SSDIs
Breaking Down the Rules

RegistryPartners

DATA ABSTRACTION / REGISTRY MANAGEMENT / CONSULTING

Objectives:

- Understand the general rules for coding lab values and basic measurements
- Understand the SSDI description and rationale for data collection
- Utilize the SSDI coding guidelines and site specific notes to guide accurate coding
- Accurately assign SSDIs through case examples

General Rules:

- Recording “Less Than” or “Greater Than”
  - Record the lab value as one less than stated when a value is reported as “less than”. Example: ER Percent Positive reported as <30%. Enter as 029 (29%)
  - Record the lab value as one more than stated when a value is reported as “greater than”. Example: PSA reported as >4. Enter as 4.1
- Check coding instructions for special rules for rounding numbers. AJCC sometimes provides test and site specific rounding rules. In the absence of a special rule, round 0-4 down and 5-9 up.

BREAST

Primary Site	Histology
C500-C506, C508-C509	8000-8700, 8982-8983, 9700-9701
C501-C506, C508-C509	8720-8790

ER (Estrogen Receptor) and PR (Progesterone Receptor) Total Allred Score: Allred looks at what **percentage** of cells test positive for hormone receptors along with how well the receptors show up after staining (referred to **intensity**). The information is combined for a total score. The higher the score the more receptors were found and the easier they were to see.

BREAST

Allred Score for Estrogen and Progesterone Receptor Evaluation Table

Proportion Score	Positive Cells %	Intensity	Intensity Score
0	0	None	0
1	<1	Weak	1
2	1 to 10	Intermediate	2
3	11 to 33	Strong	3
4	34 to 66		
5	≥ 67		

BREAST

Example of Calculating ER/PR Total Allred Score

ER positive at 95%, Intensity of Strong
PR positive at 85%, Intensity of Strong
Must have both components (proportion score and intensity)

Using the table:

ER 95% maps to a proportion **score of 5** (view table and >=67% is a score of 5)
ER Intensity of strong maps to an intensity **score of 3** (view table and an intensity of strong = intensity score of 3)

5+3=8 or 08 for the SSDI ER Total Allred Score

BREAST

Example of Calculating ER/PR Total Allred Score

ER positive at 95%, Intensity of Strong
PR positive at 85%, Intensity of Strong

Using the table:

PR 85% maps to a proportion **score of 5** (view table and >=67% is a score of 5)
PR Intensity of strong maps to an intensity **score of 3** (view table and an intensity of strong = intensity score of 3)

5+3=8 or 08 for the SSDI PR Total Allred Score

BREAST

Calculating ER/PR Total Allred Score **QUESTION**

ER positive at 80%, Intensity of Strong
PR positive at 65%%, Intensity of Intermediate

Using the table:
ER 80% maps to a proportion **score of ?**
Intensity of strong maps to an intensity **score of ?**

PR 65% maps to a proportion **score of ?**
Intensity of intermediate maps to an intensity **score of ?**

?+?=? for the SSDI ER Total Allred Score and ?+?=? For the SSDI PR Total Allred Score

BREAST

Calculating ER/PR Total Allred Score **ANSWER**

ER positive at 80%, Intensity of Strong
PR positive at 65%%, Intensity of Intermediate

Using the table:
ER 80% maps to a proportion **score of 5.**
Intensity of strong maps to an intensity **score of 3.**

PR 65% maps to a proportion **score of 4.**
Intensity of intermediate maps to an intensity **score of 2.**

5+3=8 or 08 for the SSDI ER Total Allred Score and 4+2=6 or 06 for the SSDI PR Total Allred Score

LIVER

Primary Site
C220

Histology
8000-8700, 8720-8790, 9700-9701

AFP (Alpha Fetoprotein) Pretreatment Lab Value & Interpretation: there are 2 data items that record information on AFP, the lab value and lab interpretation.

- Code the highest value PRIOR to treatment in nanograms per milliliter (ng/ml) and in the range 0.1 (1 ng/ml) to 9999.9 (9999 ng/ml).
- Micrograms per liter (ug/L) is equivalent to ng/ml.
- May use physician's statement when no other information is available.
- The same laboratory test should be used to record both the pretreatment lab value and interpretation

LIVER

Code	*Description*
0.0	0.0 ng/mL; not detected
0.1-9999.9	0.1-9999.9 ng/mL (exact value to nearest tenth)
XXXX.1	10,000.0 ng/m Ll or greater
XXXX.7	Test ordered, results not in chart
XXXX.8	Not applicable, information not collected for this case. (Could result in edit error.)
XXXX.9	Not documented in MR, AFP Pretreatment Value not assessed or unknown if assessed

Code	*Description*
0	Negative/normal, WNL
1	Positive/elevated
2	Borderline; undetermined if positive or negative
7	Test ordered, results not in chart
8	Not applicable, information not collected for this case. (Could result in edit error.)
9	Not documented in MR, AFP Pretreatment Value not assessed or unknown if assessed

LIVER

Bilirubin Total Lab Value and Creatinine Lab Value:

- May use physician's statement when no other information is available.
- Record the lab value of the highest test results documented in the medical record **prior to treatment**.
- For *Bilirubin Pretreatment Total Lab Value*: in an assay of bilirubin, it includes direct (conjugated), indirect (unconjugated), and total values. Always record the **total bilirubin lab value**.
- For *Creatinine Lab Value*: Record blood or serum creatinine value. Do not use urine results to code data item.
- Record to nearest tenth of mg/dL or umol/L of highest value prior to treatment.
- The same laboratory test should be used to record information in Pretreatment Unit of Measure.

LIVER

Bilirubin Total Value	Value Code	Creatinine Value	Value Code	Unit of Measure Code
0 ng/mL	0.0	0 ng/mL	0.0	1
34.8 umol/L	34.8	0.8 umol/L	0.8	2
108.7 ng/mL	108.7	27.3 ng/mL	27.3	1
1423 umol/mL	XXX.1	128.2 umol/L	XX.1	2
527.4	527.4	97.6	97.6	9
Test ordered,results not in chart	XXX.7	Test ordered, results not in chart	XX.7	7
Not documented in MR, test not done, unknown if test done	XXX.9	Not documented in MR, test not done, unknown if test done	XX.9	9

LIVER

INR (International Normalized Ratio for Prothrombin Time):

- May use physician's statement when no other information is available.
- Record the value of the highest INR test results documented in MR **prior to treatment**.

Fibrosis Score

- May use physician's statement when no other information is available, however code 7 when statement of fibrosis score is not based on histologic examination.
- FIB-4 is NOT a pathological fibrosis score of 4; the MR may show something similar to "FIB-4=3.52." Do not code value in this data item.
- AJCC classifies Ishak fibrosis scores 0-4 (none to moderate fibrosis) as F0, and Ishak fibrosis scores 5-6 (cirrhosis/severe fibrosis) as F1. Not the same as METAVIR score F0 or F1.
- If no score is mentioned, descriptive terms may be used to assign codes 0 and 1
- If stated in medical record that patient does not have advanced cirrhosis/advanced fibrosis and not histologically confirmed or unknown if histologically confirmed code to 9

LIVER

Example:

History: 65 y/o male, c/o RT-sided abdominal pain, Liver US revealed hypodense lesion RT lobe of liver, further imaging suspicious for hepatocellular carcinoma, physician stated no advanced fibrosis and histologic confirmation available in patient records. Lab results: AFP 32 ug/L, Total Bilirubin 0.8 mg/dL, Creatinine 1.3 mg/dl, INR 1.2.

AFP PreTX Lab Value/Interpretation: **?**
Bilirubin PreTX Value/Unit: **?**
Creatinine PreTX Value/Unit: **?**
INR Prothrombin Time: **?**
Fibrosis Score: **?**

LIVER

Example:

History: 65 y/o male, c/o RT-sided abdominal pain, Liver US revealed hypodense lesion RT lobe of liver, further imaging suspicious for hepatocellular carcinoma, physician stated no advanced fibrosis and histologic confirmation available in patient records. Lab results: AFP 32 ug/L, Total Bilirubin 0.8 mg/dL, Creatinine 1.3 mg/dl, INR 1.2.

AFP PreTX Lab Value/Interpretation: **32.0, 1 elevated**
Bilirubin PreTX Value/Unit: **0.8, 1 mg/dL**
Creatinine PreTX Value/Unit: **1.3, 1 mg/dL**
INR Prothrombin Time: **1.2**
Fibrosis Score: **9**

COLON

Primary Site
C180, C182-C189, C199, C209
Histology 8000-8149, 8154, 8157, 8160-8231, 8243-8248, 8250-8682, 8690-8700, 8720-8790, 9700-9701

Perineural Invasion: code the presence or absence by the primary tumor documented in the pathology report.

- Presence may be taken from either the biopsy or resection pathology
- Absence can **only** be taken from a surgical resection report
- May use physician statement of microscopically confirmed perineural invasion when no other information is available
- Code 9 if surgical resection of the primary is performed and no mention of perineural invasion

COLON - Perineural Invasion

Code	Description
0	Perineural invasion not identified/not present
1	Perineural invasion identified/present
8	Not applicable: information not collected for this case (If this information is required by your standard setter, use of code 8 may result in an edit error)
9	Not documented in medical record Pathology report does not mention perineural invasion Cannot be determined by the pathologist Perineural invasion not assessed or unknown if assessed

COLON

Circumferential Resection Margin: also referred to as the circumferential radial margin or mesenteric margin.

- **Record in mm** to the nearest tenth the distance between the edge of the tumor and the nearest edge of surgically dissected margin within pathology report.
  - CRM is 2 mm, code as 2.0
  - CRM is 3.59 mm, code as 3.6
  - CRM is 0.5 **“cm”**, multiply 0.5 x 10 to get value in mm - 5.0.
  - CRM is positive, code 0.0
  - CRM is < 1 mm with no more specific measurement, code 0.0
  - Code XX.9 if pathology describes only distal and proximal margins or **margins NOS**.
  - Code XX.1 used when CRM or radial margin **specifically stated**, not the same as margins NOS. Or no residual tumor.
  - May use physician statement of CRM or radial margin to code when no other information is available.
  - Exact measurements takes precedence over codes beginning with XX.

COLON - CRM

Code	Description	Code	Description
0.0	Circumferential resection margin (CRM) positive Margin IS involved with tumor Described as “less than 0.1 millimeter (mm)”	**XX.4**	Described as “at least” 2 mm
0.1-99.9	Distance of tumor from margin 0.1-99.9 millimeters (mm) (Exact size to nearest tenth of millimeter)	**XX.5**	Described as “at least” 3 mm
XX.0	100 mm or greater	**XX.6**	Described as “greater than” 3 mm
XX.1	Margins clear, distance from tumor not stated Circumferential or radial resection margin negative, NOS No residual tumor identified on specimen	**XX.7**	No resection of primary site Surgical procedure did not remove enough tissue to measure CRM
XX.2	Margins cannot be assessed	**XX.8**	Not applicable: Information not collected for this case
XX.3	Described as “at least” 1 mm	**XX.9**	Not documented in medical record Circumferential or radial resection margin not assessed or unknown if assessed

COLON

KRAS: Known as an oncogene that acts as an on/off switch in cell signaling. When mutated, the oncogene has the potential to cause normal cells to become cancerous.

KRAS analysis:

- Normal or Wild Type is a code 0
- May use physician statement to code data item when no other information is available
- May use results from nodal or metastatic tissue
- Use results from the initial work up (includes clinical and pathological workup)
- KRAS positive with no mention of mutated codon is a code 4

COLON - KRAS

Code	Description
0	Normal (wild type) Negative for mutations
1	Abnormal (mutated) in codon(s) 12, 13, and/or 61
2	Abnormal (mutated) in codon 146 only
3	Abnormal (mutated), but not in codon(s) 12, 13, 61, or 146
4	Abnormal (mutated), NOS, codon(s) not specified
7	Test ordered, results not in chart
8	Not applicable: Information not collected for this case
9	Not documented in medical record KRAS not assessed or unknown if assessed

COLON

Example:

History: 89 year old female with discomfort in abdomen. CEA 3.5.
Sigmoid biopsy: Intramucosal adenocarcinoma suspicious for invasion, surface ulceration.
Sigmoid Resection: Invasive moderately differentiated adenocarcinoma, 3.2 cm extending through muscularis propria into pericolic soft tissue, all surgical margins including proximal and distal margins uninvolved by invasive ca, LVI and PNI not identified, no extramural venous invasion, tumor deposits not identified, 13 benign lymph nodes 0/13, pT3, N0.
Comment: All stains positive, MSI-Stable

Perineural Invasion: Code 0, not identified.
CRM: Code XX9, pathology describes all surgical margins including proximal and distal margins as uninvolved. CRM not mentioned. See Note 8.
KRAS: Code 9, not assessed.

COLON

Question:

History: 59 year old male with complaints of hematochezia and weight loss. CEA 105.
Rectosigmoid biopsy: Infiltrating moderately differentiated adenocarcinoma.
Segmental Colectomy: 9.5 cm adenocarcinoma with mucinous features, moderately differentiated, invades through muscularis propria into pericolic tissue, all surgical margins including proximal and distal margins uninvolved by invasive ca, tumor noted to be 2.89 mm from CRM, LVI neg, PNI present, tumor deposits not identified, 13/18 lns positive. Biopsy of liver nodule positive for metastatic adenocarcinoma.
Comment: KRAS Mutated. MSI Stable

Perineural Invasion ?
CRM ?
KRAS ?

COLON

Answer:

History: 59 year old male with complaints of hematochezia and weight loss. CEA 105.
Rectosigmoid biopsy: Infiltrating moderately differentiated adenocarcinoma.
Segmental Colectomy: 9.5 cm adenocarcinoma with mucinous features, moderately differentiated, invades through muscularis propria into pericolic tissue, all surgical margins including proximal and distal margins uninvolved by invasive ca, tumor noted to be 2.89 mm from CRM, LVI neg, PNI present, no extramural venous invasion, tumor deposits not identified, 13/18 lns positive. Biopsy of liver nodule positive for metastatic adenocarcinoma.
Comment: KRAS Mutated. MSI Stable

Perineural Invasion: **code 1 Perineural invasion identified/present**
CRM: **code 2.9**
KRAS: **code 4, mutated NOS, codons not specified**

MELANOMA

Primary Site
C000-C002, C006, C440-C449, C500, C510-C512, C518-C519, C600-C602, C608-C609, C632
Histology 8720-8790

Breslow Tumor Thickness: used for staging.

- May use physician's statement when no other information is available, or the available information is ambiguous.
- Code Breslow tumor thickness, not size. Record actual measurement in tenths of millimeters from the pathology report. Measurement given in hundredths of millimeters should be rounded to the nearest tenth.
- Do not add measurements together from different procedures.
- If pathologist describes thickness as "at least," use appropriate A code. An exact measurement takes precedence over A codes. For example:
    - Pathologist states: Thickness at least 3.0mm, code **A3.0**
    - Pathologist states: Thickness greater than 5mm, code **XX.9**

MELANOMA

Ulceration: used for staging.

- May use physician's statement of microscopically confirmed ulceration to code data item.
- Ulceration can only be confirmed from microscopic examination, based on biopsy or surgical resection; do not use findings from physical exam.

Code	Description
0	Ulceration not identified/not present
1	Ulceration present
8	Not applicable: Information not collected for this case
9	**Not documented in medical record** **Cannot be determined by pathologist** **Pathology report does not mention ulceration** **Ulceration not assessed or unknown if assessed**

MELANOMA

Mitotic Rate:

- May use physician's statement when no other information is available.
- Term "mitotic figures" is the same as mitoses.
- If there are are conflicting pathology reports for the same melanoma at initial diagnosis and differing mitotic rates are documented, code the highest mitotic count.

LDH Pretreatment Value:

- May use physician's statement when no other information is available.
- Record value of highest serum LDH test results documented in medical record **prior to treatment** or within 6 weeks of diagnosis. Give priority to the first test performed.
- Same laboratory test should be used to record information in LDH Pretreatment Upper Limits of Normal

LDH Upper Limits of Normal:

- May use physician's statement when no other information is available.
- Upper limits of normal may vary widely between labs. Always use the same lab test used to record LDH Pretreatment Value

MELANOMA

LDH Pretreatment Level:

- May use physician's statement when no other information is available.
- Upper limits of normal may vary widely between labs. Always use the same lab test used to record LDH Pretreatment Value

LDH Upper Limits of Normal Code	Description
001-999	001-999 (Exact upper limit of normal
XX8	N/A, info not collected
XX9	Not documented in record, unknown

LDH Pretreatment Value Code	Description
0.0	0.0 (U/L)
0.1-99999.9	0.1-99.999.9 U/L
XXXXX.1	100,000 U/L or greater
XXXXX.7	Test ordered, results not in chart
XXXXX.8	N/A, info not collected
XXXXX.9	Not documented in record, unknown

LDH Pretreatment Level Code	Description
0	Normal LDH Level Low, below normal
1	Above normal, High
7	Test ordered, results not in chart
9	Not documented in record, unknown

MELANOMA

Examples:

- Pretreatment LDH lab results: 274 U/L Range 140-250
  - Pretreatment LDH Value: 274.0
  - LDH Upper Limit Normal: 250
  - LDH Pretreatment Level: 1
- Pretreatment LDH lab results: 126 U/L Range 110-220
  - Pretreatment LDH Value: 126.0
  - LDH Upper Limit Normal: 220
  - LDH Pretreatment Level: 0

MELANOMA

Example:

History: 72 year old male with suspicious lesion on right thigh, 1.2cm. There are no satellite nodules or lymphadenopathy, CT scan: negative. LDH lab results: 201 U/L Range 140-250
Excisional biopsy: Skin, right thigh, malignant melanoma, at least 2.0cm thick, ulceration present, mitosis 2/mm2
Wide excision: Skin, right thigh, no residual melanoma.

Breslow's Thickness: ?
Ulceration: ?
Mitosis: ?
Pretreatment LDH Value: ?
LDH Upper Limit of Normal: ?
Pretreatment LDH Level: ?

MELANOMA

Example:

History: 72 year old male with suspicious lesion on right thigh, 1.2cm. There are no satellite nodules or lymphadenopathy, CT scan: negative. LDH lab results: 201 U/L Range 140-250
Excisional biopsy: Skin, right thigh, malignant melanoma, at least 2.0cm thick, ulceration present, mitosis 2/mm2
Wide excision: Skin, right thigh, no residual melanoma.

Breslow's Thickness: **A2.0**
Ulceration: **1, ulceration present**
Mitosis: **02**
Pretreatment LDH Value: **201.0**
LDH Upper Limit of Normal: **250**
Pretreatment LDH Level: **0, normal level**

PROSTATE

Primary Site
C619

Histology
8000-8700, 8720-8790, 9700-9701

Gleason Score Clinical:

- Code from needle core biopsy or transurethral resection of the prostate (TURP). May also use patterns for any prostate tissue identified during TURBT.
- Code PRIOR to any neoadjuvant treatment
- Prostatic cancer normally shows two main histologic patterns - primary and secondary. Refer to Note 4 if only one number is given.
- Use highest score if different scores on multiple biopsies or if bx and TURP performed.
- Do not infer Gleason Score from Grade Group, code X9.
- May use physician's statement when no other information is available.
- X7 if no needle core biopsy or TURP performed

PROSTATE - Gleason Score Clinical

Code	Description	Code	Description
02	Gleason score 2	**08**	Gleason score 8
03	Gleason score 3	**09**	Gleason score 9
04	Gleason score 4	**10**	Gleason score 10
05	Gleason score 5	**X7**	No needle core biopsy/TURP performed
06	Gleason score 6	**X8**	No applicable; Information not collected for this case
07	Gleason score 7	**X9**	Not documented in medical record Gleason Score Clinical not assessed or unknown if assessed

PROSTATE

Gleason Score Pathological:

- Code from prostatectomy or autopsy only.
- Prostatic cancer normally shows two main histologic patterns - primary and secondary. Refer to Note 3 if only one number is given.
- Code Gleason Pathological Score as X9 if neoadjuvant therapy was given.
- Do not infer Gleason Score from Grade Group, code X9.
- May use physician’s statement when no other information is available.
- X7 if no prostatectomy performed

PROSTATE - Gleason Score Pathological

Code	Description	Code	Description
02	Gleason score 2	**08**	Gleason score 8
03	Gleason score 3	**09**	Gleason score 9
04	Gleason score 4	**10**	Gleason score 10
05	Gleason score 5	**X7**	No prostatectomy done
06	Gleason score 6	**X8**	No applicable; Information not collected for this case
07	Gleason score 7	**X9**	Not documented in medical record Gleason Score Pathological not assessed or unknown if assessed

PROSTATE

Gleason Score Example:

Patient underwent a prostate biopsy revealing Gleason 3+4=7 adenocarcinoma in seven cores and 4+5=9 adenocarcinoma in five cores. The patient subsequently underwent a Radical Prostatectomy positive for Gleason 3+4=7 adenocarcinoma.

Gleason Score Clinical = 09 Gleason score of 9. Highest score.

Gleason Score Pathological = 07 Gleason score of 7 from prostatectomy.

PROSTATE

Gleason Score Question:

Patient underwent a TURP revealing Gleason 3+3=6 and 4+3=7 adenocarcinoma. The patient subsequently declined further surgery and agreed to watchful waiting.

Gleason Score Clinical?

Gleason Score Pathological?

PROSTATE

Gleason Score Answer:

Patient underwent a TURP revealing Gleason 3+3=6 and 4+3=7 adenocarcinoma. The patient subsequently declined further surgery and agreed to watchful waiting.

Gleason Score Clinical? **07 Gleason score** 7 (4+3). Highest score from TURP.

Gleason Score Pathological? **X7 No prostatectomy performed.**

PROSTATE

Gleason Score Pathological Side Note:

Do not confuse the Gleason Score Pathological Rules with Grade Pathological Rules. These SSDIs are independent of one another.

- **Grade** Pathological Note 2 allows the clinical grade to be assigned in grade pathological IF the clinical grade is the highest grade identified from the primary tumor, if no grade documented on surgical resection or if resection performed and no residual disease.
- **Gleason Score** Pathological can only be coded from a Prostatectomy specimen or Autopsy. You may not use any clinical information when coding this SSDI.

SSDI Updates

Updated instruction for Breast SSDIs - ER, PR, HER2 (IHC, ISH, Overall) summary

Sourced from the Cancer Forum 7/17/19: http://cancerbulletin.facs.org/forums/forum/site-specific-data-items-grade-2018/93658-updated-instructions-for-er-pr-her2-ihc-ish-overall-summary-ssdis

The posting explains the SSDI manual and change log will be updated in the Fall 2019 update.

Kidney SSDI - Adrenal Gland Involvement http://cancerbulletin.facs.org/forums/forum/site-specific-data-items-grade-2018/94404-ssdi-kidney-adrenal-gland-involvement

- Code 0 when the tumor is limited to the kidney (staging for AJCC is based on the size of the tumor). If tumor is “confined to kidney” and staging is based on size, then there is no involvement of the adrenal gland.
- The same changes have been made to Invasion Beyond Capsule and Major Vein Involvement
- Planned for the Version 1.7 SSDI manual update.

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