



COLLABORATIVE STAGE
DATA COLLECTION SYSTEM

Lung

Education & Training Team
Collaborative Stage Data Collection System
Version 2.03

Learning Objectives

- Understand anatomy
- Understand rationale behind changes and updates
- Understand use of codes and reporting
- Determine proper code use for accurate reporting
- Understand finding specific documentation
 - SSFs
 - Coding rules

2



Outline

- Overview of prognostic factors
- Overview of lung anatomy
- Review Collaborative Stage data items for lung
- Describe changes to lung in CSv2

3



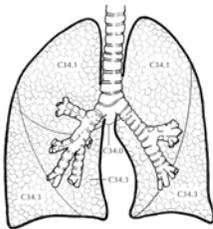
Lung Prognostic Factors

- Cell type
 - Small vs. non-small cell
 - Mucinous vs. non-mucinous
- Clinical stage
- Bilateral involvement at diagnosis
- Performance status

4



Lung Anatomy



- C34.0 Main bronchus
- C34.1 Upper lobe, lung
- C34.2 Middle lobe, lung
- C34.3 Lower lobe, lung
- C34.8 Overlapping lesion of lung
- C34.9 Lung, NOS

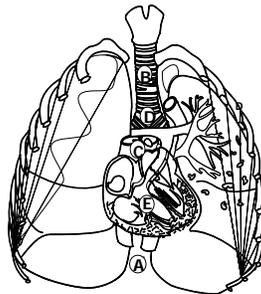
Credit line: Lung. In: Greene, F.L., Compton, C.C., Fritz, A.G., et al., editors. AJCC Cancer Staging Atlas. New York: Springer, 2008: 167-176. ©American Joint Committee on Cancer.

5



Lung Anatomy

- A = Mediastinum
- B = Trachea
- C = Great vessels
- D = Carina
- E = Heart or visceral pericardium

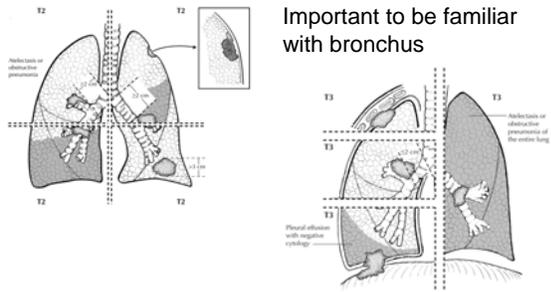


Used with permission: April Fritz, A.Fritz and Associates, LLC

6 Not shown = nerves and esophagus (behind trachea)



Lung Anatomy



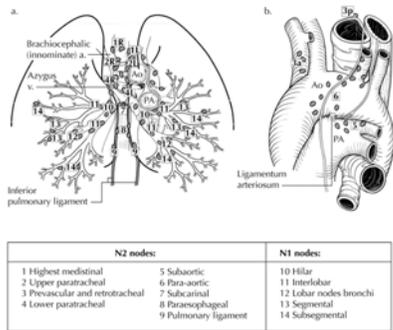
Important to be familiar with bronchus

Credit line: Lung. In: Greene, F.L., Compton, C.C., Fritz, A.G., et al., editors. AJCC Cancer Staging Atlas. New York: Springer, 2009: 167-176. ©American Joint Committee on Cancer.



7

Regional Lymph Nodes of Lungs and Mediastinum



Credit line: Lung. In: Greene, F.L., Compton, C.C., Fritz, A.G., et al., editors. AJCC Cancer Staging Atlas. New York: Springer, 2009: 167-176. ©American Joint Committee on Cancer.



8

What is New in CSv2 for Lung

- Used for carcinoid tumor
- CS Tumor Size – new descriptions
- CS Extension – new and obsolete codes
- CS Lymph Nodes – new descriptions
- CS Mets – new and obsolete codes



9

What is New in CSv2 for Lung

- CS Tumor Size/Ext Eval 1 now maps to 'c'
- Site-Specific Factor 1 – new data item
- Site-Specific Factor 2 – new data item
- Site-Specific Factors 3-25 – not applicable

10



CS Tumor Size

- Hilar mass
- Use of codes 997 and 998
- Use of codes 992 or 993

11



CS Tumor Size

- Site specific table due to special codes *
 - 000 = no mass/tumor found
 - 001-988 = exact size in mm
 - 989 = 989 mm or larger
 - 990 = microscopic focus or foci only
 - 991 = Described as < 1 cm
 - 992 = Described as < 2 cm, or > 1 cm, or between 1 cm and 2 cmStated as T1a, NOS with no other info

12



CS Tumor Size

- Site specific table due to special codes *
 - 993 = Described as < 3 cm, or > 2 cm, or between 2 cm and 3 cm
Stated as T1 NOS or T1b, NOS with no other info
 - 994 = Described as < 4 cm, or > 3 cm, or between 3 cm and 4 cm
 - 995 = Described as < 5 cm, or > 4 cm, or between 4 cm and 5 cm

13



CS Tumor Size

- Site specific table due to special codes *
 - *996 = Malignant cells present but no tumor seen radiographically / bronchoscopy - occult carcinoma (TX)
 - *997 = Diffuse (entire lobe)
 - *998 = Diffuse (entire lung or NOS)

14



CS Extension Notes

- Note 1: Direct extension may be M1 in AJCC
- Note 2: Distance from carina
- Note 3: Opposite lung

15



CS Extension Notes

- Note 4: Bronchopneumonia
- Note 5: Pulmonary artery/vein
- Note 6: Vocal cord paralysis
SVC obstruction
Compression of trachea or esophagus

16



CS Extension Notes

- Note 7: Pleural effusion and pericardial effusion
- Note 8: Determining T category
- Note 9: Separate tumor nodules in ipsilateral lung
- Note 10: Visceral pleural invasion

17



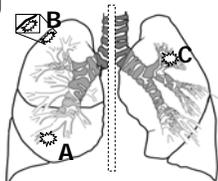
CS Extension

- Code 000 – In situ
- Code 100 – Confined to lung

A = Tumor surrounded by lung

B = Tumor surrounded by visceral pleura

C = No invasion more proximal than a lobar bronchus



Used with permission: April Fritz, A.Fritz and Associates, LLC

18



CS Extension

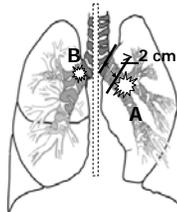
- Code 110 – Superficial tumor
- Code 115 – Stated as T1a
- Code 120 – Stated as T1b
- Code 125 – Stated as T1, NOS

19



CS Extension

- Code 200 – Involving main bronchus greater than 2cm from carina (A)
- Code 210 – Involving main bronchus NOS, distance unknown (B)



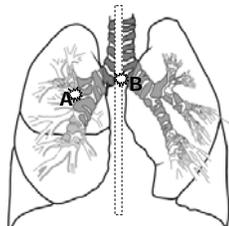
Used with permission: April Fritz, A.Fritz and Associates, LLC

20



CS Extension

- Code 230 – Confined to hilus (A)
- Code 250 – Confined to carina (B)
- Code 300 – Localized, NOS



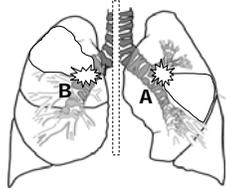
Used with permission: April Fritz, A.Fritz and Associates, LLC

21



CS Extension

- Code 400 – Partial atelectasis (A)
- Code 400 – Obstructive pneumonitis (B)



Used with permission: April Fritz, A.Fritz and Associates, LLC

22



CS Extension

- Code 410 – Extension to (not into) pleura
– Including into but not through elastic layer
- Code 420 – Invasion of pleura, including invasion through the elastic layer
- Code 430 – Invasion of pleura NOS
- Code 440 – Invasion of pulmonary ligament

23



CS Extension

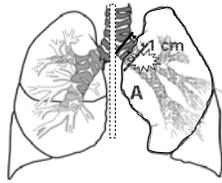
- Code 450 – Obsolete: Extension to
– Pleura, visceral or NOS
– Pulmonary ligament
- Code 455 – Stated as T2a
- Code 460 – Stated as T2b
- Code 465 – Stated as T2, NOS

24



CS Extension

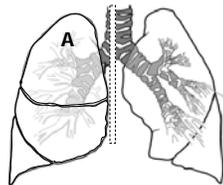
- Code 500 – Tumor in main bronchus less than 2cm from carina
- Code 520 – Combination code (A) [500+400]
- Code 530 – Obsolete
- Code 540 – Combination code



25

CS Extension

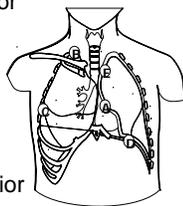
- Code 550 – Atelectasis or obstructive pneumonitis of entire lung (A)



26

CS Extension

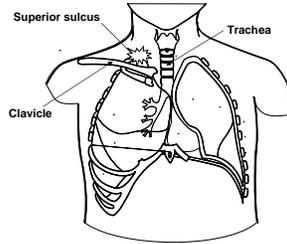
- Code 560 – Parietal pericardium or pericardium, NOS (A)
- Code 570 – Stated as T3, NOS
- Code 590 – Phrenic nerve
- Code 600 – Brachial plexus, inferior branch or NOS, from superior sulcus, chest wall (C), diaphragm (D), Pancoast tumor (B), or parietal pleura (E)



27

CS Extension

- Code 610 – Superior sulcus tumor
WITH encasement of subclavian vessels
OR
WITH unequivocal involvement of superior branches of brachial plexus (C8 or above – above clavicle)



Used with permission: April Fritz, A.Fritz and Associates, LLC



28

CS Extension

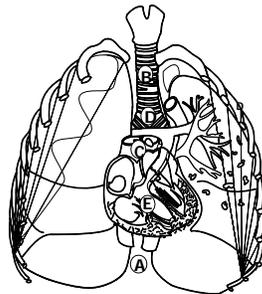
- Code 650 – Obsolete: Multiple tumor nodule in same lobe
- Code 700 – Extension into major extrapulmonary structures
 - Ignore if involvement of artery/vein only within lung tissue
- Code 710 – Heart or visceral pericardium



29

CS Extension

- Codes 700 and 710
- A = Mediastinum
- B = Trachea
- C = Great vessels
- D = Carina
- E = Heart or visceral pericardium



Used with permission: April Fritz, A.Fritz and Associates, LLC



30 Not shown = nerves and esophagus (behind trachea)

CS Extension

- Code 720 – Obsolete: Pleural effusion (moved to Mets at Dx)
- Code 730 – Adjacent rib
- Code 740 – Aorta
- Code 745 – Combination codes (740 + 710)

31



CS Extension

- Code 750 – Vertebra, neural foramina
- Code 760 – Obsolete: Pleural tumor foci
- Code 770 – Inferior vena cava
- Code 780 – Obsolete: Contiguous adjacent rib + other codes

32



CS Extension

- Code 785 – Obsolete: Pleural tumor foci separate from direct pleural invasion
- Code 790 – Obsolete: Pericardial effusion reclassified as distant metastasis
- Code 795 – Stated as T4, NOS
- Code 800 – Further contiguous extension

33



CS Extension

- Code 950 – No evidence of primary tumor
- Code 980 – Tumor proven in sputum or washings only - “occult” carcinoma
- Code 999 – Unknown, cannot be assessed, not documented

34



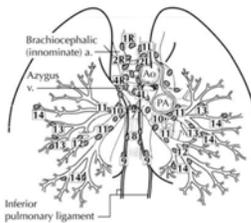
CS Tumor Size/Ext Eval

- Tumor size and extension
 - Determine T category
- Eval code important
- Eval code 1 maps to
 - Clinical staging basis

35



CS Lymph Nodes



| <u>Station Code</u> | <u>CSLN</u> |
|---------------------|-------------|
| 1-9 ipsilateral | 200 |
| 1-9 contralateral | 600 |
| 10-14 ipsilateral | 100 |
| 10-14 contralateral | 600 |

Credit line: Lung, In: Greene, F.L., Compton, C.C., Fritz, A.G., et al., editors. AJCC Cancer Staging Atlas. New York: Springer, 2006: 167-176. ©American Joint Committee on Cancer.

36



CS Lymph Nodes - Notes

- Note 1: Field is for regional nodes only
- Note 2: Code node involvement based on specific descriptions
- Note 3: Coding nodes as negative
- Note 4: Vocal cord paralysis
SVC obstruction
Compression of trachea or esophagus

37



CS Lymph Nodes

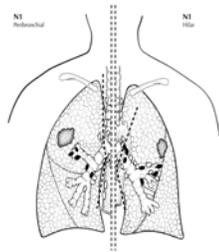
- Code 000 – None, no regional node involvement
- Code 500 – Regional nodes, NOS
- Code 800 – Nodes, NOS
- Code 999 – Unknown, cannot be assessed, not documented

38



CS Lymph Nodes

- Code 100 corresponds to AJCC N1
- LN Stations 10-14
- Metastasis to ipsilateral peribronchial, ipsilateral hilar or intrapulmonary nodes including direct extension of primary tumor
- Stated as N1



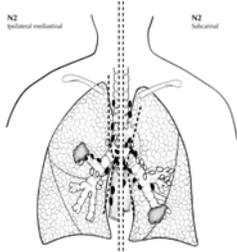
Credit line: Lung. In: Greene, F.L., Compton, C.C., Fritz, A.G., et al., editors. AJCC Cancer Staging Atlas. New York: Springer, 2006: 167-170. ©American Joint Committee on Cancer.

39



CS Lymph Nodes

- Code 200 corresponds to AJCC N2
- LN Stations 1-9
- Metastasis to ipsilateral mediastinal (right side of diagram) and/or subcarinal nodes (left side of diagram)
- Stated as N2



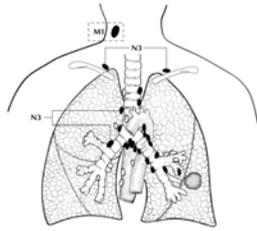
Credit line: Lung. In: Greene, F.L., Compton, C.C., Fritz, A.G., et al., editors
AJCC Cancer Staging Atlas. New York: Springer, 2006: 167-176.
©American Joint Committee on Cancer.



40

CS Lymph Nodes

- Code 600 corresponds to AJCC N3
- Contralateral mediastinal or hilar nodes
- Ipsilateral / contralateral scalene or supraclavicular nodes
- Stated as N3



Credit line: Lung. In: Greene, F.L., Compton, C.C., Fritz, A.G., et al., editors
AJCC Cancer Staging Atlas. New York: Springer, 2006: 167-176.
©American Joint Committee on Cancer.



41

MX Eliminated

- MX has been eliminated from 7th Edition
 - Clinical M0
 - Unless clinical or pathologic evidence of mets
- cM only requires history and physical
- Infer cM0 unless known cM1



42

CS Mets at Dx

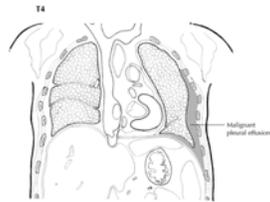
- Note 1: Pleural (and pericardial) effusions
- Note 2: Contralateral pleural or pericardial effusion
- Note 3: Code 10 has been made obsolete
– All previously coded cases converted to code 30
- Note 4: Extension to & separate tumor nodules in contralateral lung

43



CS Mets at Dx

- Code 00 – No, none
- Code 10 – Obsolete
- Code 15 – Malignant pleural effusion, ipsilateral lung
- Code 16 – Malignant pleural effusion, contralateral lung



Credit line: Lung. In: Greene, F.L., Compton, C.C., Fritz, A.G., et al., editors. AJCC Cancer Staging Atlas, New York: Springer, 2008: 167-176. ©American Joint Committee on Cancer.

44



CS Mets at Dx

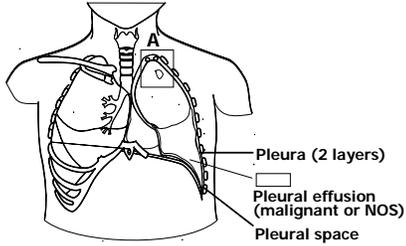
- Code 17 – Bilateral malignant pleural effusion
- Code 18 - Malignant Pleural effusion, unknown if ipsilateral or contralateral lung
- Code 20 – Malignant pericardial effusion
- Code 23 – Extension to: Contralateral lung or mainstem bronchus; Separate tumor nodule(s) in contralateral lung

45



CS Mets at Dx

- Code 24 – Discontinuous pleural tumor foci (A)



46

Used with permission: April Fritz, A.Fritz and Associates, LLC



CS Mets at Dx

- Code 25 – Contralateral lung + Pleural or Pericardial effusion
- Code 26 – Stated as M1a
- Code 30 – Distant nodes, including cervical nodes
- Code 32 – Distant nodes + Pleural or Pericardial effusion

47



CS Mets at Dx

- Code 33 – Distant nodes + Pleural tumor foci
- Code 35 – Obsolete: Separate tumor nodules in different lobe, same lung (moved to CSSF1)
- Code 37 – Extension to sternum, skeletal muscle, skin of chest
- Code 39 – Obsolete: Changed to code 23

48



CS Mets at Dx

- Code 40 – Abdominal organs
Distant metastases except distant lymph node(s)
(code 30) or those specified in codes 23 and 37
Distant metastasis, NOS; Carcinomatosis
- Code 42 - Distant metastases + Pleural or
Pericardial effusion
- Code 43 - Distant mets + Pleural tumor foci

49



CS Mets at Dx

- Code 50 – Obsolete: Distant nodes + distant mets
- Code 51 - Distant metastases + Distant lymph
node(s)
- Code 52 – Distant metastases + Distant lymph
nodes + Pleural or Pericardial effusion
- Code 53 – Distant metastases + Distant lymph
nodes + Pleural tumor foci

50



CS Mets at Dx

- Code 70 – Stated as M1b
- Code 75 – Stated as M1, NOS
- Code 99 – Unknown, not documented

51



Mets at Dx-Metastatic Sites

- 4 new fields
 - Bone excluding marrow
 - Lung excluding pleura and pleural fluid
 - Brain excluding spinal cord and other CNS
 - Liver
- Code 0 when CS Mets at Dx is 00
- Code structure
 - 0 – No
 - 1 – Yes
 - 8 – Not applicable
 - 9 – Unknown

52



Site-Specific Factor 1: Separate Tumor Nodules

- Note 1: Coded separately from CS Extension
 - Except for nodules in contralateral lung
 - Collected in Mets at Dx
- Note 2: Defined clinically (imaging) or pathologically
- Note 3: Code 000
 - Not mentioned in imaging and/or pathology reports

53



Site-Specific Factor 1: Separate Tumor Nodules

- Code 000: No separate tumor nodules noted
- Code 010: Identified in same lobe ipsilateral lung
- Code 020: Identified in different lobe ipsilateral lung

54



Site-Specific Factor 1: Separate Tumor Nodules

- Code 030: Identified in ipsilateral lung
 - Same and different lobe
- Code 040: Identified in ipsilateral lung
 - Unknown if same or different lobe
- Code 888 and 988: Obsolete
- Code 999: Unknown

55



Site-Specific Factor 2: Visceral Pleural Invasion (VPI) / Elastic Layer

- Note 1: Relevant for peripheral lesions
- Note 2: Code results as stated on pathology report
 - Code 998 if no pathologic examination of pleura
- Note 3: Mets to the pleura

56



Microscopic Anatomy of Visceral Pleura

Moving from the visceral pleural surface to the lung
parenchyma:

1. a single layer of mesothelial cells
2. a submesothelial connective tissue layer,
3. elastic fibers that usually form a single prominent layer (may also form a second discontinuous layer)
4. a connective tissue layer

57



Site-Specific Factor 2: Visceral Pleural Invasion (VPI) / Elastic Layer

- Code 000 – No evidence of visceral pleural invasion (PL 0)
- Code 010 – Invasion beyond the visceral elastic pleura, but limited to the pulmonary pleura (PL 1)
- Code 020 – Invasion to the surface of the pulmonary pleura (PL 2)

58



Site-Specific Factor 2: Visceral Pleural Invasion (VPI) / Elastic Layer

- Code 030 – Extends to parietal pleura (PL 3)
- Code 040 – Invasion of pleura, NOS
- Code 888 and 988 – Obsolete
- Code 998 – No histologic exam of pleura
- Code 999 – Unknown if VPI present

59



Conclusion

- Malignant pleural effusion or pericardial effusion
 - Moved from CS Ext to Mets at Dx
- Additional codes or additional descriptions
 - Accommodate physician statement with no further info
 - CS Extension
 - CS Lymph Nodes
 - CS Mets Dx

60



Conclusion

- 2 Site Specific Factors for Lung added to CSv2
 - Separate tumor nodules in same lung
 - Collected in SSF1
 - Visceral Pleural Invasion/Elastic Layer
 - Collected in SSF2

61



Inquiry & Response System

- Submit questions to Inquiry & Response System
 - Allows tracking for educational purposes
 - Provides information for all
- <http://web.facs.org/coc/default.htm>



62



Questions?

63



American Joint Committee on Cancer
Contact Information

Karen A. Pollitt – Manager

email: kpollitt@facs.org

phone: 312-202-5313

Donna M. Gress, RHIT, CTR – Technical Specialist

email: dgress@facs.org

phone: 312-202-5410

General Inquiries can be directed to AJCC@facs.org

Collaborative Stage Data Collection System Web Site

www.cancerstaging.org/cstage

64