# Lower GI 2023 Part 1

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## Q&A

Please submit all questions concerning the webinar content through the Q&A panel.

If you have participants watching this webinar at your site, please collect their names and emails.

We will be distributing a Q&A document in about one week. This document will fully answer questions asked during the webinar and will contain any corrections that we may discover after the webinar.

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## Fabulous Prizes

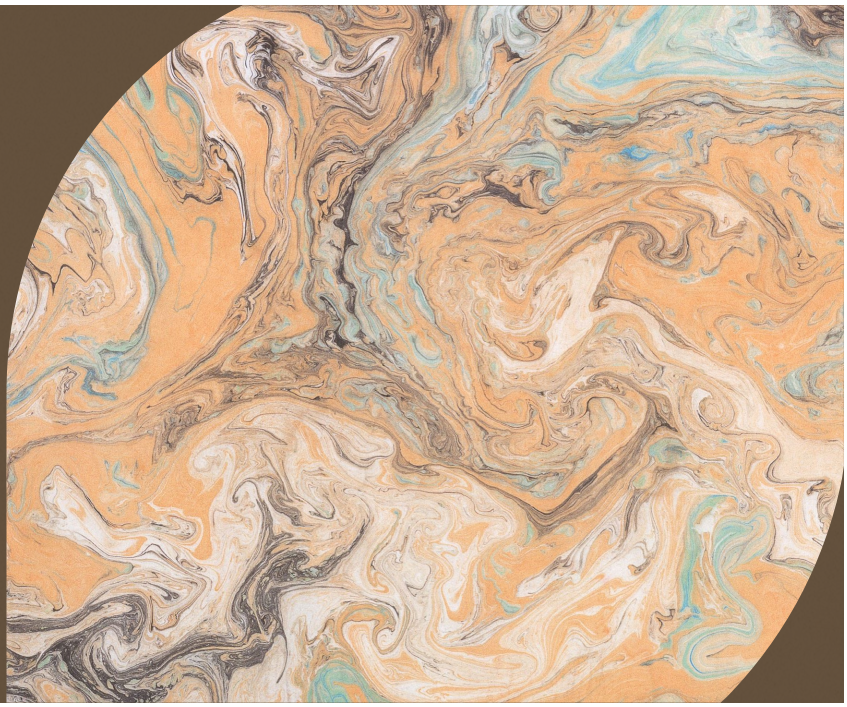
3

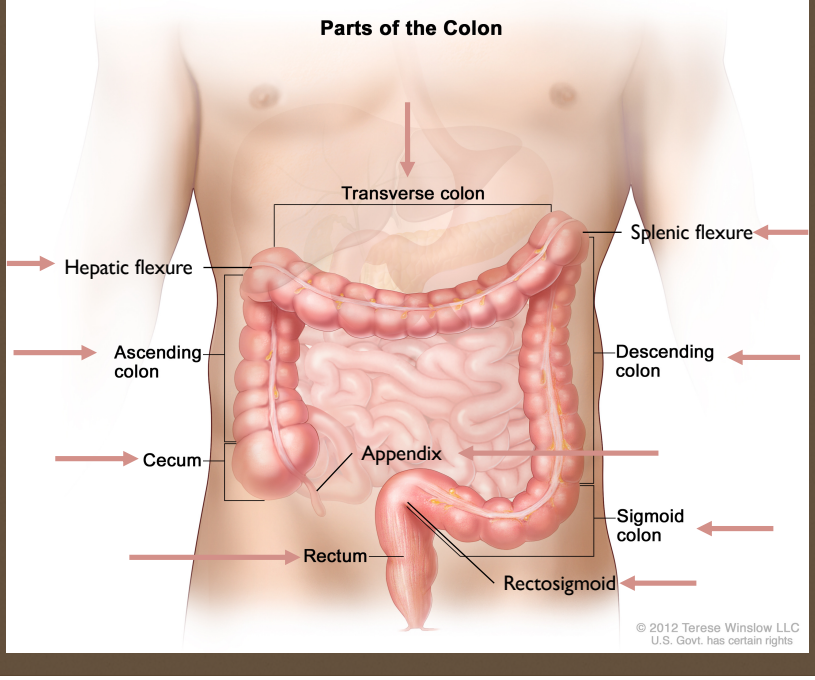
## Guest Presenter

- Denise Harrison, CTR
  - President-Elect, NCRA
- Elizabeth Harvey, CTR
  - Texas Cancer Registry

4

# Appendix v9 and Colorectal Cancers





# Colorectal and Appendiceal Cancers by the Numbers

- Colon, Rectosigmoid, Rectum, and Appendix share the same STR
- Colon, Rectosigmoid, and Rectum
  - AJCC Chapter 20
  - EOD Colon and Rectum
  - SS2018 Colon and Rectum
  - 1 Grade Table
  - 9 SSDI

Appendix

- AJCC Chapter 19 (8th Edition) 2018-2022
- AJCC Cancer Staging System (Version 9) 2023+
- EOD Appendix
  - 8th Edition 2018-2022
  - Version 9 2023+
- SS2018 Appendix
  - 8th Edition 2018-2022
  - Version 9 2023+
- 1 Grade Table
- 3 SSDI (1 new for 2023+)



# Coding Primary Site

Resources for Coding Primary Site for Solid Tumors, in priority order

1. ICD-O
2. SEER Program Manual
   a. Including Coding Guidelines in Appendix C
      - Guidelines for Colon and Rectosigmoid junction
      - No guidelines for Rectum or Anus or Appendix
3. Solid Tumor Rules

# Priority for Coding Primary Site: Colon

Priority when there is **conflicting** information:

- Resected cases
  - Operative report with surgeon's description
  - Pathology report
  - Imaging
- Polypectomy or excision without resection
  - Endoscopy report
  - Pathology report

**Subsites**

- Code the subsite with the most tumor when the tumor overlaps two subsites.
- Code C188 when both subsites are equally involved.



# Primary Site: Rectosigmoid, Rectum

- A tumor is classified as
  - **Rectosigmoid** when differentiation between rectum and sigmoid is not possible
  - **Rectal** when
    - Lower margin lies <16 cm from the anal verge **or**
    - Any part of the tumor is located at least partly within the supply of the superior rectal artery

| | Anatomic Part | | | Colonoscopy measurements |
|---|---|---|---|---|
| | Sigmoid Colon | | | 17-57 cm |
| | Rectosigmoid junction | | | 15-17 cm |
| | Rectum | | | 4-16 cm |
| Anal Canal | Surgical | | Anorectal ring | 2-3 cm |
| | | Anatomical | Dentate line | 1-1.5 cm |
| | | | Anus | 0-4 cm |
| | | | Anal verge | 0 cm |

Measurements from Anal verge



# Anatomic Transition Sigmoid to Rectum to Anal Canal

- Sigmoid
  - Tenia coli fuse to form the circumferential longitudinal muscle of rectal wall
- Rectum
  - Starts opposite the sacral promontory and ends at anorectal ring (proximal border of the puborectalis muscle)
- Anal Canal
  - Anorectal ring - top of anal canal
  - Dentate (pectinate) line – anatomic landmark where rectum changes to anatomic anal canal
  - Anal verge – lower end of anal canal

# Poll 1: Coding Primary Site

- PE: 52 yo WHF here for evaluation of anal mass
- CT abd/pel: mass involving anorectal ring outside the anal canal and extending to anal verge; separate mass in mid rectum
- Colonoscopy: 2 masses, one in the anus and a separate mass in the mid rectum; remainder of colon normal
- Pathology: Anal mass bx: adenocarcinoma; Rectal mass bx: adenocarcinoma



# Poll 1: # of Primaries and Primary Site Code(s)

How many primaries, and what primary site(s) is(are) assigned?

A. 1 – Rectum C209

B. 1 – Rectum/Anus/Anal Canal Overlapping Lesion C218

C. 2 – Rectum C209; Anus C211

Rationale: Tumors in sites that differ at the second CXxx or third CxXx character are multiple primaries per M4: 1tumor in the mid rectum, C209, and 1 tumor in the anus C211.

# Poll 2: Coding Primary Site

- Colonoscopy #1: 2 lg polyps, one in the cecum and the other in the ascending colon; ascending colon polyp incompletely removed. Path revealed benign findings; Colonoscopy #2: Clotted blood in A-colon and cecum d/t previous polypectomy
- Op note (Robot assisted laparoscopic hemicolectomy): 5cm mass at hepatic flexure which bled during previous polypectomy and was incompletely excised
- Pathology: Rt Ascending colon w/ 2.2 cm WD adenocarcinoma arising in a tubular adenoma; invades lamina propria (intramucosal carcinoma); proximal, distal, and circumferential margins uninvolved by invasive carcinoma; no LVI or PNI identified; no tumor deposits; 0+/12 LNs; pT1 pN0



# Poll 2: Primary Site Code

- What primary site is assigned?

A. Ascending colon C182

B. Hepatic flexure C183

**Rationale**: Since the tumor was resected, we use the description of the site from the operative report and assign hepatic flexure.

# Poll 3: Coding Primary Site

- 56 yo WF presents for repeat Rt Hemicolectomy for newly dx'd colon CA; new tumor identified at anastomosis s/p partial Rt colectomy for adenocarcinoma
- Colonoscopy w/ ileocolic anastomosis mass bx: prior end to side ileocolonic anastomosis in ascending colon ulcerated
- Robotic Rt hemicolectomy: 6 cm of ileum along w/ anastomosis, hepatic flexure and Rt portion of transverse colon removed
- Pathology: 3.1 cm PD adenocarcinoma at ileocolonic anastomotic line; invades through muscularis propria into pericolonic soft tissues, margins neg, 2+/36 LNs



# Poll 3: Primary Site Code

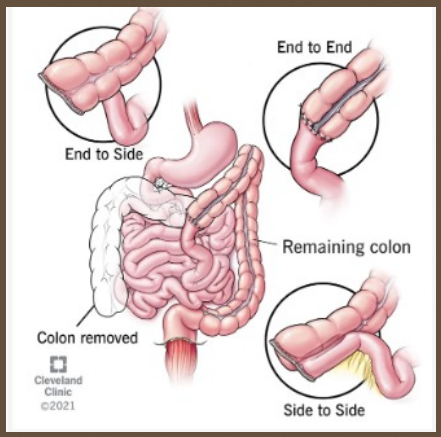
- What primary site is assigned?

A. Cecum/Ileocecal C180

B. Transverse colon C184

C. <u>Ascending colon/Rt colon C182</u>

Rationale: The cecum is no longer in place because the anastomosis was between the A-colon and the ileum. A portion of the T-colon was removed, but there was no tumor there. The colonoscopy stated the mass was at the anastomosis in the ASCENDING colon.




https://my.clevelandclinic.org/health/treatments/24035-anastomosis

# Poll 4: Coding Primary Site

- 80 yo WM non-hisp CC acute lg bowel obstruction in distal sigmoid colon; no palpable LNs
- CT abd/pel: sigmoid colon w/ mural thickening and irregularity w/ surrounding omental/mesenteric nodules
- Sigmoidoscopy: Obstructive mass 14 cm from anal verge
- Rectal EUA: Rectum w/ no palpable mass; Lt colon dissection: infiltration of mesocolon w/ mets, no liver mets, tumor palpable at rectosigmoid jxn w/ infiltration of lateral pelvic wall; Omental nodule excised
- Pathology: Omental nodule: metastatic MD involving fibroadipose tissue



# Poll 4: Primary Site Code

- What primary site is assigned?

A. Rectosigmoid junction C199

B. Colon, NOS C189

C. Rectum C209

Rationale: The operative note stated the mass was palpable at the rectosigmoid junction. Therefore, we code C199 rectosigmoid junction.

# Solid Tumor Rules

Equivalent Terms and Definitions
Multiple Primary Rules
Histology Rules

**[Appendix C181], Colon, Rectosigmoid, and Rectum C180-C189, C199, C209**



## STR: Colon, Rectosigmoid, Rectum, and Appendix (C180-C189, C199, C209)

- Effective for cases diagnosed **1/1/2018** and forward
  - Original tumor diagnosed **before** 1/1/2018 and a subsequent tumor diagnosed **1/1/2018 or later** in the **same primary site**: use the 2018 Solid Tumor Rules
- **Exclude** lymphoma and leukemia (M9590-9993) and Kaposi sarcoma (M9140)

# Histology Terms and Ideas

- **NET** (neuroendocrine tumor) replacing "carcinoid"
- **NEC** (neuroendocrine carcinoma) includes:
  - Small cell neuroendocrine
  - Large cell neuroendocrine
  - Poorly differentiated neuroendocrine carcinoma
- MINEN (mixed neuroendocrine neoplasm)
  - Formerly:
    - MANEC, which replaced adenocarcinoid

- GIST (gastrointestinal stromal tumor)
  - Reportable since 1/1/2021
  - Originate in cells of Cajal (neuro-regulatory cells in GI tract)
- Pseudomyxoma peritonei
  - High grade PMP is /3 and reportable
  - Low grade PMP is /1 and not reportable
- Severe or High Grade Dysplasia
  - Collect ONLY of pathologist expressly states CIS





# New for 2022

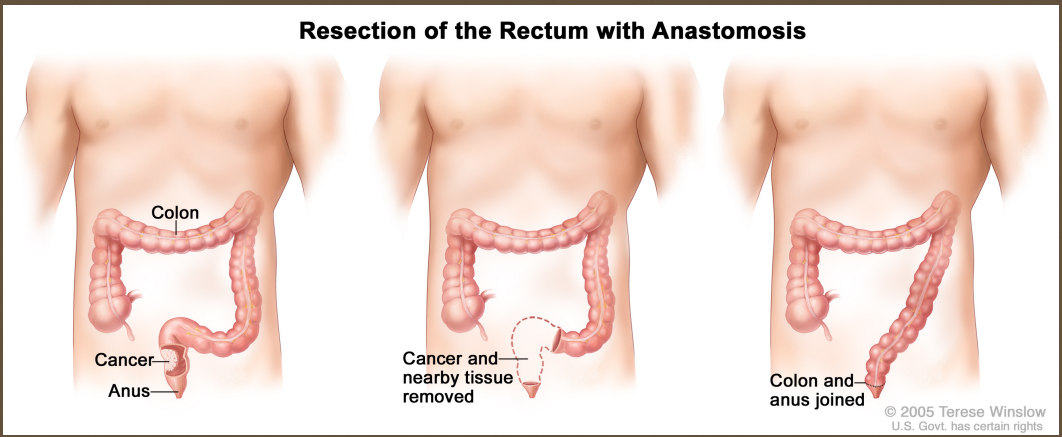
- Timing changes to rules M7 and M8
  - Changed from 24 months to 36 months, effective for cases diagnosed 1/1/2022+
  - Cases diagnosed 1/1/2018 through 12/31/2021, use 24 months
- Low grade appendiceal neoplasm (LAMN) reportable effective for cases diagnosed 1/1/2022+
  - LAMN may be either in situ 8480/2 or malignant 8480/3 based on physician statement of behavior
  - LAMN diagnosed prior to 1/1/2022 are not reportable

# Multiple Primary Rules

- 15 MP Rules in 3 separate categories
  - ***Unknown if Single or Multiple Tumors*** (M1)
  - ***Single tumor*** (M2)
  - ***Multiple tumors*** (M3-M15)
- Note preceding each colon module:
  - **Collision tumors** are counted as **two individual** tumors for the purpose of determining multiple primaries. Collision tumors were originally **two separate** tumors that arose in close proximity. As the tumors increased in size, they merged or overlapped each other. Use the ***Multiple Tumors Module***.



# Anastomosis



# Rule M7: Multiple Tumors Module

**M7 Multiple primaries**: Subsequent tumor arises at anastomotic site **AND**

- One tumor NOS, other subtype of NOS **OR**
- Subsequent tumor occurs > 36* months after original surgery **OR**
- Subsequent tumor arises in mucosa (not GIST)

*Cases diagnosed 1/1/2018 through 12/31/2021, use 24 months





# Rule M8: Multiple Tumors Module

**M8 Single primary**: Subsequent tumor arises at anastomotic site **AND**

- Subsequent tumor ≤ 36* months after surg **OR**
- Tumor arises in colon wall w/o involvement mucosa (does not apply to GIST) **OR**
- Doctor states an anastomotic recurrence

*Cases diagnosed 1/1/2018 through 12/31/2021, use 24 months

# Poll 5: Anastomosis

- The original tumor in 2020 was adenocarcinoma NOS 8140, treated w/ hemicolectomy
- 35 months later, patient had recurrence at the anastomotic site; pathology dx was mucinous adenocarcinoma 8480; physician documents anastomotic recurrence
- How many primaries?
  - A. 1
  - B. 2

Rationale: Use the rules in order. Stop at rule M7 because they are a NOS and subtype/variant. Don't go on to M8, even though it seems to apply due to the timing (< or = 36 months) and the physician documentation of anastomotic recurrence.



# Poll 6: Anastomosis

- Original tumor was **adenocarcinoma in a polyp (8210/3),** s/p hemicolectomy in 2017.
- Anastomotic recurrence 23 months later was **adenocarcinoma NOS (**8140/3)
- How many primaries?
  - A. 1
  - B. 2

**Rational: single primary** per M8 since anastomotic recurrence was within 36 months of original resection and the tumors have the **same** histology (we now code 8210 to 8140). No previous rules apply.

# Histologic Type

- Guidelines for ICD-O-3 Updates include:
  - New histologies
  - Changes in behavior
  - New preferred terminology
- STR Editors recommend coding histology using:
  - Solid Tumor Rules
  - Updated ICD-O histology codes and terms which can be found at: https://www.naaccr.org/icdo3/
  - ICD-O
  - Ask a SEER Registrar (when preceding 3 bullets fail to ID a histology code)



# Important Notes for Coding Histology

**Code the histology:**

- Prior to neoadjuvant therapy
- Using priority list and H rules
- Do not change histo to make the case applicable to staging

***Exception:*** If the initial diagnosis is based on histology from **FNA, smears, cytology,** or from a regional or metastatic site, and neoadjuvant treatment is given and followed by resection of primary site which identifies a different or specific histology, code the histology from the primary site.

# Important Notes for Coding Histology



Code **most specific** histology from either resection or biopsy:

- Code the **invasive** when in situ and invasive in single tumor
- **Discrepancy** between bx and resection (2 different histos/different rows), code from most representative specimen (>est amount of tumor)

# Documentation Priority to Identify Histology



1. Tissue/path report from primary (listed in priority order)
   - Addendum
   - Final dx/CAP synoptic report
   - CAP protocol
2. Tissue/pathology from a Metastatic site
3. Imaging (CT > PET > MRI)
4. Physician documentation (listed in priority order)
   - Treatment plan
   - Tumor Board
   - Medical record referencing the original pathology, cytology, or scan(s)
   - MD reference to histology
5. Cytology (rarely used for colon, rectosigmoid and rectum)

## Coding Histology



1. Code the most specific histology or subtype/variant, regardless of whether it is described as:

A. Majority or predominant part of tumor
B. Minority part of tumor
C. A component

*Terms A-C must describe a carcinoma or sarcoma*

2. Code histo described as differentiation or features only when there is a specific ICD-O code for the NOS w/ features or differentiation

## Coding Histology

3. Code histo described by ambiguous terms only when the conditions in A **or** B are met:

A. The only diagnosis available is **one histology** term described by ambiguous terminology (case accessioned based on ambiguous term and no other histo is available)
B. There is a **NOS histology and a more specific** (subtype/variant) described by ambiguous terminology **AND**
   - Specific histo confirmed by a physician **OR**
   - Patient is being treated based on the specific histo described by the ambiguous term

## Coding Histology

| List of Ambiguous Terms | | |
|---|---|---|
| Apparently<br>Appears<br>Comparable with<br>Compatible with<br>Consistent with | Favor(s)<br>Malignant appearing<br>Most likely<br>Presumed | Probable<br>Suspect(ed)<br>Suspicious (for)<br>Typical (of) |

**4. DO NOT CODE** histology when described as:

- Architecture
- Foci; focus; focal
- Pattern





## Rule H4: Single Tumor Module

**H4** Code mixed mucinous & signet ring cell as follows:

Adenoca w/mucinous & signet ring features **8140**

Mucinous & signet ring carcinoma

Mucinous > 50% = **8480**

Signet ring > 50% = **8490**

% mucinous & signet ring unk = **8255**

# Rule H5: Single Tumor Module

**H5** Code low grade appendiceal mucinous neoplasm (LAMN) and high grade appendiceal mucinous neoplasm (HAMN) 8480/**2** when:

- Diagnosis date is 1/1/2022 forward **AND**
- Behavior is stated to be in situ/non-invasive **OR**
- Behavior is not indicated

Rule Notes

- ICD-O-3.2 lists LAMN as 8480/**1**
- Dx of LAMN or HAMN does not require the tumor be > 50% mucinous
- If path report indicates **invasive**, keep reading the rules



# LAMN

- 2021 Appendix resection: LAMN diffusely involving the appendix and perforating the visceral peritoneum, as extensive intraperitoneal metastasis
- 2023 Lung wedge resection: metastatic mucinous neoplasm involving lung parenchyma and pleura, consistent with metastasis of the known appendiceal primary
- *LAMN diagnosed prior to 1/1/2022 is not reportable even when it spreads or metastasizes according to our expert pathologist consultant. Spread of this neoplasm does not indicate malignancy. For this case to be reportable, the diagnosis must indicate "carcinoma" or "adenocarcinoma." Pre-2022, LAMN is not reportable even when treated with surgery and chemotherapy. LAMN is reportable starting with cases diagnosed in 2022. (SEER Sinq 20230007)*

# Rules H6 – H8: Single Tumor Module

| H6: Code 8480/3 when the dx is: | H8: Code 8140/3 when dx is |
|---|---|
| *Exactly* Mucinous adenocarcinoma | *Exactly* Adenocarcinoma |
| 2 Histos and mucinous is > 50% | Adenocarcinoma, intestinal type |
| HAMN is /3 and dx date is 2022+ | Intestinal type adenocarcinoma |
| LAMN is /3 and dx date is 2022+ | **2 Histologies** |
| PMP (Invasive or Malignant) | Adenocarcinoma + mucinous |
| H7: Code 8490/3 when dx is | and % mucinous ? or <= 50% |
| *Exactly* Signet ring adenocarcinoma | Adenocarcinoma + signet ring |
| 2 Histos and signet ring is > 50% | and % signet ring ? or <= 50% |

**Mucinous and Signet ring cell adenocarcinoma must meet a percentage requirement (>50%) in order to be coded. Do not use majority of tumor, predominantly, or predominant part of tumor to code mucinous or code signet ring cell.**



# Rule H8 as it Appears in the STR Manual

Code adenocarcinoma NOS **8140** when the final diagnosis is:
- Two histologies:
  - Adenocarcinoma and mucinous carcinoma
    - Percentage of mucinous **unknown/not documented**
    - Mucinous documented as less than or equal to 50% of tumor
  - Adenocarcinoma and signet ring cell carcinoma
    - Percentage of signet ring **unknown/not documented**
    - Signet ring cell documented as less than or equal to 50% of tumor
- **Exactly** adenocarcinoma **OR**
- **Intestinal** type adenocarcinoma **OR** adenocarcinoma intestinal type (no modifiers or additional histologic terms).

This part of rule H8 is on 1 page of the STR; the rest **and** the notes continue on the next page

Notes 1-3

Be sure to read the **ENTIRE** rule **and** notes. Some rules bleed over to the next page!

# Intestinal Type Adenocarcinoma

- What if intestinal type adenocarcinoma is described by a specific histologic term?
  - Example 1: Mucinous intestinal type adenocarcinoma
  - Example 2: Signet ring cell intestinal type adenocarcinoma
- Treat as an adenocarcinoma w/ a subtype/variant when intestinal type adenocarcinoma is further described by a specific term



# Poll 7: Histology

- Final Diagnosis: Proximal *colon*, segmental resection: Invasive adenocarcinoma, poorly differentiated, with signet ring cell features.
- Synoptic Report A: *Colon* and Rectum - Resection Specimen Procedure: Right hemicolectomy,
  - Tumor Site: Right (ascending) *colon*,
  - Histologic Type: Signet-ring cell carcinoma
  - Histologic Grade: G3: Poorly differentiated

What is the histology?

A. Adenocarcinoma, NOS 8140
B. Signet ring cell adenocarcinoma 8490

Rationale: When there are discrepancies between the final diagnosis and synoptic report, use the document that provides the more specific histology.

# Rule H12: Multiple Tumor Module

**H12** Code FAP **8220** when

- Clinical history says patient has FAP **AND**
  - Final diagnosis on path is adenoCA in FAP **OR**
  - > 100 polyps in resected specimen (**with** adenoCA in at least 1 polyp)

FAP is a **genetic** disease. Diagnostic criteria include:

- 100 or more colorectal adenomatous polyps **OR**
- Germline mutation in APC **OR**
- Family history (FH) FAP w/ colorectal adenomas (@ age < 30) **OR**
- FH FAP at least one epidermoid cyst, osteoma or desmoid tumor



# Other Stuff

SSDIs
Grade Fields

# SSDI General Instructions

Timing for Collection of SSDIs

- Collected during initial dx, work up, and FCOT depending on the specific instructions for the SSDI
- Consult Reports have priority over the original report
- Source Documents suggested for some data items
  - If no source document, use any info from med record
  - If Pathology report is suggested, that document includes the addenda or revisions, gross, microscopic, synoptic, and CAP protocol or cancer checklist provided by the pathologist
  - Physician statement



# SSDI General Instructions

General Rules versus SSDI specific rules

- Record highest value (pos v. neg or actual numerical value) obtained from any lab or tissue-based examination) prior to treatment, **unless** instructions for the specific test state otherwise
- If the SSDI specific coding rules column is yes, then check the SSDI for additional coding instructions

# Pathology Consults

- If a report is sent out for consult and the results are different than the original report, record the results from the consult
  - Should discuss with pathologist if no amended report done
  - Outside consults always take priority
  - Applies to SSDI and Grade
  - Documented in
    - SEER Program and Coding Manual
    - STORE



# Timing Rules for Lab Tests

Use for **lab values only** – not for results based on tissue

SSDI helps with source of the information

- Lab value versus info from bx, resection, autopsy, etc.

1. All lab values must be done no earlier than ~3 months before diagnosis
2. Unless instructions for a specific laboratory test state otherwise, record only tests results obtained
   - Before any cancer-directed treatment is given (neoadjuvant therapy or surgical), AND
   - If multiple lab tests are available, record the highest value

# SSDI Based on Tissue

Priority Order for SSDIs

- Addendums or amendments
- Synoptic report (including CAP protocol)
- Pathology report: final diagnosis
- Physician statement

New text

General Rules versus SSDI specific rules

- Record highest value (pos v. neg or actual numerical value) obtained from any lab or tissue-based examination) prior to treatment, **unless** instructions for the specific test state otherwise
- If the SSDI specific coding rules column is yes, then check the SSDI for additional coding instructions



# SSDI Based on Tissue

- Unless instructions for a specific tissue test state otherwise, record the highest value (positive versus negative, or actual numerical value) obtained from any tissue-based examination (biopsy, surgical resection, bone marrow biopsy).
- Check the SSDI for additional coding instructions for:
  - Circumferential Resection Margin
  - Perineural Invasion
  - Tumor Deposits

# SSDI: Colorectum and Appendix

| | Schema | SSDI | Specific Rules |
|---|---|---|---|
| | Appendix | Histologic Subtype | |
| Lab | Colon and Rectum | CEA Pretx Lab Value | Yes |
| | Colon and Rectum | CEA Pretx Interpretation | Yes |
| Tissue | Colon and Rectum | Circumferential Resection Margin | Yes |
| | Colon and Rectum | KRAS | |
| | Colon and Rectum | Microsatellite Instability (MSI) | |
| | Colon and Rectum | Perineural Invasion | |
| | Colon and Rectum | Tumor Deposits | |
| | Colon and Rectum | BRAF Mutational Analysis | Yes |
| | Colon and Rectum | NRAS Mutational Analysis | Yes |



# Tumor Grade: Colon, Rectosigmoid, Rectum

- Highest grade from primary tumor during appropriate staging time [c, p, yc, yp]
- If only one grade noted, unk if c, p, yc, yp, code as c grade, use 9 for p, blank for y fields

| Code | Description |
|---|---|
| 1 | G1: well differentiated |
| 2 | G2: moderately differentiated |
| 3 | G3: poorly differentiated |
| 4 | G4: undifferentiated, anaplastic |
| 9 | Grade cannot be assessed (GX), unk |

# Tumor Grade: Appendix (Required for AJCC PSG)

- Highest grade from primary tumor during appropriate staging time [c, p, yc, yp]
- If only one grade noted, unk if c, p, yc, yp, code as c grade, use 9 for p, blank for y fields

| Code | Description |
|---|---|
| 1 | G1: well differentiated |
| 2 | G2: moderately differentiated |
| 3 | G3: poorly diff, undiff, anaplastic |
| 9 | Grade cannot be assessed (GX), unk |



# Poll 8: Coding Grade

- Appendectomy for appendicitis: path shows moderately differentiated adenocarcinoma

How are the grade fields coded?

A. Grade Clinical 2; Grade Pathological 2

B. Grade Clinical 2; Grade Pathological 9

C. Grade Clinical 9; Grade Pathological 2

Rationale: https://cancerbulletin.facs.org/forums/forum/site-specific-data-items-grade-2018/gi-schemas/92351-colon-grade

# Poll 9: Coding Grade

- Colonoscopy w/ bx: path shows moderately differentiated adenocarcinoma; resection w/ no residual tumor identified

How are the grade fields coded?

A. Grade Clinical 2; Grade Pathological 2
B. Grade Clinical 2; Grade Pathological 9
C. Grade Clinical 9; Grade Pathological 2

Rationale: https://cancerbulletin.facs.org/forums/forum/site-specific-data-items-grade-2018/gi-schemas/92351-colon-grade



# Poll 10: Coding Grade

- Colonoscopy w/ polypectomy: path shows moderately differentiated adenocarcinoma; resection w/ no residual tumor identified

How are the grade fields coded?

A. Grade Clinical 2; Grade Pathological 2
B. Grade Clinical 2; Grade Pathological 9
C. Grade Clinical 9; Grade Pathological 2

Rationale: https://cancerbulletin.facs.org/forums/forum/site-specific-data-items-grade-2018/gi-schemas/92351-colon-grade

# Poll 11: Coding Grade

- Colonoscopy w/ polypectomy: path shows moderately differentiated adenocarcinoma; no further resection

How are the grade fields coded?

A. Grade Clinical 2; Grade Pathological 2

B. Grade Clinical 2; Grade Pathological 9

C. Grade Clinical 9; Grade Pathological 2

Rationale: https://cancerbulletin.facs.org/forums/forum/site-specific-data-items-grade-2018/gi-schemas/92351-colon-grade



# Poll 12: Coding Grade

- Excisional bx for definitive treatment of rectal tumor: Path is MD adenocarcinoma.

- How are the grade fields coded?

A. Grade Clinical 2; Grade Pathological 2

B. Grade Clinical 2; Grade Pathological 9

C. Grade Clinical 9; Grade Pathological 2

Rationale: The excisional bx was the planned **definitive** Tx of the rectal tumor.

# Poll 13: Coding Grade

- Excisional bx for Tx of rectal tumor: Path is MD adenocarcinoma; margins are positive; resection shows no residual tumor

- How are the grade fields coded?

A. Grade Clinical 2; Grade Pathological 2

B. Grade Clinical 2; Grade Pathological 9

C. Grade Clinical 9; Grade Pathological 2

Rationale: The excisional bx was the planned Tx of the rectal tumor.



# SSDI Appendix: Histologic Subtype

- 2023+ diagnoses
- Use STR to determine histology prior to coding this SSDI
- Histology 8480/2 or 8480/3 have multiple definitions that are collected in this SSDI. This data item is used to further identify specific subtypes for histology code 8480/2 or 8480/3.

| Code | Description |
|---|---|
| 0 | Histology is NOT 8480 |
| 1 | Low-grade appendiceal mucinous neoplasm; LAMN |
| 2 | High-grade appendiceal mucinous neoplasm: HAMN |
| 3 | Mucinous Adenocarcinoma/carcinoma<br>Mucus Adenocarcinoma/carcinoma<br>Mucoid adenocarcinoma/carcinoma<br>Colloid adenocarcinoma/carcinoma |
| 4 | Other terminology coded to 8480 |
| BLANK | NA-Diagnosis year is prior to 2023 |

# Appendix SSDI (2023+): Poll 14: Coding Histo Subtype: 8480

2023 Abdominal paracentesis (for jelly belly): Final dx: High grade pseudomyxoma peritonei most likely related to appendiceal primary

How is the SSDI for Histologic Subtype coded?

A. 0 – Histology not 8480
B. 1– LAMN
C. 2 – HAMN
D. 3 – Mucinous/colloid adenocarcinoma
E. 4 – Other terminology coded to 8480

Rationale: Colon STR Rule H6 states to code high grade PMP to 8480/3. High grade PMP is not listed in the terminology for histologic subtype, therefore code 4 is appropriate.



# SSDI: CEA Pre-Tx Lab Value (CRC & Appendix)

- CEA levels can be measured in blood, plasma, or serum
- Recommendations for CEA measurement
  - Pre-op before potentially curative resection (Stage I-III), then every 3-6 months for 2 years, then annually until 5 yrs after first tx
  - Monthly as a response marker for tx of Stage IV dz.

- Ability to cause treatment resistance
- Can promote metastasis in human xenograft models through
  - Increased cell adhesion
  - Induction of cytokines that promote cancer cell survival
  - Inhibition of inflammatory responses
  - Inhibition of programmed cell death (apoptosis)

# 2 SSDI: CEA PreTx Lab Value and Interpretation (CRC & Appendix)

**CEA PreTX Lab Value**

- MD statement can be used if no other info available
- Record highest CEA value prior to tx or polypectomy
  - Record to nearest **tenth**
- Use 0.1 for CEA lab value when stated as <0.1

**CEA PreTX Interpretation**

- Record highest CEA interpretation prior to tx or polypectomy
- Code 3 when CEA value known, but no interpretation and the lab value with its normal range is not documented

- Use same test for value and interpretation

61

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# SSDI: CEA Pre-tx Lab Value Codes

| | |
|---|---|
| 0.0 | 0.0 ng/ml exactly |
| 0.1 – 9999.9 | Exact value to nearest tenth (0.1 when stated as < 0.1) |
| XXXX.1 | ≥ 10,000 ng/ml |
| XXXX.7 | Test ordered, results not in medical record |
| XXXX.8 | N/A, Info not collected |
| XXXX.9 | Not documented in medical record; CEA not assessed or unknown |

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# SSDI: CEA Pre-tx Interpretation Codes

| | |
|---|---|
| 0 | CEA neg/normal; WNL |
| 1 | CEA +/elevated |
| 2 | Borderline |
| 3 | CEA documented, unk if + or - (normal values N/A) **and** no MD interpretation |
| 7 | Test ordered, results not in chart |
| 8 | N/A, info not collected |
| 9 | Not in med record, CEA not assessed or unk |



# Poll 15: Coding CEA Interpretation

CEA lab value = 8.3 (Report states reference values have not been established for patients who are greater than 69 years of age)

How would the SSDI for CEA Interpretation be coded?

A. 0 Negative, WNL
B. 1 Positive/elevated
C. 2 Borderline
D. 3 CEA documented, unknown if + or -
E. 9 CEA not assessed or unknown if assessed

Code 3 would be the appropriate interpretation code. Code 9 would be used when you don't have a CEA lab value, but you do in this case, you just don't know if it's positive or negative.

# SSDI: Tumor Deposits

- Use path, or MD statement if no other info available
- TD = discontinuous spread w/in the lymph drainage of the primary tumor; nodules lack histo evidence of residual LN
- Record # TD even if + LN

**Synonyms for TD**: discontinuous extramural extension, malignant tumor foci, malignant peritumoral deposits, satellite nodule

| | |
|---|---|
| **00** | No TD |
| **01 – 99** | Exact # TD |
| **X1** | ≥ 100 TD |
| **X2** | TD identified, ? # |
| **X8** | N/A, info not collected |
| **X9** | Not documented in med record; can't be determined by path; path report doesn't mention; no surgical resection; TD unk |



# Poll 16: Coding Tumor Deposits

Endoscopic mucosal resection: adenoca, G1, invades lamina propria and muscularis mucosa; mucosal margin cannot be assessed (piecemeal resection); no LNs submitted or found; **tumor deposits not identified**

How would the SSDI for Tumor Deposits be coded?

A. 00 No TD identified
B. X9 Cannot be determined

Rationale: Tumor deposits cannot be evaluated based on EMR.

If you enter any code other than X9 when the surgery is < 30, you will get an edit.

# SSDI: Perineural Invasion (PNI)

- Use path, or MD statement if no other info available
- **Presence** of PNI can come from bx or resection
- **Absence** of PNI can **only** come from surgical resection pathology

| | |
|---|---|
| **0** | PNI not identified/not present |
| **1** | PNI identified/present |
| **8** | N/A, info not collected |
| **9** | Not documented in med record; path doesn't mention PNI; can't be determined by pathologist; PNI unknown |



# Poll 17: Coding Perineural Invasion

Endoscopic mucosal resection: adenoca, G1, invades lamina propria and muscularis mucosa; mucosal margin cannot be assessed (piecemeal resection); no LNs submitted or found

How would the SSDI for Perineural Invasion be coded?

A. 0 No perineural invasion identified

B. 9 Not documented, unknown

Rationale: The path did not mention PNI; therefore, we cannot code this to 0. We need to use 9 .

# SSDI: Circumferential Resection Margin (CRM)

- MD statement of CRM can be used if no other info
- CRM = distance in mm between deepest point of invasion and the surgically dissected margin in RP or mesentery
- SPPS Codes required for coding CRM (per Note 3 v3.0)
  - Colon and Rectosigmoid primaries: 30-80; if 00-29, code XX7
  - Rectal primaries: 27, 30-80; if 00-26 or 28, code XX7
- Synonyms: CRM, circumferential radial/resection margin, radial (w/ w/o resection) margin, mesenteric/mesocolon/mesorectal margin, soft tissue margin
- Record in mm to nearest tenth per path
- If documented in cm, multiply by 10



# Comparison of Codes in the 3 Colorectal Surgery Tables

| Code and Description (Blue shade use XX.7 per Note 3) | C18.X | C19.9 | C20.9 |
|---|---|---|---|
| A000 None; no surgery of primary site; autopsy ONLY | X | X | X |
| A100 Local tumor destruction, NOS | X | X | X |
| A120 Electrocautery; fulguration (incl. use of hot forceps for tumor destruction) | X | X | X |
| (No specimen sent to pathology from surgical events A100 – A 120) | X | X | X |
| A200 Local tumor excision, NOS | X | X | X |
| A260 Polypectomy, NOS | X | X | X |
| A270 Excisional biopsy (currently allowed for CRM for Rectum C20.9 only) | X | X | X |
| A280 Polypectomy-endoscopic (see code A280 below for Rectum C20.9) | X | | |
| A290 Polypectomy-surgical excision | X | | |
| Any combination of A200 or A260–A290 (A200 or A260-A270 for C19.9 and C20.9) WITH | X | X | X |
| A220 Electrocautery | X | X | X |
| A280 Curette and fulguration | | | X |

# Comparison of Codes in the 3 Colorectal Surgery Tables

| Code and Description | | C18.X | C19.9 | C20.9 |
|---|---|---|---|---|
| A300 Partial colectomy, segmental resection | | X | | |
| A300 Wedge or segmental resection; partial proctosigmoidectomy, NOS | | | X | |
| A300 Wedge or segmental resection; partial proctectomy, NOS | | | | X |
| Anterior resection | For Rectosigmoid and Rectum, procedures in code A300 include, but are not limited to those listed on the left. | | X | X |
| Hartmann operation | | | X | X |
| Low anterior resection (LAR) | | | X | X |
| Partial colectomy, NOS | | | X | |
| Rectosigmoidectomy, NOS | | | X | |
| Sigmoidectomy | | | X | |
| Transsacral rectosigmoidectomy | | | | X |
| A310 Plus resection of contiguous organs; example: small bowel, bladder | | | X | |
| A320 Plus resection of contiguous organs; example: small bowel, bladder | | X | | |



# SSDI: CRM Codes

| Code | Description |
|---|---|
| 0.0 | Positive CRM, margin involved, margin < 0.1mm (no exact mm) |
| 0.1 – 99.9 | Exact distance (Exact mm has priority over 0.0 and XX codes) |
| XX.0 | ≥ 100 mm |
| XX.1 | Margin clear, distance not stated; CRM negative; No residual tumor on specimen |
| XX.2 | Margins can't be assessed (must be stated on path or checklist) |
| XX.3 | Described as "at least" 1 mm |
| XX.4 | Described as "at least" 2 mm |
| XX.5 | Described as "at least" 3 mm |
| XX.6 | Described as ">" 3 mm |

# SSDI: CRM Codes

| Code | Description |
|---|---|
| XX.7 | No resection primary site (See Note 3)<br>Surgical procedure did not remove enough tissue to measure the circumferential or radial resection margin (See Note 3)<br>(Examples include: polypectomy only, endoscopic mucosal resection (EMR), excisional biopsy only, transanal disk excision) |
| XX.8 | N/A; not collected for this case |
| XX.9 | Not documented in med record, unknown; **in situ only**; checked N/A on CAP checklist; proximal and distal margins only |

# Poll 18: CRM Coding

Margin Status: all margins clear
Distance for Radial Margin: 2 - 3mm

How is the SSDI for CRM coded?

A. 2.5 – 2 to 3 mm
B. 3.0 – 3 mm
C. 2.1 – one above the lower end of the range
D. XX.4 – Described as "at least" 2 mm
E. XX.5 – Described as "at least" 3 mm

Rationale: Follow the general rules for ranges, which is to code one above the lower number. So code 2.1. Document in text. https://cancerbulletin.facs.org/forums/forum/site-specific-data-items-grade-2018/gi-schemas/137471-circumferential-margin

# Poll 19: Coding CRM

MARGINS
Margin Status for Invasive Carcinoma: All margins negative for invasive carcinoma
Closest Margin(s) to Invasive Carcinoma: Proximal Radial (circumferential) or mesenteric
Distance from Invasive Carcinoma to Closest Margin: Greater than 1 cm
Distance from Invasive Carcinoma to Distal Margin: Not applicable

How is the SSDI for CRM coded?

A. XX.0 – ≥ 100 mm
B. 10.1 – greater than 1 cm
C. XX.6 – greater than 3 mm

Rationael: Based on this description, you would follow the general rules for coding greater than. You have to convert 1 cm to 10 mm. Since CRM has a decimal point, you would record 10.1. https://cancerbulletin.facs.org/forums/forum/site-specific-data-items-grade-2018/gi-schemas/137683-ssdi-cecum-crm



# Poll 20: Coding CRM

Rt colectomy: Tumor present at visceral peritoneum; all other margins uninvolved by invasive carcinoma

How is the SSDI for CRM coded?

A. 0.0 – margin involved
B. XX.1 – margins clear; distance not stated
C. XX.9 – unknown

**Note 11:** Code XX.9 when
•Checked "Not applicable: Radial or Mesenteric Margin" on CAP Checklist
•**Pathology report describes only distal and proximal margins, or margins, NOS**
•Only specific statements about the CRM are collected in this data item
•CRM not mentioned in the record

Ratiionale: The original answer of XX.2 was based on the following CAnswer Forum post which was corrected after the webinar: https://cancerbulletin.facs.org/forums/forum/site-specific-data-items-grade-2018/gi-schemas/137435-colorectal-ssdi-circumferential-radial-margin-visceral-peritoneum

# Poll 21: CRM Coding

Resection s/p neoadjuvant therapy: No residual invasive/malignant tumor identified; complete response; 0+/15 LNs; margins negative; distance to radial margin 2.4 cm; ypT0ypN0

How is the SSDI for CRM coded?

A. XX.1 – no residual tumor in specimen
B. 2.4 – measurement from path report
C. 24.0 – measurement from path report
D. XX.9 – unknown

Rationale: Record the distance given from the pathology report. https://cancerbulletin.facs.org/forums/forum/site-specific-data-items-grade-2018/gi-schemas/137229-crm-w-no-residual-tumor-but-distance-given-to-radial-margin



# Poll 22: Coding CRM

CRM at least 2 cm

How is the SSDI for CRM coded?

A. XX.0 – ≥ 100 mm
B. 2.1 – at least 2 cm
C. 20.1 – at least 2 cm
D. XX.6 – greater than 3 mm

Rationale: Follow the general instructions for "greater than" 2 cm = 20 mm, so we would code 20.1 https://cancerbulletin.facs.org/forums/forum/site-specific-data-items-grade-2018/gi-schemas/136481-crm-at-least

# 3 SSDI: KRAS, NRAS, and BRAF Mutational Analysis



- MD statement may be used when no further info
- Oncogenes that, when mutated have ability to be switched "on" **independent** of presence of growth factor receptors
- 4 KRAS codons commonly mutated in CRCs (See KRAS note 3)
- 3 NRAS codons commonly mutated in CRCs (See NRAS note 5)
- 1 BRAF codon commonly mutated in CRCs (BRAF V600E (c.1799T>A)
- Commonly done for pts w/ metastatic dz
  - LN or other mets may be used for results if none from primary site
- **KRAS**: Use results from initial workup (clin and path)
- **NRAS**, **BRAF**: Record prior to neoadjuvant tx; if no NRAS prior to neoadjuvant tx, use post-tx NRAS



# SSDI: KRAS Note 3 and NRAS Note 5

Commonly mutated KRAS and NRAS codons
Use list to help identify the KRAS/NRAS mutation with its associated codon

| **Codon 12 (KRAS and NRAS)** | **Codon 13** |
|---|---|
| Gly12Asp (GGT>GAT)<br>Gly12Val (GGT>GTT)<br>Gly12Cys (GGT>TGT)<br>Gly12Ser (GGT>AGT)<br>Gly12Ala (GGT>GCT)<br>Gly12 Arg (GGT>CGT)<br>Codon 12 mutation, NOS | Gly13Asp (GGC>GAC)<br>Gly13Arg (GGC>CGC)<br>Gly13Cys (GGC>TGC)<br>Gly13Ala (GGC>GCC)<br>Gly13Val (GGC>GTC)<br>Codon 13 mutation, NOS |
| **Codon 61 (KRAS and NRAS)** | **Codon 146 (KRAS only)** |
| Gln61Leu (CAA>CTA)<br>Gln61His (CAA>CAC)<br>Codon 61 mutation, NOS | Ala146Thr (G436A) (GCA>ACA)<br>Codon 146 mutation, NOS |

KRAS only

KRAS and NRAS

# 3 SSDI: KRAS, NRAS, and BRAF Mutational Analysis (Coding Structure)

| | | | | |
|---|---|---|---|---|
| 0 | Normal; K/NRAS/BRAF negative; K/NRAS/BRAF wild type: Negative for (somatic) mutations, no alterations, no (somatic) mutations identified, not present, not detected | | | |
| | | **KRAS Codons** | **NRAS Codons** | **BRAF Codons** |
| 1 | Abnormal (mutated) | 12, 13, and/or 61 | 12, 13, and/or 61 | BRAF V600E (c.1799T>A) |
| 2 | | 146 only | **not** 12, 13, or 61 | **not** BRAF V600E (c.1799T>A) |
| 3 | | **not** 12, 13, 61, or 146 | | |
| 4 | | 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; K/NRAS/BRAF unknown; no microscopic confirmation of tumor; insufficient tissue available to perform test | | | |
| Blank | | | N/A - Diagnosis year is prior to 2021 | |



# Poll 23: Coding KRAS

**DETECTED: KRAS (Tier 1) KRAS, G12D, Exon 2, p.Gly12Asp, c.35G>A, NM_033360.2, (Frequency 24.9%)**

How is the SSDI for KRAS coded?

A. 1 Abnormal (mutated) codons 12, 13, and/or 61

B. 4 Abnormal (mutated), NOS, codon(s) not specified

Rationale: Gly12Asp is listed as being on codon 12 in the SSDI notes

# Poll 24: Coding KRAS

**Colon:** KRAS c.35g>A.p. Gly12Asp. Type: missense VAF 14.1 CN: N/A

How is the SSDI for KRAS coded?

A. 1 Abnormal (mutated) codons 12, 13, and/or 61
B. 4 Abnormal (mutated), NOS, codon(s) not specified

Rationale: Gly12Asp is listed as being on codon 12 in the SSDI notes



# Microsatellite Instability (MSI)

Physician statement of MSI can be used when no other information is available
Can code from nodal or metastatic tissue

| Genetic testing for MSI | Immunology testing for the Mismatch Repair proteins |
|---|---|
| • Looks for the microsatellites in the DNA.<br>• Many colon cancers with HNPCC (Lynch Syndrome) have high MSI<br>• High MSI colon cancers have a better response to surgery and survival<br>• Reports states stable, H, or L | • Shows the functionality of the MMR gene by looking at its products (proteins)<br>• Most common markers are MLH1, MSH2, MSH6, PMS2<br>• Widely available in pathology laboratories and highly concordant with DNA-based MSI testing |

# IHC Result Interpretation

| MMR Gene | IHC Result | Interpretation |
|---|---|---|
| MLH1 | Positive | Protein expressed |
| MSH2 | Positive | Protein expressed |
| MSH6 | Positive | Protein expressed |
| PMS2 | Positive | Protein expressed |

All 4 genes functioning normally

| MMR Gene | IHC Result | Interpretation |
|---|---|---|
| MLH1 | Positive | Protein expressed |
| MSH2 | Negative | Protein NOT expressed |
| MSH6 | Negative | Protein NOT expressed |
| PMS2 | Positive | Protein expressed |

MSH2 or MSH6 not functioning due to LOH
~100% chance to have deleterious mutation in MSH2 gene

| MMR Gene | IHC Result | Interpretation |
|---|---|---|
| MLH1 | Negative | Protein NOT expressed |
| MSH2 | Positive | Protein expressed |
| MSH6 | Positive | Protein expressed |
| PMS2 | Negative | Protein NOT expressed |

MLH1 or PMS2 not functioning due to LOH
20% chance to have deleterious mutation in MLH1
80% chance to loss of expression due to methylation of the MLH1 gene



# IHC Result Interpretation

| MMR Gene | IHC Result | Interpretation |
|---|---|---|
| MLH1 | Positive | Protein expressed |
| MSH2 | Positive | Protein expressed |
| MSH6 | Negative | Protein NOT expressed |
| PMS2 | Positive | Protein expressed |

MSH6 not functioning due to LOH
~100% chance to have deleterious mutation in MSH6

| MMR Gene | IHC Result | Interpretation |
|---|---|---|
| MLH1 | Positive | Protein expressed |
| MSH2 | Positive | Protein expressed |
| MSH6 | Positive | Protein expressed |
| PMS2 | Negative | Protein NOT expressed |

PMS2 not functioning due to LOH
~100% chance to have deleterious mutation in PMS2

# SSDI: Microsatellite Instability (MSI)

| | MSI (Genetic Test) [0, 1, 2, 8, 9] | MMR (Immunologic Test) [0, 2, 8, 9] |
|---|---|---|
| **Code** | Looking at instability in informative markers (microsatellites) | Looking for the MMR gene products: most common markers are MLH1, MSH2, MSH6, PMS2 |
| 0 | MSS | No loss of nuclear expression (Positive result) |
| 0 | Stable | Mismatch repair (MMR) intact (Positive result) |
| 0 | Negative | MMR proficient (pMMR or MMR-P) (Positive result) |
| 0 | Low probability of MSI-H | MMR normal (Positive result) |
| 0 | MSS/MSI-L | |
| 1 | MSI-L | |
| 2 | Unstable, high | Loss of nuclear expression (in 1 or more MMR proteins) (Negative result) |
| 2 | Unstable, NOS (no designation of high or low) | MMR deficient (dMMR or MMR-D) (Negative result) |
| 2 | MSI-H | MMR abnormal (Negative result) |
| 8 | Not applicable: Information not collected for this case | |
| 9 | Not documented; MSI-I (intermediate); MSI equivocal; In situ and no info; unknown if/ or not assessed | |



# Poll 25: MSI Coding

Immunostains for mismatch repair protein (MMR) are performed, and the results are as follows:

MLH1 (M1): Negative
PMS2 (A16-4): Negative
MSH2 (G219-1129): Positive, intact nuclear staining
MSH6 (SP93): Positive, intact nuclear staining

**Interpretation**: Loss of nuclear expression of MLH1 and PMS2

How is the SSDI for MSI coded?

A. 0 No loss of nuclear expression; mismatch repair intact
B. 2 MMR abnormal

Rationale: There is loss of nuclear expression of 1 or more MMR proteins (MLH1 and PMS2). MSH2 and MSH6 are normal (present per the staining), which is why they are noted to be positive.

# Poll 26: MSI Coding

2022 Colonoscopy with hot snare polypectomy: **MLH1 & PMS2 Loss of Nuclear Expression,** MSH2 & MSH6 Intact Nuclear Expression; 2022 resection: **No loss of nuclear expression of MMR proteins: No evidence of deficient mismatch repair (low probability of MSI-H)**

How is the SSDI for MSI coded?

A. 0 No loss of nuclear expression; mismatch repair intact
B. 2 MMR abnormal (loss of nuclear expression in 1 or more MMR proteins)

Rationale: The biopsy shows there is loss of nuclear expression of 1 or more MMR proteins (MLH1 and PMS2). MSH2 and MSH6 are normal (intact), which is why they are noted to be positive. Use the biopsy results for loss of nuclear expression.



# Poll 28: MSI Coding

POSITIVE (Intact):MSH2 and MSH6
NEGATIVE (Absent): MLH1 and PMS2

How is the SSDI for MSI coded?

A. 0 No loss of nuclear expression; mismatch repair intact
B. 2 MMR abnormal

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## Fabulous Prizes



## CE Certificate Quiz/Survey

### CE Phrase

### Link

- https://survey.alchemer.com/s3/7032814/Lower-GI-2023-Part-1

# Coming UP…

## Lower GI 2023 Part 2

- Guest Host: Denise Harrison
- 6/1/2023

## IT Worked for Me: In"FUN"matics in the Cancer Registry

- Guest Host: Ronda Broome, Lisa Landvogt, Kelli Merriman
- 7/13/2023

# Thank you!

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