

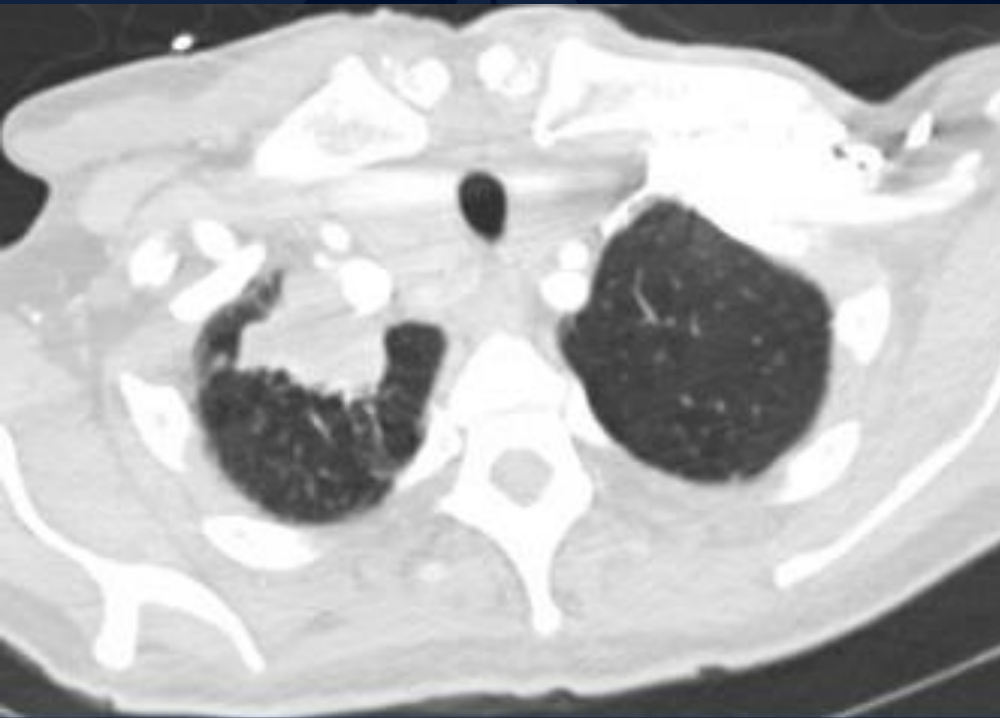
87-year-old male presenting with  
worsening dyspnea on exertion,  
fatigue and weakness

Prakhar Bansal, MS3

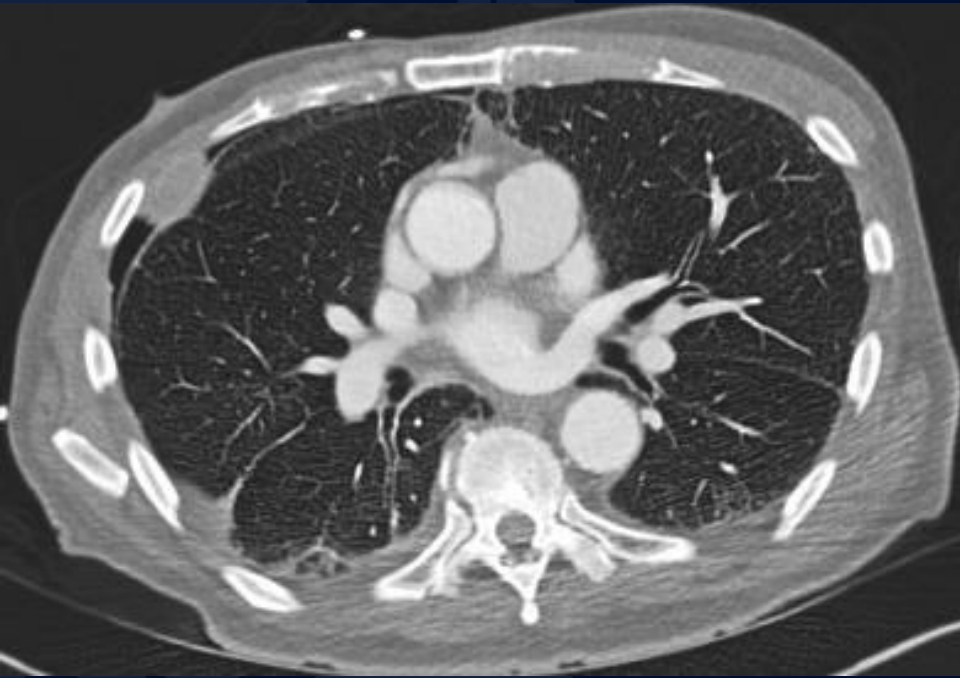
# Radiographs



# CT



# CT

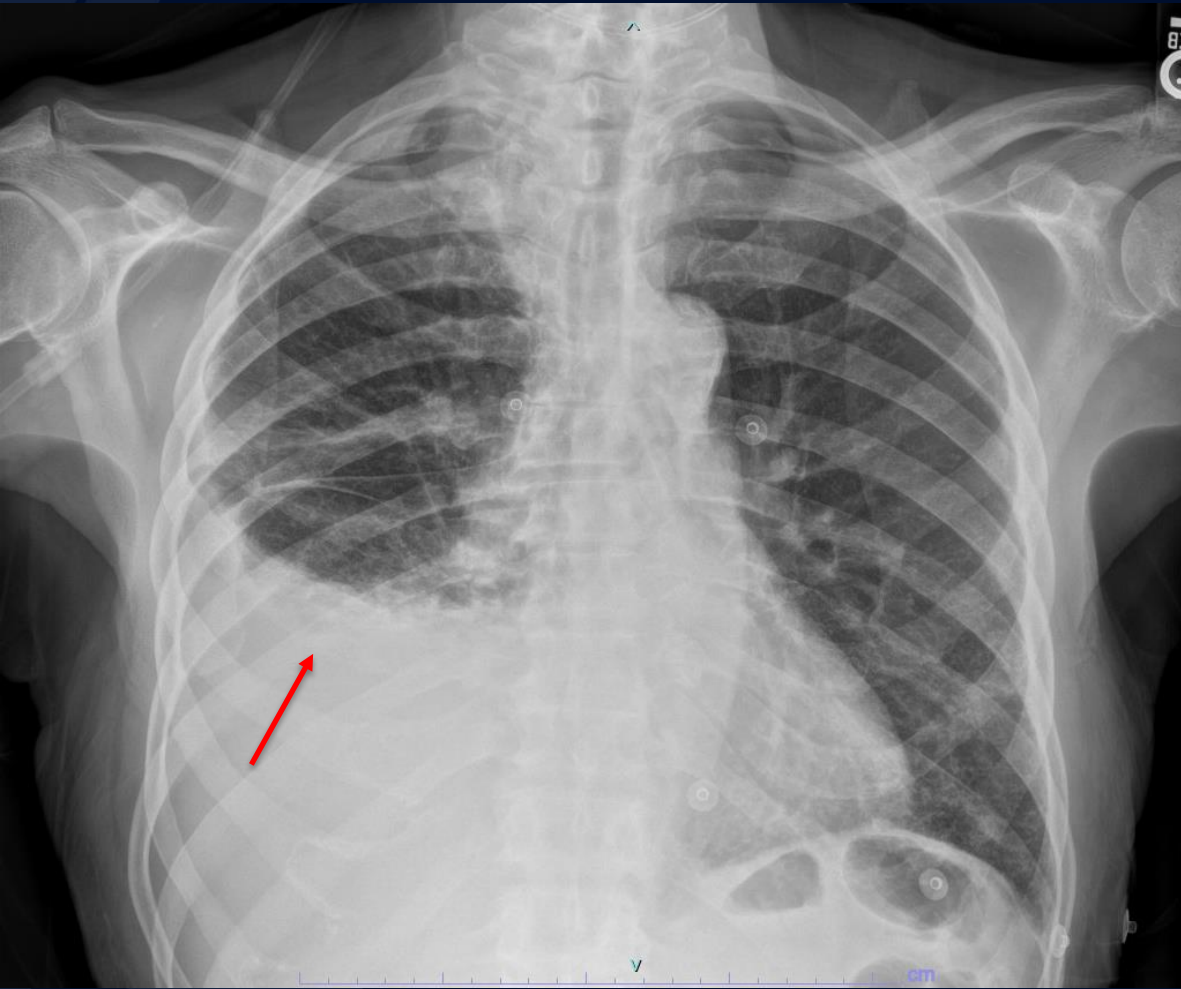




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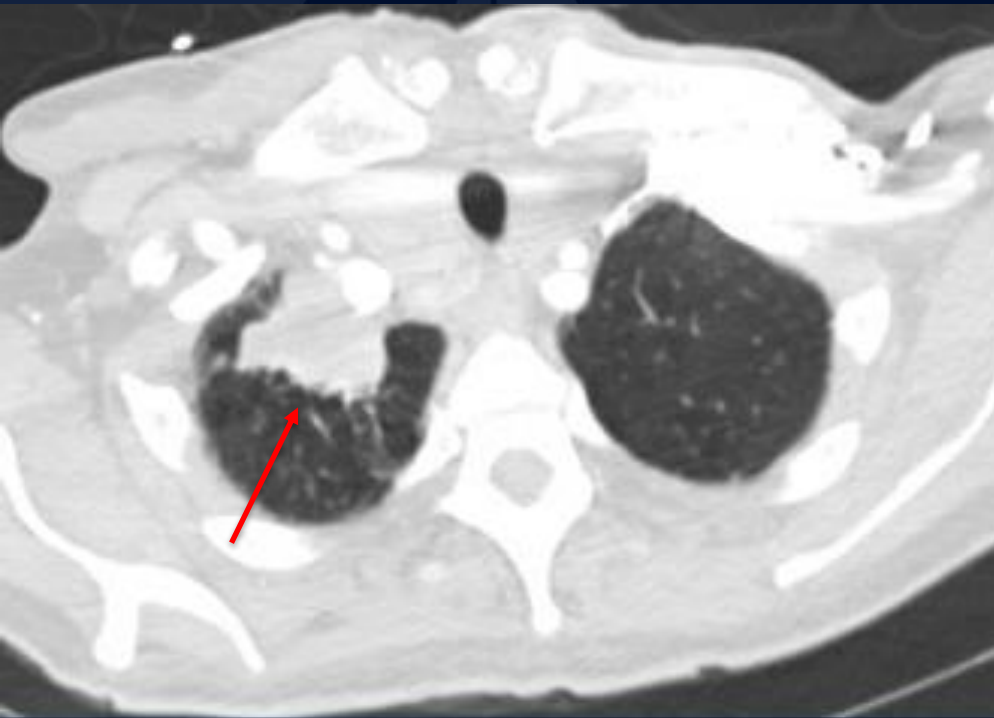
# Lung Adenocarcinoma with Pleural Metastasis

# Radiograph



Right-sided pleural effusion

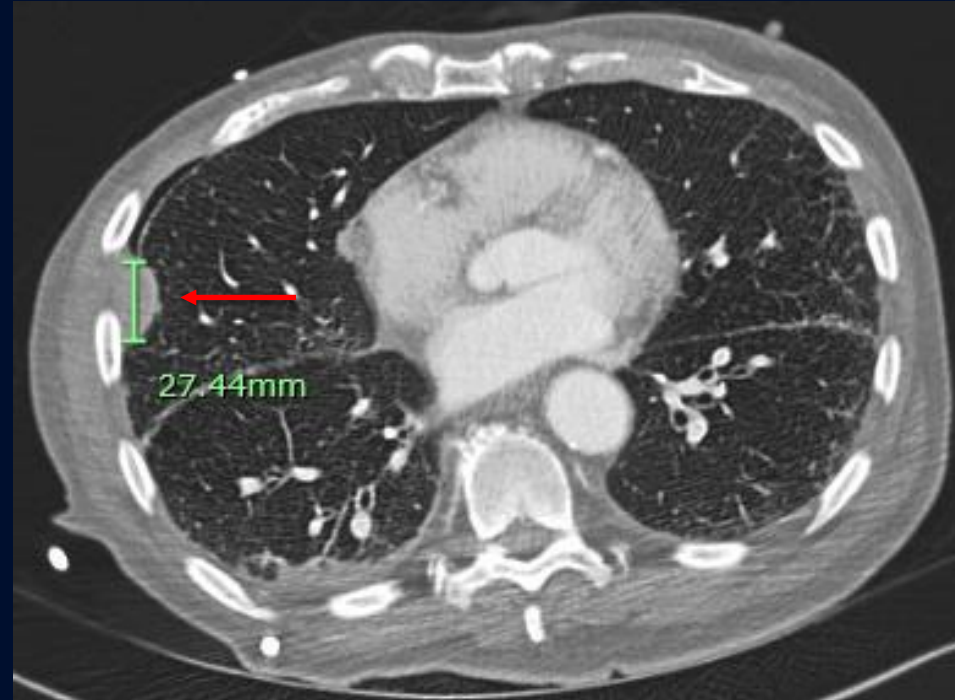
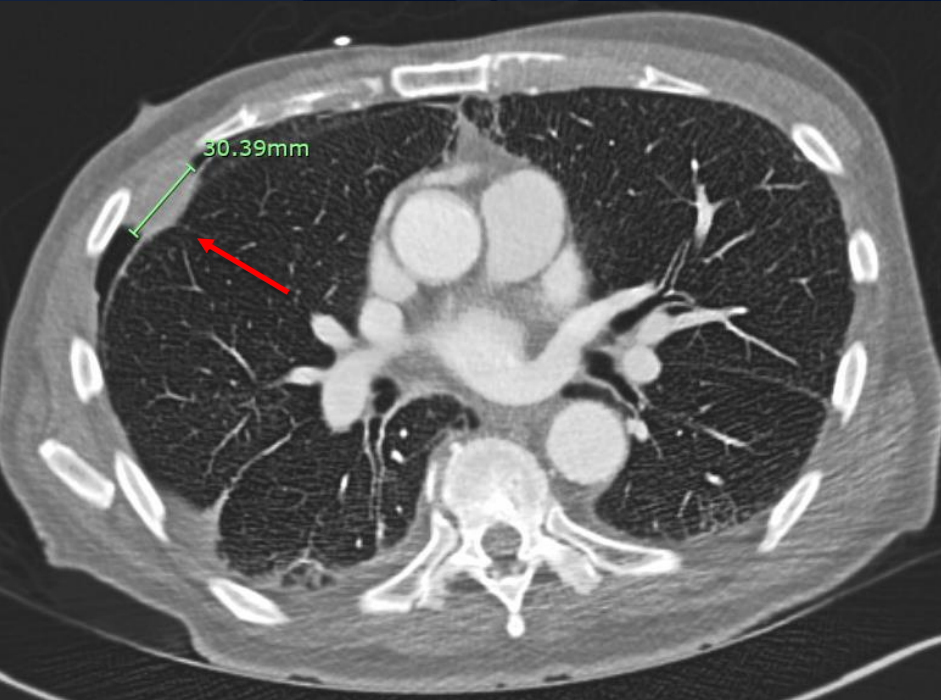
# CT



4.0 cm right apical soft tissue mass



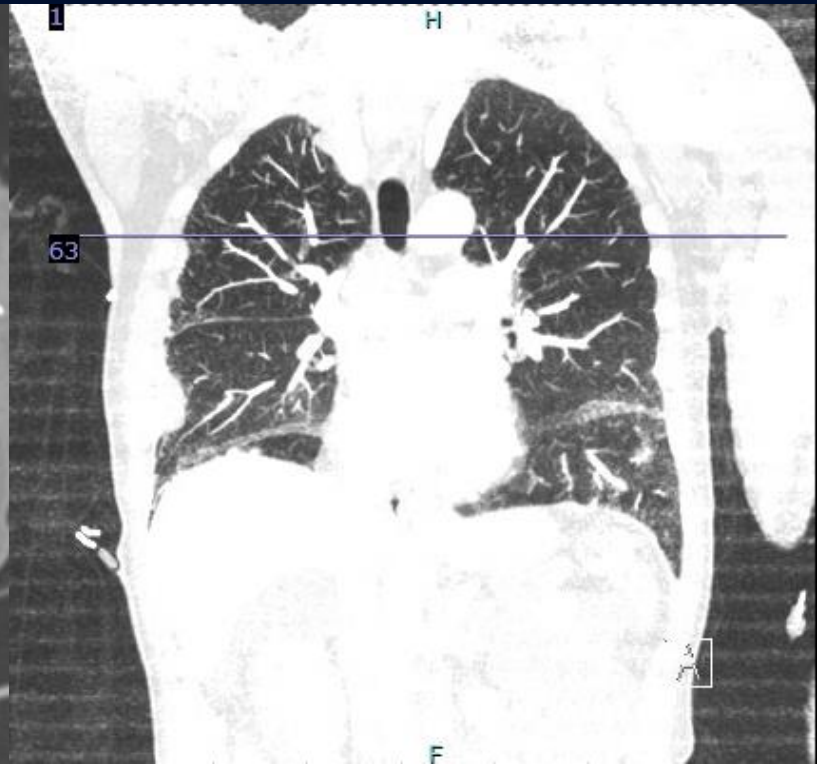
# CT



Soft tissue nodules and masses in the pleural space in the right hemithorax, consistent with metastatic pleural implants

Trace associated pneumothorax

# CT



Multiple enlarged mediastinal lymph nodes, consistent with metastatic mediastinal lymphadenopathy

Small bilateral pleural effusions

# Imaging Findings Concerning for Lung Cancer

- Nodules with irregular/spiculated margins, upper lobe, thick-wall cavitation, nodules with solid and ground glass components
- New nodules/masses, especially if > 3 cm
- Measurable growth in any nodule or mass
- Pleural nodularity
- Asymmetric or significantly enlarged hilar or paratracheal nodes
- Endobronchial lesion
- Consolidation that fails to resolve with medical management
- Less specific findings
  - Pleural effusions
  - Non-dependent or substantial atelectasis
  - Pleural plaques indicating significant asbestos exposure

# Malignant Pleural Effusions (MPEs)

- 15% of all patients with cancer develop malignant pleural effusions
  - Most commonly with lung and breast cancers
- Usually indicator of advanced stage cancer (median survival 4 months)
- Management focused on palliation
  - If symptomatic (dyspnea, discomfort, cough), drain with large volume thoracentesis or chest tube
  - >50% of MPEs recur (up to 2/3 of those recur rapidly within 1 month)
  - Tx symptomatic recurrence with repeat thoracentesis, long-term indwelling pleural catheter, pleuroperitoneal shunt

# References

- Heffner JE, Nietert PJ, Barbieri C. Pleural fluid pH as a predictor of survival for patients with malignant pleural effusions. *Chest*. 2000 Jan;117(1):79-86. doi: 10.1378/chest.117.1.79. PMID: 10631203.
- Ost DE, Niu J, Zhao H, Grosu HB, Giordano SH. Quality Gaps and Comparative Effectiveness of Management Strategies for Recurrent Malignant Pleural Effusions. *Chest*. 2018 Feb;153(2):438-452. doi: 10.1016/j.chest.2017.08.026. Epub 2017 Aug 31. PMID: 28864054; PMCID: PMC6743066.
- Thomas KW, Gould MK, Naeger D. Overview of the initial evaluation, diagnosis, and staging of patients with suspected lung cancer. In: UpToDate, Post, TW (Ed), UpToDate, Waltham, MA, 2023.
- Silvestri GA, Littenberg B, Colice GL. The clinical evaluation for detecting metastatic lung cancer. A meta-analysis. *Am J Respir Crit Care Med*. 1995 Jul;152(1):225-30. doi: 10.1164/ajrccm.152.1.7599828. PMID: 7599828.