SURGICAL TREATMENT OF LUNG CANCER

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DISCLOSURE

I have no disclosures related to this presentation.

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OBJECTIVES

- Understand steps for workup and diagnosis of lung cancer, including biopsy options
- Review TNM staging criteria, specifically for surgical candidates
- Discuss surgical candidacy and resection indicated for the treatment of lung cancer
- Review common postoperative concerns, both inpatient and outpatient
- NCCN guidelines for surveillance imaging

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PRESENTATION OF LUNG CANCER

- Lung cancer is the leading cause of cancer-related mortality in the United States.
- Many early-stage lung cancers are found incidentally on CT imaging Important to increase awareness/access for annual lung cancer screening
  - Criteria:
    - Age 50-80yo
    - 20 pack year smoking history
    - Current smoker or quit within the past 15 years
- Concerning features on imaging:
  - Larger size (>3cm)
  - Irregular or “spiculated” border
  - Ground glass opacity vs solid component
  - Involvement of mediastinal lymph nodes

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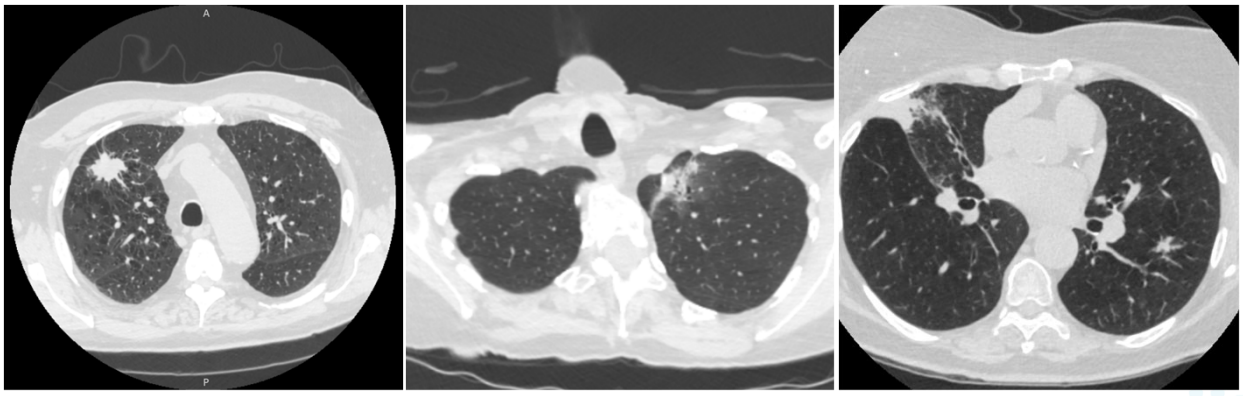

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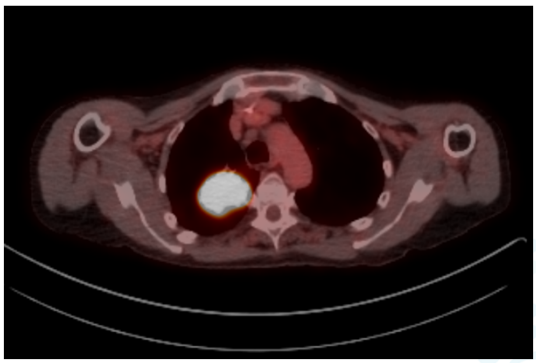
WORK UP STEPS

- CT scan of the chest (with or without contrast)
- PET/CT scan
- Pulmonary Function Tests (PFT's)
- Additional staging may require Brain MRI



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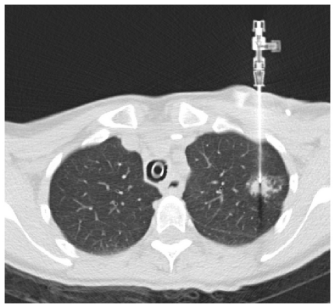
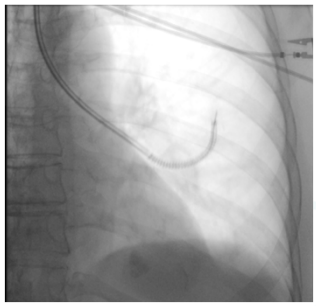
BIOPSY OPTIONS OF THE LUNG

- CT-guided needle biopsy
- Robotic Bronchoscopy with biopsy
- Excisional Biopsy (via wedge resection)
- Lymph Node Sampling: Endobronchial Ultrasound (EBUS) with biopsy





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TNM STAGING FOR SURGICAL CANDIDATES

NSCLC is the most common type of lung cancer found for surgical candidates
- →Adenocarcinoma, Squamous Cell Carcinoma
- →Typically, less aggressive/slow growing and more likely to be found at earlier stage

TNM: **T**umor, Lymph **N**odes, **M**etastasis

Stage IA/IB: prefer surgical resection vs consideration SBRT

Stage II +/- N1 disease: consider surgical resection with additional chemotherapy

Stage IIIA: consider combination of medical treatment, radiation and/or surgical resection

Stage IV: not surgical candidates

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SURGICAL CANDIDACY AND RESECTION

- Surgical Candidacy Criteria:
  - Clinical Cancer Staging
  - Pulmonary Function Tests
  - Activity status
  - Comorbidities
- Resection Options:
  - Minimally Invasive via VATS (Video Assisted Thoracoscopic Surgery)
  - Robotic Assisted VATS
  - Traditional Open Thoracotomy

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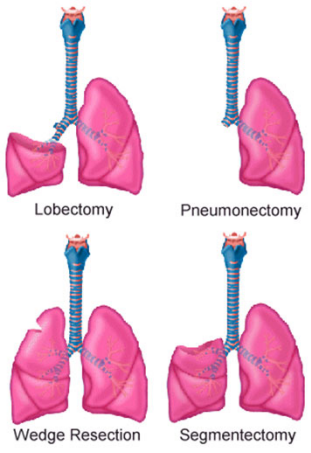
SURGICAL RESECTION

- How much lung do we have to remove?
  - Wedge Resection
  - Segmentectomy
  - Lobectomy
  - Pneumonectomy



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INPATIENT POSTOPERATIVE CARES

- Chest tube in place temporarily
- Weaning supplemental oxygen
- Pain control
  - Intercostal nerve blocks
  - OnQ pain catheter for thoracotomy patients
- Activity status
- Typical Hospital stay: 1-5 days
  - Can be longer if they have a persistent postop airleak from staple line
  - Generally, wedge resections go home on POD# 1

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FOLLOW UP

- Postoperative Visit 7-10 days from discharge
  - Repeat chest x-ray
  - Remove chest tube site stitches
  - Incision check
  - Common concerns: nerve pain, SOB with activity
- Surveillance for Stage IA
  - CT chest with IV contrast every 6 months for 2 years
  - Then CT chest without contrast annually
- Stage IB and above →refer to Medical Oncology

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CASE STUDY #1

68-year old female

Former smoker, quit in 1983

Recently identified with renal mass concerning for renal cell carcinoma

Staging CT identified a suspicious LUL nodule

PET/CT showed hypermetabolic uptake

Pulmonary function tests were excellent

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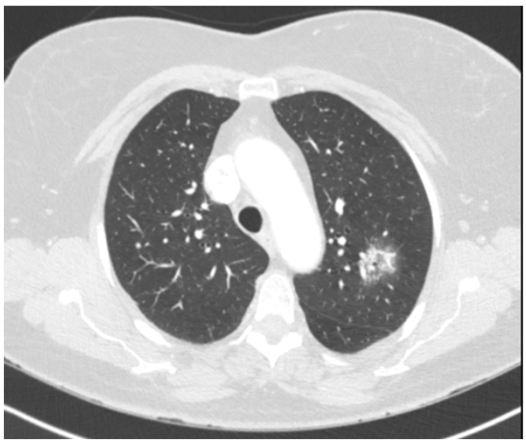
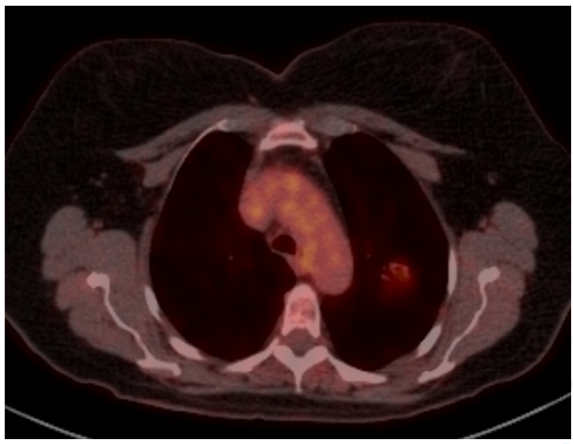
CASE STUDY #1





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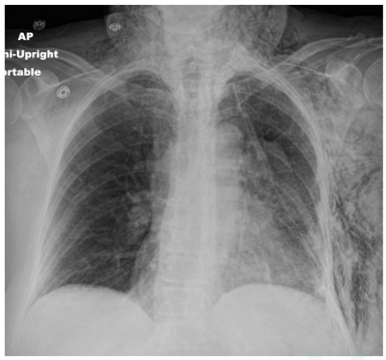
CASE STUDY #1

Underwent single anesthesia event:

- Robotic bronchoscopy with biopsy → positive for malignancy
- Proceeded with robotic assisted left VATS, lingula-sparing left upper lobectomy
- Small airleak postop, discharged home POD # 3
- Final pathology: 3.3cm invasive adenocarcinoma
  pT2a N0 M0 → Stage IB

  Referred to medical oncology to discuss the potential for further treatment in combination with treatment needed for her RCC



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