

Collecting Cancer Data: Lung

NAACCR 2011-2012 Webinar Series
2/2/2012



Q&A

- Please submit all questions concerning webinar content through the Q&A panel.

Reminder:

- If you have participants watching this webinar at your site, please collect their names and emails.
 - We will be distributing a Q&A document in about one week. This document will fully answer questions asked during the webinar and will contain any corrections that we may discover after the webinar.

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Fabulous Prizes



Agenda

- Coding Moment
 - CS Mets at DX—Metastatic Sites
- Overview
 - Anatomy
 - MP/H
 - Treatment
 - Quiz 1
- Collaborative Stage Data Collection System
 - Quiz 2
- Review of Case Scenarios



CS Mets at DX – Metastatic Sites

CODING MOMENT



CS Mets at DX – Metastatic Sites

- Four CS Mets at DX – Metastatic Sites Data Items
 - Identify whether or not primary has metastasized to a specific site
 - Provides information on specific metastatic sites for data analysis



CS Mets at DX – Metastatic Sites

- Code 0
 - No distant metastasis at all
 - CS Mets at DX = 00
 - No distant metastasis to the specific site
- Code 1
 - Distant metastasis to the specific site
- Code 8
 - Not applicable for the site
- Code 9
 - Cannot be determined from the record if patient has metastasis to the specific site
 - CS Mets at DX = 99



CS Mets at DX - Bone

- Patient complained of left leg pain. Bone scan showed metastasis to left femur and sacrum. CT scan showed large left lung mass invading left pleura. Biopsy positive for squamous cell carcinoma; primary lung cancer.
- What is the code for CS Mets at DX – Bone?
 - 0: None; no bone metastasis
 - 1: Yes
 - 8: Not applicable
 - 9: unknown



CS Mets at DX - Brain

- Intracranial swelling confined to cerebral meninges. Biopsy of cerebral meninges positive for adenocarcinoma. Large left lung upper lobe mass, malignant, per CT of chest. Final diagnosis is lung cancer.
- What is the code for CS Mets at DX – Brain?
 - 0: None; no brain metastasis
 - 1: Yes
 - 8: Not applicable
 - 9: unknown



CS Mets at DX - Liver

- Biopsy of left lower lung lobe confirms adenocarcinoma. CT scan of abdomen shows abdominal carcinomatosis.
- What is the code for CS Mets at DX – Liver?
 - 0: None; no liver metastasis
 - 1: Yes
 - 8: Not applicable
 - 9: unknown



CS Mets at DX - Lung

- CT scan of chest: 3 cm left upper lung lobe mass and 2 cm left lower lobe mass, both malignant and confined to left lung. No masses in right lung. This is a single primary.
- What is the code for CS Mets at DX – Lung?
 - 0: None; no lung metastasis
 - 1: Yes
 - 8: Not applicable
 - 9: unknown



LUNG



The Numbers

- Estimated new cases and deaths from lung cancer (non-small cell and small cell combined) in the United States in 2012:

- New cases: 226,160
- Deaths: 160,340

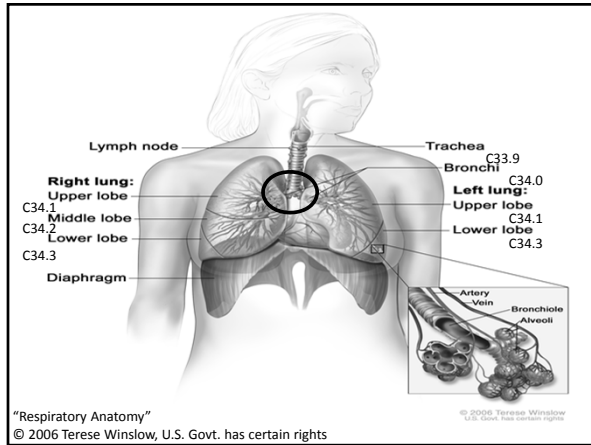
American Cancer Society

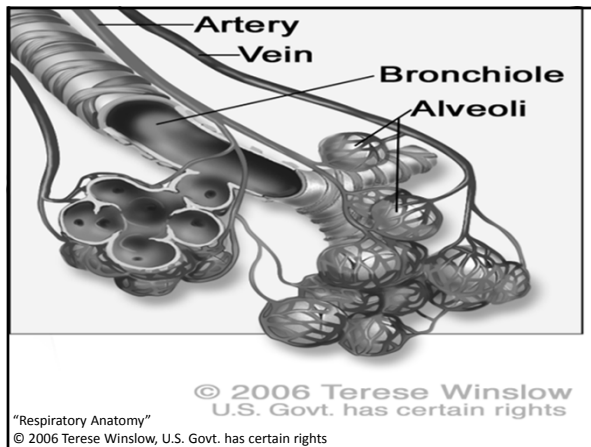
- Estimated new cases and deaths in Canada 2011:

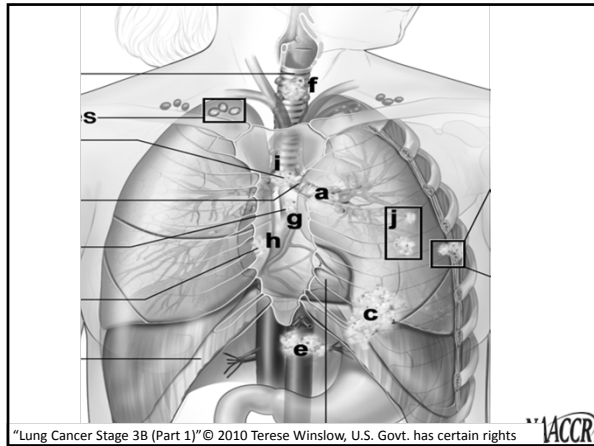
- New cases: 25,300
- Deaths: 20,600

Canadian Cancer Society

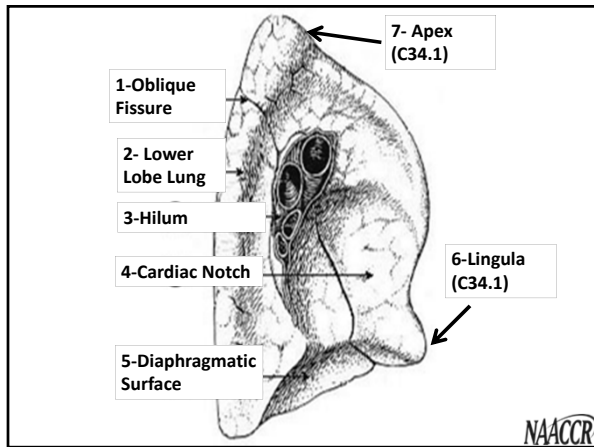


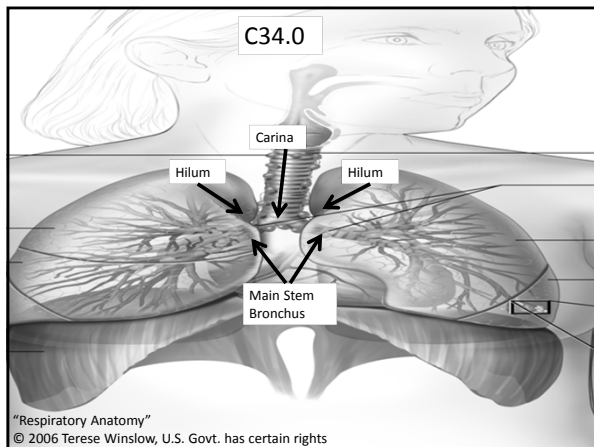






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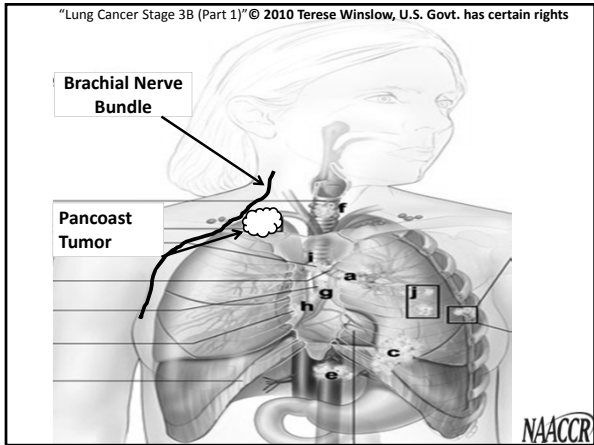


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Pancoast Tumor

- Form in the extreme apex of the lung in the superior sulcus
- Tend to involve the chest wall structures rather than the underlying lung tissue
- Pancoast syndrome is characterized by pain in the shoulder and along the inner side of the arm or hand





Question

- If the term "Pancoast tumor, NOS" is considered malignant by definition, should the date of diagnosis be coded to the date of the clinical diagnosis when the clinical diagnosis is made prior to the histologic confirmation of the malignancy?



Answer

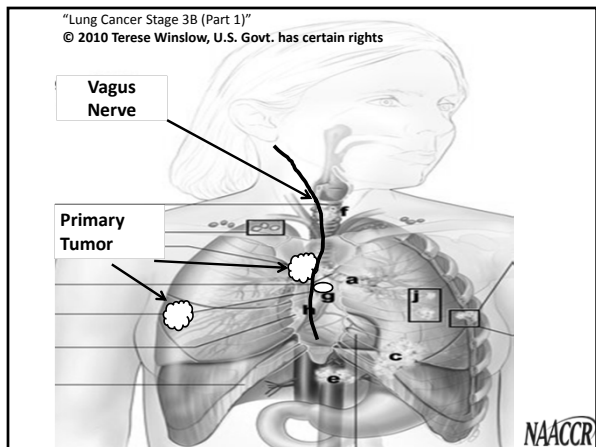
- Yes, Pancoast tumor is by definition malignant. It is defined as a lung cancer in the uppermost segment of the lung that directly invades into the brachial plexus (nerve bundles) of the neck, causing pain.
 - If a Pancoast tumor was identified on imaging prior to the biopsy, the date of diagnosis should be linked to the Pancoast tumor report.

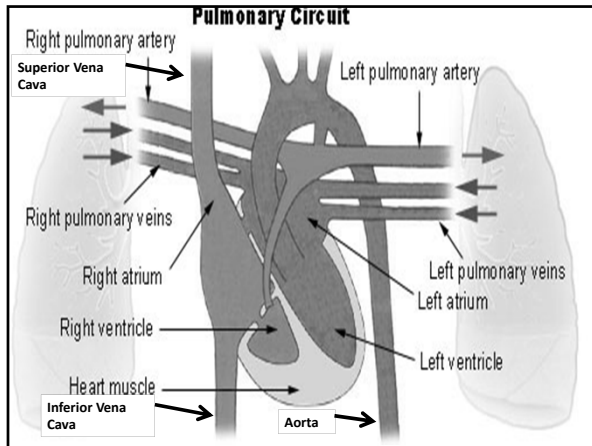


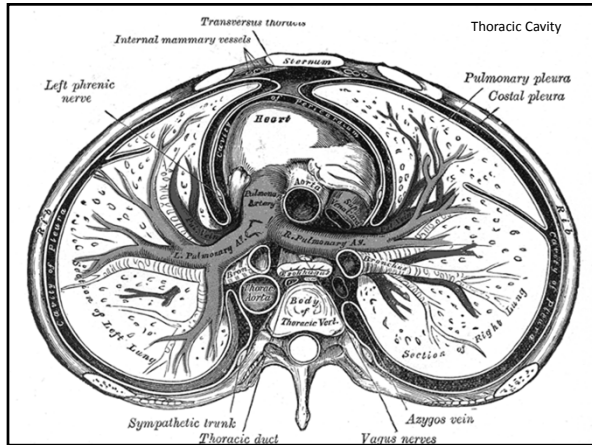
Vocal Cord Paralysis or Superior Vena Cava Syndrome

- Vocal cord paralysis
 - May be caused by involvement of the recurrent branch of the vagus nerve
- Superior vena cava obstruction or compression of the trachea or esophagus
 - May be caused by direct extension from the primary tumor









Atelectasis

- The collapse of part or (much less commonly) all of a lung
- Caused by a blockage of the air passages (bronchus or bronchioles) or by pressure on the outside of the lung.

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Obstructive Pneumonitis

- Combination of atelectasis, bronchiectasis with mucous plugging, and parenchymal inflammation that develops distal to an obstructing endobronchial lesion.

Trachea
Bronchi
Left lung:
Upper lobe
Lower lobe

Artery
Vein
Bronchiole
Alveolus

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Pleural Effusion

- Caused by excess fluid accumulation between the two layers of the pleura
- Consider malignant unless multiple cytopathologic examinations of pleural and/or pericardial fluid are negative for tumor, and the fluid is non-bloody and is not an exudates

Effusion
Left

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Direct Extension from Lung to the Pleura

- Layer of the pleura
 - Lung parenchyma
 - Connective tissue
 - Elastic fibers
 - Submesothelial tissue (PL1)
 - Mesothelial cells on basement membrane (PL2)
 - Pleural space
 - Parietal pleura (PL3)

Chest wall
Rib
Lung
Lung lining
Visceral Pleura
Chest wall lining
Parietal Pleura

"Lung Cancer Stage 3B (Part 1)"
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Pleural Tumor Foci or Nodules

- Pleural tumor foci or nodule separate from direct invasion

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Question

- How is the term "pleural based mass" interpreted in CS Extension?

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Answer

- When you have a description of "pleural based mass", this is stating that the mass is confined to the lung.
 - A "pleura based mass" does not mean involvement of the pleura (do not code SSF2, Visceral Pleural Invasion, as positive based on this description).
 - If the pleural based mass has a histology that is common to the lung, the code would be lung.
 - For example, pleural based mass with a histology of adenocarcinoma.
 - The only exception to this would be if your histology is Mesothelioma (9050-9053). In that case, your primary site code would be for Pleura, C38.4.

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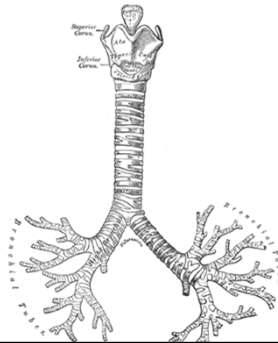
Pop Quiz

- Patient has a single pleural based mass located in the right lung. A biopsy confirms this is adenocarcinoma.
 - What is the primary site?
- Patient has a right upper lobe primary tumor with multiple pleural based nodules at the right lung base suspicious for metastasis.
 - Where are these pleural based nodules located?



Regional Lymph Nodes

- Hilar lymph nodes
 - Present around the main stem bronchi
- Lobar
 - Located around a lobar bronchus
- Interlobar
 - Located between the lobes of the lung
- Segmental
 - Located along a segmental bronchus
- Sub segmental
 - Located along the sub segmental bronchus and/or the peripheral bronchus.



Regional Lymph Nodes

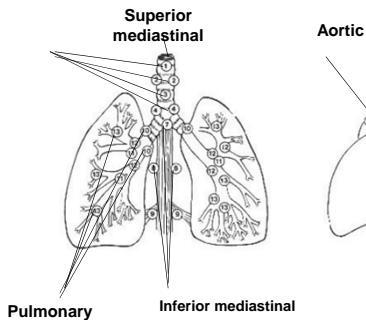
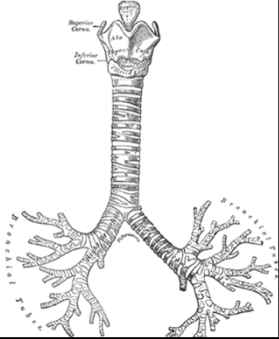


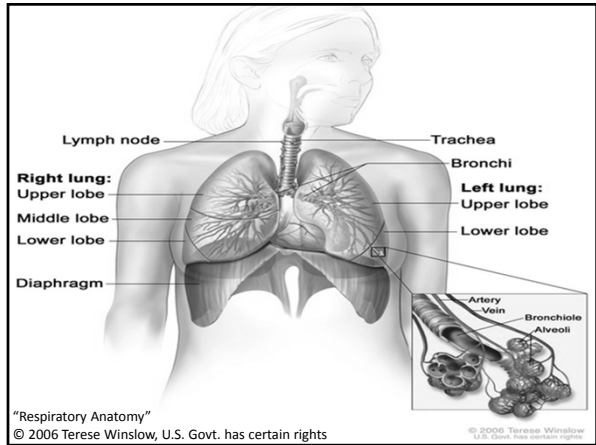
Image Source: SEER Training Website



Regional Lymph Nodes

- Aortic
- Carinal
- Mediastinal
- Peri/paratracheal
- Scalene
- Supraclavicular






Labels: Lymph node, Trachea, Bronchi, Right lung: Upper lobe, Middle lobe, Lower lobe, Diaphragm, Left lung: Upper lobe, Lower lobe, Artery, Vein, Bronchiole, Alveoli

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Question

- What would I assign as the topography code in the following situation?
 - Chest CT shows "1.6 cm RUL suspicious mass and too numerous to count nodules throughout both lungs."
Core biopsy of mass in the RUL compatible with adenocarcinoma.



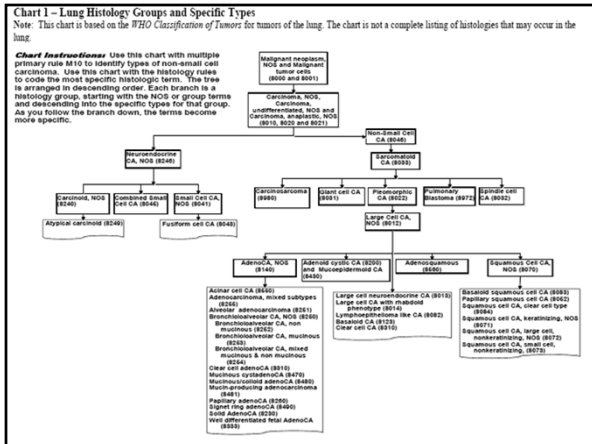
Answer

- For lung primaries with one large mass and numerous nodules, code the primary site to the subsite where the large mass is located.
 - Primary site is C34.1



MPH Rules





Histologies

- Squamous cell carcinoma
 - More common among men than women
 - Strongly associated with smoking
 - Often arises in the larger bronchi
 - Often TTF-1 negative
- Adenocarcinoma
 - Most common histologic subtype in US and Canada
 - Often arises in the terminal bronchioles
 - Mixtures of adenocarcinoma histologic subtypes are more common than tumors consisting purely of a single pattern of acinar, papillary, bronchioloalveolar, and solid adenocarcinoma with mucin formation.
 - Usually TTF-1 positive



Histologies

- Large cell carcinoma
 - May be undifferentiated squamous cell or adenocarcinomas
 - Large cell neuroendocrine carcinoma
 - High grade non-small cell carcinoma.
 - Very poor prognosis similar to small cell carcinoma
- Small cell carcinoma
 - Account for about 15% of bronchogenic carcinomas
 - Aggressive disease
 - More responsive to chemotherapy and radiation than non small cell carcinomas



Multiple Primary Rules

Unknown if single or multiple tumors

- Rule M1
 - When it is not possible to determine if there is a single tumor or multiple tumors, opt for a single tumor and abstract as a single primary.

Single Tumor

- Rule M2
 - A single tumor is always a single primary.



Multiple Tumors

- Rule M3
 - Tumors in sites with ICD-O-3 topography codes that are different at the second (Cxxx) and/or third character (Cxxx) are multiple primaries.
- Rule M4
 - At least one tumor that is non-small cell carcinoma (8046) and another tumor that is small cell carcinoma (8041-8045) are multiple primaries.



Multiple Tumors

- Rule M5
 - A tumor that is adenocarcinoma with mixed subtypes (8255) and another that is bronchioloalveolar (8250-8254) are multiple primaries
- Rule M6
 - A single tumor in each lung is multiple primaries
- Rule M7
 - Multiple tumors in both lungs with ICD-O-3 histology codes that are different at the first (xxxx), second (xxxx) or third (xxxx) number are multiple primaries



Multiple Tumors

- Rule M8
 - Tumors diagnosed more than three (3) years apart are multiple primaries
- Rule M9
 - An invasive tumor following an in situ tumor more than 60 days after diagnosis is a multiple primary
- Rule
 - M10 Tumors with non-small cell carcinoma, NOS (8046) and a more specific non-small cell carcinoma type (Chart 1) are a single primary



Multiple Tumors

- Rule M11
 - Tumors with ICD-O-3 histology codes that are different at the first (xxxx), second (xxxx) or third (xxxx) number are multiple primaries
- Rule M12
 - Tumors that do not meet any of the above criteria are a single primary



Single Tumor Histology Rules

- Rule H1
 - Code the histology documented by the physician when there is no pathology/cytology specimen or the pathology/cytology report is not available
- Rule H2
 - Code the histology from a metastatic site when there is no pathology/cytology specimen from the primary site
- Rule H3
 - Code the histology when only one histologic type is identified



Single Tumor Histology Rules

- Rule H4
 - Code the invasive histologic type when a single tumor has invasive and in situ components
- Rule H5
 - Code the most specific term using Chart 1 when there are multiple histologies within the same branch
- Rule H6
 - Code the appropriate combination/mixed code (Table 1) when there are multiple specific histologies or when there is a non-specific with multiple specific histologies
- Rule H7
 - Code the histology with the numerically higher ICD-O-3 code



Multiple Tumor-Histology Rules

- Rule H8
 - Code the histology documented by the physician when there is no pathology/cytology specimen or the pathology/cytology report is not available
- Rule H9
 - Code the histology from a metastatic site when there is no pathology/cytology specimen from the primary site.
- Rule H10
 - Code the histology when only one histologic type is identified



Multiple Tumor-Histology Rules

- Rule H11
 - Code the histology of the most invasive tumor
- Rule H12
 - Code the most specific term using Chart 1 when there are multiple histologies within the same branch
- Rule H13
 - Code the histology with the numerically higher ICD-O-3 code



Lung Cancer Work-up

- Imaging studies
 - Chest x-ray
 - CT scan or MRI of lung
 - CT scan or MRI
 - Bone
 - Brain
 - Liver/spleen
 - Esophagus
 - PET or PET/CT scans



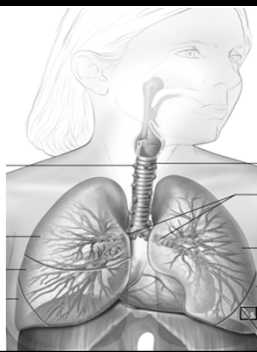
Lung Cancer Work-up

- Endoscopy
 - Bronchoscopy
 - Thoroscopy
 - Mediastinoscopy
 - Laryngoscopy
 - Esophagoscopy
- Endoscopic ultrasound
 - EUS-FNA
 - EBUS



Treatment NSCLC

- Surgery
 - Wedge resection (21)
 - Segmental resection (22)
 - Sleeve Lobectomy
 - Lobectomy (30)
 - Pneumonectomy (50)



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Radiation

- Stereotactic Ablative Radiation (SABR)
 - AKA Stereotactic Body Radiation (SBRT)
 - Code 41
- IMRT
 - Code 31
- 3D Conformal
 - Code 32
- 6-10 MV photons
 - Code 24

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Chemotherapy

- Cisplatin and
- Vinorelbine or
- Etoposide or
- Gemcitabine or
- Docetaxel

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Treatment-Non Small Cell Carcinoma

- Stage I, Stage IIA, and Stage IIB (T1-2, N1) Disease
 - Surgery
 - Observation
 - Chemotherapy
 - Radiation

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Treatment-Non Small Cell Carcinoma

- Stage IIB (T3, N0), Stage IIIA, and Stage IIIB Disease
 - Neoadjuvant chemo/radiation
 - Resection
 - Chemotherapy
 - Concurrent chemoradiation
 - Radiation

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Treatment-Non Small Cell Carcinoma

- Stage IV
 - Chemotherapy
 - Radiation

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Treatment-Small Cell Carcinoma

- Surgery (early stage disease only)
- Chemotherapy
- Radiation

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Questions?

QUIZ 1

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Lung

**COLLABORATIVE STAGE DATA
COLLECTION SYSTEM**

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CS Tumor Size: Lung

- Do not code size of hilar mass unless it is the primary lung tumor
- Site-specific special codes
 - 996: Malignant cells present in bronchopulmonary secretions, but no tumor seen radiographically or during bronchoscopy; "occult" carcinoma
 - 997: Diffuse (entire lobe)
 - 998: Diffuse (entire lung or NOS)

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CS Extension: Lung

- Tumor involves main stem bronchus
 - Code 200: 2 cm or more from carina OR distance from carina unknown and patient had lobectomy, segmental resection, or wedge resection
 - Code 210: Distance from carina not stated and no lobectomy, segmental resection, or wedge resection
 - Code 500: Less than 2.0 cm from carina

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CS Extension: Lung

- Bronchopneumonia is NOT obstructive pneumonitis
 - Code 400: Atelectasis/obstructive pneumonitis extends to hilar region but does not involve entire lung OR NOS
 - Code 550: Atelectasis/obstructive pneumonitis involving entire lung



CS Extension: Lung

- Visceral pleural invasion
 - 410: Extension to but not into pleura, including invasion of elastic layer BUT not through the elastic layer
 - 420: Invasion of pleura, including invasion through the elastic layer
 - 430: Invasion of pleura, NOS
 - Additional information collected in SSF2
- Parietal pleural invasion
 - Code 600



CS Extension: Lung

- Vocal cord paralysis
 - Code 700 UNLESS the tumor is peripheral and unrelated to vocal cord paralysis
 - Then code in CS Lymph Nodes
- Involvement of the pulmonary artery or vein
 - Code 700 UNLESS involvement is only in the lung, not mediastinum



CS Extension: Lung

- Do not code separate lung tumor nodules in CS Extension
 - Code presence or absence of separate nodules in ipsilateral lung in SSF1
 - Code presence of separate metastatic nodules in contralateral lung in CS Mets at DX
- Do not code the presence of pleural or pericardial effusion in CS Extension
 - Code in CS Mets at DX



CS Extension: Lung

- Multiple CS data items used to map stage for lung
 - CS Extension codes 000-440, 455-520, 540-600, 730, and 950-999
 - AJCC 7th Ed. T category based on the values of CS Tumor Size, CS Extension, and CS SSF1
 - CS Extension codes 000, 950, 980 and 999
 - Summary Stage 77 based on the values of CS Extension and Site Specific Factor # 1
 - CS Extension codes 000-700, 740, 950-999
 - Summary Stage 2000 based on the values of CS Extension and Site Specific Factor #1



Pop Quiz

- Left upper lung lobectomy: 4 cm and 1 cm tumors in left upper lobe; both adenocarcinoma with no extension. Per MP/H rules this is a single primary
- What is the code for CS Tumor Size?
 - 010
 - 040
 - 050
 - 999
- What is the code for CS Extension?
 - 100: Tumor confined to 1 lung
 - 300: Localized NOS
 - 455: Stated as T2a
 - 570: Stated as T3



CS Lymph Nodes: Lung

- Description of 'mass', 'adenopathy', or 'enlargement' of lymph nodes listed in codes 100 or 200
 - Code as involvement in CS Lymph Nodes
- Documentation of 'no evidence of spread' or 'remaining examination negative'
 - Code as no involvement in CS Lymph Nodes



CS Lymph Nodes: Lung

- Vocal cord paralysis
 - Code 200 if primary tumor is peripheral and clearly unrelated to vocal cord paralysis, SVC obstruction, or compression of the trachea or the esophagus
 - Otherwise code in CS Extension



Pop Quiz

- CT scan of chest: Right upper lobe tumor, probably malignant, 4 cm. Right and left hilar lymphadenopathy and right mediastinal lymphadenopathy.
- What is the code for CS Lymph Nodes?
 - 100: Ipsilateral hilar nodes
 - 200: Ipsilateral mediastinal nodes
 - 600: Contralateral/bilateral hilar nodes; contralateral/bilateral mediastinal nodes
 - 999: Unknown



CS Mets at DX: Lung

- Consider pleural or pericardial effusion as malignant UNLESS
 - Multiple cytopathologic exams of effusion are negative
 - It is documented that effusion is not related to tumor
- Code ipsilateral or contralateral malignant pleural effusion in CS Mets at DX
 - Codes 15-18
- Code malignant pericardial effusion in CS Mets at DX
 - Code 20



CS Mets at DX

- Separate metastatic nodules in contralateral lung
 - Code 23
- Direct extension to skeletal muscle, sternum, or skin of chest
 - Code 37



Pop Quiz

- 4 cm right upper lobe lung mass, probably malignant; right and left pleural effusion per CT of chest. Liver metastasis per abdominal CT.
- What is the code for CS Mets at DX?
 - 15: Ipsilateral malignant pleural effusion
 - 16: Contralateral malignant pleural effusion
 - 17: Ipsilateral & contralateral malignant pleural effusion
 - 40: Abdominal organs; distant metastasis except distant lymph nodes
 - 42: Distant metastasis plus pleural or pericardial effusion



SSF1: Separate Tumor Nodules – Ipsilateral Lung

Code	Description
000	No separate tumor nodules noted
010	Separate tumor nodules in ipsilateral lung, same lobe
020	Separate tumor nodules in ipsilateral lung, different lobe
030	Separate tumor nodules, ipsilateral lung, same and different lobe
040	Separate tumor nodules, ipsilateral lung, unknown if same or different lobe
888	OBSOLETE
988	Not applicable
999	Unknown



Question

- What is ground glass opacity? Does its presence on a CT scan with a measured malignant lesion of the lung indicate separate tumor nodules?



Answer

- Ground glass opacity
 - Refers to the presence of increased hazy opacity within the lungs that is not associated with obscured underlying vessels
 - Can represent active disease such as pulmonary edema, pneumonia, or diffuse alveolar damage
- Do not count as other malignant nodules unless specified as such by the physician



Pop Quiz

- Patient is diagnosed with synchronous left lung tumors. Left upper lobe tumor contains bronchioloalveolar carcinoma; left lower lobe tumor contains squamous cell carcinoma. Using the MP/H rules, these are separate primaries.
 - What is the code for SSF1 for the bronchioloalveolar carcinoma?
 - 000: No separate tumor nodules
 - 020: Separate tumor nodules in ipsilateral lung, different lobe
 - 030: Separate tumor nodules, ipsilateral lung, same and different lobe
 - 999: Unknown



SSF2:

Visceral Pleural Invasion (PL)/Elastic Layer

Code	Description
000	PL0: No evidence of visceral pleural invasion; Tumor does not completely traverse the elastic layer
010	PL1: Invasion beyond visceral pleura, but limited to pulmonary pleura; Tumor extends through elastic layer
020	PL2: Invasion to surface of pulmonary pleura; Tumor extends to surface of visceral pleura
030	PL3: Tumor extends to parietal pleura
040	Invasion of pleura, NOS
888	OBSOLETE
988	Not applicable
998	No histologic examination of pleura
999	Unknown




Pop Quiz

- CT scan of chest: 4 cm tumor of right upper lung with direct invasion of the visceral pleura and mediastinal lymphadenopathy. Lung biopsy: poorly differentiated small cell carcinoma. Patient deemed inoperable.
- What is the code for SSF2?
 - 020: PL 2 - Tumor extends to surface of visceral pleura
 - 040: Invasion of pleura NOS
 - 998: No histologic examination of pleura
 - 999: Unknown




Standard Setters SSF Requirements
CS v02.03: Lung

- SSF1: Separate Tumor Nodules - Ipsilateral Lung
 - Required: CoC, NPCR, SEER, Canadian Council of Cancer Registries
- SSF2: Visceral Pleural Invasion (PL)/Elastic Layer
 - Required: CoC, SEER
 - Collect if in pathology report: Canadian Council of Cancer Registries
 - Not required: NPCR



Questions?


QUIZ 2



Coming up!

- **3/1/12**
 - Abstracting and Coding Boot Camp: Cancer Case Scenarios
- **4/5/12**
 - Collecting Cancer Data: Lower Digestive System

And the winners of the fabulous prizes are....



Thank You!

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