

Unit II – Problem 7 – Clinical + Radiology: Lung Cancer

- Bronchogenic carcinoma is the leading cause of death because of malignancy in men and women. The 5-year survival rate for small cell cancer is 5% and non-small cell cancer is 8%.
- Etiology: 90% of cases of lung cancer are due to cigarette smoking in both males and females. The occasional nonsmoker who has lung cancer develops adenocarcinoma. Active smokers have a 10X greater risk compared with nonsmokers. The risk related to the number of pack-years. Asbestos exposure also increases the risk.
- Pathology:
 - **The most common lung cancers are adenocarcinoma and squamous cell carcinoma:**
 - ✓ Adenocarcinoma:
 - ❖ Peripheral.
 - ❖ Asbestos exposure can be underlying causative agent.
 - ❖ Adenocarcinoma is associated with pleural effusions that have high hyaluronidase levels.
 - ❖ Diagnosis: thoracotomy with pleural biopsy.
 - ✓ Squamous cell carcinoma:
 - ❖ Central.
 - ❖ It is associated with cavitory lesions.
 - ❖ Metastasizes by direct extension into the hilar node and mediastinum.
 - ❖ It is associated with hypercalcemia from the secretion of a parathyroid hormone-like substance.
 - ❖ Histology: characterized by the presence of keratin pearls.
 - ✓ Small cell carcinoma:
 - ❖ Central.
 - ❖ Rapidly growing.
 - ❖ Early distant metastasis to extrathoracic sites.
 - ❖ Associated with Eaton-Lambert syndrome (autoimmune disease characterized by muscle weakness due to antibodies against voltage-gated calcium channels) and syndrome of inappropriate antidiuretic hormone.
 - ❖ Small cell carcinoma is also the most common cause of venocaval obstruction syndrome.
 - ✓ Large cell carcinoma:
 - ❖ Peripheral.
 - ❖ Associated with cavitation.
- Clinical presentation:
 - **Cough (in 74% of patients).**
 - **Weight loss.**
 - **Dyspnea (58% of patients).**
 - **Hemoptysis.**
- Diagnosis:
 - Bronchoscopy is the best choice for centrally located lesions.
 - If there is a high degree of suspicion for carcinoma and the bronchoscopy results are non-specific, a biopsy must be requested.
- Treatment:
 - **Symptoms which suggest that lesion is unresectable are:**
 - ✓ Weight loss > 10%.
 - ✓ Bone pain or other extrathoracic metastases.
 - ✓ Superior Vena Cava Syndrome.
 - ✓ Hoarseness.
 - ✓ Tumor involving the trachea, esophagus, pericardium or chest wall.

- Small cell carcinoma are treated with chemotherapy (etoposide + platinum). Notice that prognosis is poorest for small cell carcinoma.

- Radiology:

