


# Directly Coded Summary Stage Lung Cancer



# Directly Coded Summary Staging is Back

- ❑ **Summary Staging (known also as SEER Staging) bases staging of solid tumors solely on how far a cancer has spread from its point of origin.**
- ❑ **It is an efficient tool to categorize how far the cancer has spread from the original site as the staging categories are broad enough to measure the success of cancer control and other epidemiologic efforts**
- ❑ **Summary Stage uses all information available in the medical record as it is a combination of clinical and pathologic information on the extent of disease**
- ❑ **Information within four (4) months of diagnosis**



**To begin the staging process,  
abstractors should always review:**

**History and Physical Exam**

**Radiology Reports**

**Operative Reports**

**Pathology Reports**

**Medical Consults**

**Pertinent Correspondence**



## **Determining how the Lung Tumor Should be Staged requires the Registrar to:**

- ❑ Read the Physical Exam and Work Up documents.**
- ❑ Read operative and pathology reports.**
- ❑ Review imaging reports for documentation of any spread.**
- ❑ Become familiar with the anatomy of the lung and the regional and distant lymph node chains with the lung.**
- ❑ Refer to the online manuals regularly and periodically check the site for update and/or changes.**

# Assigning the Correct Summary Stage Code

## Nine possible codes for Summary Stage

- 0 = In-Situ
- 1 = Local
- 2 = Regional disease by direct extension only
- 3 = Regional disease with only regional lymph nodes involved
- 4 = Regional disease by both direct extension and regional lymph node(s)
- 5 = Regional disease that is not otherwise specified
- 7 = Distant sites or distant lymph node involvement
- 8 = benign and borderline CNS tumors
- 9 = Unknown if there is extension or metastatic disease (unstaged, death certificate only cases)

## Important for Registrars to Know

Available in the *SEER Summary Staging Manual 2000* are 2 lists of Ambiguous Terminology with terms that clarify whether or not a finding is part of the malignant process.

These lists instruct the registrar to either:

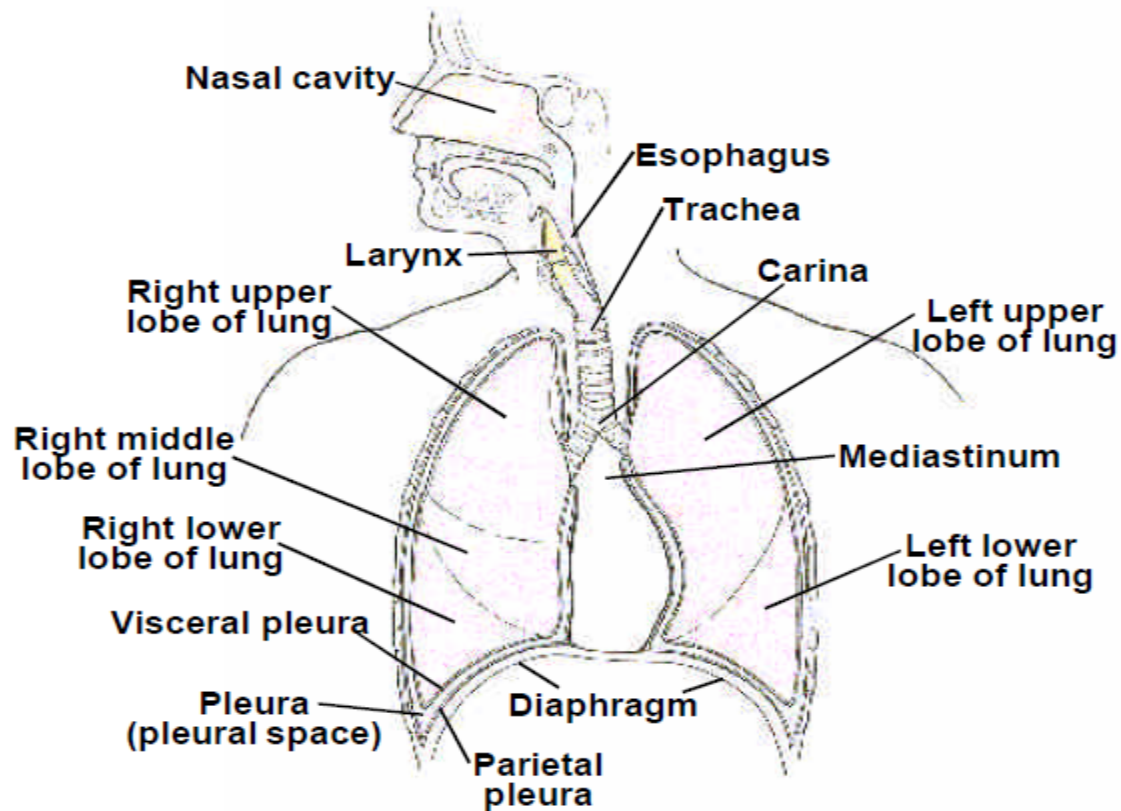
\* Consider as Involvement

OR

\* Do Not Consider as Involvement

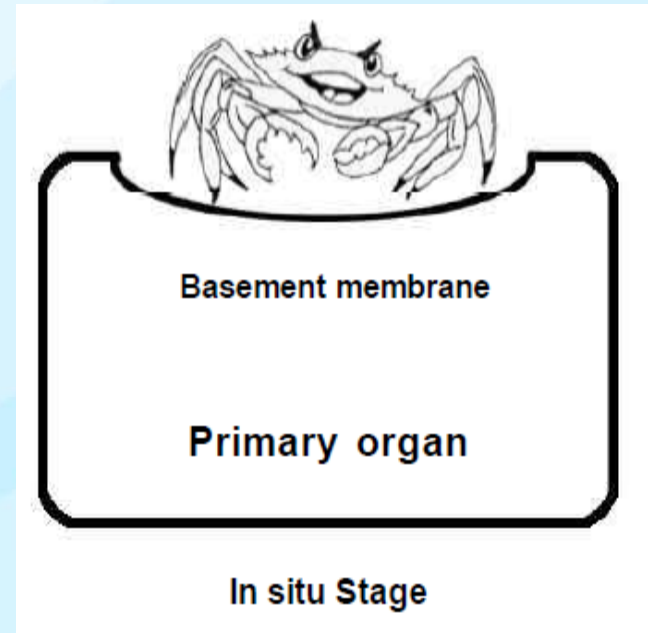
# Know the Anatomy of the Lung

## ANATOMIC DRAWINGS OF THE TRACHEA, LUNGS AND BRONCHI



## What does In-Situ Mean?

- ❑ **In-Situ is defined as malignancy without invasion.**
  - Only occurs with epithelial or mucosal tissue
  - **Must be microscopically diagnosed** to visualize the basement membrane.
- ❑ **In-Situ of the lung may also be referred to as non-invasive, pre-invasive, or intraepithelial.**
- ❑ **If pathology states the tumor is in-situ with microinvasion it is no longer staged as in-situ but is considered to be at least a localized disease.**







# **In-Situ Equivalent Terms**

**Behavior Code of 2**

**Non-infiltrating**

**Noninvasive**

**Pre-invasive**

**Stage 0**

**Intraepithelial**

**In-Situ Cancer is coded as Summary Stage 0.**

**Review of the *SEER Summary Staging Manual 2000* will help to clarify the definitions and terms for specific malignancies.**

# Staging In-situ Lung Cancers Requires Knowledge of a Specific Exception

In-situ is a non-invasive malignancy and is coded as '0'

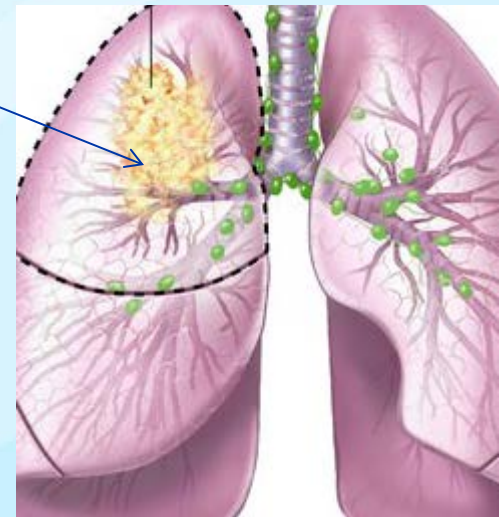
## UNLESS

- ❑ Primary Tumor was documented in the pathology report as having only an in-situ behavior but there is an additional statement confirming malignancy has spread and is present in regional node(s) or in a distant site.
- ❑ Should that occur, the in-situ stage is not valid and the stage must be documented to reflect regional or distant disease.

# What Does Localized Mean?

## Single tumor confined to one lung.

- ❑ Confined to the:
  - Carina
  - Hilus of the lung
  - Main stem bronchus
- ❑ Extension from other parts of the lung to:
  - Main stem bronchus  $\geq 2$  cm from Carina##
  - Main stem bronchus, NOS##
- ❑ Localized, NOS



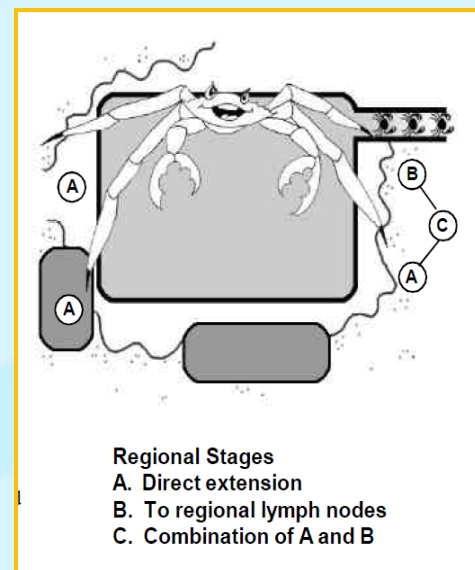
**Localized Disease is coded as Summary Stage 1.**

**## Considered regional in historical stage**

# What Does Regional Disease Mean?

Regional Disease indicates that the tumor has gone beyond the organ of origin but is not considered distant.

- **Regional by direct extension (code 2)**  
Tumor has invaded surrounding organ(s) or adjacent tissues. May also be referred to as direct extension or contiguous spread.
- **Regional to lymph nodes (code 3)**  
Tumor cells may have traveled through the lymphatic system to regional lymph nodes where they remain and begin to “grow.”
- **Regional by direct extension and lymph nodes (code 4)**  
Extension into adjacent structures or organs and lymph node involvement are both present.
- **Regional (as stated by the physician but the site[s] of regional spread is/are not clearly documented) (code 5)**



## Staging of Regional Disease

- ❑ Review records for documentation confirming that tumor is more than localized.
  
- ❑ Review all pertinent reports looking for specific regional disease references and exclusions of distant spread.
  - Terms to watch for are seeding, implants and nodules – scrutinize diagnostic reports for regional disease spreading references to eliminate that spread is not distant.

**Caution: A diagnosis of cancer with lymph node metastases means some nodes have involvement by tumor – always confirm that the lymph nodes are regional.**

# Regional by Direct Extension

- ❑ Atelectasis/obstructive pneumonitis
- ❑ Extension to:
  - Blood Vessels
    - Aorta\*
    - Azygos vein
    - Pulmonary artery or vein
    - Superior vena cava (SVC Syndrome)
  - Brachial plexus from superior sulcus\*#
  - Carina from lung
  - Chest (thoracic wall)\*
  - Diaphragm\*
  - Esophagus
  - Main stem bronchus <2 cm from the Carina

\*Considered distant in SS 1977

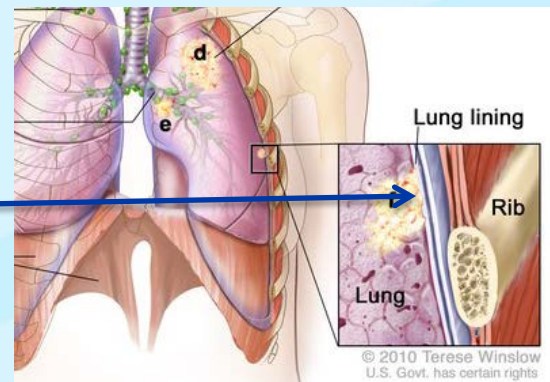
#Considered distant in Historical Stage

If any of these tissues are involved  
Code as Stage 2  
provided NO lymph nodes are involved

**Regional by direct extension only is coded as Summary Stage 2.**

# Regional by Direct Extension, Cont'd

- Mediastinum, Extrapulmonary or NOS
- Nerves
  - Cervical sympathetic (Horner's syndrome)
  - Phrenic
  - Recurrent laryngeal (vocal cord paralysis)
  - Vagus
- Pancoast Tumor (Superior sulcus syndrome)\*#
- Parietal (medistinal) Pleura\*
- Parietal pericardium#
- Pericardium, NOS
- Pleura, NOS
- Pulmonary Ligament
- Trachea
- Visceral pleura



\*Considered distant in SS 1977

#Considered distant in Historical Stage

**Regional by direct extension only is coded as Summary Stage 2.**

## Regional by Direct Extension, cont'd

- Multiple masses or separate tumor nodule(s) in the SAME lobe\*#
- Multiple masses or separate tumor nodule or nodules in the main stem bronchus
- Tumor of the main stem bronchus < 2 cm from the carina\*

\*Considered localized in SS 1977

#Considered localized in Historic Stage

**Regional by direct extension only is coded as Summary Stage 2.**



# Regional Nodes for a Lung Primary

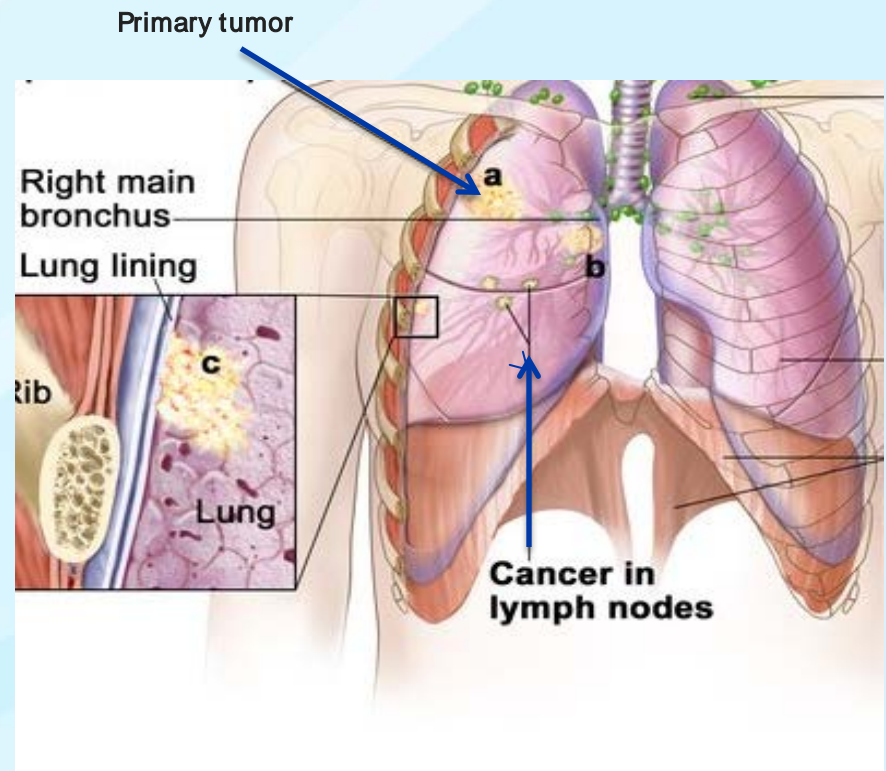
Regional **IPSILATERAL** lymph nodes for lung include:

- Aortic (above the diaphragm)
  - Peri/para-aortic
  - Ascending aorta (phrenic)
  - Subaortic (aortico-pulmonary window)
- Bronchial
- Carinal (tracheobronchial, tracheal bifurcation)
- Hilar (bronchopulmonary, proximal lobar, pulmonary root)
- Intrapulmonary
  - Interlobar
  - Lobar
  - Segmental
  - Subsegmental
- Mediastinal
  - Anterior
  - Posterior (tracheoesophageal)
- Pericardial

**Regional to Lymph Nodes only is coded as Summary Stage 3.**

# Regional Nodes for a Lung Primary cont'd

- ❑ Peri/parabronchial
- ❑ Peri/paraesophageal
- ❑ Peri/paratracheal
  - Azygos (lower Peritracheal)
- ❑ Pre- and retrotracheal
  - Precarinal
- ❑ Pulmonary ligament
- ❑ Subcarinal
- ❑ Regional Lymph Nodes (NOS)



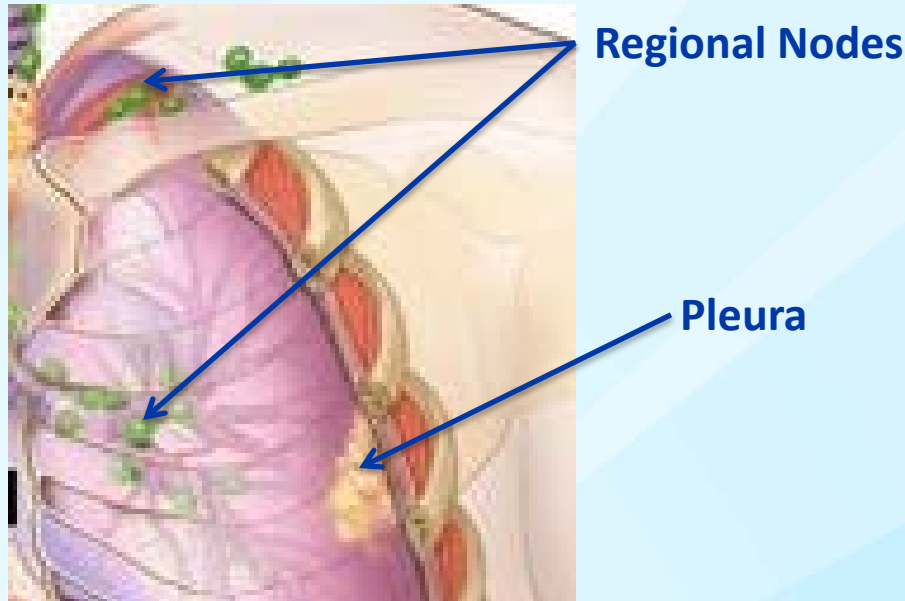
Regional to Lymph Nodes only is coded as Summary Stage 3.

# SEER Summary Stage Manual 2000 Errata and Clarifications

- ❑ On August 20, 2002, Errata and Clarifications to the SEER Summary Staging Manual 2000.
  - <http://www.seer.cancer.gov/tools/ssm/>
  
- ❑ See item # 22, Page 151:

Replace note 5 with: *If at mediastinoscopy/x-ray, the description is “mass,” “adenopathy,” or “enlargement” of the mediastinum or of any of the lymph nodes listed under Regional Lymph Nodes (see page 151 of the SS Manual), assume that at least regional lymph nodes are involved.*

# Regional by both Direct Extension and Ipsilateral Regional Lymph Nodes



**Regional Direct and Ipsilateral Regional Lymph Node Involvement is coded as Summary Stage 4.**

**NOTE:** A medical record with only a physician statement of Regional Disease is coded as Summary Stage 5.

## **Regional, NOS**

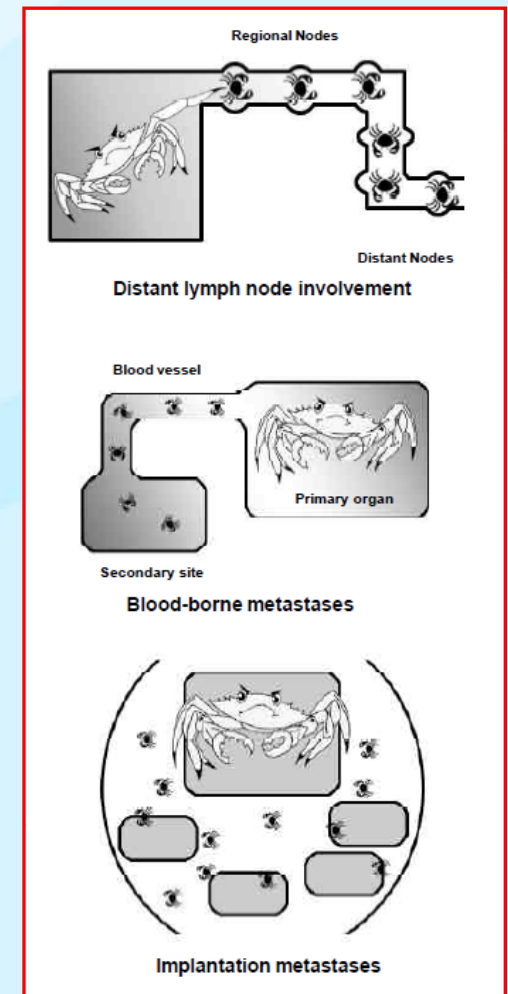
- \* It is unclear if the tissues involved are regional direct or lymph nodes.**
- \* Physician statement says Regional with no additional documentation in the medical record.**

**Regional Disease with no further information is coded as Regional, NOS - Summary Stage 5.**

# What is Distant Stage (code 7)?

Distant Stage indicates that the tumor has spread to areas beyond the regional sites.

- ❑ These sites may be called:
  - Remote
  - Metastatic
  - Diffuse
  
- ❑ Distant lymph nodes are those that are not included in the drainage area of the primary tumor.
  
- ❑ Hematogenous metastases develop from tumor cells carried by the bloodstream and begin to grow beyond the local or regional areas.



# Distant Lymph Nodes

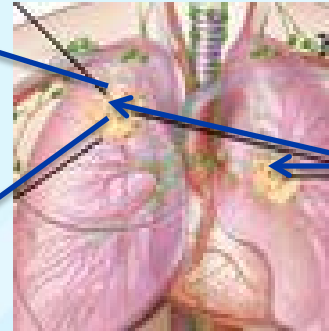
- ❑ **Cervical, NOS**
- ❑ **Contralateral/bilateral Hilar**
  - **Bronchopulmonary**
  - **Proximal lobar**
  - **Pulmonary Root**
- ❑ **Contralateral/bilateral Mediastinal**
- ❑ **Scalene (inferior deep cervical)**
  - **Ipsilateral**
  - **Contralateral**
- ❑ **Supraclavicular (Transverse Cervical)**
  - **Ipsilateral**
  - **Contralateral**
- ❑ **Other distant lymph nodes**

**Distant Metastatic Disease is coded as Summary Stage 7.**

# Extension to Distant Sites

Tumor may spread to other organs

Tumor may spread to distant nodes



Tumor in both lungs

## Distant metastatic lung cancer is often found in:

Abdominal organs

Adjacent rib\*

Contralateral main stem bronchus

Contralateral lung

Heart\*

Skeletal muscle

Skin of chest

Sternum

Vertebra(e)

Visceral pericardium\*

Pericardial effusion – either stated as malignant or NOS

Pleural effusion – either stated as malignant or NOS

\*Considered regional in Historic Stage

**Distant Metastatic Disease is coded as Summary Stage 7.**



## Pleural Effusions

- If pleural effusion is determined to be negative for tumor, ignore it in the staging process.
- If a resection was done, the registrar is to assume the pleural effusion was negative.
- However, a pleural effusion NOS has not ruled out involvement so it should be considered involved in the staging to distant sites.

## Extension to Distant Sites cont'd

- ❑ Further contiguous extension
- ❑ Separate tumor nodules in a different lobe#\*
- ❑ Separate tumor nodules in the contralateral lung
- ❑ Metastasis

\*Considered localized in SS 1977

#Considered localized in Historic Stage

**Distant Sites or Nodes are coded as Summary Stage 7**

# SEER Summary Staging Manual – Lung Site Specific Notes

- ❑ **Note 1: Bronchopneumonia is not the same as obstructive pneumonitis and should not be coded as such.**
  
- ❑ **Note 2: If a lobectomy, segmental resection or wedge resection is done it can be assumed the tumor is  $\geq 2$  cm from the carina.**
  
- ❑ **Note 3: If no mention is made of the opposite lung on a chest x-ray, assume it is not involved.**
  
- **Note 4: Ignore pleural effusion which is negative for tumor. Assume that a pleural effusion is negative if a resection done.**

## Site Specific Notes – cont'd

- ❑ **Note 5:** If at mediastinoscopy /x-ray the description is mediastinal mass/adenopathy or if any of the lymph nodes is named in Regional Lymph Nodes are mentioned, assume that mediastinal nodes are involved.
- ❑ **Note 6:** The words “no evidence of spread” and/or “remaining examination negative” are sufficient information to consider regional lymph nodes negative in the absence of any statement about nodes.
- ❑ **Note 7:** “Vocal cord paralysis,” “superior vena cava syndrome,” and “compression of the trachea or the esophagus” are classified as mediastinal lymph node involvement UNLESS there is a statement of involvement by direct extension from the primary tumor.

## Tips for the Abstractor

- ❑ **If review of the patient's records documents distant metastases, the Registrar can avoid reviewing records to identify local or regional disease.**
- ❑ **Documentation that contains a statement of invasion, nodal involvement or metastatic spread cannot be staged as in-situ even if the pathology of the primary tumor states it.**
- ❑ **If there are nodes involved, the stage must be at least regional.**
- ❑ **If there are nodes involved but the chain is not named in the pathology report, assume the nodes are regional.**
- ❑ **If the record does not contain enough information to assign a stage, it must be recorded as unstageable/unknown and coded as stage 9.**

## Remember to Read Carefully

- ❑ **Example: lung adenocarcinoma with pericardial node metastases.**
- ❑ **Don't be misled by the term metastases – It doesn't always mean distant disease. Pericardial nodes in this example are regional to the lung.**

## Exercise 1 – How would you stage this case?

- ❑ During routine physical the patient complained of increasing shortness of breath. She indicated it was becoming more difficult to catch her breath after any level of physical activity. She was noted by the physician to have rapid and shallow breathing. A chest X-ray was ordered which showed pleural effusion on the left.
- ❑ She was followed up with a CT of the chest which identified bilateral mediastinal adenopathy and a large pleural effusion on the left. In addition the CT showed probable liver mets. She underwent a thoracentesis with findings of malignant cells which were consistent with adenocarcinoma.
- ❑ The patient was admitted to hospice care.

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- ❑ The patient was admitted to hospice care.
- ❑ **Summary Stage 7 with Pleural effusion and liver metastases.**

(NOTE: Probable considered involvement based on the SS 2000 ambiguous terminology list)



## **Exercise 2 – How would you stage this case?**

- ❑ Patient complained of a cough that did not respond to over the counter cough suppressants and was sent for a chest X-ray which identified a 6mm mass in the right lower lobe.**
- ❑ CT of the chest showed a right suprahilar soft tissue mass which extended into the mediastinum. No nodal metastases noted.**
- ❑ A needle biopsy was done which diagnosed a non-keratinizing squamous cell carcinoma, moderately differentiated.**

## Exercise 2 – How would you stage this case?

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- ❑ A needle biopsy was done which diagnosed a non-keratinizing squamous cell carcinoma, moderately differentiated.
- ❑ Summary Stage 2 – Direct extension to the mediastinum.

## **Exercise 3 – How Would You Stage This Case?**

- ❑ Patient presented with complaints of weight loss and progressive wheezing. A chest X-ray resulted in findings of a 2 cm mass in the right middle lobe.**
- ❑ She was referred for bronchoscopy revealing an adenocarcinoma. Further examination noted an enlarged cervical lymph node which was excised and found to be consistent with metastatic adenocarcinoma from the lung.**
- ❑ The patient was treated with radiation therapy.**

## **Exercise 3 – How Would You Stage This Case?**

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- ❑ The patient was treated with radiation therapy.**
- ❑ Summary Stage 7 – Distant lymph node involvement.**

## Exercise 4 – How Would You Stage This Case?

Clinic Notes 01/15/2014.

- ❑ This 38 year old gentleman was referred for possible treatment with chemotherapy and/or radiation therapy by his primary care physician.
- ❑ He had presented with a continuing dry cough and was sent for a chest X-ray that returned findings of a right lung mass.
- ❑ His primary care physician then referred him to the Oncology Physician Group for treatment of his regional disease. After discussion, the patient decided to seek other treatment.

## Exercise 4 – How Would You Stage This Case?

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- ❑ His primary care physician then referred him to the Oncology Physician Group for treatment of his regional disease. After discussion, the patient decided to seek other treatment.
- ❑ Summary Stage 5 – Only clinic notes stating patient had regional disease.

**The CDC gratefully acknowledges Terese Winslow  
for granting permission to incorporate her  
illustrations into this presentation.**

# Excellent Resources for SEER Summary Staging

- ❑ SEER Summary Stage 2000, SEER Training modules:  
<http://training.seer.cancer.gov>
- ❑ SEER Coding Manuals – Historic – 1977.
- ❑ [http://training.seer.cancer.gov/modules\\_site\\_spec.html](http://training.seer.cancer.gov/modules_site_spec.html)
- ❑ <http://training.seer.cancer.gov/lung/>



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