

# 63 year-old male smoker undergoes screening lung CT

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Low dose screening CT Chest

1.8cm nodule evaluated by PET  
No significant FDG activity.

Subsequently undergoes bronchoscopic  
biopsy

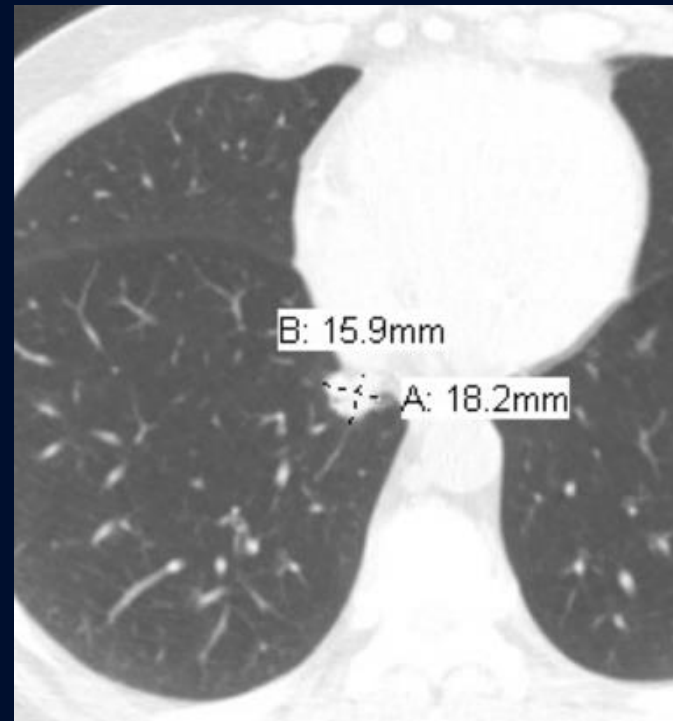
Adenocarcinoma

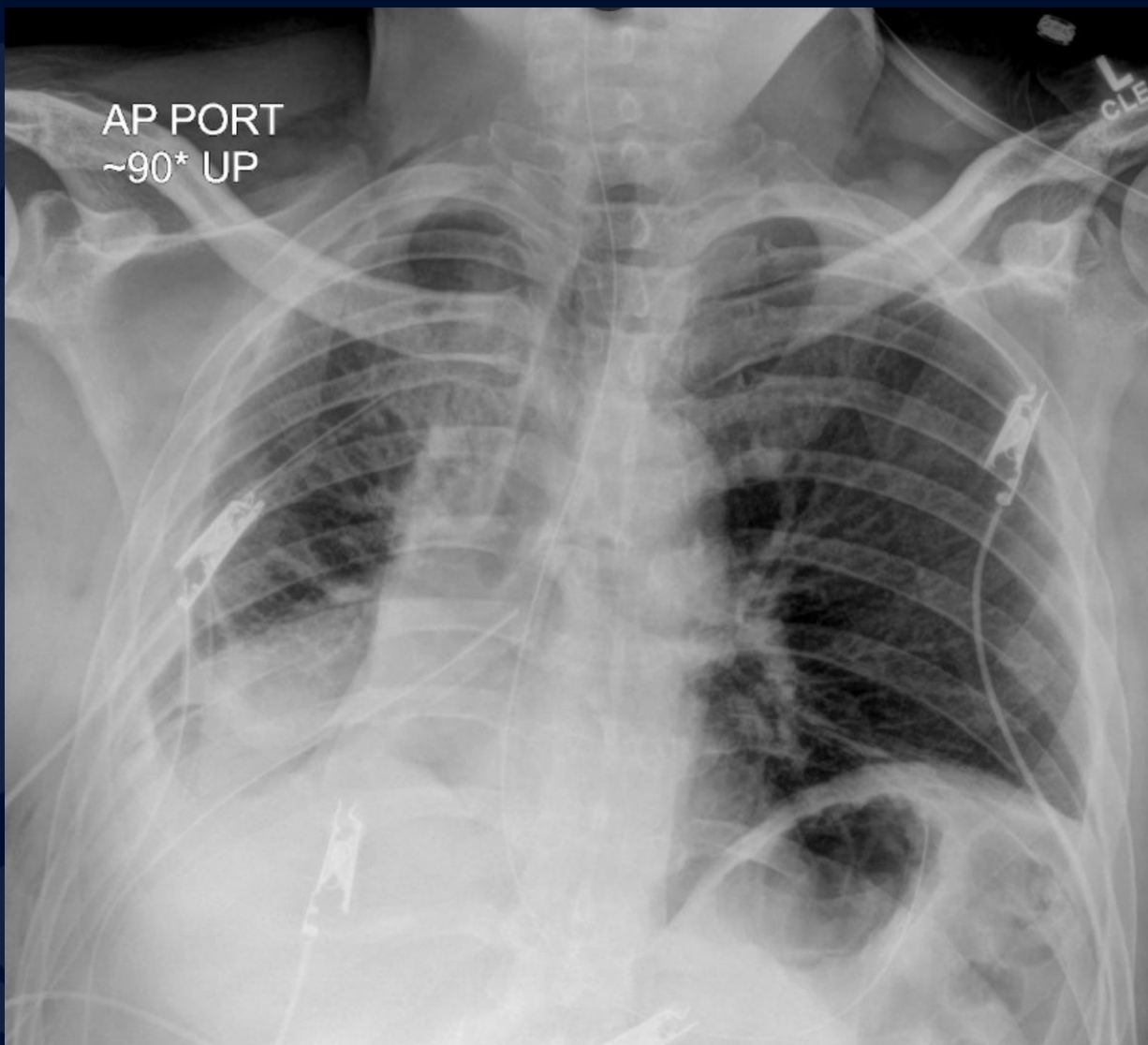
“Infiltrating well differentiated bronchoalveolar/lepidic carcinoma of the lung with subpleural location involving a subpleural scar and seems to at least partially arising within the scar.”

T2 N0 Mx

Surgeon and patient decide on right lower lobectomy.

Patient undergoes right lower lobectomy without immediate complication.





POD 1 – requisition reads “S/P RLL Lobectomy”

2 right chest tubes with small right basilar hydropneumothorax



POD 2 – requisition reads “Increasing O2 Req s/p RLL lobectomy”

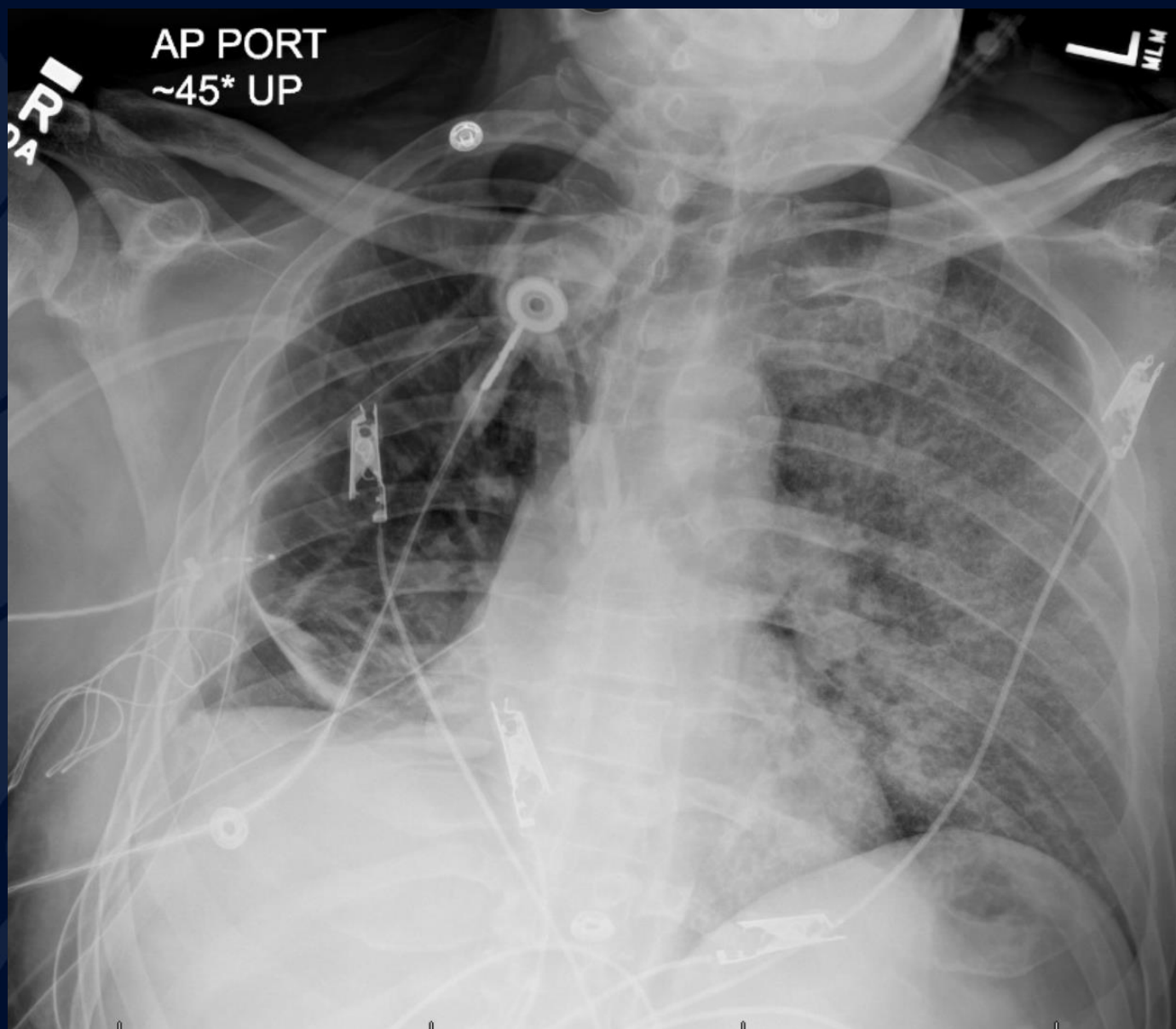
Increasing interstitial opacity throughout R lung



12 hours later on POD 2 – requisition reads “SOB and hypoxia”

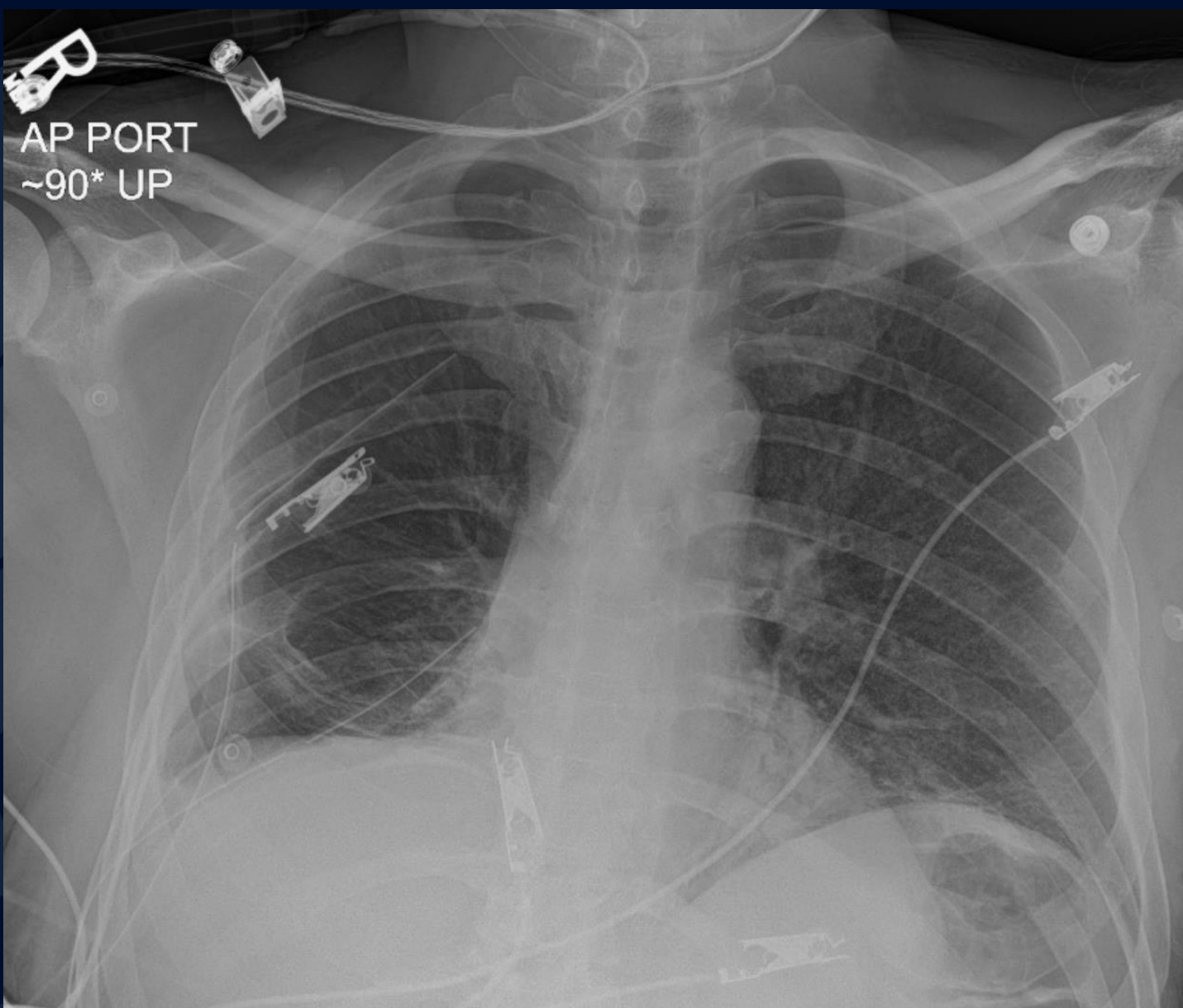
New left perihilar lobular opacity





POD 3 - hypoxia

Diffuse left lung interstitial and airspace opacity c/w edema



AP PORT  
~90\* UP

POD 6

A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide. It features detailed vein patterns and a lobed edge.

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# Post-pneumonectomy Pulmonary Edema

(aka ALI/ARDS after lung  
resection)

# Post-pneumonectomy Pulmonary Edema

- Previously called post-pneumonectomy edema, *ALI/ARDS after lung resection* represents a form of non-cardiogenic pulmonary edema that develops after lung resection (usually pneumonectomy, lobectomy, or bilobectomy), in the absence of other identifiable causes. Has similar clinical, radiological, and histopathological characteristics as ALI/ARDS and therefore might be considered a variant.
- Most patients present between 1 and 3 days postoperatively, with refractory hypoxemia, disorientation, restlessness, dyspnea, tachypnea, and tachycardia.
- Radiologic findings lag behind the clinical signs and may include a new interstitial pattern of edema in the early phase or diffuse parenchymal consolidation later in disease process. Histopathologically, it is characterized by diffuse alveolar damage.

# Post-pneumonectomy Pulmonary Edema

- The pathophysiology of *ALI/ARDS after lung resection* consists of alteration in pulmonary vascular control and permeability.
- Various theories have suggested factors that may contribute to the pathogenesis of this condition, including both surgical or perioperative factors and biochemical/inflammatory mediators.
- These may include physical and biochemical alterations in both the ipsilateral and contralateral lung during one-lung ventilation, followed by ischemia-reperfusion injury. This then leads to cellular damage and the development of ALI and ARDS.
- The mortality of *ALI/ARDS after lung resection* is high (>10%) and related to the type of resection.

# References

- <https://www.thoracic.org/professionals/clinical-resources/critical-care/clinical-education/critical-care-cases/acute-respiratory-failure-36-hours.php>
- Statdx
- Zeldin RA, Normandin D, Landtwing D, Peters RM: Postpneumonectomy pulmonary edema. J Thorac Cardiovasc Surg 1984; 87: 359-65