Great Cases

Clinical, Radiologic & Pathologic Correlations by Master Physicians

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Great Cases: Clinical, Radiologic and Pathologic Correlations by Master Physicians

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Master Pathologist:	Jeffrey L. Myers, MD, Ann Arbor, MI

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CASE 1

I Knew You Were Trouble

Kriti Sharma, MD, Perth, Australia

An asymptomatic 80 year old male was referred for workup of multiple incidentally imaged right lower lobe subpleural nodules, seen on a recent CT coronary angiogram. He denied shortness of breath, chest pain, cough and weight loss. There was no personal or family history of lung cancer. Given a history of previous prostate cancer managed with prostatectomy, there was some concern for possible metastatic malignant disease.

A subsequent high resolution CT chest confirmed visualisation of multiple subpleural pulmonary nodules in the right lower lobe, as well as a right apical nodule and left lower lobe nodule. Repeat CT chest 9 months later showed that the subpleural right lower lobe opacity had increased in size from23x11mm (Figure 1) to 38x20mm (Figure 2).

What is the best next step in management?

1. Surveillance
2. Excisional biopsy (i.e. VATS)
3. Fine needle biopsy
4. Radial EBUS
5. Transbronchial cryobiopsy

Which of the following is false regarding this diagnosis?

1. It is most commonly asymptomatic
2. It is usually a unilateral condition
3. Malignancy must always be ruled out with tissue sampling/biopsy
4. An inferior location is expected
5. The pathogenesis is unknown

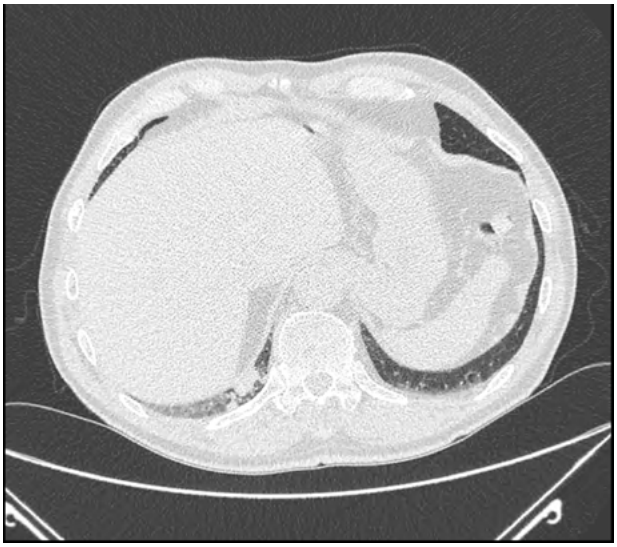


Figure 1

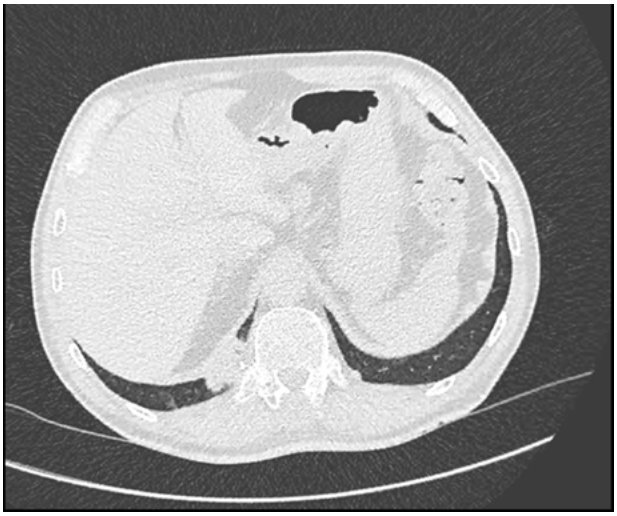
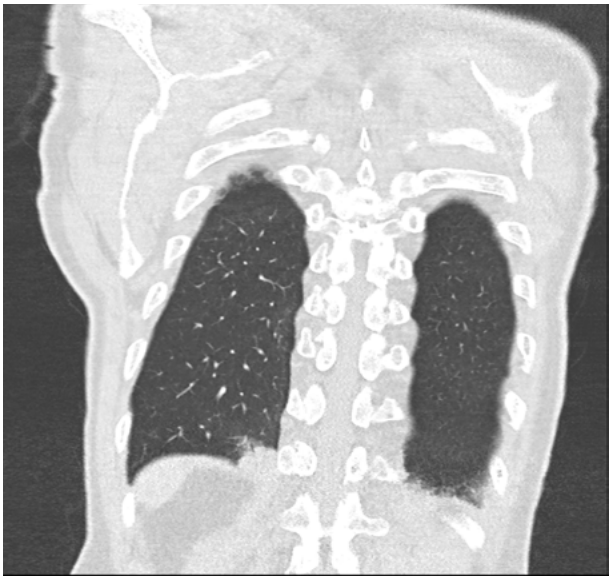


Figure 2

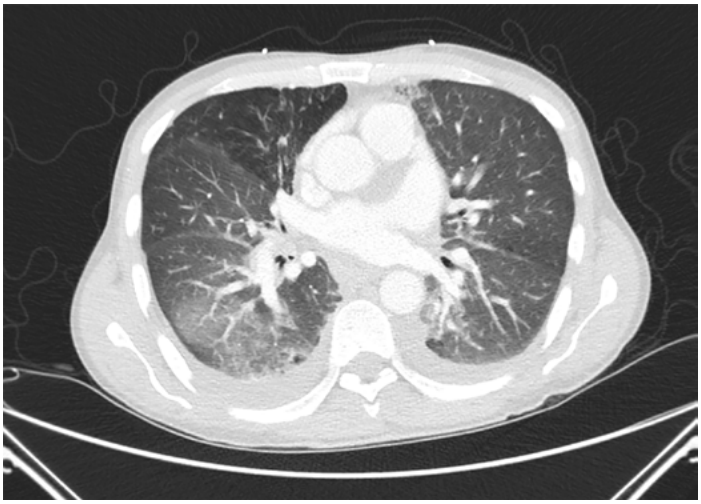


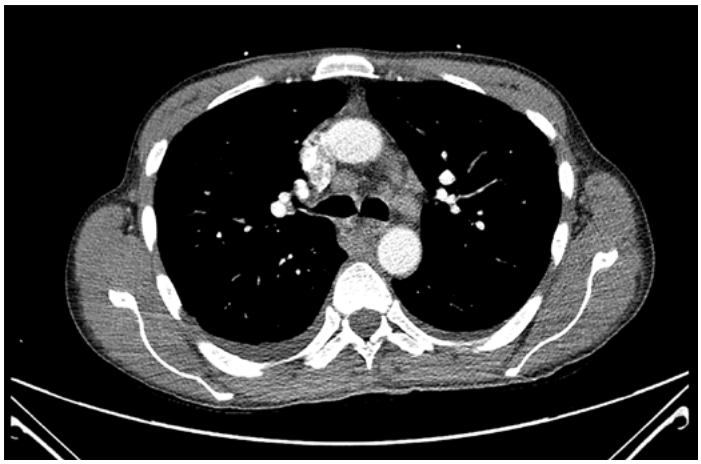
CASE 2

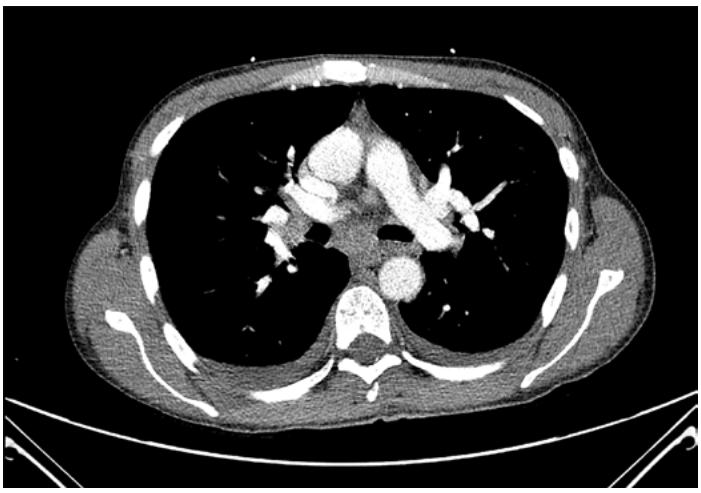
Everything Has Changed

Paul Chang, MD, New Orleans, LA

A 47-year-old Ethiopian male with a pertinent past medical history of human immunodeficiency virus (HIV), and diffuse large B-cell lymphoma presents with weight loss, fatigue, fever, cough, and epigastric pain. He reported gradual onset of symptoms over the past year with progressive worsening. He previously completed treatment with chemotherapy with etoposide, vincristine, doxorubicin, cyclophosphamide, and prednisone (EPOCH), along with intrathecal methotrexate, for 6 cycles two years ago. Positron emission tomography (PET) scan at the completion of treatment showed mostly Deauville 3 features, consistent with complete response; however, a repeat PET scan completed one month prior to this presentation showed multifocal hypermetabolic mediastinal, hilar, and mesenteric lymph nodes larger than previous CT findings. CT chest imaging done at the time of admission was notable for mediastinal and hilar lymphadenopathy along with multiple hepatic and splenic lesions.







How should alternative diagnoses be considered in patients with previously confirmed processes when evaluating recurrent mediastinal lymphadenopathy?

1. Every recurrence should be worked up as if it were a new presentation before initiating treatment.
2. Recurrence should be treated as a re-presentation and treatment should be attempted before looking at alternative diagnoses.
3. It depends.

What is the case fatality rate annually related to this diagnosis?

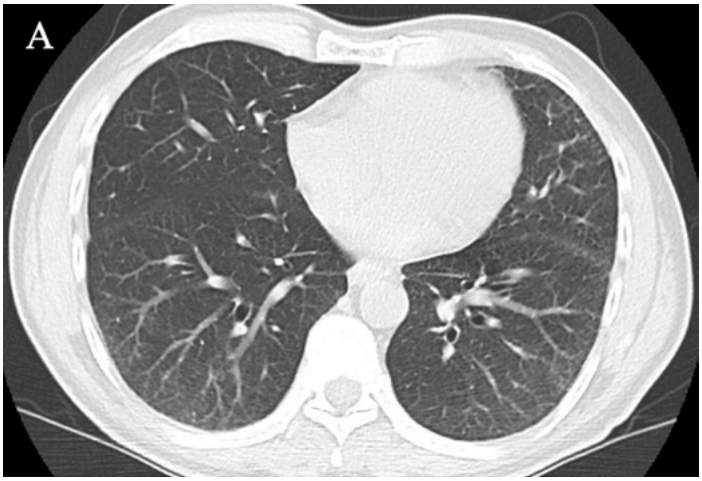
1. 85%
2. 70%
3. 48%
4. 16%
5. 5%

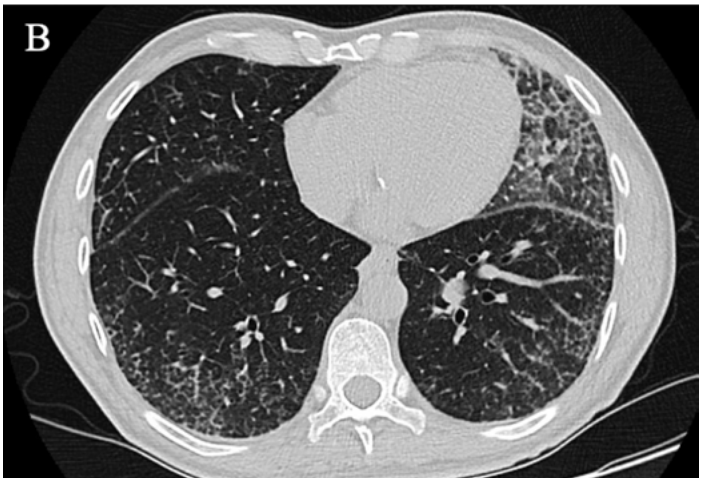
CASE 3

Anti-Hero

Krunal Patel, MD, Fairfax, VA
Nihar Modi, MD, Washington, DC

A 74-year-old man presented clinically asymptomatic with CT chest findings of mild pulmonary fibrosis, a pleural nodule, and bilateral axillary and mediastinal lymphadenopathy in the setting of recent influenza pneumonia. Over the next several months, the patient developed prominent bilateral parotid and submandibular glands and a cough. Repeat CT chest revealed progression of lymphadenopathy and pulmonary fibrosis.





What is the most likely diagnosis?

1. Tuberculosis
2. Granulomatosis with polyangiitis
3. IgG4-related lung disease
4. Scleroderma-related interstitial lung disease
5. Bulimia nervosa with chronic microaspiration

What is the best next step in management?

1. Isoniazid, rifampin, ethambutol, and pyrazinamide
2. Corticosteroids and rituximab
3. Mycophenolate mofetil
4. Psychiatric evaluation
5. PET scan

CASE 4

Pediatric Case: Cruel Summer

Pooja E. Mishra, MBBS, Pittsburgh, PA

A 14-year-old male with history of heart transplant at age 3 months presented with chronic cough for 1 year. His medical history was notable for intracranial PTLD (<1 year post-transplant), left diaphragm paresis, left lower lobe bronchiectasis, asthma and eczema (currently on dupilumab). In the last year, he had 2 episodes of right sided pneumonia as well as declining spirometry. Sirolimus was his primary anti-rejection medication. Chest X Ray and CT Chest are shown. The CT Chest showed small new nodules in the upper lobes and right middle lobe. He was clinically doing well so after workup he was discharged home. At follow-up 1 month later his cough had improved, however repeat chest CT revealed new right lower lobe opacities. Bronchoscopy was planned.

What would you do as initial workup?

1. PET CT
2. Infectious workup and full Pulmonary Function Testing
3. VATS Guided Biopsy
4. Observe clinically with close follow up

What is the most likely diagnosis?

1. Mucus plug
2. Plastic Bronchitis
3. Neoplasm
4. Purulent Secretions

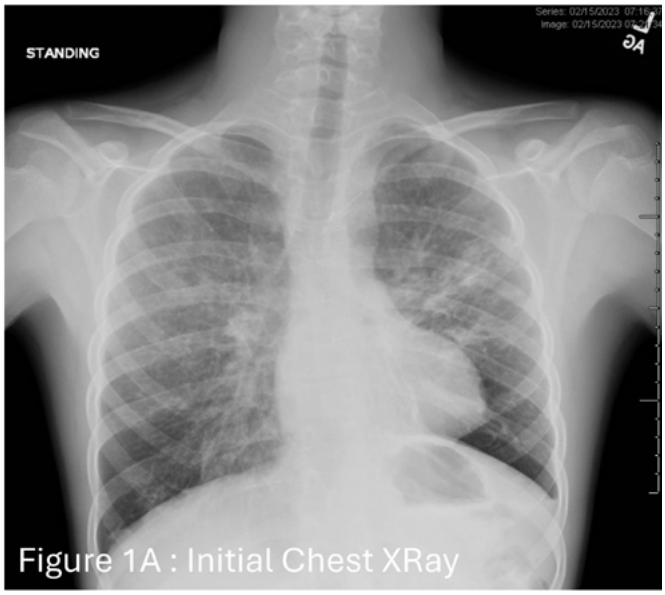


Figure 1A : Initial Chest XRay

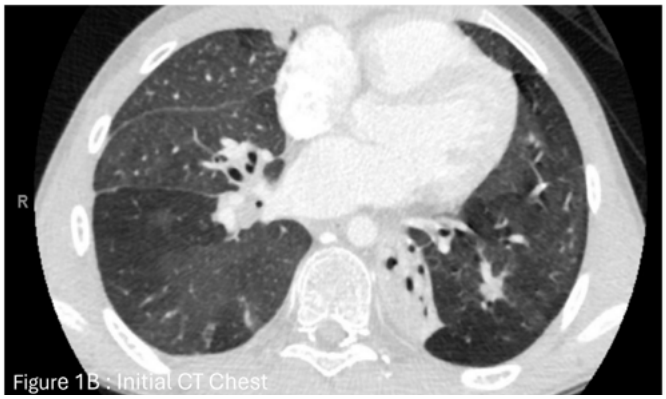


Figure 1B : Initial CT Chest

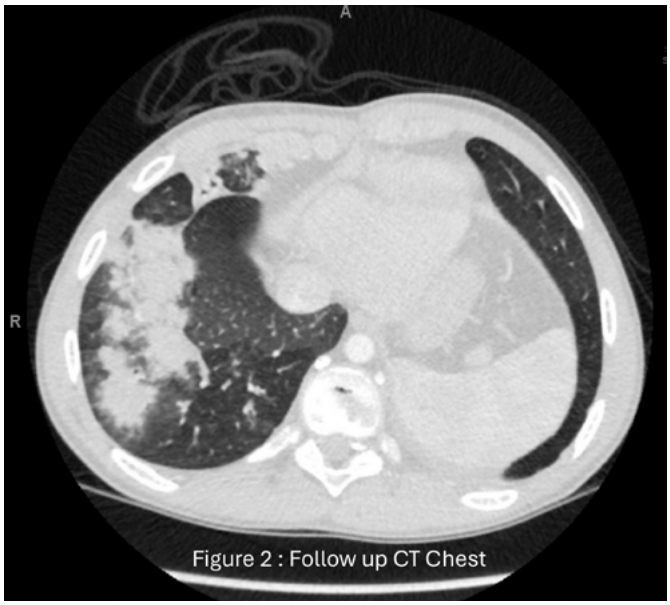


Figure 2 : Follow up CT Chest