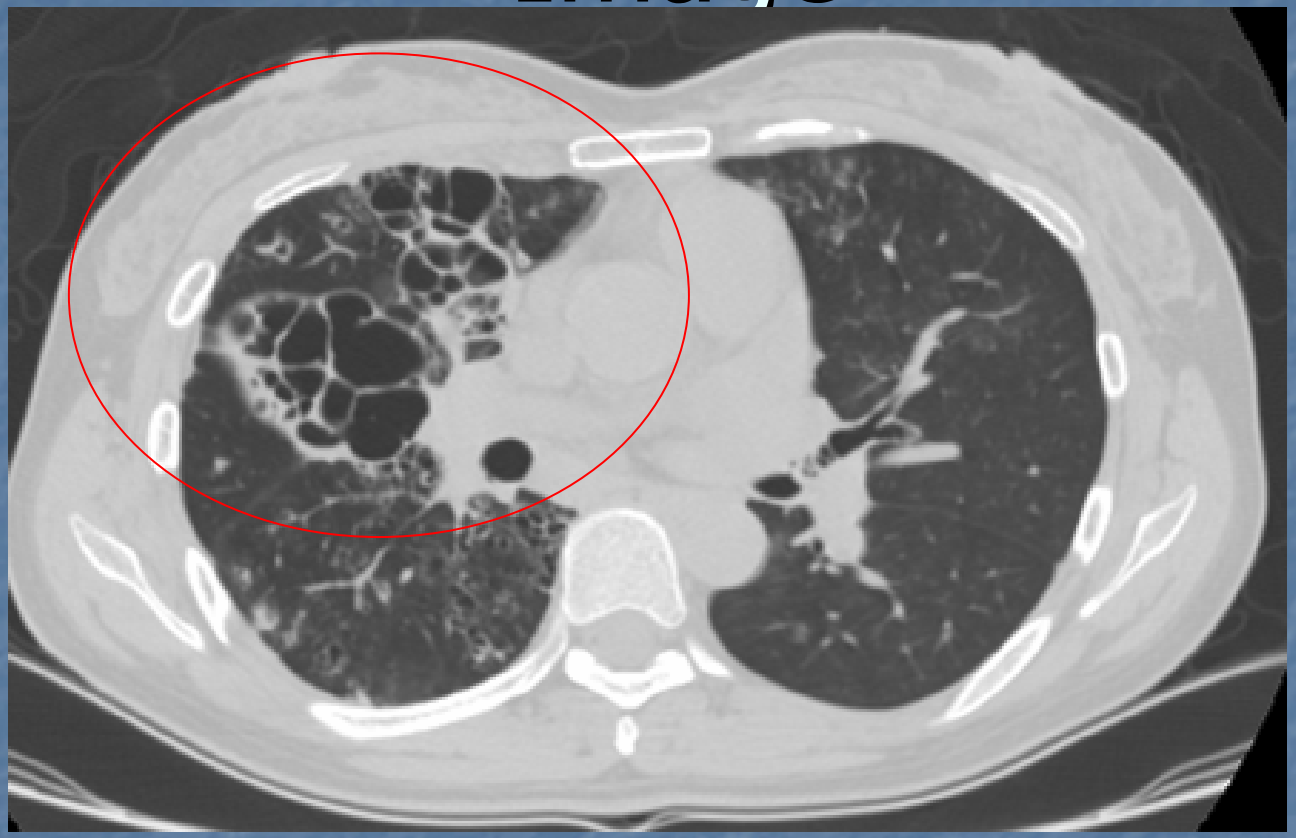
取樣日期	950818
取樣時間	1213
工作單號	5081869097
試管編號	5081869097
確認日期	950824
確認時間	1124
Sputum culture (第一套)	Sputum culture (第一套)
Isolated 1	**Normal Pharyngeal Flora**

Image



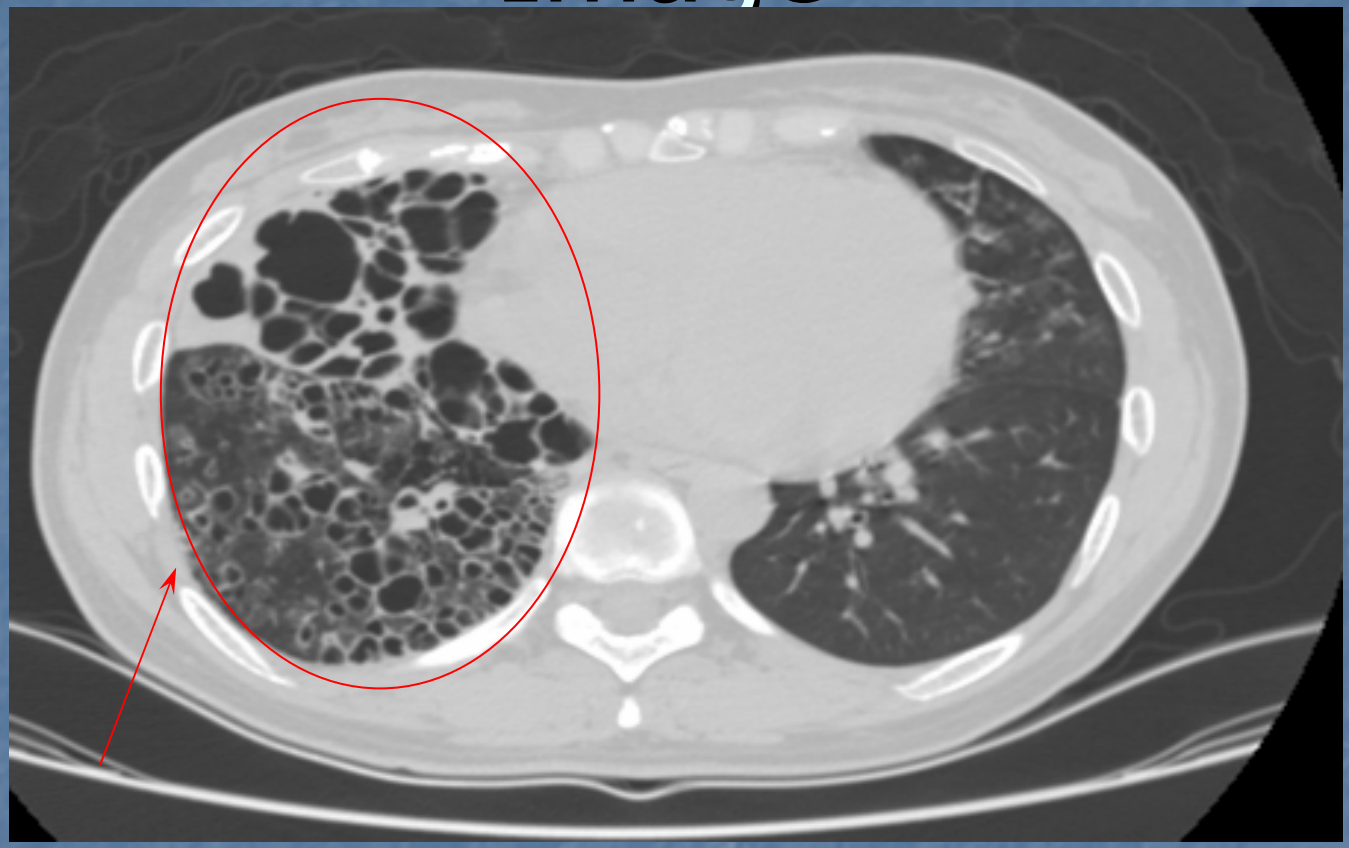
- Chest x-ray
- Fibrotic change with cystic appearance at Right lower lung.
- Repeat & chronic inflammatory process of lung is noted.
- It is suggested bronchiectasis.

Image



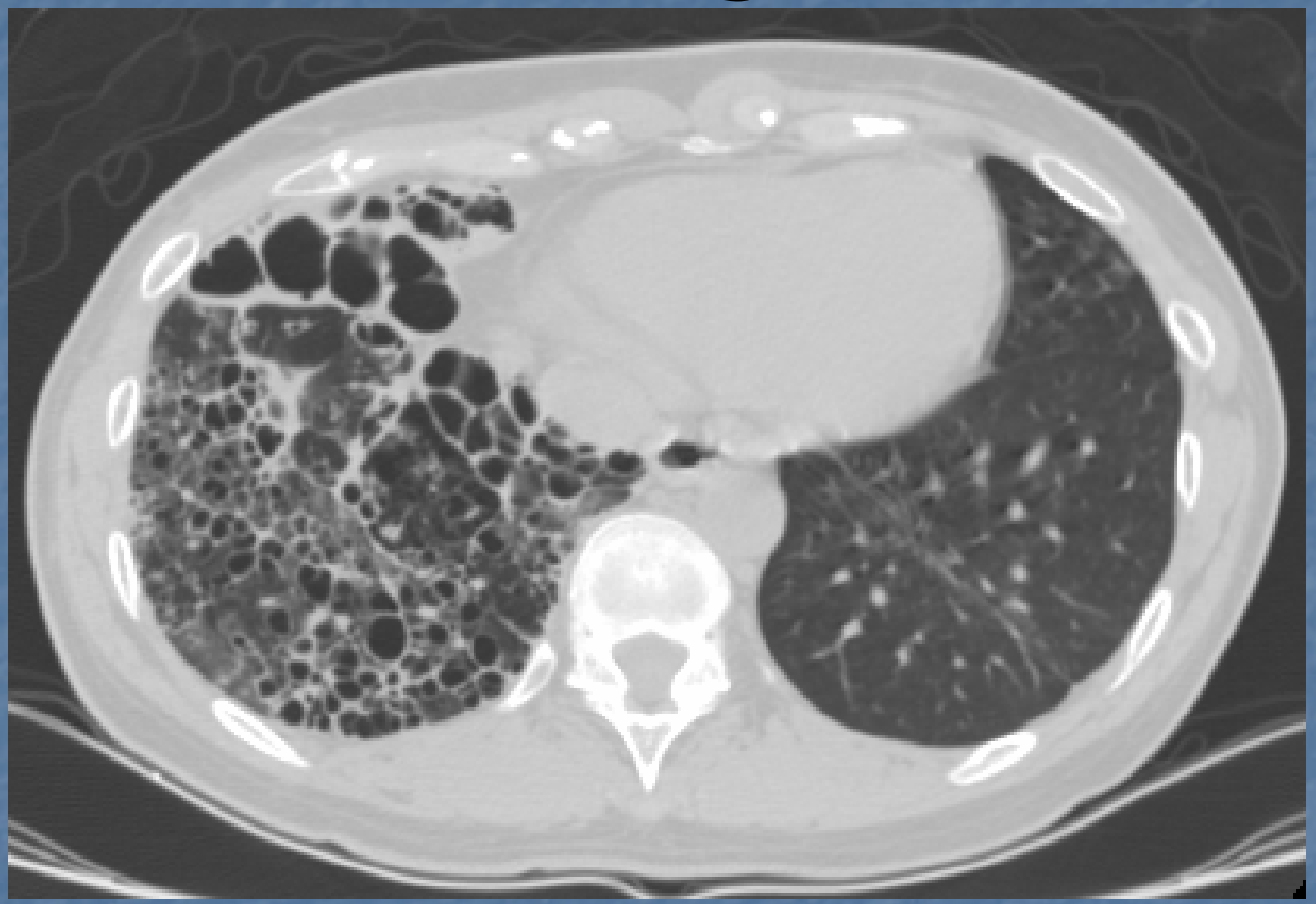
- HRCT: bronchial wall dilated and thickening

Image



- HRCT: right pleural thickening. no lymphadenopathy and there are no perihilar masses.

Image



HRCT: mediastinum is centered and of normal width. no evidence of masses in the anterior, middle and posterior compartment.

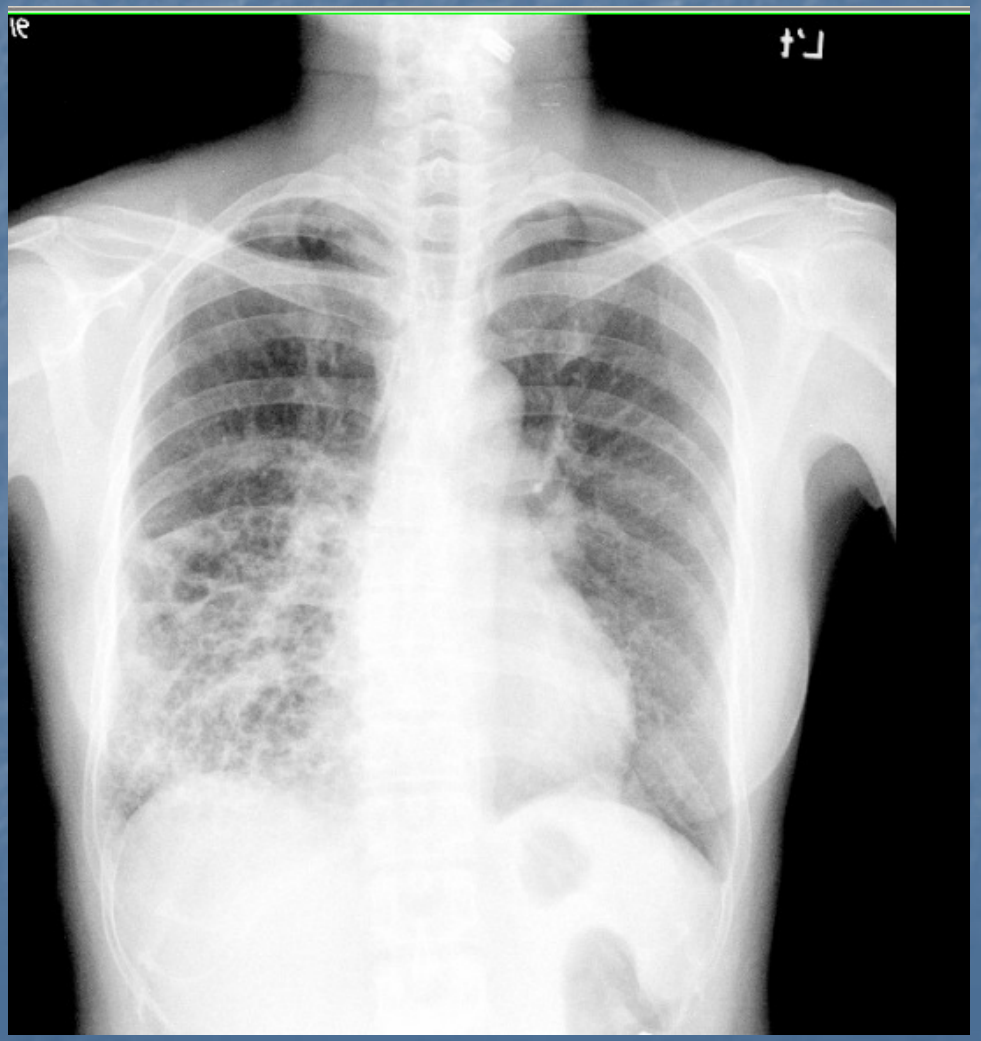
Key Image

- Differential diagnosis:

1. Bronchiectasis
2. Allergic bronchopulmonary aspergillosis
3. Cystic fibrosis
4. Emphysema
5. bronchitis
6. Postprimary tuberculosis

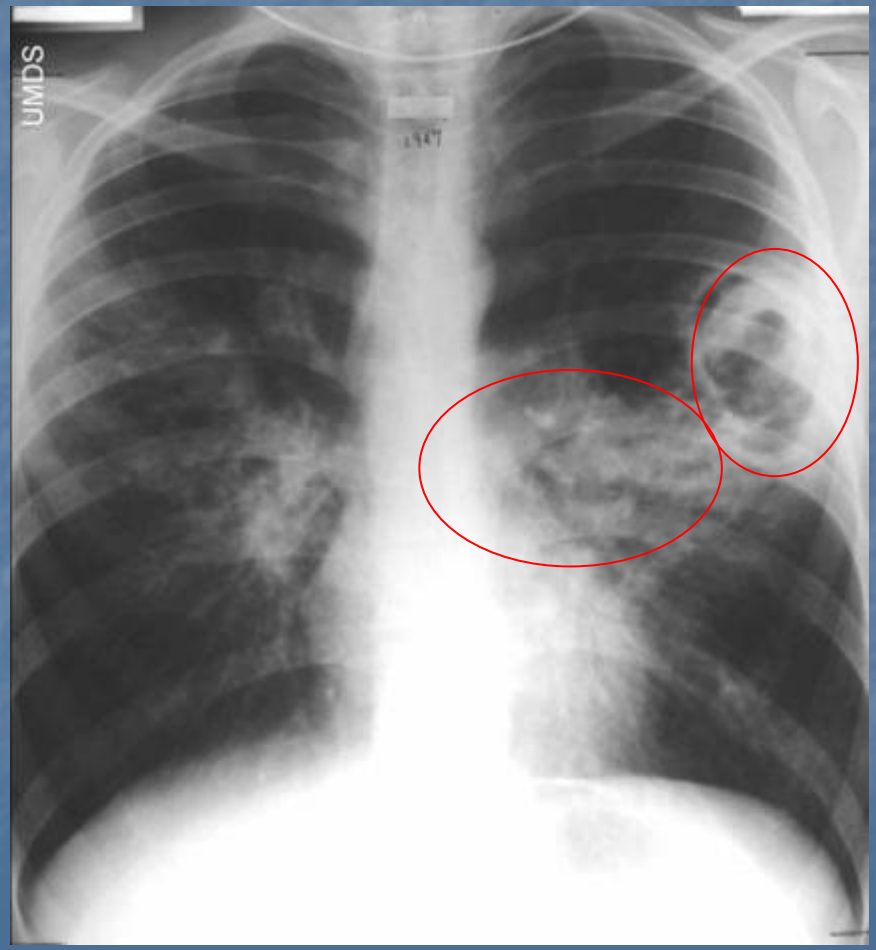
Differential Diagnosis

- Bronchiectasis:
- cystic changes and Ring shadows (air-fluid level.)
- dilated and thickening bronchial wall



Allergic Bronchopulmonary Aspergillosis

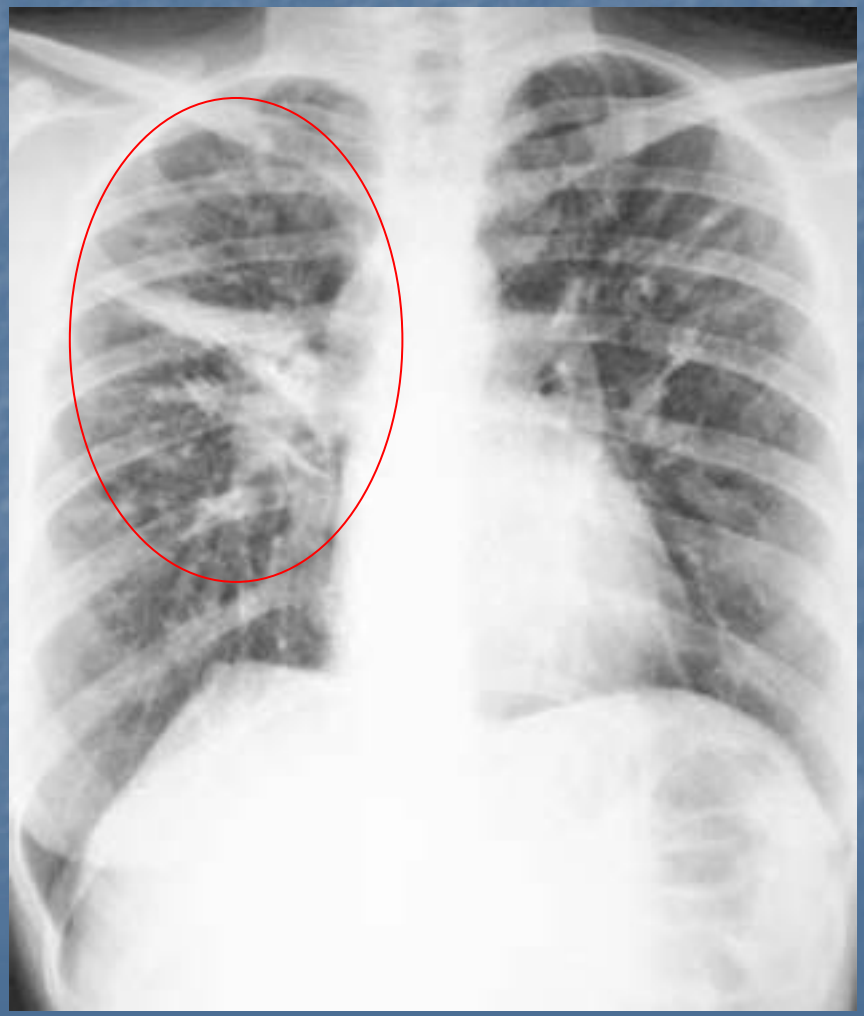
- ABPA: hypersensitivity to aspergillosis. Frequently in asthmatics. Often associated with eosinophilia.
- Central bronchiectasis, allergic consolidation, cavication.
- Upper and central lung field.



Cystic fibrosis

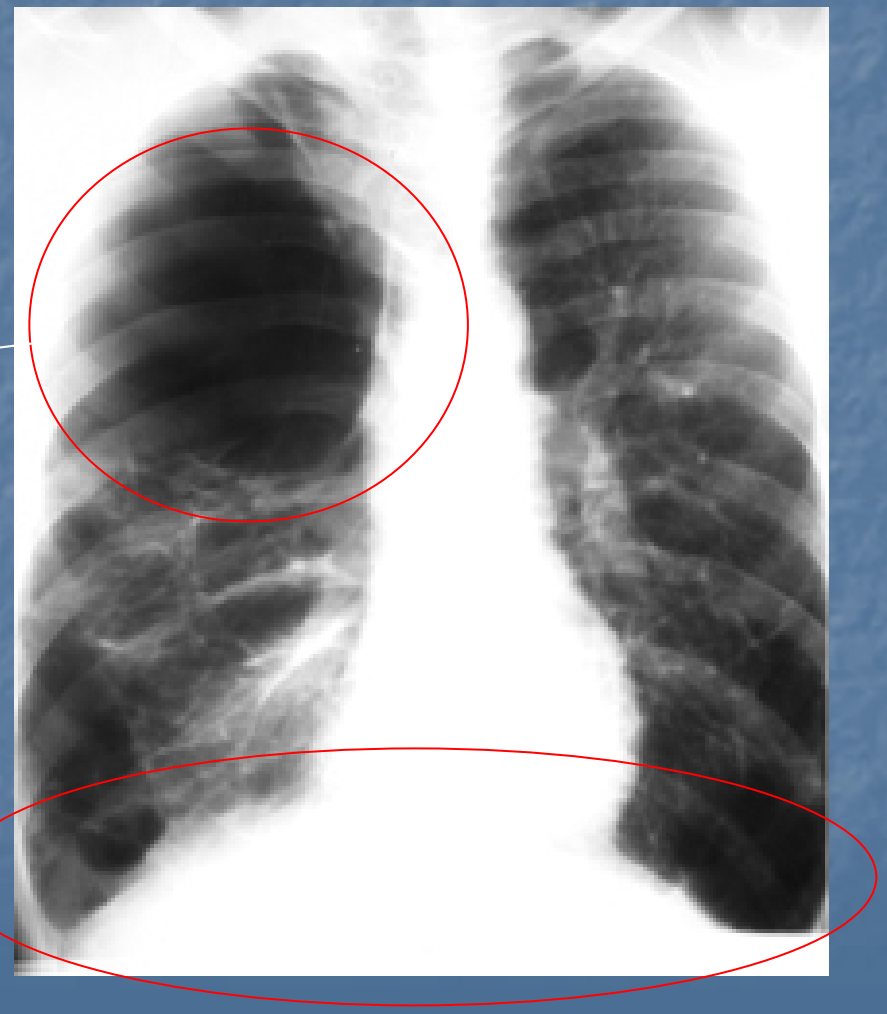
- Cystic fibrosis: multisystemic, autosomal recessive disorder .
- Two elevated sweat chloride levels (60 mEq/L)
- CXR:

1. Upper lung field: ill-defined consolidation or cavitation.
2. Bronchiectasis and bronchial wall thicking (upper lung field)

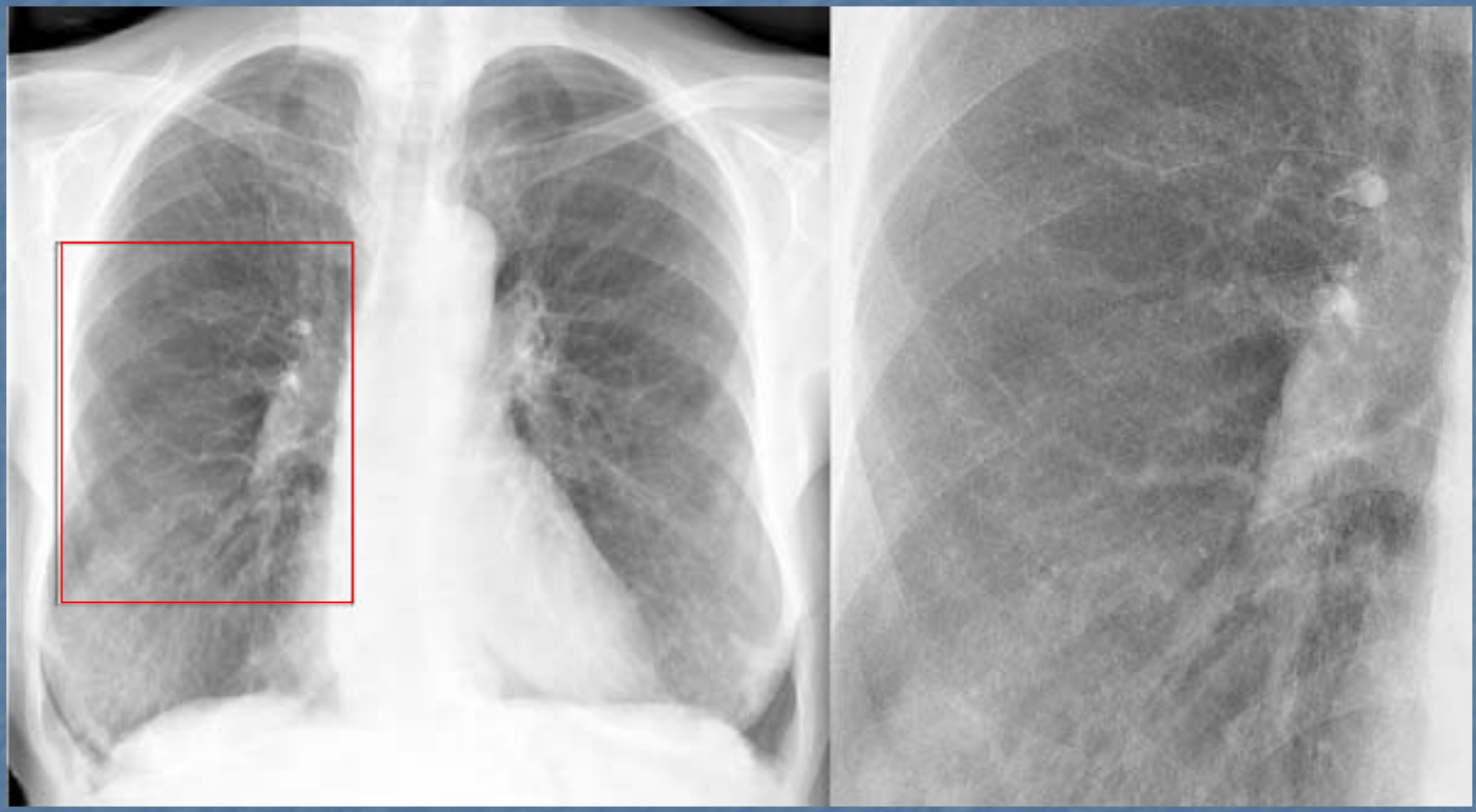


Emphysema

- Overinflation of all or a portion of one or both Lungs.
- Arterial deficiency(AD) severe overinflation and peri-hilar vascular deficiency.



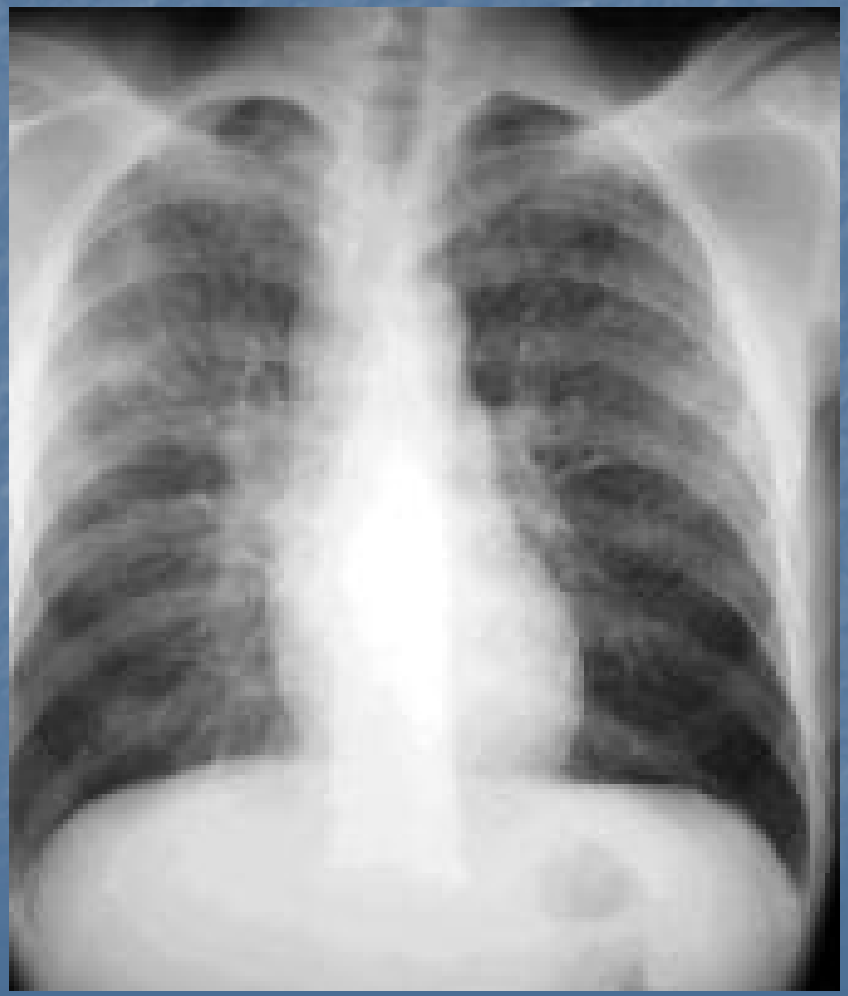
Bronchitis



Irregular bronchovascular markings, and lines that **leave the right hilum horizontally** show irregular borders because of chronic inflammation

Postprimary tuberculosis

- CXR:right mediastinal adenopathy and bilateral, uniformly tiny nodules.
- Cavitation, pleural effusion. Upper lung area
- Biopsy by means of video-assisted thoracic surgery (VATS), and miliary tuberculosis was diagnosed.
- PPD, and a pleural effusion that was positive for acid-fast bacilli (AFB).



Final Diagnosis

1. Bronchiectasis

Discussion

- **Epidemiology**

  Onset: middle aged
- **Pathophysiology**

1. Chronic inflammatory or infectious pulmonary process.
2. Results in multiple dilatations of small bronchi, due to destruction change in the elastic and muscular layers of brachial walls

Discussion

- Common cause of bronchiectasis

1. Allergic Bronchopulmonary Aspergillosis
2. Immunoglobulin deficiencies predisposing to chronic respiratory infections.
3. Cystic fibrosis (CF)
4. Immotile cilia or Kartagener's syndrome (triad: sinusitis, situs inversus & infertility).
5. Bronchial obstruction
6. Alpha1-antitrypsin deficiency

Symptoms

- Productive cough
- Copious sputum (200-500 ml/day)
- Sputum thick, mucopurulent and foul-smelling
- Hemoptysis
- Wheezing
- dyspnea
- Halitosis
- Fatigue
- Weight loss to Emaciation

Signs

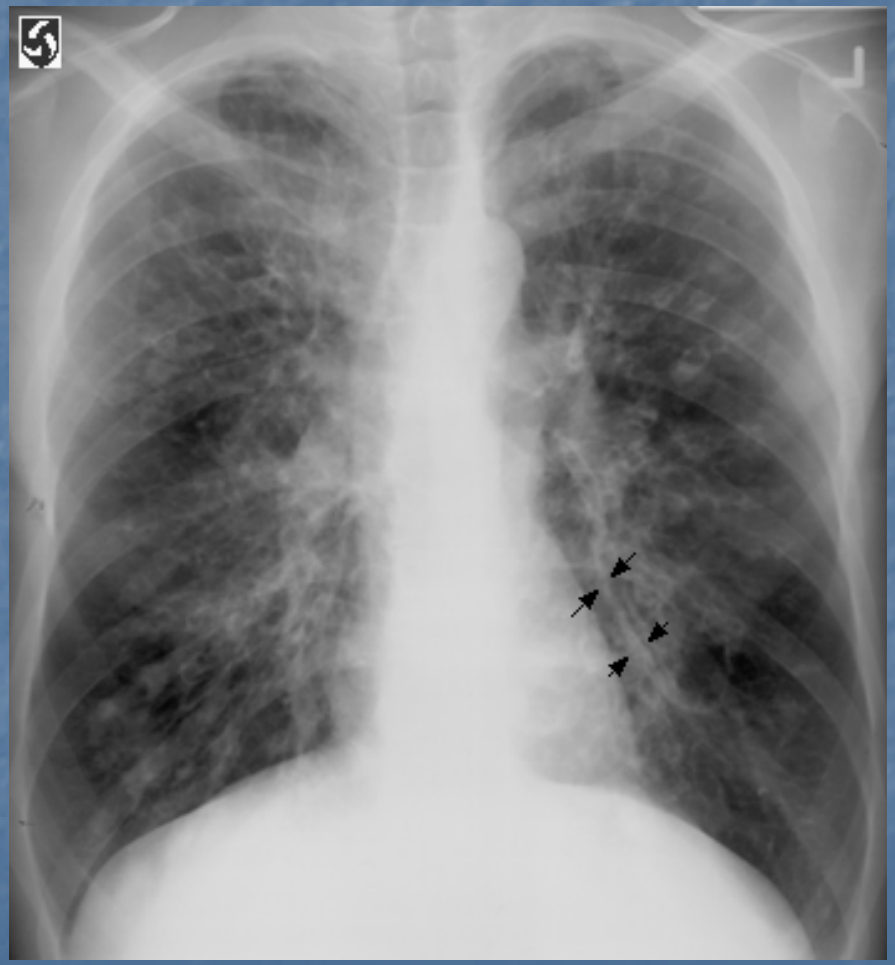
- Lung auscultation
  - Coarse or moist crackles
  - Rales and Rhonchi
  - Wheezing
  - Diminished breath sounds
- Cyanosis
- Digital clubbing

Lab data

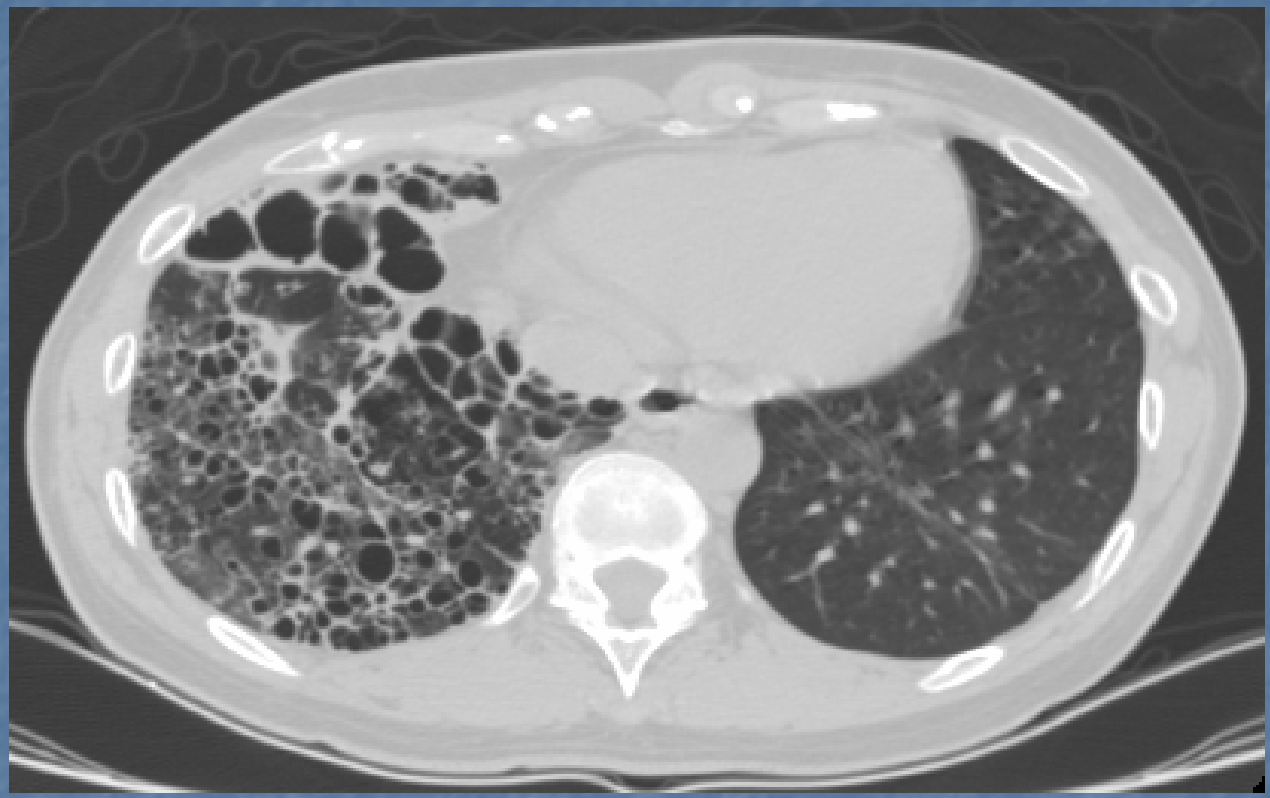
- Sputum forms layers on standing
  - Top: Mucus
  - Middle: Clear fluid
  - Bottom: Pus
- Sputum culture: not diagnostic (mixture of organisms)
- Fungal Culture

Typical Image

- Tram tracks: Parallel lines in peripheral lung field→ thickened bronchial wall.
- Ring shadows: air-fluid level.

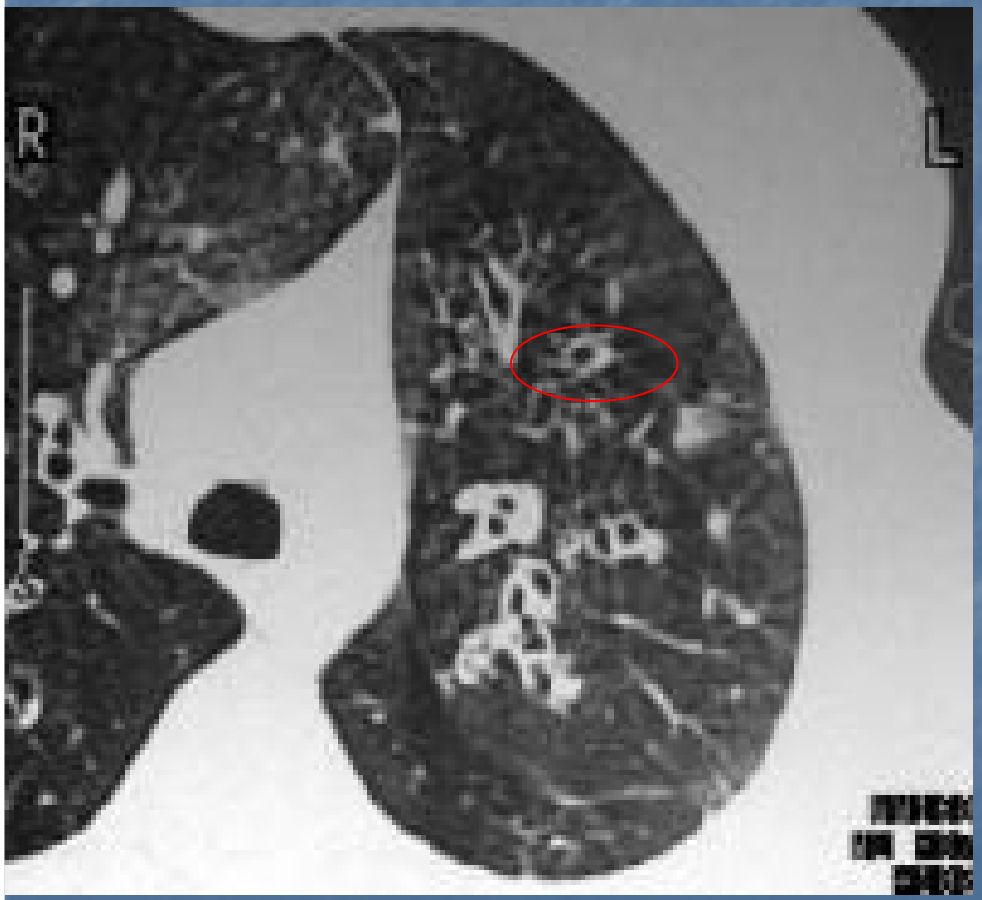


Typical Image



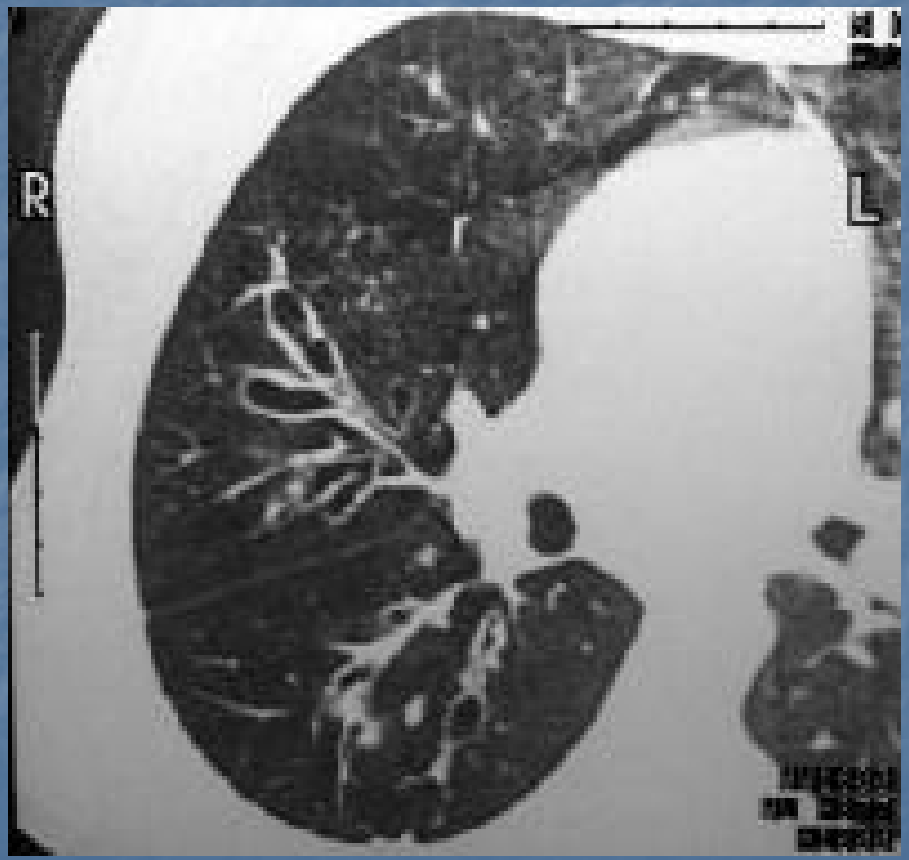
- definitive diagnosis: High-resolution computed tomography

In 1950, Reid characterized bronchiectasis as cylindrical, varicose, or cystic in nature



- Cylindrical bronchiectasis
- Signet-ring appearance
- luminal airway diameter is greater than the diameter of the adjacent vessel

Varicose Bronchiectasis

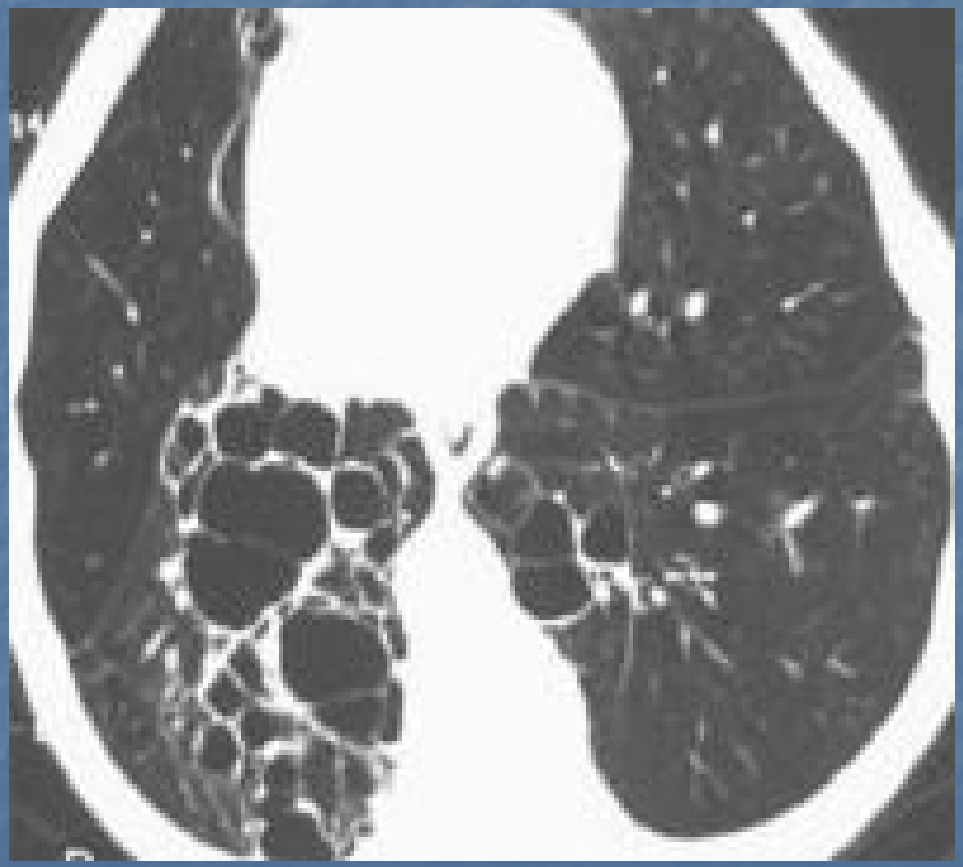


- Varicose bronchiectasis
- a bulbous appearance with a dilated bronchus .
- interspersed sites of relative constriction->

Post-obstructive

Pneumonitis.

Cystic Bronchiectasis



- Cystic or saccular bronchiectasis
- ballooned appearance that may have air-fluid levels.

Prognosis

- Overall, the prognosis is good, but it varies with the underlying or predisposing condition.
- In general, patients do well if they are compliant with all treatment regimens and practice routine preventive medicine strategies.

Treatment

- Medical therapy

1. General therapy
2. Antibiotics : Augmentin
3. Bronchial hygiene
4. Bronchodilator: Meptin, Frandyl
5. Anti-inflammatory medication: oral steroid: Compesolon

Treatment

- Surgical treatment
- Medical treatment failure or cystic bronchiectasis

1. Reduction of acute infective episodes
2. Reduction of excessive sputum production
3. Massive hemoptysis (Alternatively, bronchial artery embolization may be attempted for the control of hemoptysis.)

Treatment

4. Foreign body or tumor removal
5. Consideration in the treatment of Aspergillus species infections