AJCC Staging Moments

AJCC TNM Staging 8th Edition

Lung Case #2

AJCC

American Joint Committee on Cancer

Validating science. Improving patient care.

- Newly diagnosed lung cancer patient

- Presentation at Cancer Conference for treatment recommendations and clinical staging

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

- 25 pack year smoking history

- 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
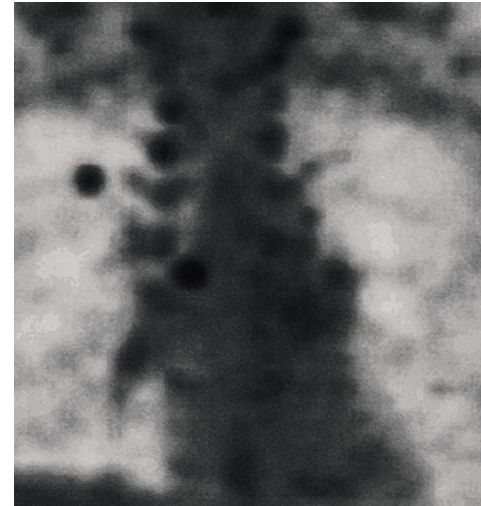
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Diagnostic Procedure

- **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

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

- **Purpose**
  - Select appropriate treatment
  - Estimate prognosis

- 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_____

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

- **Based on stage, treatment is selected**

- **Review NCCN treatment guidelines for this stage**

- **Rationale for staging choices**
  - cT3 for ca >5cm but $\leq$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

- **Applicable to this case**

  – Separate tumor nodules: none

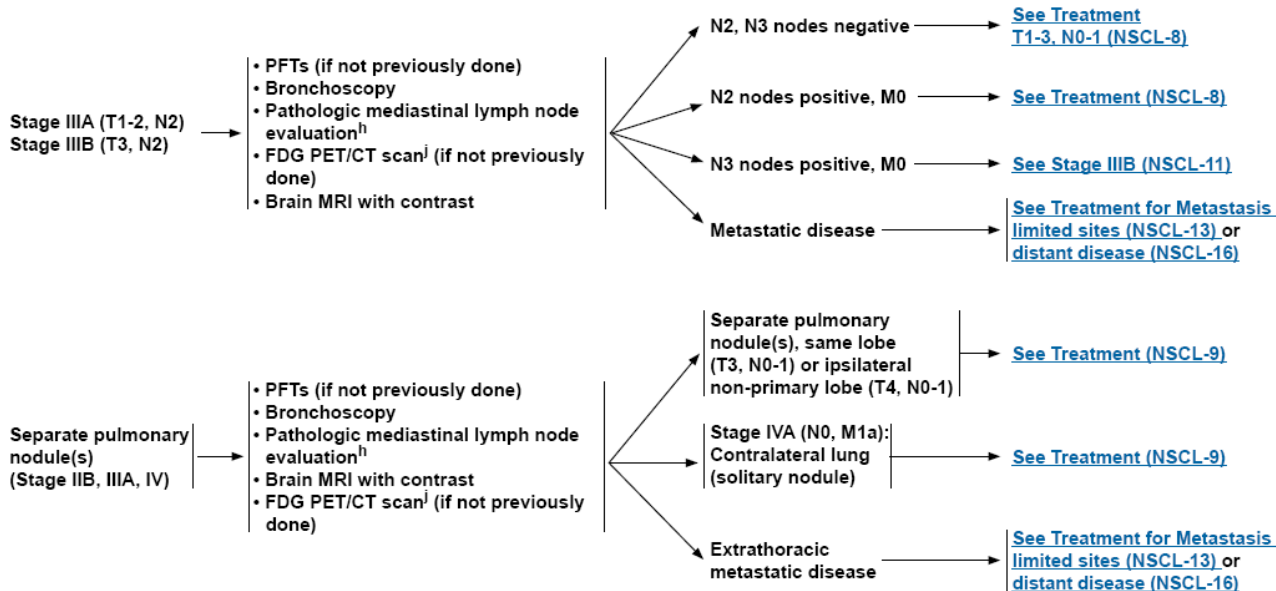 – Visceral and parietal pleural invasion: none

- **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™

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CLINICAL ASSESSMENT

PRETREATMENT EVALUATION

MEDIASTINAL BIOPSY FINDINGS AND RESECTABILITY

Stage IIIA (T1-2, N2)
Stage IIIB (T3, N2)

→

- PFTs (if not previously done)
- Bronchoscopy
- Pathologic mediastinal lymph node evaluation[h]
- FDG PET/CT scan[j] (if not previously done)
- Brain MRI with contrast

N2, N3 nodes negative → See Treatment T1-3, N0-1 (NSCL-8)

N2 nodes positive, M0 → See Treatment (NSCL-8)

N3 nodes positive, M0 → See Stage IIIB (NSCL-11)

Metastatic disease → See Treatment for Metastasis limited sites (NSCL-13) or distant disease (NSCL-16)

Separate pulmonary nodule(s)
(Stage IIB, IIIA, IV)

→

- PFTs (if not previously done)
- Bronchoscopy
- Pathologic mediastinal lymph node evaluation[h]
- Brain MRI with contrast
- FDG PET/CT scan[j] (if not previously done)

Separate pulmonary nodule(s), same lobe (T3, N0-1) or ipsilateral non-primary lobe (T4, N0-1) → See Treatment (NSCL-9)

Stage IVA (N0, M1a): Contralateral lung (solitary nodule) → See Treatment (NSCL-9)

Extrathoracic metastatic disease → See Treatment for Metastasis limited sites (NSCL-13) or distant disease (NSCL-16)

[h]Methods for evaluation include mediastinoscopy, mediastinotomy, EBUS, EUS, and CT-guided biopsy.
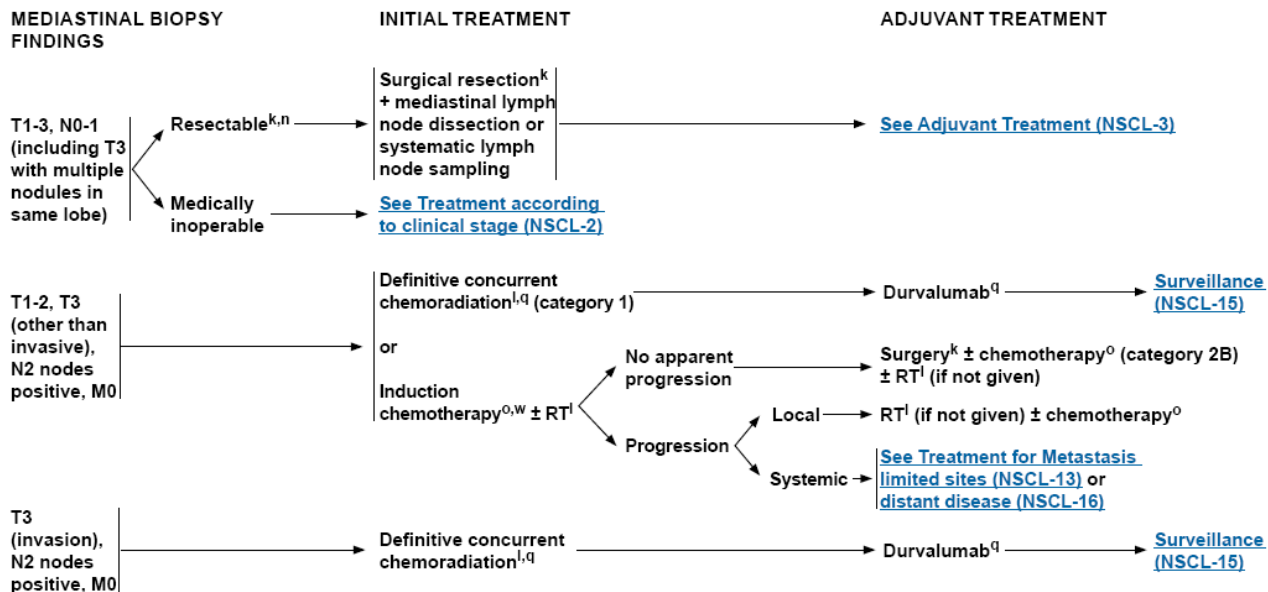[j]PET/CT performed skull base to knees or whole body. Positive PET/CT scan findings for distant disease need pathologic or other radiologic confirmation. If PET/CT scan is positive in the mediastinum, lymph node status needs pathologic confirmation.

Note: For more information regarding the categories and definitions used for the NCCN Evidence Blocks™, see page EB-1.
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.

NSCL-7

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MEDIASTINAL BIOPSY FINDINGS	INITIAL TREATMENT	ADJUVANT TREATMENT

T1-3, N0-1 (including T3 with multiple nodules in same lobe)

Resectable[k,n] → Surgical resection[k] + mediastinal lymph node dissection or systematic lymph node sampling → See Adjuvant Treatment (NSCL-3)

Medically inoperable → See Treatment according to clinical stage (NSCL-2)

T1-2, T3 (other than invasive), N2 nodes positive, M0

Definitive concurrent chemoradiation[l,q] (category 1) → Durvalumab[q] → Surveillance (NSCL-15)

or

Induction chemotherapy[o,w] ± RT[l]

- No apparent progression → Surgery[k] ± chemotherapy[o] (category 2B) ± RT[l] (if not given)
- Progression
  - Local → RT[l] (if not given) ± chemotherapy[o]
  - Systemic → See Treatment for Metastasis limited sites (NSCL-13) or distant disease (NSCL-16)

T3 (invasion), N2 nodes positive, M0

Definitive concurrent chemoradiation[l,q] → Durvalumab[q] → Surveillance (NSCL-15)

[k] See Principles of Surgical Therapy (NSCL-B).
[l] See Principles of Radiation Therapy (NSCL-C).
[n] After surgical evaluation, patients likely to receive adjuvant chemotherapy may be treated with induction chemotherapy as an alternative.
[o] See Chemotherapy Regimens for Neoadjuvant and Adjuvant Therapy (NSCL-D).
[q] See Chemotherapy Regimens Used with Radiation Therapy (NSCL-E).
[w] Chest CT with contrast and/or PET/CT to evaluate progression.

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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

- 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)

- 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 y-pathologic Stage correct answer**
  - ypT2a
  - ypN0
  - cM0
  - Stage Group IB

- **Based on posttherapy y-pathologic stage, there is more information to estimate prognosis and adjuvant treatment recommendations**

- **Rationale for staging choices**
  - ypT2a for ca >3cm but $\leq$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**
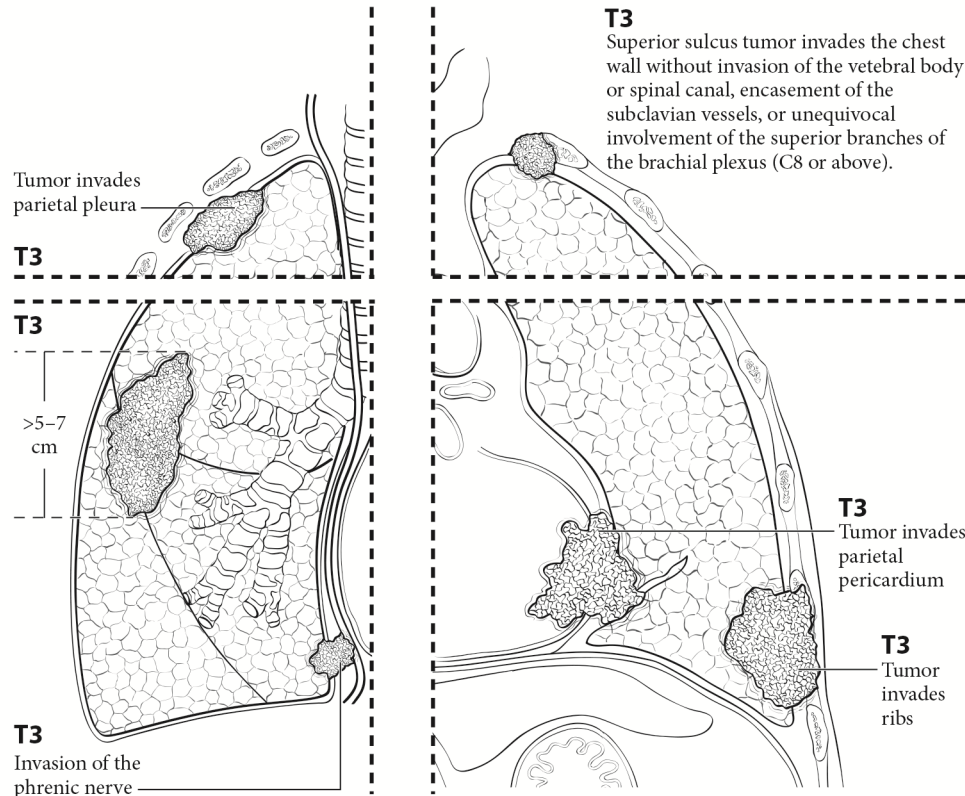
- **Applicable to this case**

  – Separate tumor nodules: none

  – Visceral and parietal pleural invasion: PL0

T3 defined as tumor >5cm but $\leq$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

Rami-Porta, Asamura, Travis, and Rusch. Lung. In Amin, M.B., Edge, S.B., Greene, F.L., et al. (Eds.) AJCC Cancer Staging Manual. 8th Ed., 2017

- **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)