

Collaborative Staging System

Part II

Data Elements And Codes

Data Elements

- CS Tumor Size
- CS Extension
- CS Tumor Size/Ext Eval
- CS Lymph Nodes
- CS Reg Nodes Eval
- Regional Nodes Positive
- Regional Nodes Examined
- CS Mets At Dx
- CS Mets Eval
- CS Site Specific Factors 1-6

Deriving The T Stage

- CS Tumor Size
- CS Tumor Extension
- CS Tumor Size/Extent Eval
- Site Specific Factors

CS Tumor Size

CS Tumor Size records the largest lateral dimension or diameter of the primary tumor in millimeters, including melanoma

- If no pre-operative treatment was performed, code Pathologic Tumor Size
- If pre-operative treatment was performed, code pre-treatment Clinical Tumor Size
- Record the size of the invasive component of the tumor
- Microscopic residual tumor does not affect Tumor Size

4

Coding CS Tumor Size (Lung)

T0	000	No mass/tumor found
T1/T2	001 – 988	code exact size in millimeters
T2	989	989 millimeters or larger
T1	990	Microscopic focus or foci only, no size of focus given
T1/T2	991	Described as less than 1 cm
	992-995	Described as less than 2-5 cm
TX	996	Malignant cells in bronchopulmonary secretions, no tumor seen radiographically or during bronchoscopy; "occult" carcinoma
T4	997	Diffuse (entire lobe)
M1	998	Diffuse (entire lung or NOS)
TX	999	Unknown; size not stated Not documented in patient record

5

CS Extension

CS Extension identifies contiguous growth of the primary tumor within the organ of origin or its direct extension into surrounding tissues (except Corpus Uteri and Ovary)

- Always code the farthest direct extension of the primary tumor
- If no neo-adjuvant treatment was performed, use the information in the path report to determine extension
- If neo-adjuvant treatment was performed, use pre- treatment clinical information to determine extension

6

Coding CS Extension (Lung)

Tis	00 In situ; noninvasive; intraepithelial
T1/T2* *based on size	10 Tumor confined to one lung; Without extension or conditions in codes 20-80 (excludes primary in main stem bronchus) (excludes superficial tumor as described in code 11)
T1	11 Superficial tumor of any size with invasive component limited to bronchial wall, with or without proximal extension to the main stem bronchus
T2	20 Extension from other parts of lung to main stem bronchus, NOS (excludes superficial tumor as described in code 11). Tumor involving main stem bronchus \geq 2 cm from carina (primary in lung or main stem bronchus)
T2	21 Tumor involving main stem bronchus, NOS (distance from carina not stated, no surgery) ⁷

Coding CS Extension (Lung)

T1/T2	23 Tumor confined to hilus
T1/T2	25 Tumor confined to the carina
T1	30 Localized, NOS
T2	40 Atelectasis/obstructive pneumonitis that extends to the hilar region but does not involve the entire lung (or NOS) without pleural effusion
T2	45 Extension to (without pleural effusion): Pleura, visceral or NOS Pulmonary ligament
T3	50 Tumor of/involving main stem bronchus < 2.0 cm from carina
T3	52 (40) + (50)
T3	53 (45) + (50)

8

Coding CS Extension (Lung)

T3	55 Atelectasis/obstructive pneumonitis involving entire lung
T3	56 Parietal pericardium or pericardium, NOS
T3	59 Invasion of phrenic nerve
T3	60 Direct Extension to: Brachial plexus, inferior branches or NOS, from superior sulcus Chest (thoracic) wall Diaphragm Pancoast tumor (superior sulcus syndrome), NOS Parietal pleura
T4	61 Superior sulcus tumor with encasement of subclavian vessels or unequivocal involvement of superior branches of brachial plexus
T4	65 Multiple masses/separate tumor nodule(s) in the same lobes; "Satellite nodules" in same lobe ⁹

Coding CS Extension (Lung)

T4	70 Major Blood vessels (except aorta/inferior vena cava): Azygos vein, Pulmonary artery/vein, SVC Carina from lung/mainstem bronchus Compression of esophagus/trachea not specified as direct extension Esophagus Mediastinum, extrapulmonary or NOS Nerve(s): Cervical sympathetic (Horner's syndrome), Phrenic, Recurrent laryngeal (vocal cord paralysis), Vagus Trachea
T4	71 Heart Visceral pericardium
T4	72 Malignant pleural effusion Pleural effusion, NOS
T3	73 Adjacent rib

10

Coding CS Extension (Lung)

T4	74 Aorta
T4	75 Vertebra(e) Neural foramina
T4	76 Pleural tumor foci separate from direct pleural invasion
T4	77 Inferior vena cava
T4	79 Pericardial effusion, NOS; malignant pericardial effusion
T4	80 Further contiguous extension (see also Mets at Dx)
T0	95 No evidence of primary tumor
TX	98 Malignant cells in sputum or bronchial washings but not visualized by imaging or bronchoscopy; occult carcinoma
TX	99 Unknown extension; Primary tumor cannot be assessed; Not documented in patient record

11

CS Tumor Size/Ext Eval

CS Tumor Size/Ext Eval records how the codes for "CS Tumor Size" and "CS Extension" were determined based upon the methods employed (PE, Radiographic, Surgery, Autopsy, Etc.)

- Select the code that documents the report or procedure from which the farthest tumor extension or size of the primary tumor was determined

12

Coding CS Tumor Size/Ext Eval (Lung)

- | | | |
|---|---|---|
| c | 0 | PE, imaging, other non-invasive clinical evidence. No surgery; no autopsy |
| p | 1 | Endoscopy, dx biopsy, FNA biopsy, or other invasive techniques including surgical observation without biopsy. No surgery/autopsy |
| p | 2 | No surgery; based on autopsy (tumor suspected or dx'd prior to autopsy) |
| p | 3 | Surgical resection, no pre-surgical systemic tx or RT; Surgical resection, unknown if pre-surgical systemic tx or RT. Evidence acquired before tx, supplemented by information obtained from surgery and pathologic examination of the resected specimen. |

13

Coding CS Tumor Size/Ext Eval (Lung)

- | | | |
|---|---|---|
| c | 5 | Surgical resection with pre-surgical systemic tx or RT; TS/Ext based on clinical evidence |
| y | 6 | Surgical resection with pre-surgical systemic tx or RT; TS/Ext based on pathologic evidence |
| a | 8 | Autopsy only (tumor unsuspected or undiagnosed prior to autopsy) |
| c | 9 | Unknown if surgical resection done; Not assessed; cannot be assessed; Unknown if assessed; Not documented in patient record |

14

Deriving The N Stage

- CS Lymph Nodes
- CS Reg Nodes Eval
- Regional Nodes Examined
- Regional Nodes Positive

15

CS Lymph Nodes

CS Lymph Nodes identifies the regional lymph nodes involved with cancer at the time of diagnosis

- Record the RLN chain farthest from the primary site that is involved with cancer, either Clinically or Pathologically
- For inaccessible sites, record RLN's as negative rather than unknown if no mention is made of RLN involvement and patient receives usual standard cancer directed treatment
- If patient receives neo-adjuvant treatment, code the farthest involved RLN's based upon information prior to treatment
- If RLN's are more involved after neo-adjuvant treatment, code the most extensive RLN involvement

16

Coding CS Lymph Nodes (Lung)

N0	00 None; no regional lymph node involvement
N1	10 Regional lymph nodes, ipsilateral: Bronchial; Hilar (bronchopulmonary) (proximal lobar) (pulmonary root); Intrapulmonary: Interlobar, Lobar, Segmental, Subsegmental, Peri/parabronchial
N2	20 Regional LN, ipsilateral: Aortic [above diaphragm], NOS--Peri/para-aortic, NOS (Ascending aorta {phrenic}, Subaortic {aortico-pulmonary window}); Carinal (tracheobronchial) (tracheal bifurcation); Mediastinal, NOS--Anterior, Posterior (tracheoesophageal); Pericardial; Peri/paraesophageal; Peri/paratracheal, NOS--Azygos (lower peritracheal), Pre- and retrotracheal, NOS (Precarinal); Pulmonary ligament; Subcarinal

17

Coding CS Lymph Nodes (Lung)

N1	50 Regional Lymph Nodes, NOS
N3	60 Contralateral/bilateral hilar (bronchopulmonary) (proximal lobar) (pulmonary root); Contralateral/bilateral mediastinal; Scalene (inferior deep cervical), ipsilateral or contralateral; Supraclavicular (transverse cervical), ipsilateral or contralateral
N1	80 Lymph nodes, NOS
NX	99 Unknown; not stated Regional lymph nodes cannot be assessed Not documented in patient record

18

CS Reg Nodes Eval

CS Reg Nodes Eval records how the code for “CS Lymph Nodes” was determined based upon the diagnostic methods employed

- Select the code that indicates the report or procedure from which information about the farthest involved RLN’s was obtained

19

Coding CS Reg Nodes Eval (Lung)

c	0	PE, imaging, other non-invasive clinical evidence. No LN removed; no autopsy
p	1	Endoscopy, dx biopsy, incl. FNA biopsy, or other invasive techniques including surgical observation without biopsy. No LN removed, no autopsy
p	2	No LN removed; based on autopsy (tumor suspected or dx'd prior to autopsy)
p	3	LN removed; NO pre-surgical systemic tx or RT OR LN removed, unk. if pre-surgical systemic tx or RT

20

Coding CS Reg Nodes Eval (Lung)

c	5	LN removed with pre-surgical systemic tx or RT; LN based on clinical evidence
y	6	LN removed with pre-surgical systemic tx or RT; LN based on pathologic evidence
a	8	Autopsy only (tumor not suspected or dx'd prior to autopsy)
c	9	Unknown if surgical resection done; Not assessed; cannot be assessed; Unknown if assessed; Not documented in patient record

21

Regional Nodes Positive

Regional Nodes Positive records the exact number of RLN's examined by the pathologist and found to be positive

- The fields Regional Nodes Positive and Regional Nodes Examined are based upon pathologic information only

22

Coding Regional Nodes Positive

p	00	All nodes examined negative.
p	01 - 89	1 - 89 nodes positive (code exact number of nodes positive)
p	90	90 or more nodes positive
p	95	Positive aspiration of lymph node(s)
p	97	Positive nodes - number unspecified
c	98	No nodes examined
c	99	Unknown if nodes are positive; not applicable; Not documented in record

23

Regional Nodes Examined

Regional Nodes Examined records the total number of RLN's that were removed and examined by the pathologist

- The number of RLN's examined is cumulative from all procedures that removed RLN's through the completion of surgery in the first course of treatment

24

Coding Regional Nodes Examined

- 00 No nodes examined.
- 01 - 89 1 - 89 nodes examined (code exact number of nodes examined)
- 90 90 or more nodes examined
- 95 No regional nodes removed but aspiration of regional nodes performed
- 96 LN "sampling," number unk/not stated
- 97 LN "dissection," number unk/not stated
- 98 LN removed, number unk/not stated; procedure type not stated; nodes examined, number unk
- 99 Unknown if nodes were examined; not applicable or negative; Not documented in patient record

25

Deriving The M Stage

- CS Mets At Dx
- CS Mets Eval

26

CS Mets At Dx

CS Mets At Dx identifies the distant site or sites of metastatic involvement at the time of diagnosis including distant lymph nodes

- Assign the highest code for CS Mets At Dx whether determined clinically or pathologically and whether or not the patient had any neo-adjuvant treatment

27

Coding CS Mets at Dx (Lung)

M0	00	No distant metastases
M1	10	Distant lymph node(s)
M1	35	Separate tumor nodule(s) in different lobe, same lung
M1	37	Extension to Sternum, Skeletal muscle, Skin of chest
M1	39	Extension to Contralateral lung, Contralateral main stem bronchus; Separate tumor nodule(s) in contralateral lung
M1	40	Distant metastases except those in 10-39, including separate lesion in chest wall or diaphragm, Distant metastasis NOS; Carcinomatosis
M1	50	Distant mets + distant nodes
MX	99	Unknown; distant metastasis cannot be assessed; not stated in patient record

28

CS Mets Eval

CS Mets Eval records how the code for data item "CS Mets at DX" was determined based upon the diagnostic methods employed

- Select the CS Mets Eval code that documents the report or procedure from which the information was obtained about metastatic involvement or non involvement farthest from the primary site
- If the patient receives neo-adjuvant treatment use the clinical status of metastatic involvement or non involvement prior to treatment

29

Coding CS Mets Eval

c	0	PE, imaging, other non-invasive clinical evidence. No metastatic tissue examined; no autopsy
c	1	Endoscopy or other invasive techniques, including surgical observation without biopsy. No metastatic tissue examined, no autopsy
p	2	No metastatic tissue examined prior to death; based on autopsy (tumor suspected or dx'd prior to autopsy)
p	3	Metastatic tissue examined; no pre-surgical systemic TX or RT or Metastatic tissue examined, unknown if pre-surgical systemic TX or RT

30

Coding CS Mets Eval

c	5	Metastatic tissue examined with pre-surgical systemic TX or RT; Mets based on clinical evidence
y	6	Metastatic tissue examined with pre-surgical systemic TX or RT; Mets based on pathologic evidence
a	8	Autopsy only (tumor not suspected or dx'd prior to autopsy)
c	9	Unknown if surgical resection done; Not assessed; cannot be assessed; Unknown if assessed; Not documented in patient record

31

CS Site-Specific Factors

CS Site-Specific Factors 1-6 identify additional information necessary to generate stage or prognostic factors that effect stage or survival including HIV status and tumor markers

32

Site-Specific Factors

SSF	Sites/Histologies
1	Head and neck, colon, rectum, liver, pleura, melanoma, mycosis fungoides, Kaposi sarcoma, breast, ovary, placenta, prostate, testis, melanoma/conjunctiva, melanoma/iris and ciliary body, retinoblastoma, brain, thyroid, lymphoma
2	Head and neck, liver, melanoma, breast, prostate, testis, melanoma/iris and ciliary body, lymphoma
3	Head and neck, melanoma, breast, prostate, testis, lymphoma
4	Head and neck, melanoma, breast, prostate, testis
5	Head and neck, breast, prostate, testis
6	Head and neck, breast, prostate

33

Collaborative Staging System

Coding Practicum Lung

34

Example: Lung Cancer Case 1

6 months PTA: minimal cough; night sweats; 5-10 lb weight loss.
1½ PPD cigarette smoker x 30 years.

PE: No lymphadenopathy or organomegaly.

CXR: Solitary 3 cm. nodule in right upper lobe

CT bone, brain and liver: within normal limits

Bronchoscopy with biopsy: undiff large cell ca.

Bronchoscopy brushings: positive for malignant cells

Right upper lobectomy: 2.5 cm right upper lobe tumor; No gross hilar or mediastinal nodes noted.

Pathology: Nodular 4 cm. mass showing poorly differentiated adenocarcinoma of right upper lobe, 0/12 hilar lymph nodes positive.

35

Example: Lung Case 1-Coded

CS Tumor Size	040	4 cm per path report
CS Extension	10	confined to one lung
CS TS/Ext Eval	3	resection, no pre-op (p)
CS Lymph Nodes	00	lymph nodes negative
CS Reg Nodes Eval	3	resection, no pre-op (p)
Reg LN Pos	00	per path report
Reg LN Exam	12	per path report
CS Mets at Dx	00	none
CS Mets Eval	0	clinical (imaging) only (c)
SSF1 - SSF6	888	not applicable

36

Example: Lung Case 1-Derived

•TNM	Derived Stage pT2 pN0 cM0	Stage IB
•SS 1977 Localized	SS 2000 Localized	

37

Example: Lung Cancer Case 2

HX: Chest pain, productive cough, hoarseness with partial vocal cord paralysis. One PPD x 40 years.

PE: Wheezing on expiration in both lungs. Otherwise no abnormal findings.

CXR: 6 cm. RUL mass, incomplete atelectasis same lung. Pneumonitis and pleural effusion apparent.

Scans of liver, brain: negative

Bronchoscopy with biopsy: Right upper lobe mass noted with extension along lateral wall of main stem bronchus involving trachea. Washings and brushings positive for malignant cells.

Scalene node biopsy (one node removed): metastatic SCC.

Lung biopsy: Squamous cell carcinoma, poorly differentiated.

38

Example: Lung Case 2-Coded

CS Tumor Size	060	6 cm per CXR
CS Extension	72	pleural effusion
CS TS/Ext Eval	1	endoscopy
CS Lymph Nodes	60	scalene lymph nodes
CS Reg Nodes Eval	3	LN bx established highest N
Reg LN Pos	01	scalene node
Reg LN Exam	01	scalene node
CS Mets at Dx	00	none
CS Mets Eval	0	clinical (imaging) only
SSF1 - SSF6	888	not applicable

39

Example: Lung Case 2-Derived

•TNM	Derived Stage cT4 pN3 cM0	Stage IIIB
•SS 1977 Distant	SS 2000 Distant	

40

FCDS Implementation of Collaborative Staging

- Conversion of the FCDS database to NAACCR V10.1 was implemented on October 1, 2004
- **FCDS requires that all cases, including historical cases, be submitted in the NAACCR V10.1 record layout, including all 15 items of the CS schema, regardless of the date of diagnosis**

41

CS Additional Information

- <http://www.training.seer.cancer.gov>
- <http://www.cancerstaging.org/collab.html>

The End

42
