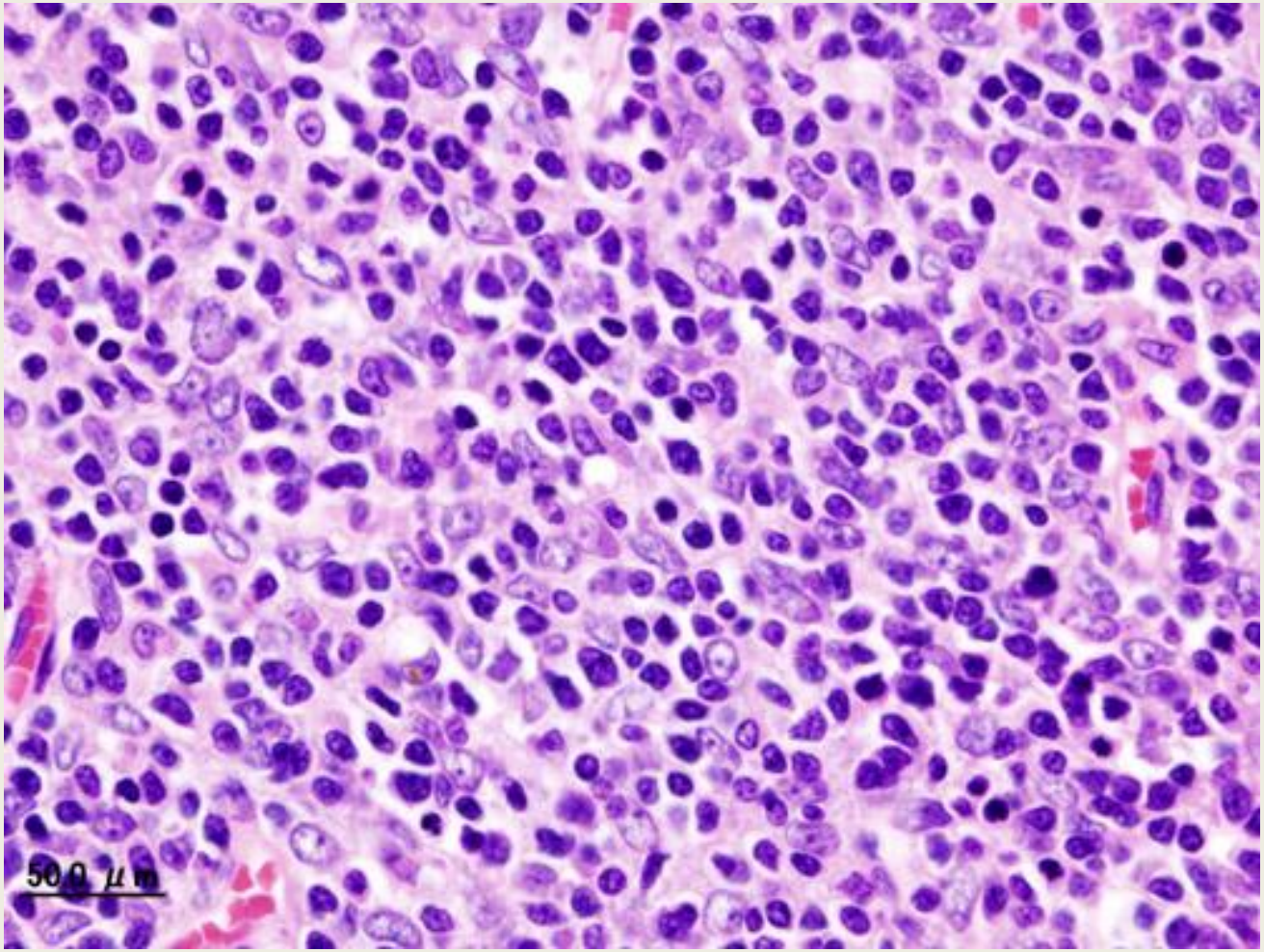
Q1

- A 35-year-old woman has had increasing fatigue for the past 6 months. By the end of the day, she has difficulty keeping her eyes open, and she experiences diplopia. Multiple cups of coffee do not help. She has tried getting more sleep, but this does not help. On physical examination she has 4/5 motor strength in extremities following repetitive movement. Based upon the CT finding here, next slide, which of the following laboratory serologic tests is most likely to be abnormal in this woman?
- A Anti-double stranded DNA
- B Anti-microsomal antibody
- C Acetylcholine receptor antibody
- D Glomerular basement membrane antibody
- E Rheumatoid factor

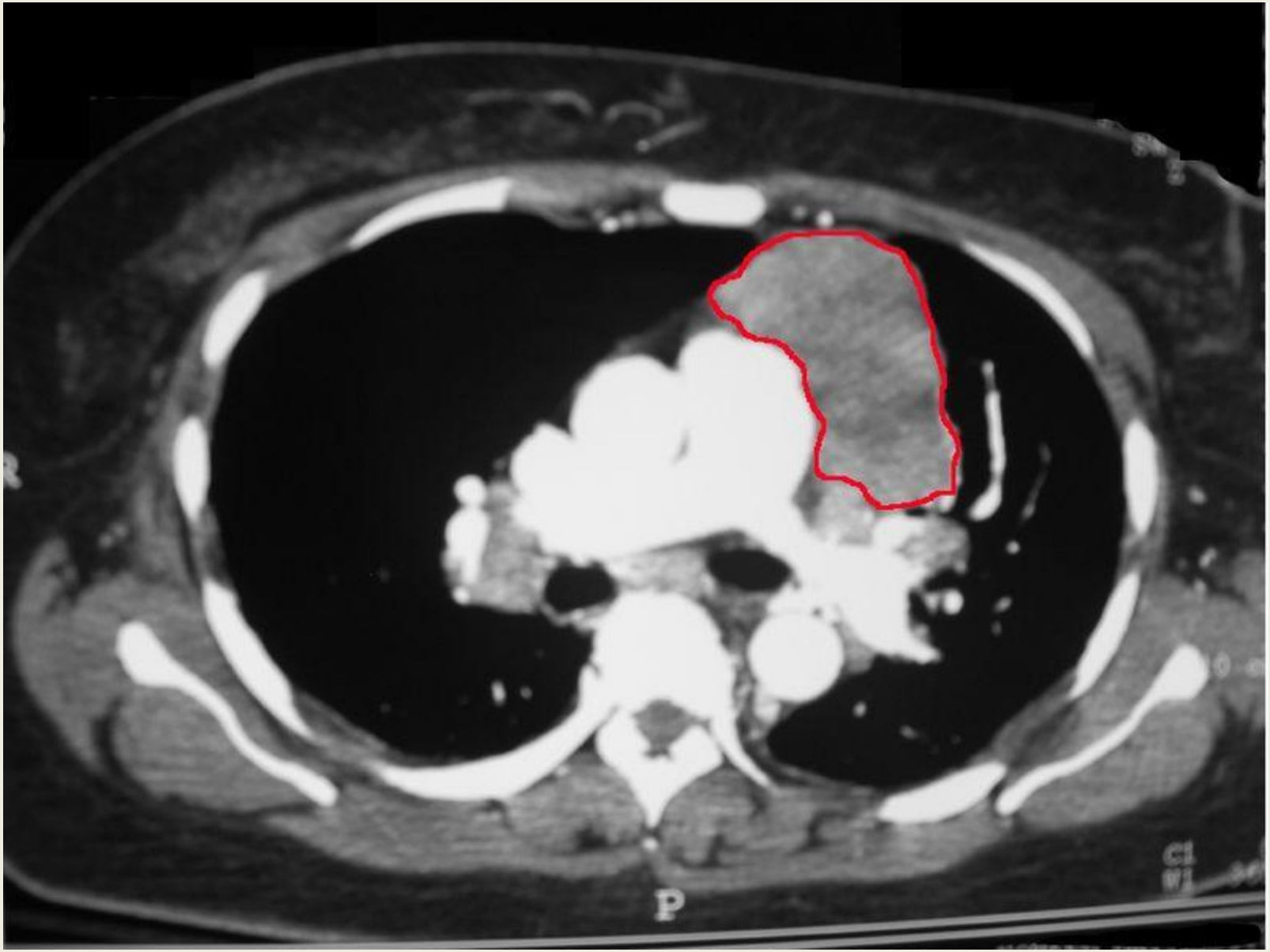

BONE
R 147
L 173
R
L
kV 120
mA 280
Large

- C is CORRECT. The mass is located in the mediastinum and is a thymoma. Persons with myasthenia gravis often have a either a thymoma or thymic hyperplasia. The acetylcholine receptor antibody blocks neuromuscular junctions and results in weakness, particularly with muscles used in repetitive movement.

MEDIASTINUM: ENCAPSULATED THYMOMA (MIXED LYMPHOCYTIC AND EPITHELIAL)
A bottle-shaped tumor is encapsulated and shows a bulging, rather homogeneous, faintly lobulated ivory-colored cut surface.



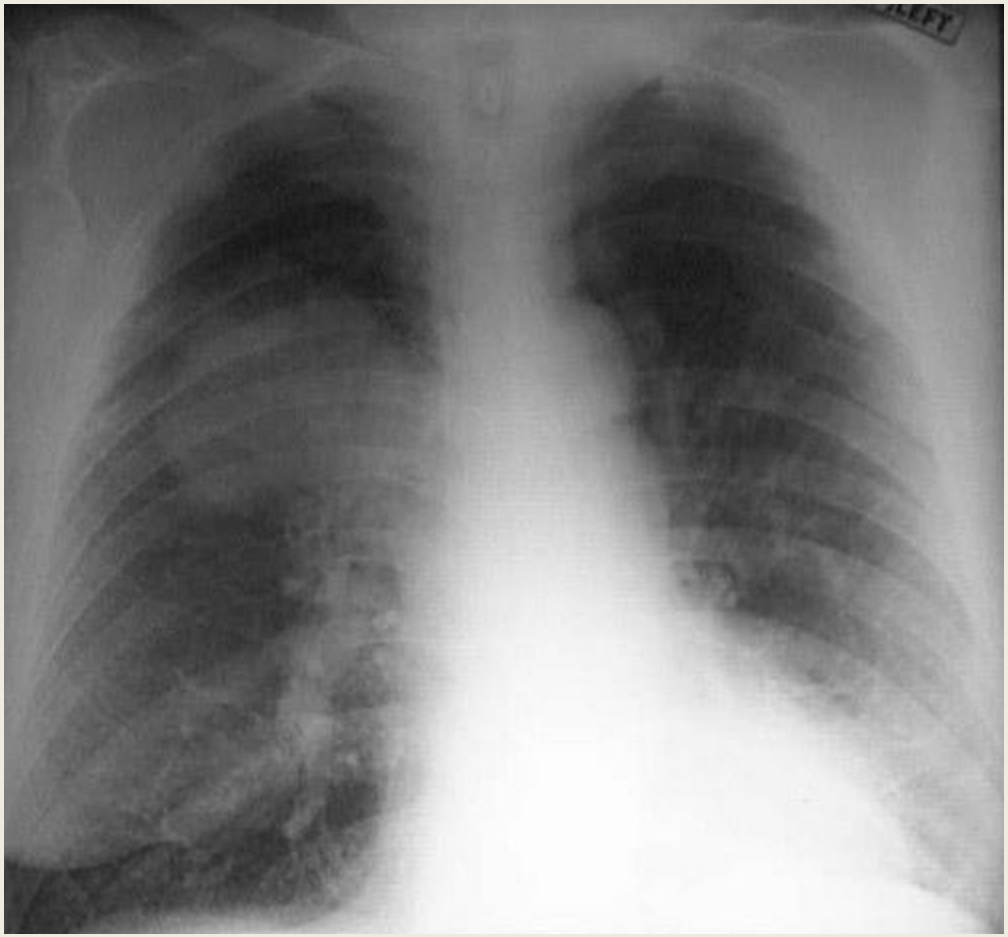
Histopathological image of thymoma type B1. Anterior mediastinal mass surgically resected. Hematoxylin & eosin stain.


P

a. Partial right eye ptosis; b. post-tensilon treatment

Q2

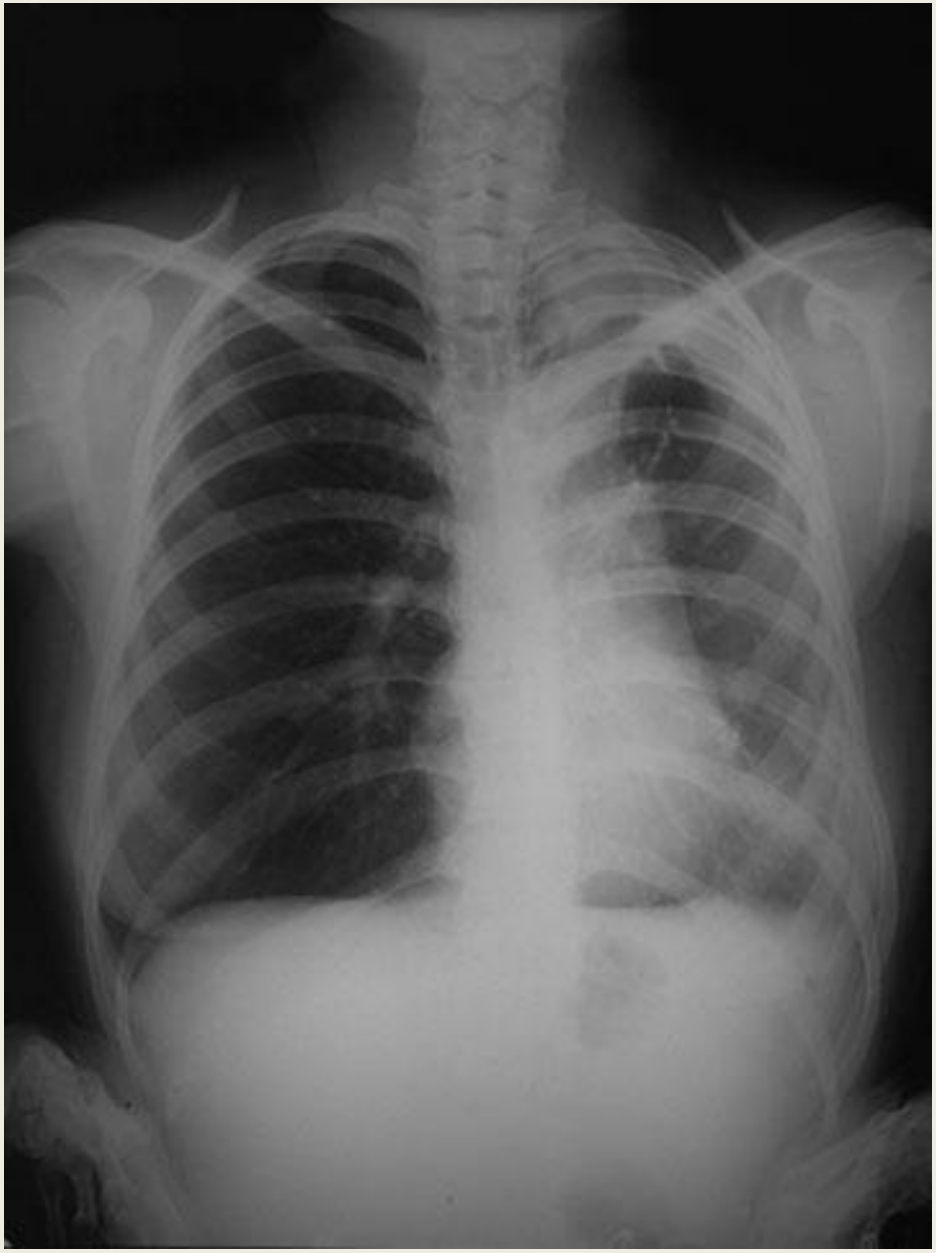
- A 55-year-old woman has a 50 pack year history of smoking. She suddenly develops the sudden onset of colicky lower abdominal pain and hematuria. She passes a stone that, when analyzed, is composed of calcium oxalate. On physical examination she has no abnormal findings. From the appearance of her chest radiograph shown here, next slide, which of the following sputum cytologic findings would you expect to be present in this woman?
- A Cells with hyperchromatic nuclei and dense orange-pink cytoplasm
- B Curschmann's spirals and Charcot-Leyden crystals
- C Numerous acid fast bacilli
- D Clusters of small blue cells with scant cytoplasm
- E Numerous neutrophils with some pigmented alveolar macrophages


LEFT

- A is CORRECT. She has a squamous cell carcinoma of the lung with hypercalcemia as a consequence of a paraneoplastic syndrome in which the cancer is elaborating a parathormone-related peptide.
- Squamous cell carcinomas are related to smoking; they tend to produce large central masses.

Q3

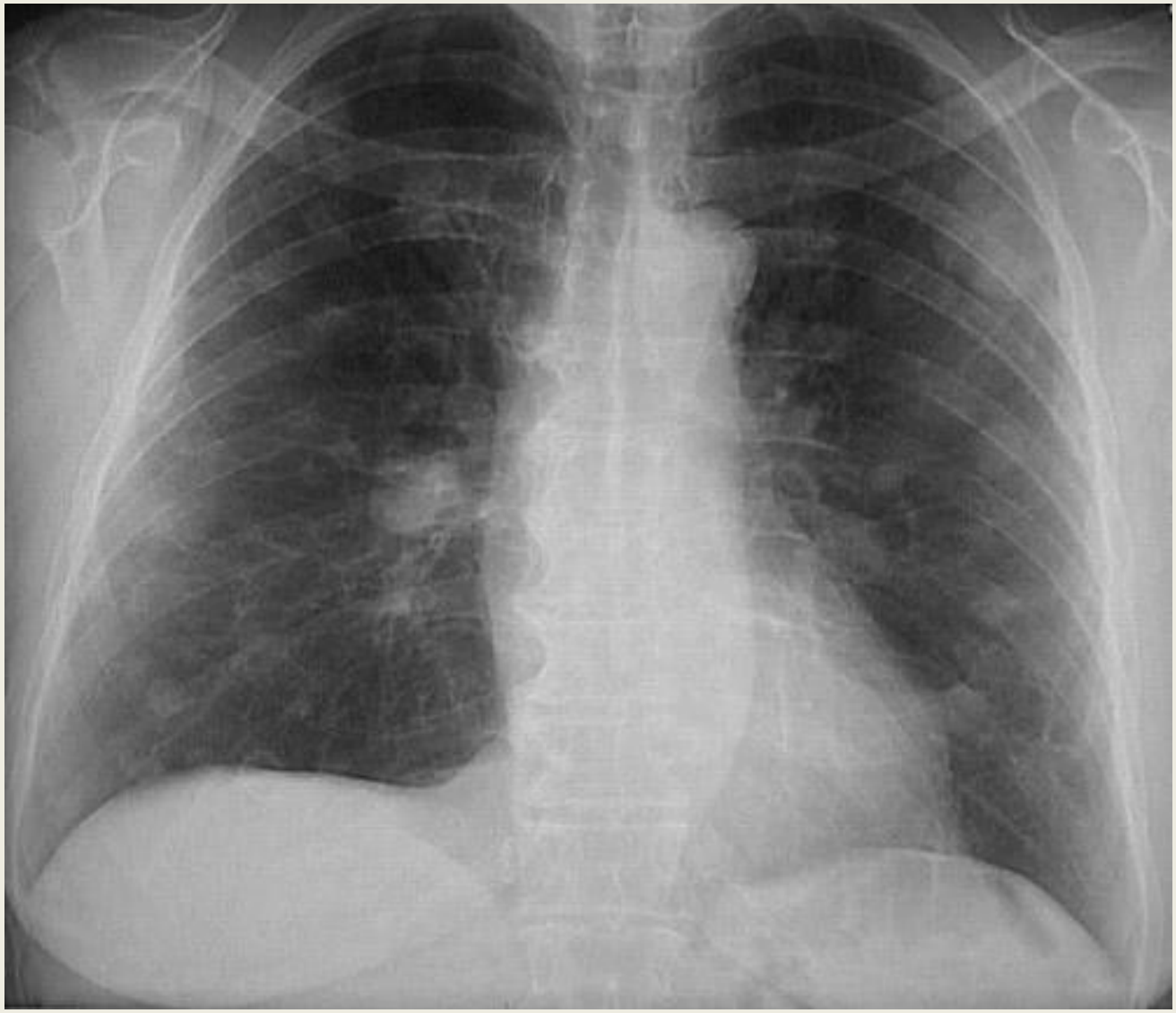
- A 22-year-old woman suddenly became dyspneic. On physical examination there are no breath sound on the right. Her chest radiograph is shown here, next slide. Which of the following underlying conditions is she most likely to here?
- A Atopic asthma
- B Hypersensitivity pneumonitis
- C Acquired immunodeficiency syndrome
- D Paraseptal emphysema
- E Factor V Leiden mutation



- D is CORRECT. There is a pneumothorax seen here on the right. Chest trauma most often produces a pneumothorax. However, the uncommon condition of paraseptal emphysema, which can occur in young persons, may also lead to spontaneous pneumothorax.
- With paraseptal emphysema, there are few focal peripheral bullae that are prone to rupture.

Q4

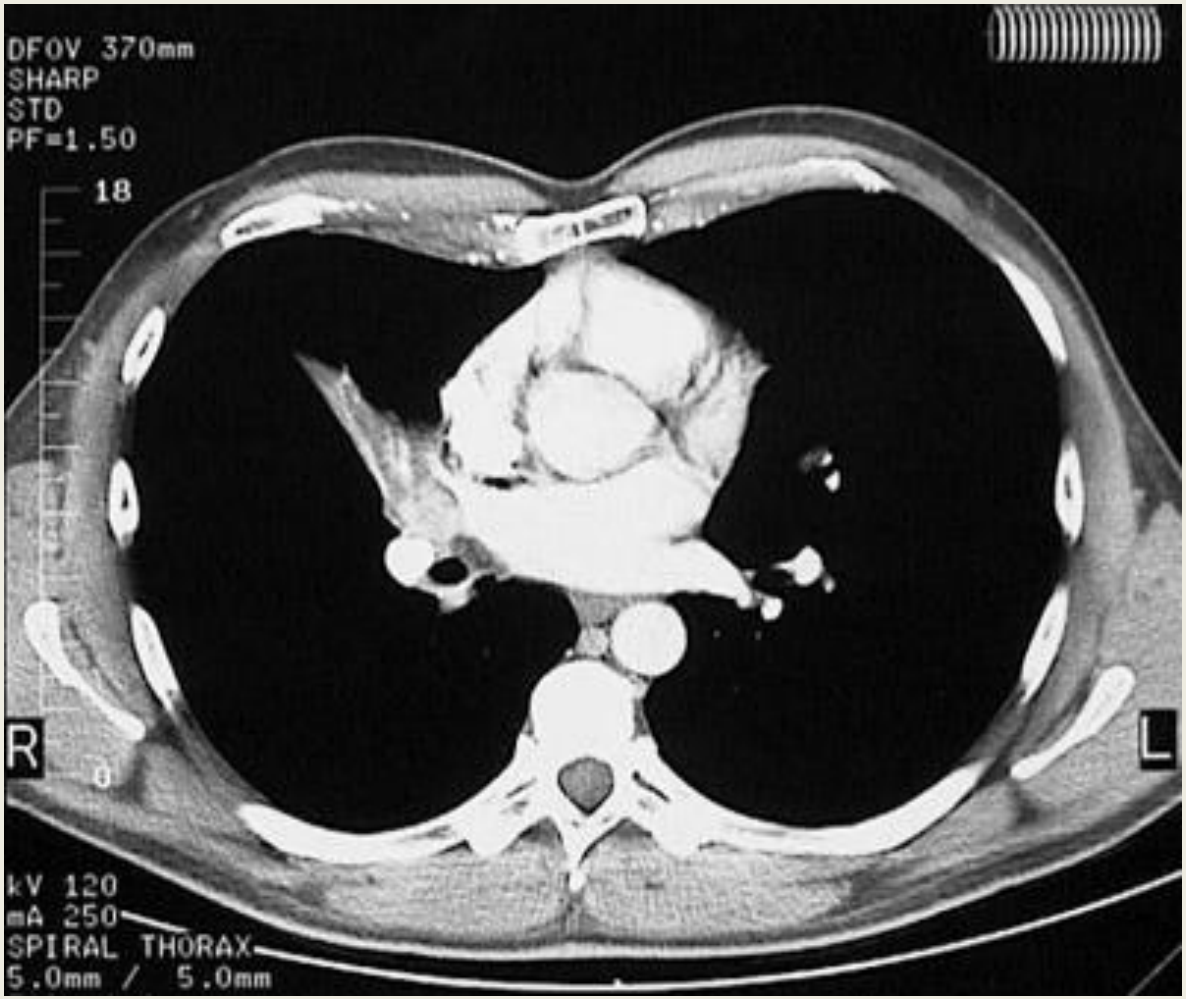
- A 52-year-old man was diagnosed with Crohn disease 25 years ago. He now has a 3 month history of malaise and a 5 kg weight loss. On physical examination he is afebrile. His stool is positive for occult blood. Laboratory studies show Hgb 10.3 g/dL, Hct 30.5%, MCV 71 fL, platelet count 193,000/microliter, and WBC count 7710/microliter. A urinalysis shows proteinuria. A renal biopsy reveals membranous glomerulonephritis. From the chest radiographic appearance seen here, next slide, which of the following conditions is most likely to be present in this patient:
- A Cirrhosis
- B Colitis
- C Cor pulmonale
- D Coccidioidomycosis
- E Cecal adenocarcinoma



- E is CORRECT. There are multiple masses present representing metastases. There is an increased risk (albeit lower than for ulcerative colitis) for colonic adenocarcinoma in patients with Crohn disease.
- Some cases of membranous GN are due to an underlying malignancy such as colon cancer.

Q5

- A 39-year-old man has a 1 month history of cough with hemoptysis. He is a non-smoker. On physical examination there are no abnormal findings. His chest CT scan is seen here, next slide. A segmental lung resection is performed. On gross examination of the specimen obtained, a lipid pneumonia is present. Which of the following lesions is most likely to produce these findings?
- A Tuberculosis
- B Carcinoid tumor
- C Goodpasture syndrome
- D Wegener granulomatosis
- E Rheumatic heart disease


DFOV 370mm
SHARP
STD
PF=1.50
18
R
L
kV 120
mA 250
SPIRAL THORAX
5.0mm / 5.0mm

- B is CORRECT. A bronchial carcinoid tumor proved to be present. Such tumors can form an endobronchial mass that leads to obstruction. The obstruction by the tumor can result in a lipid pneumonia (the density in the right middle lobe seen in the CT scan) distal to the obstructing tumor. Most carcinoid tumors tend to act in a benign fashion.