Lung Case # 2
Presentation of New Case

• Newly diagnosed lung cancer patient

• Presentation at Cancer Conference for treatment recommendations and clinical staging
Lung Case # 2
History & Physical

• 69 yr old female who presented with abnormal routine CXR, no symptoms

• 25 pack year smoking history
Lung Case # 2
Imaging Results

- Chest x-ray- 5cm right upper lobe (RUL) lung mass
- CT chest- 4.5x5.3cm mass RUL lung, right paratracheal node, no hilar nodes
- PET/CT- RUL lung mass, right paratracheal & right hilar lymphadenopathy
- Bone scan-neg

Lung Case # 2
Diagnostic Procedure

• Procedures
  – CT guided biopsy RUL lung
  – Mediastinoscopy with biopsy right paratracheal nodes

• Pathology Reports
  – Poorly differentiated adenocarcinoma, bx RUL lung
  – Met adenocarcinoma, 2 right paratracheal nodes
Lung Case # 2
Clinical Staging

• **Clinical staging**
  – Uses information from physical exam, imaging, and diagnostic biopsy

• **Purpose**
  – Select appropriate treatment
  – Estimate prognosis
Lung Case # 2
Clinical Staging

• Synopsis: patient with 5.3cm adenoca lesion RUL lung, also clinically positive and biopsy proven mediastinal nodes

• What is the clinical stage?
  – T____
  – N____
  – M____
  – Stage Group_______
Lung Case # 2
Clinical Staging

- Clinical Stage correct answer
  - cT3
  - cN2
  - cM0
  - Stage Group IIIB

- Based on stage, treatment is selected

- Review NCCN treatment guidelines for this stage
Lung Case # 2
Clinical Staging

• Rationale for staging choices
  – cT3 for ca >5cm but ≤7cm
  
  – cN2 because ipsilateral mediastinal nodes were clinically positive on imaging, and diagnostic biopsy confirms clinical category of N2
  
  – cM0 because there were no signs or symptoms to suggest distant metastases; if there were, appropriate tests would be performed before developing a treatment plan
Prognostic Factors/Registry Data Collection

• Applicable to this case
  – Separate tumor nodules: none
  – Visceral and parietal pleural invasion: none
Lung Case # 2
Initial Treatment

• Presentation at Cancer Conference for initial treatment recommendations
  – Treatment chosen based on single lesion and clinically positive nodes in the patient, Stage IIIB, is neoadjuvant chemotherapy & radiation therapy
NCCN Guidelines Version 4.2018
Non-Small Cell Lung Cancer
NCCN Evidence Blocks™

CLINICAL ASSESSMENT

PRETREATMENT EVALUATION

<table>
<thead>
<tr>
<th>N2, N3 nodes negative</th>
<th>See Treatment T1-3, N0-1 (NSCL-8)</th>
</tr>
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<tbody>
<tr>
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<td>See Treatment for Metastasis limited sites (NSCL-13) or distant disease (NSCL-16)</td>
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Stage III A (T1-2, N2)
Stage III B (T3, N2)

Separate pulmonary nodule(s) (Stage II B, III A, IV)

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Separate pulmonary nodule(s), same lobe (T3, N0-1) or ipsilateral non-primary lobe (T4, N0-1)

Stage IVA (N0, M1a); Contralateral lung (solitary nodule)

Extrathoracic metastatic disease

NSCL-7

Methods for evaluation include mediastinoscopy, mediastinotomy, EBUS, EUS, and CT-guided biopsy.

PET/CT performed with based on positive PET/CT scan findings for distant disease need pathologic or other radiologic confirmation. If PET/CT scan is positive in the mediastinum, lymph node status needs pathologic confirmation.

Note: For more information regarding the categories and definitions used for the NCCN Evidence Blocks™, see page EBL.
All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.
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MEDIASTINAL BIOPSY FINDINGS

- T1-3, N0-1 (including T3 with multiple nodules in same lobe)
  - Resectable
  - Medically inoperable
  - Surgical resection + mediastinal lymph node dissection or systemic lymph node sampling
  - See Treatment according to clinical stage (NSCL-2)

- T1-2, T3 (other than invasive), N2 nodes positive, M0
  - Definitive concurrent chemoradiation (category 1)
  - Or
  - Induction chemotherapy + RT

- T3 (invasion), N2 nodes positive, M0
  - Definitive concurrent chemoradiation

INITIAL TREATMENT

- Surgical resection

ADJUVANT TREATMENT

- See Adjuvant Treatment (NSCL-3)

- Durvalumab

SURVEILLANCE

- Surveillance (NSCL-10)

- Surgery + chemotherapy (category 2B) ± RT (if not given)

- RT (if not given) + chemotherapy

- See Treatment for Metastasis
  - Limited sites (NSCL-13) or distant disease (NSCL-16)

- Surveillance (NSCL-15)

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Lung Case # 2
Response To Therapy – Posttherapy staging

- **Posttherapy y-clinical staging (yc)**
  - Evaluation by imaging tests after neoadjuvant Rx showed no progression

- Patient underwent surgical resection

- Presentation at Cancer Conference for adjuvant treatment recommendations and pathologic staging
Lung Case # 2
Surgery & Findings

• **Surgery**
  – RUL lung resection
  – Hilar and mediastinal node resection

• **Operative findings**
  – No additional information
Lung Case # 2
Pathology Results

- Adenocarcinoma, RUL lung
- Tumor size - 3.8cm
- Grade 3
- Tumor largely necrotic and inflammatory, consistent with chemo radiation effect
- No pleural involvement by ca
- Margins negative
- 3 hilar and 3 mediastinal nodes negative
Posttherapy y-pathological staging (yp)

- Uses information from posttherapy y-clinical staging (yc), operative findings, and posttherapy resected specimen pathology report.

Purpose

- Response to therapy
- Additional precise data for estimating prognosis
- Calculating end results (survival data)
Lung Case # 2
Posttherapy Staging

• Synopsis: patient with residual 3.8cm tumor and negative nodes after chemo & radiation therapy followed by surgery

• What is the posttherapy y-pathologic stage?
  – T____
  – N____
  – M____
  – Stage Group______
• Posttherapy yp-pathologic Stage correct answer
  – ypT2a
  – ypN0
  – cM0
  – Stage Group IB

• Based on posttherapy yp-pathologic stage, there is more information to estimate prognosis and adjuvant treatment recommendations
Lung Case # 2
Posttherapy Staging

- **Rationale for staging choices**
  - ypT2a for ca >3cm but ≤4cm
  - ypN0 because hilar and mediastinal nodes were negative
  - cM0 – classified by M status prior to therapy

- **Posttherapy y prefix used to show stage during or following neoadjuvant therapy**
Prognostic Factors/Registry Data Collection

• Applicable to this case

  – Separate tumor nodules: none
  
  – Visceral and parietal pleural invasion: PL0
T3 defined as tumor >5cm but ≤7cm or directly invading any of following: parietal pleura (PL3), chest wall, phrenic nerve, parietal pericardium, or separate tumor nodule(s) in same lobe as primary.
Lung Case # 2
Recap of Staging

• Summary of correct answers
  – Clinical stage  cT3 cN2 cM0 Stage Group IIIB
  – Posttherapy (yp) stage  ypT2a ypN0 cM0 Stage Group IB

• The staging classifications have a different purpose and therefore can be different. Do not go back and change the clinical staging based on posttherapy staging information.
Staging Moments Summary

• Review site-specific information if needed

• Clinical Staging
  – Based on information before treatment
  – Used to select treatment options

• Posttherapy y-pathologic Staging
  – Based on information from posttherapy y-clinical staging (yc), operative findings, and posttherapy resected specimen pathology report
  – Assesses response to treatment
  – Used to evaluate end-results (survival)