General History

- 林陳x珠
- Female
- 69 years old
- 住院期間：93.5.8~93.5.15
- Chief Complaint : sudden loss of conscious for 2-5 minutes in the morning.

General History

- DM under regular medical control for 10 years.
- Blurred vision, intermittent bilateral costal margin pain and leg muscle spasm many times in recent 2-3 years.
- Dizziness when changing from lying to sitting position recently.

General History

- Three days ago, she began to have mild cough with whitish sputum. She also felt fatigue, anorexia, dry mouth and back soreness.
- She denied fever, chillness or shortness of breath.

General History

- She was doing morning exercise with her husband in a park when she suddenly lost her conscious and fell down.
- Her husband mentioned that she looked pale, but no vomiting, clonic movement or cold sweating was noted.
- She denied any pre-syncope aura, headache, chest tightness, dyspnea, palpitation, abdominal pain and digital numbness.

General History

- At our ER, Physical Examination revealed mild fever, hypertension and tachycardia. Two ablation wounds were found on her right elbow and occipital area. Neurological functions are normal.
- Routine chest x-ray showed numerous lung masses. There were rales over bilateral lung fields on auscultation.
- She was admitted to our ward for work up of her syncope and lung masses.

Laboratory Data

- Blood

WBC [5.2-12.4×103/uL] : *13.54*

Neutrophil [40-74%] : *82.9*

Lymphocyte [19-48%] : *8.5*

Left shift : ++

RBC [4.2-6.1×106/uL] : *3.53*

Hb [12-18g/dL] : *11.3*

Hct [37-52%] : *33.1*

Laboratory Data

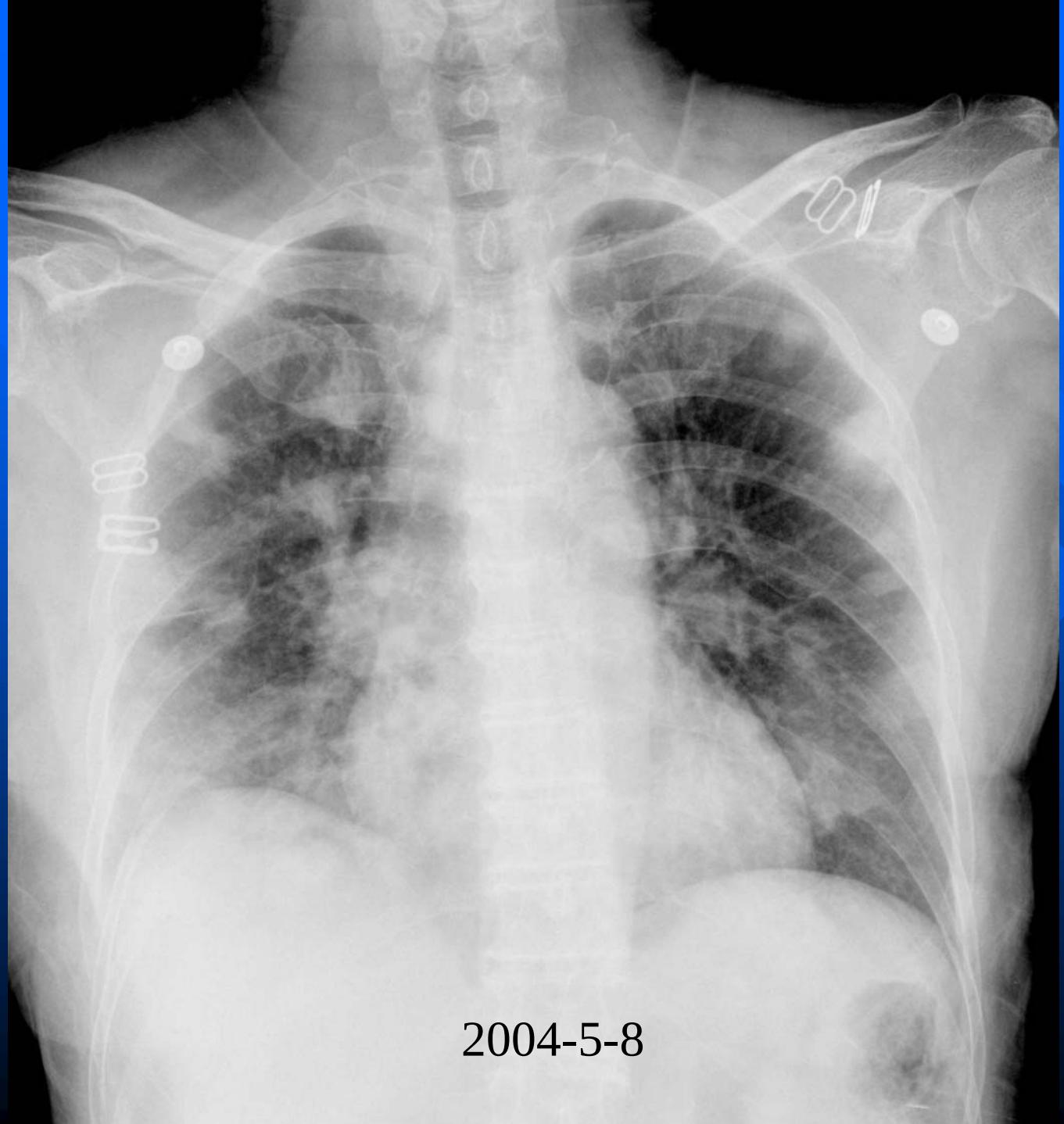
- Biochemistry

Glucose [80-140mg/dL] : *209*

CK [15-100 IU/L] : *158*

LDH [90-180 IU/L] : *191*

Na [135-158meq/L] : *133*



2004-5-8

Imaging findings:Chest x-ray

- Multiple, ill-defined radio-opaque densities over both lungs :

-Infarction

-Pneumonia

-Lung Abscesses–staphylococci, klebsiella, TB, anaerobic bacteria and various fungi

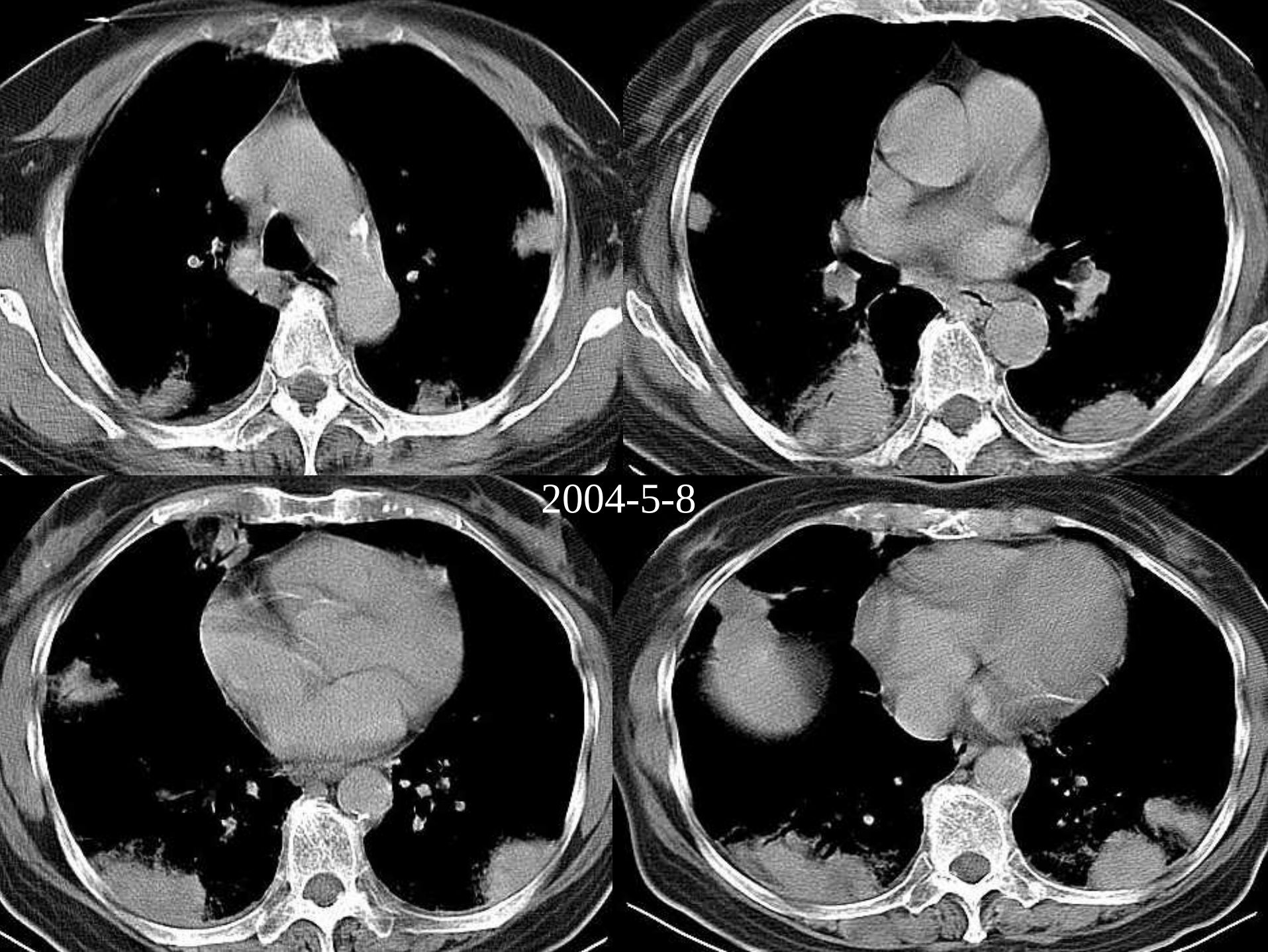
-Metastatic carcinoma

-Granuloma caused by collagen vascular disease

- Blunting of right CP angle :

-Pleural effusion

-Pneumonia of RLL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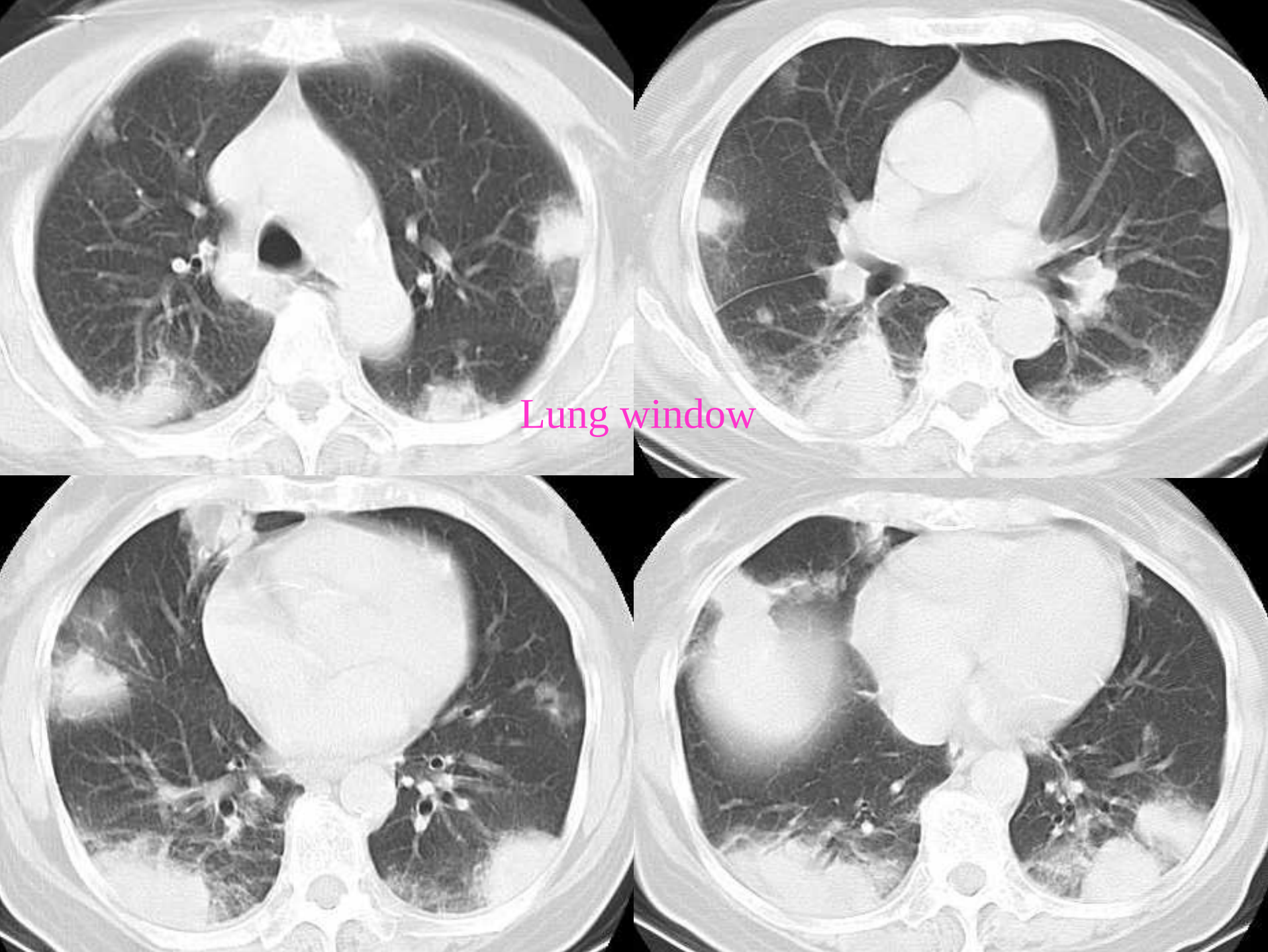
Lung window

Imaging findings:Chest CT

- Multiple, wedge-shaped and lobulated hyperdense masses at the periphery of both lungs:

a) Originates from the lung

-Metastatic carcinoma

-Pneumonia

-Lung abscesses

a) Originates from the pleura

-Metastatic carcinoma

-Malignant mesothelioma

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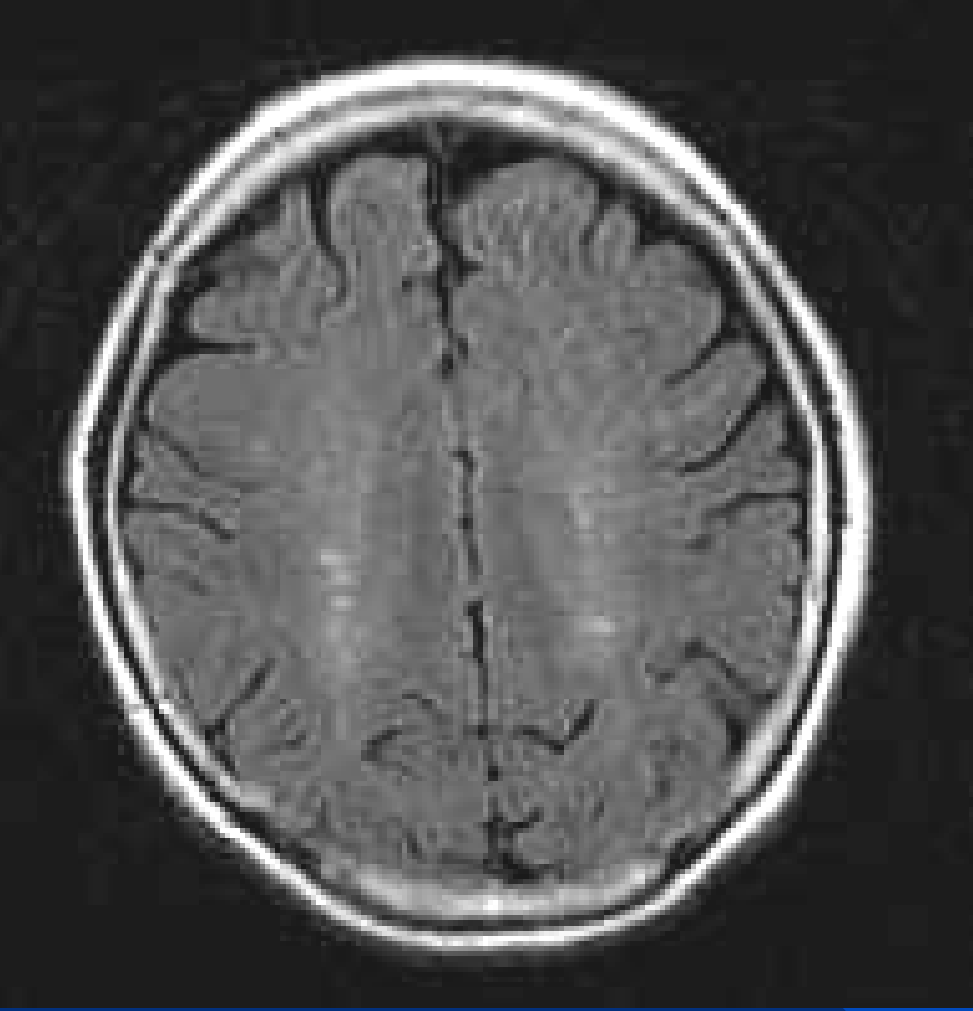
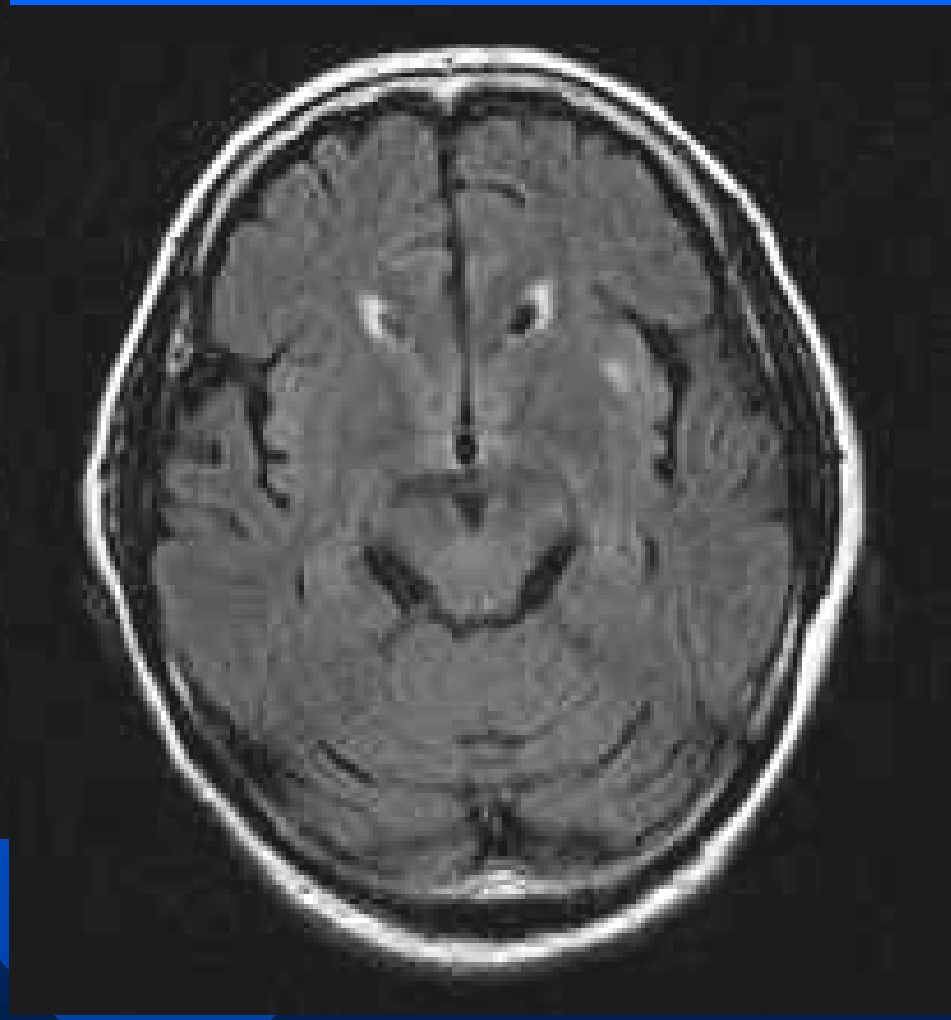




Brain CT:Grossly normal, no specific findings.

Differential Diagnosis

- Pneumonia
- Metastatic carcinoma
- Lung abscesses
- Infarction
- Granuloma
- Malignant Mesothelioma

Pathological findings

- CT guided biopsy of RLL mass

  Cryptococcosis was proved by PAS and mucicarmine stain.

Discussion

- Cryptococcosis is an opportunistic infection caused by inhaling the fungus *Cryptococcus neoformans*.
- *C. neoformans* is found worldwide in soil contaminated with pigeon or other bird droppings.
- Cryptococcosis may be limited to the lungs,but frequently spreads throughout the body. It is often fatal if it infects the central nervous system.

Discussion

- Most pulmonary infections are asymptomatic or self-limiting in healthy individuals.
- Cryptococcal pneumonia has symptoms similar to other pneumonias (cough, chest pain, difficulty breathing), making it difficult to accurately diagnose.
- Most patients are not diagnosed as having cryptococcosis until they show signs of cryptococcal meningitis.

Discussion

- **Pulmonary Cryptococcosis :**

  cough, low-grade fever, pleuritic pain, difficulty breathing.

- **CNS Cryptococcosis:**

  Symptoms usually develop slowly over several months, and include headache, drowsiness, dizziness, irritability, confusion, nausea, vomiting, neck stiffness and focal neurological defects, such as ataxia.

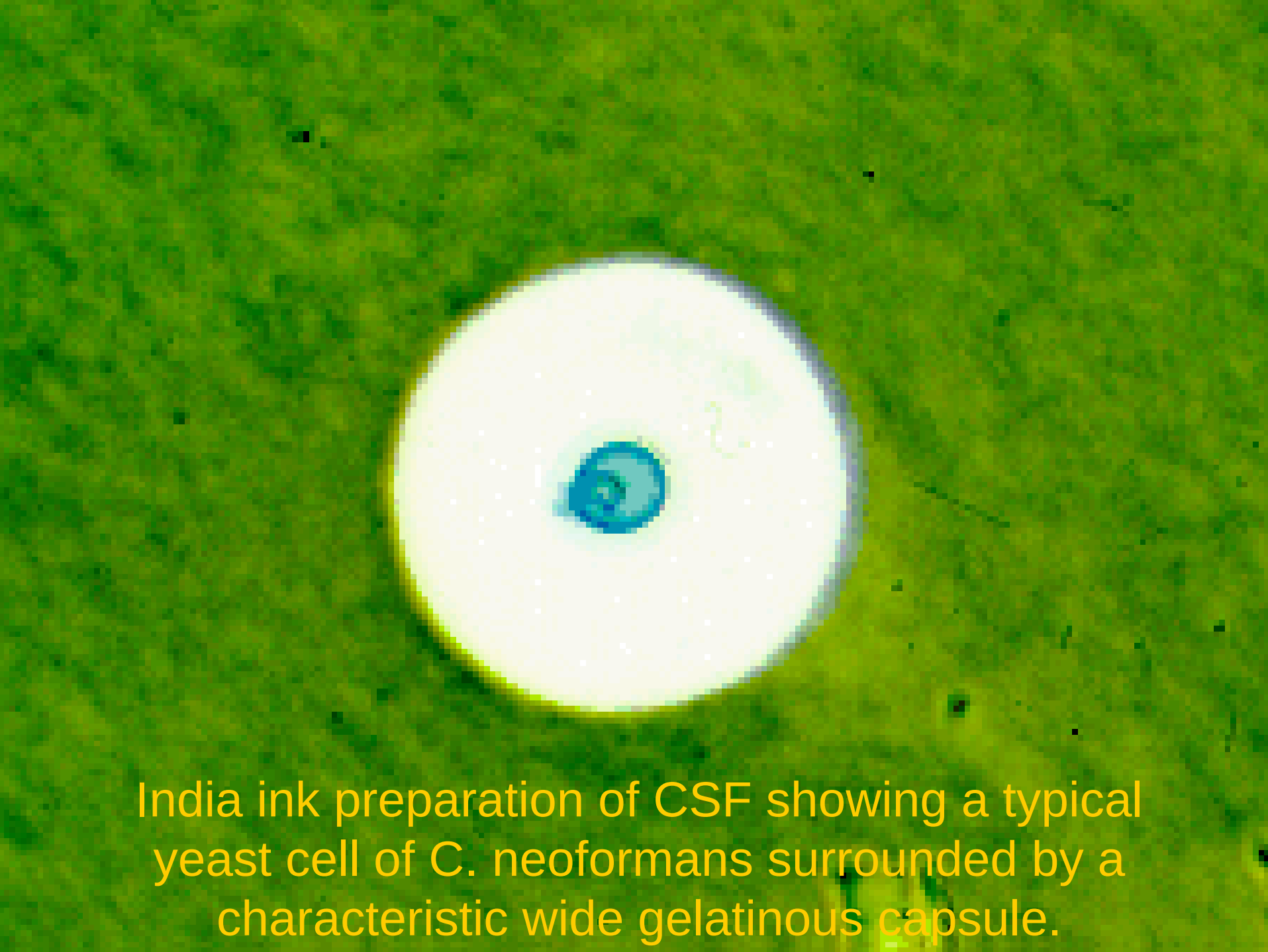
Discussion

- Laboratory Diagnosis

A) Direct microscopy : India Ink staining of sputum, bronchial washings or CSF. PAS+ Mucicarmine for staining tissue sections.

B) Culture : blood or CSF

C) Serology : detection of cryptococcal antigen by latex agglutination.



India ink preparation of CSF showing a typical yeast cell of C. neoformans surrounded by a characteristic wide gelatinous capsule.

Discussion:Radiographic appearances of pulmonary cryptococcal disease

- Major features on chest x-ray and CT:

-bilateral more common than unilateral

-irregular airspace opacities

-segmental or lobar consolidation

-discrete nodules or masses(up to 3 cm)with or without adjacent tiny satellite nodules

-tiny subpleural or peripheral interstitial nodules with adjacent interstitial thickening or pleural thickening

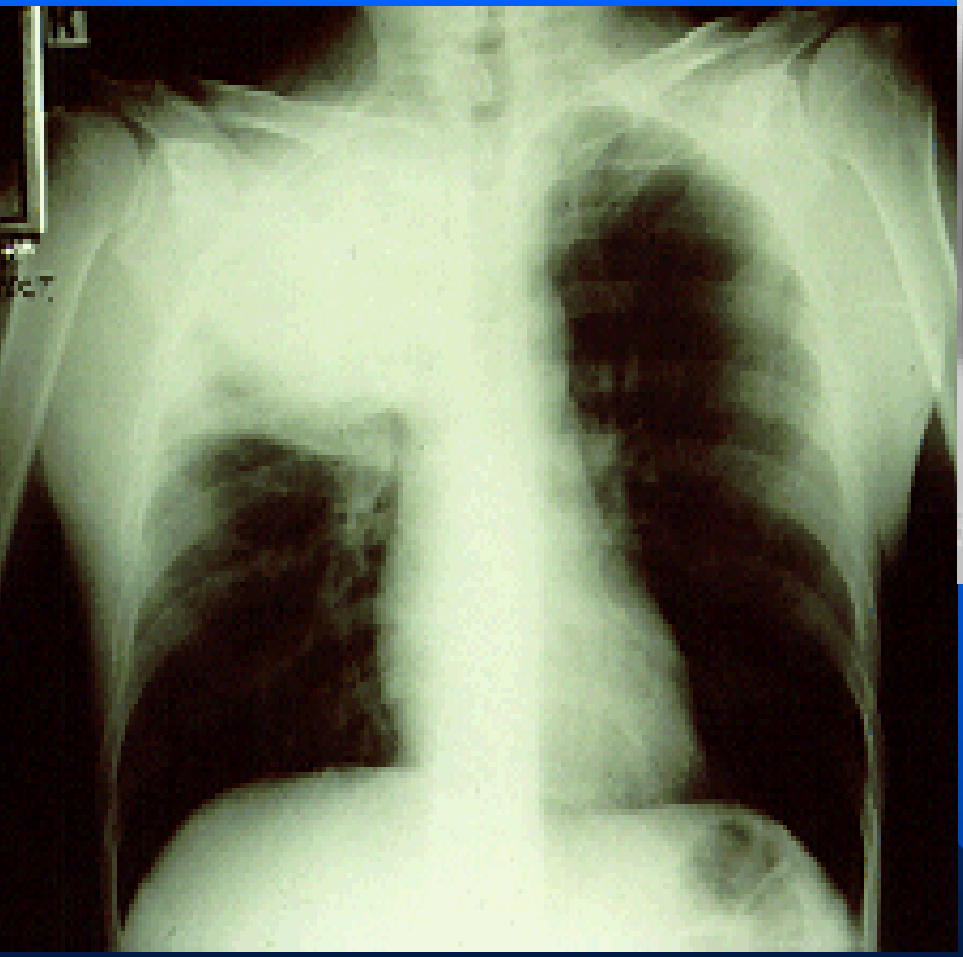
Discussion:Radiographic appearances of pulmonary cryptococcal disease

- Minor features on chest x-ray and CT:

pleural effusions

lymph nodes enlargement

Cavitation or calcification within nodules

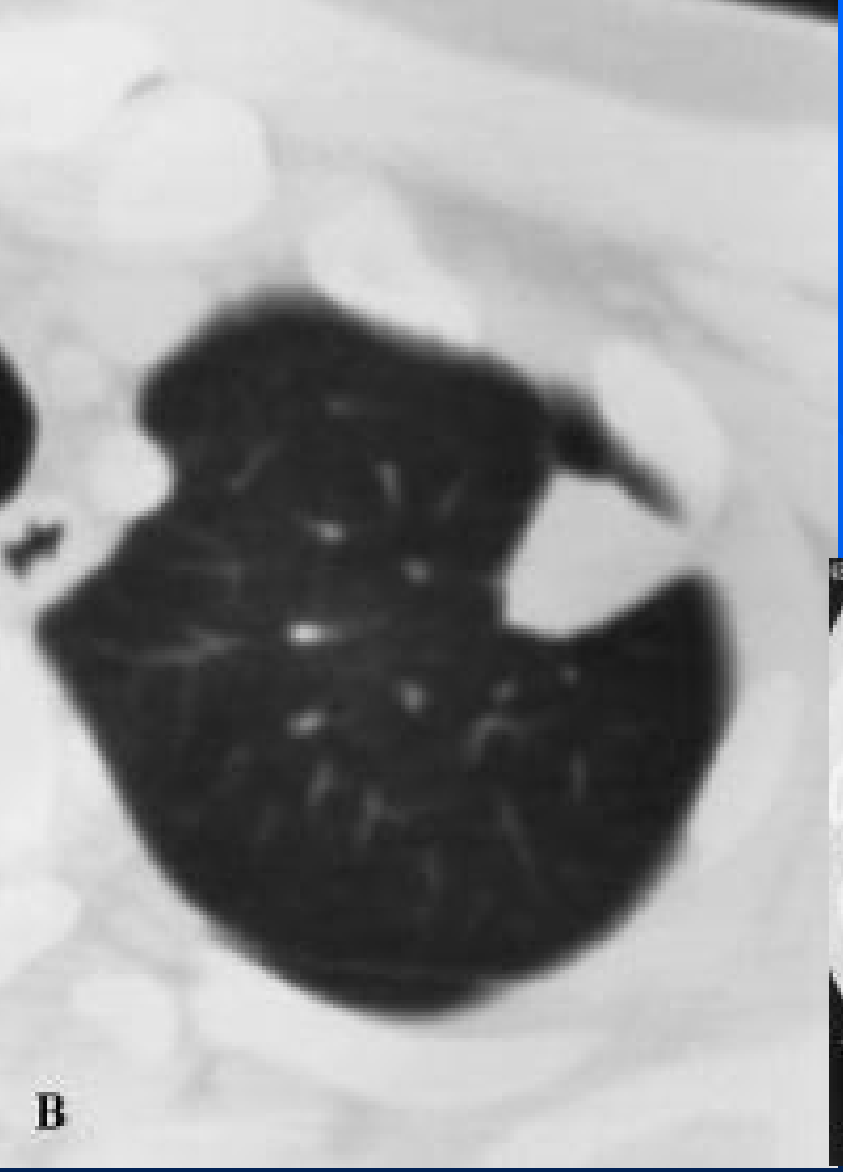


X-ray showing lobar consolidation [right upper lobe].

Marked interval progression of air-space consolidation.

Initial posteroanterior chest radiograph shows ill-defined vaguely nodular air-space opacities (arrows).

PA chest radiograph shows 1.5-cm cavitary RUL nodule.



CT shows subpleural location and polygonal shape of the mass.

CT shows multiple irregular airspace opacities in bilateral lungs, predominant in RLL.

Discussion

- Treatment

  Intravenous Amphotericin B, with or without 5-Flucytosine, is given several weeks until the patient is stable, after which the patient is given oral fluconazole to prevent the relapse of cryptococcosis.

Discussion

- Prognosis

1. Untreated cryptococcosis is always fatal.
2. Most deaths are attributable to cryptococcal meningitis and occur within two weeks after diagnosis.
3. Once the cryptococcosis infection has been successfully treated, individuals may be left with a variety of neurologic symptoms.