Clarifying the Rules for Coding EOD/Summary Stage

NIH NATIONAL CANCER INSTITUTE

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Agenda

- Differences between AJCC and EOD/Summary Stage
- Clarifications on how to code EOD/Summary Stage
- Case examples

AJCC

- Clinically based staging system focused on time frames of patient care (required only for CoC facilities)
  - Clinical, Path, Posttherapy Clin/Path
- Applies to select primary site/histology combinations
- Used to determine treatment protocols and provide prognosis
- Does not look at trends over time
- Historically changed every 5-7 years based on current medical practice
- Updates now site based (couple chapters per year)

EOD/Summary Stage

- Population based data collection system first implemented in 1960s
  - Collected as Collaborative Stage 2004-2015
- Used for two main purposes
  - Derivation of Summary Stage (primary purpose)
  - Derivation of T, N, M and Stage Group based on combined clin/path/neoadjuvant information
    - Data collection data items: EOD Primary Tumor, EOD Regional Nodes, EOD Mets

EOD/Summary Stage

- Applies to all primary site/histology combinations
  - Note 1: All cases get a Summary Stage
  - Note 2: Only those cases that AJCC determines are eligible for AJCC staging will get a T, N, M, Stage Group
- Focuses on trends over time and survival
- Not used to determine treatment protocols
- Stabilized to be as consistent as possible over time

EOD/Summary Stage and AJCC

- EOD Schemas, when applicable, based on AJCC definitions
- Code descriptions modified to match AJCC definitions so correct T, N, M and Stage Group will be derived
  - Additional information included in EOD reflects types of extension seen in real world cases
    - AJCC provides high level anatomical information presuming physician knowledge of the structures involved
- NCI SEER works closely with AJCC to ensure definitions align with AJCC definitions (when applicable)

EOD/Summary Stage AND AJCC

- **EOD derives the following based on the building block data items (as applicable)**
  - EOD Primary Tumor: Derive EOD T
  - EOD Regional Nodes; Derive EOD N
  - EOD Mets: Derive EOD M
  - These three fields used to derive EOD Stage Group
  - Summary Stage (for all cases)
  - Reminder: EOD does **not** derive AJCC since we don't have T, N, M, and Stage Group for the different patient time frames

EOD/Summary Stage and AJCC

- AJCC and EOD rules similar, but not identical
- Do not use AJCC rules to code EOD
  - Negative impact on Summary Stage
  - EOD/Summary Stage not as strict as AJCC
  - EOD/Summary Stage are not interested in patient care time frames
- Important to understand that the two differ and how that may impact your coding
- Reminder: Do NOT apply EOD/Summary Stage rules to AJCC
  - This will result in incorrect AJCC assignment

EOD/Summary Stage and AJCC

- IF AJCC rules are adopted, they will be included in EOD

EOD Regional Nodes

This input is used for staging

Notes

Note 1: For head and neck schemas, this field includes all lymph nodes defined as Levels I-VII and Other by TNM.

Note 2: This schema has lymph node codes that are defined as **CLINICAL** assessment only or **PATHOLOGICAL** assessment only.

- **CLINICAL** assessment only codes (450) are used when there is a clinical work up only and there is no surgical resection of the primary tumor or site. This includes FNA, core biopsy, sentinel node biopsy, or lymph node excision
  - *Exception:* If patient has neoadjuvant therapy, and the clinical assessment is greater than the pathological assessment, then the clinical assessment code would take priority
- **PATHOLOGICAL** assessment only codes (150, 500, 600, 700) are used for Oral Cavity sites when
  - Primary tumor or site surgically resected with
    - Any microscopic examination of regional lymph nodes. Includes
      - FNA, core biopsy, sentinel node biopsy or lymph node excision done during the clinical work up and/or
      - Lymph node dissection performed
  - Primary tumor or site NOT surgically resected, but
    - Lymph node dissection performed
- Remaining codes (no designation of **CLINICAL** or **PATHOLOGICAL** only assessment) can be used based on clinical and/or pathological information

Summary Stage and AJCC

- For most part, Summary Stage is not affected by AJCC rules
  - Once again, if Summary Stage adopts AJCC rules, specific note(s) will be added to address this
- As a reminder, Summary Stage is not affected by
  - Tumor Size (as some AJCC chapters for T are)
  - # Regional Lymph Nodes (as some AJCC chapters for N are)
  - SSDIs (as some AJCC chapters for stage group are)
  - Grade (as some AJCC chapters for stage group are)

EOD/Summary Stage and AJCC

- All staging information collected should be done during the patient's initial workup
  - AJCC, EOD and Summary Stage all have this same criteria
- Per EOD (same instruction for Summary Stage)
  - EOD (Summary Stage) should include all information available within four months of diagnosis in the absence of disease progression or upon completion of surgery(ies) in first course of treatment, whichever is longer

EOD/Summary Stage and AJCC

- For AJCC and EOD/Summary Stage, you are looking at the SAME information
- How it is coded in staging will differ depending on the rules for AJCC, EOD/Summary Stage
  - Remember: An unknown/blank in AJCC does not necessarily mean EOD/Summary Stage will be unknown

Case Example: Prostate

- Patient with elevated PSA. No DRE information available
- Prostate biopsy needle core biopsy confirms adenocarcinoma
- No evidence of extraprostatic extension on needle core biopsy. CT Abd/Pel negative for any lymph node involvement
- Bone scan negative
- Patient opted for watchful waiting (no prostatectomy)

- *Note: For Prostate ONLY, EOD collects information on the Clinical T (EOD Primary Tumor) and the Pathological T (EOD Prostate Path)*

Case Example: Prostate

- Clinical T: Blank (Per AJCC, a DRE is required to assign a Clinical T and we have no info on DRE)
- Clinical N: N0
- Clinical M: M0
- Pathological T, N, M: Blank, radical prostatectomy not performed
- EOD Primary Tumor: Code 300 (Localized, NOS, unk apparency)
- EOD Prostate Pathologic Extension: 900 (no radical prostatectomy performed)
- EOD Regional Notes: 000
- EOD Mets: 00
- Summary Stage 1: Localized (Absence of DRE does not affect Summary Stage)

Prostate Clarifications (EOD/Summary Stage)

- For 2023 updates (recently released in SEER*RSA)
  - Notes for Prostate for EOD Primary Tumor and Summary have been updated
  - Prostate is the chapter/schema that has the most notable differences between AJCC and Surveillance
  - Take time to review the updated notes to familiar yourself with the differences
    - See EOD Primary Tumor Notes #: 1, 7
    - See Summary Stage Note #: 7

Case Example: Prostate

- Patient with elevated PSA has a prostate MRI diagnosing presumed adenocarcinoma
- Imaging shows locally advanced disease with extraprostatic extension, seminal vesicles and bladder
- TRUS biopsy is recommended. The patient has a DRE immediately prior to the biopsy which is documented as benign, without any nodularity
- Biopsy cores of the right prostate show extraprostatic extension
- Hormones only

Case Example: Prostate

- AJCC only allows the DRE to be used to assign clinical T category and stage
- Biopsy findings cannot be used for AJCC staging either
  - *SEER confirmed this with AJCC*
- It is known that imaging cannot be used to assign prostate summary stage, but what about the biopsy findings?
- Should we assign this case as localized based on the DRE, or regional by extension, based on the biopsy findings

Case Example: Prostate

- EOD Primary Tumor has a note that biopsy confirming extraprostatic extension can be used
  - Code 350: Extraprostatic extension
    - Note: The seminal vesicles cannot be coded because they were diagnosed based on imaging only and imaging cannot be used to assign Clinical T or EOD Primary Tumor
- Summary Stage would be 2 based on the extraprostatic extension
  - Corresponding note missing in Summary Stage, but will be added for the 2024 updates

EOD/Summary Stage and AJCC

- There are times where a specific AJCC T or N category will be derived, but Summary Stage will be different based on the specific information
- This is because at one time, the T or N value was different in previous editions
- EOD/SS need to be reviewed carefully to make sure you are assigning the correct EOD or SS code

EOD/Summary Stage and AJCC (Colon and Rectum)

- Differences between AJCC and Summary Stage
  - If a tumor invades the following only, **AJCC Tis, Behavior is /3 and Summary Stage is localized (provided there is no nodal or metastatic involvement)**
    - Intramucosal, NOS; Lamina propria; Mucosa, NOS
    - Confined to, but not through muscularis mucosa
- This difference is because these tumors were once considered invasive, but are now in situ

EOD/Summary Stage and AJCC (Colon and Rectum)

- Determining between peritonealized and non-peritonealized (updated Notes 6 and 7)
  - Entirely peritonealized segments: Cecum, Transverse colon, Sigmoid colon, Rectosigmoid colon
  - Segmental surfaces that are peritonealized: Anterior and lateral surfaces of: Ascending colon, Descending colon, Hepatic flexure, Splenic flexure, Upper third of rectum, Anterior surface, Middle third of rectum
  - Entirely non-peritonealized segments: Lower third of rectum
  - Segmental surfaces that are non-peritonealized: Posterior surface of Ascending Colon, Descending Colon, Hepatic flexure, Splenic flexure, Upper two-thirds of rectum

Case Example

- Adenocarcinoma, Ascending colon, invasion through Muscularis Propria into pericolorectal tissue and pericolonic adipose tissue
- CAP= ASC Colon, ACA, G2, INV into Pericolorectal Tissue, PNI not identified, Tubular Adenoma, Margins not involved, pT3 pN0.

- *Per updated note 6, Ascending colon not entirely peritonealized site*
  - *Ascending colon does have segmental surfaces that are peritonealized (anterior and lateral surfaces). Pathology report does indicate if one of these surfaces is involved*
- *EOD Primary Tumor: Code 300; SS would be localized (code 1)*

EOD/Summary Stage

- As a Reminder, the main purpose of EOD is to derive Summary Stage (for SEER registries)
  - NPCR also collects Summary Stage, but it is manually assigned
- Want to avoid an unknown Summary Stage derivation as much as possible
- You are going to have situations where AJCC T, N, M or Stage Group are unknown (1 or all)
  - But this doesn't mean that EOD/Summary Stage would be unknown

EOD/Summary Stage

- Further clarifications (especially for Summary Stage)
  - If you have no information on regional nodes
    - If localized tumor, can assume nodes are negative (assign EOD Regional Nodes 000)
      - Reminder: Can get lymph node involvement information from imaging (this applies to AJCC as well)
    - If regional tumor and there is no other information, appropriate to assign EOD Regional Nodes as 999
      - SS treats unknown lymph node involvement as NONE

EOD/Summary Stage

- Further clarifications (especially for Summary Stage)
  - If you have negative regional nodes (Regional nodes positive: 00)
    - Then Summary Stage is 0, 1, 2, 7
    - EOD Regional Nodes would be coded as 000
  - If you have positive regional nodes (based on regional nodes positive data item)
    - Then Summary Stage is 3, 4, 7
    - EOD Regional Nodes cannot be coded to 000, 999

EOD/Summary Stage

- Further clarifications (especially for Summary Stage)
  - If you have no information on the primary tumor AND have positive regional nodes
    - Summary Stage is 3 (or 7 if mets present)
    - EOD Primary Tumor: 999
    - EOD Regional Nodes: Cannot be coded to 000, 999
    - EOD Mets: code as appropriate (reminder: if unknown, code 00)

EOD/Summary Stage

- If you have enough information to assign a Summary Stage, you have enough information to fill out the EOD fields
- If you have enough information to assign the EOD fields, you have enough information to fill out Summary Stage
- Make sure how you code these matches other related data items
  - Regional Nodes Positive
  - SSDIs that relate to lymph nodes
  - SSDIs that relate to tumor extension
- You want your data to be consistent

EOD/Summary Stage

- The basic premise of Summary Stage: Code what you know
  - This applies to EOD as well
- You do not have to have complete information to assign these fields
- Take what information you have and use that

Case Scenario

- I know SEER SS is Clinical PLUS Pathological information but what if the surgery was done elsewhere and we don't have the pathological info and or other clinical info such as additional imaging?

- *Code SS based on what information you do have, even if it's limited*
- *Remember: With EOD/SS code what you know*
  - *If AJCC is a TX or NX, don't automatically assume that SS2018 (or EOD) will be unknown as well*

Case Scenario

- Pt had clinical workup (scans and BX); never returned/cannot be located. Would it be best to enter as SS 9 because we do not have all the information. Or SS 1 based on what we do have?

- *Assign EOD/SS based on the information that you have*
- *Remember: Don't automatically default to an unknown in situations like this. If you have scans and a biopsy, you probably have enough information to code EOD/SS*
- *You want to avoid unknowns as much as possible*

Case Scenario

- Pathology report: Skin of right buttock extension: 11.5 cm invasive melanoma. Breslow's thickness greater than 4 mm. Depth of invasion difficult assess as mass is exophytic and large. Invades at least into the reticular dermis

- *The "at least" here is saying that the reticular dermis is involved, possibly more. Until you have evidence that there is further extension, code the information you do have*
  - *EOD Primary Tumor: 300 (Invasion of Reticular dermis)*
  - *Summary Stage: 2 (Invasion of Reticular dermis)*

EOD/Summary Stage Clarification

- If you know a tumor is localized, yet don't have the information to assign cT or pT, then assign the appropriate EOD Primary Tumor code for "Localized, NOS"
- Depending on the schema, a TX may still be derived
  - In those cases where tumor size is needed to determine the appropriate T code, a tumor size of unknown will derive a TX
    - Using the EOD Primary Tumor code for Localized will derive a known Summary Stage though

Case Example: Tumor Size

- CT scan showed kidney mass. Bx confirmed renal cell carcinoma
- Surgical resection: Mass confined to kidney (no size given)
- AJCC: cT Blank and pT Blank (no size provided)
- EOD Primary Tumor: Code 100: Any size tumor (including unknown): Confined (limited to the kidney)
  - Derived EOD T: TX
  - Summary Stage: 1
- Reminder: For EOD Primary Tumor, code 999 (unknown) would not be appropriate in this case since you know the tumor is confined to the kidney

EOD/Summary Stage Clarification

- If you know lymph nodes are involved, yet don't have the information to assign cN or pN, then assign the appropriate EOD Regional Nodes
  - Depending on the schema, a NX may still be derived
  - In those cases where regional nodes positive are needed to determine the appropriate N code, unknown # of lymph nodes may derive a NX
    - Using the EOD Regional Nodes code indicating positive nodes will derive a known Summary Stage though

Case Example: Positive nodes

- Colon resection: Lymph node dissection states positive mesenteric nodes (# nodes positive not provided)
- AJCC: pN Blank (# nodes positive required to assign N category)
- EOD Regional Nodes: Code 300: Mesenteric nodes
  - Derived EOD N: NX
  - Summary Stage: 3 (Localized tumor + regional nodes)
- Reminder: EOD Regional Nodes code 999 (unknown) would not be appropriate in this case since there are positive mesenteric nodes, just don't know how many

Breast: Difference between EOD/SS and AJCC

- For the following, SS Regional for Breast
  - Attachment of fixation to pectoral muscle(s) or underlying tumor
  - Deep fixation
  - Invasion of Pectoral fascia or muscle(s) or Subcutaneous tissue
  - Dermal lymphatic infiltration
  - Skin infiltration of primary breast, including skin of nipple or areola
  - Skin, NOS
- These would still be AJCC T1-T3 based on the tumor size

Case Example: Breast

- Pt undergoes lumpectomy with excision of the nipple and areola
- Path report states that the cancer ***invades the dermis of the skin (no dermal lymphatic invasion or epidermal invasion identified)***
- Does the invasion of the dermis of the skin affect EOD or SS?

- *This would be an EOD Primary Tumor 200 based on invasion of the skin (dermis)*
  - *AJCC would be T1-T3 based on the tumor size*
  - *Summary Stage would be at least a 2*

AJCC M0 and Summary Stage distant

- Do not use SS to determine which EOD fields to fill out
- Follow these guidelines
  - If information is coded in AJCC T: Look at EOD Primary Tumor
  - If information is coded in AJCC N: Look at EOD Regional Nodes
  - If information is coded in AJCC M: Look at EOD Mets
  - Always determine your EOD fields first-then assign Summary Stage

Case Example

- Patient with small cell carcinoma
- Separate nodule in different lobe of ipsilateral lung per radiology report and MD notes (MD staging cT4)
- Summary stage notes that this would be a 7 (distant site)
- EOD Mets does not list this in any of its code descriptions
- Can you please tell me what code I should be using?

Case Example

- Some structures coded as distant in SS are not coded as Mets in EOD
- SS does not change over time like AJCC staging. Just because something is distant in SS does not mean that EOD Mets automatically is coded as mets present
- Use SEER*RSA when coding EOD because it shows you the appropriate Summary Stage derivations
- If you look at EOD Primary Tumor, code 700, you'll see that this derives a Summary Stage D, which is code 7 (distant). This is because AJCC classifies this as a T4, but Summary Stage classifies it as distant based on historically how it was coded

AJCC M0 and Summary Stage 7

- Breast patient, noted to have positive ipsilateral supraclavicular nodes clinically
  - AJCC: cN3c
- EOD Regional Nodes: Code 700: Supraclavicular nodes, ipsilateral (derives N3c)
- Summary Stage: 7 (Distant-all Supraclavicular nodes are distant in Summary Stage)

AJCC M0 and Summary Stage 7

- *Note*: In previous editions of TNM, Supraclavicular nodes (ipsilateral, contralateral, bilateral, NOS) were always M1
  - This changed in AJCC 6th edition, when ipsilateral Supraclavicular nodes were moved to N3c
  - Summary Stage did not change, they are still counted as distant for any Supraclavicular nodes
  - Reminder: Each code in the EOD fields will provide Summary Stage derivations

SHORTCUTS FOR SUMMARY STAGE (USING SEER*RSA)

T	N	M	Summary Stage
IS	NONE, U, NA	NONE, U, NA	0
IS, L, RE, U	D	***<Any value>***	7
IS, L, RE, U	NONE, RN, U, NA	D	7
IS, L, U	RN	NONE, U, NA	3
L	NONE, U, NA	NONE, U, NA	1
RE	NONE, U, NA	NONE, U, NA	2
RE	RN	NONE, U, NA	4
D	***<Any value>***	***<Any value>***	7
U	NONE, U, NA	NONE, U, NA	9

This table is used for all Schemas to determine the derived Summary Stage based on EOD input.

Even those who are not doing EOD can use this table to help them determine the appropriate Summary Stage

CASE SCENARIO

- Breast cancer
- Tumor Size: 3.8 cm mass
- Skin of breast involved
- 2/3 SLN’s positive
- Axillary dissection done, which showed 3/14 LNs positive
- No evidence of metastatic disease

BREAST SCHEMA: EOD PRIMARY TUMOR

100	Any size tumor Confined to breast tissue and fat including nipple and/or areola Localized, NOS EXCLUDES: skin invasion of breast, nipple and areola (see code 200)	L
200	Any size tumor Attachment or fixation to pectoral muscle(s) or underlying tumor Deep fixation Invasion of •Pectoral fascia or muscle(s) •Subcutaneous tissue Local infiltration of dermal lymphatics adjacent to primary tumor involving skin by direct extension Skin infiltration of primary breast including skin of nipple and/or areola	RE

Code 200 is applicable since there is Skin Invasion. RE is the Summary Stage "T" derivation

BREAST SCHEMA: EOD REGIONAL NODES

200	PATHOLOGICAL assessment only Positive axillary (level I and II) lymph node(s), ipsilateral WITH more than micrometastasis (At least one metastasis greater than 2 mm, or size of metastasis not stated) WITHOUT internal mammary lymph node(s) or not stated	RN
250	PATHOLOGICAL assessment only Internal mammary node(s), ipsilateral, positive on sentinel node biopsy but not clinically apparent (No positive imaging or clinical exam) WITHOUT axillary lymph node(s), ipsilateral	RN

Code 200 is applicable since there are positive axillary nodes. RN is the Summary Stage "N" derivation

BREAST SCHEMA: EOD METS

00	No distant metastasis Unknown if distant metastasis	NONE
05	No clinical or radiographic evidence of distant mets •Tumor cells found in circulating blood, bone marrow or other distant lymph node tissue less than or equal to 0.2 mm	NONE

Code 00 is applicable since there is no evidence of mets.
NONE is the Summary Stage "M" derivation

BREAST SCHEMA: SUMMARY STAGE

T	N	M	Summary Stage
IS	NONE, U, NA	NONE, U, NA	0
IS, L, RE, U	D	***<Any value>***	7
IS, L, RE, U	NONE, RN, U, NA	D	7
IS, L, U	RN	NONE, U, NA	3
L	NONE, U, NA	NONE, U, NA	1
RE	NONE, U, NA	NONE, U, NA	2
RE	**RN**	**NONE, U, NA**	**4**
D	***<Any value>***	***<Any value>***	7
U	NONE, U, NA	NONE, U, NA	9

Our Case is:
RE+ RN+ None

Which is Summary Stage
4

[Summary Stage | EOD Data SEER*RSA (cancer.gov)]

Reminder

- Code what you know. Better to code known limited information than to code unknown
- EOD and Summary stage not as strict as AJCC because it doesn't deal with timeframes
- When there are differences between AJCC and EOD for a specific site, these should be included in EOD or Summary Stage notes
  - Prostate is the major schema where this shows up
    - Reminder: Major update of notes for v2023 updates (Version 3.0)
    - Received feedback on these updates from several SEER Registries (including Georgia!)

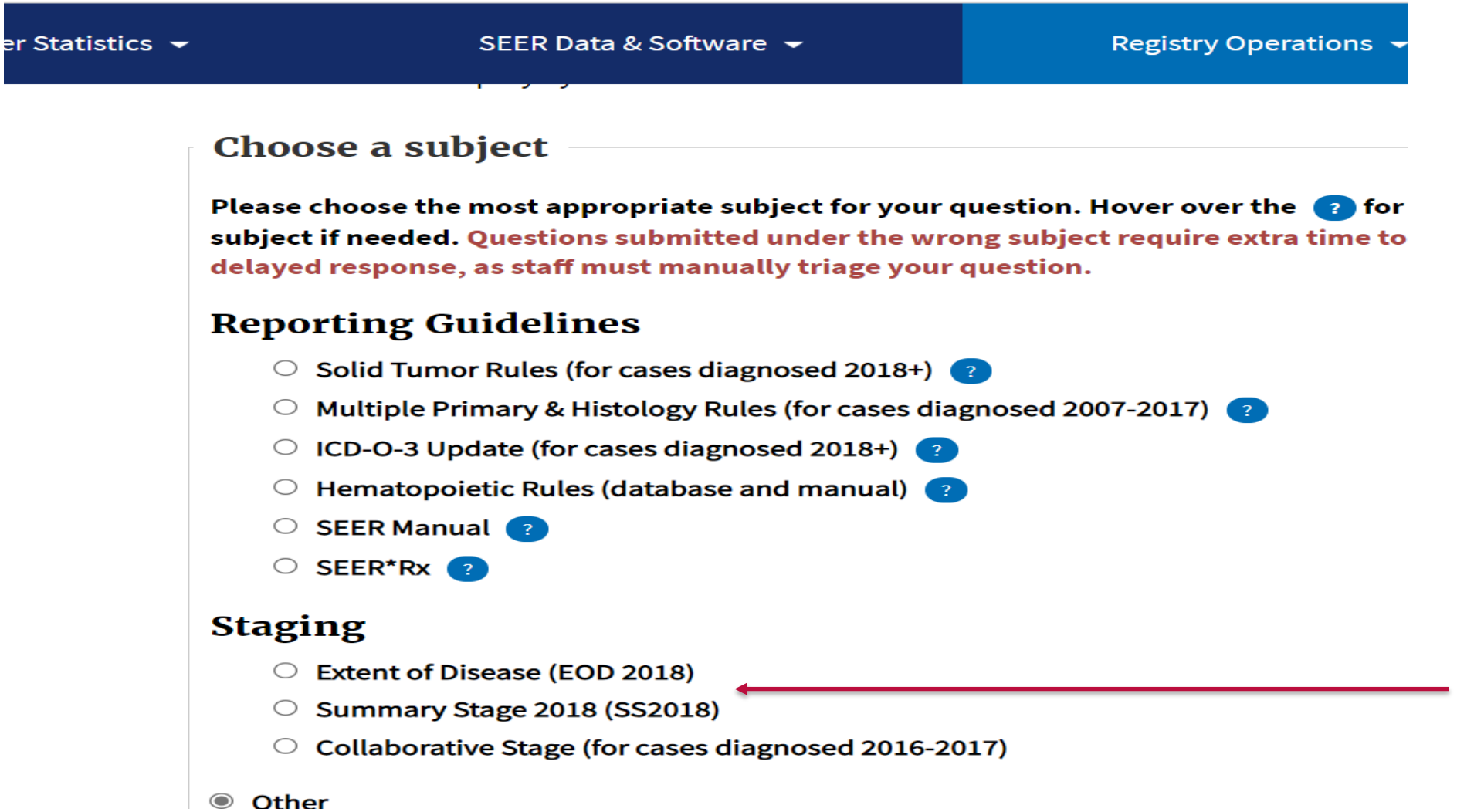
Reminder

- NCI/SEER strives to make things as clear as possible to registrars
- Many updates since 2018 have been done based on questions from registrars (including some from Georgia)
- If something is unclear, don’t hesitate to post a question in Ask SEER Registrar (EOD/Summary Stage) and we will review
- The coding instructions and codes can only be modified/clarified when we get feedback from the registrars who are using it
- Your feedback and questions are very important to us, and we do take them seriously

For questions about coding the EOD/Summary Stage data items

Please post to Ask SEER Registrar
https://seer.cancer.gov/registrars/contact.html

Choose: EOD or Summary Stage



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