

Colon, Rectum, and Appendix

**2011 Reporting Requirements and CSv02.03.02
NCCN/ASCO Treatment Guidelines by Stage**

FCDS 2011 Educational Webcast Series
September 15, 2011
Steven Peace, CTR

Presentation Outline

- Overview – Tumor Characteristics
- Anatomy of Colon/Rectum – Layers
- Multiple Primary and Histology Coding Rules Refresher
- Collaborative Stage Data Collection System (CSv02.03.02)
- 2011 FCDS Required C.S. Site Specific Factors
- NCCN/ASCO Treatment Guidelines by Stage
- Documentation

Overview – Tumor Characteristics

Colon/Rectal Cancer – 3rd most common

- 2011 estimates in the United States
 - 101,340 new colon cancer cases
 - 39,870 new rectal cancer cases
 - 49,380 deaths
- 2011 estimates in Florida
 - 10,180 new cases
 - 3,370 deaths

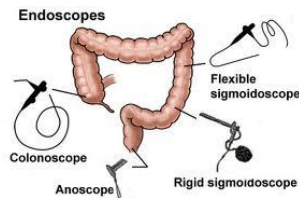
Source: American Cancer Society Cancer Facts and Figures 2011

Colorectal Cancer Histology

- Many originate in polyps
- 95% - 98% adenocarcinoma
- Most produce mucin (glandular)
- 10% or more are mucinous (>50% mucin production)
- <1% are signet ring cell (>50% signet rings) - more aggressive
- 2% - 5% other cancers (GIST, NET, etc.)

Screening Advancements

- Rigid Sigmoidoscopy
- Flexible Sigmoidoscopy
- Full Colonoscopy
- Virtual Colonoscopy
- Other Testing



Large Intestine Anatomy

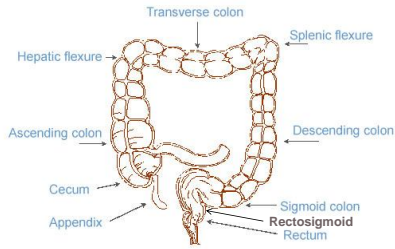
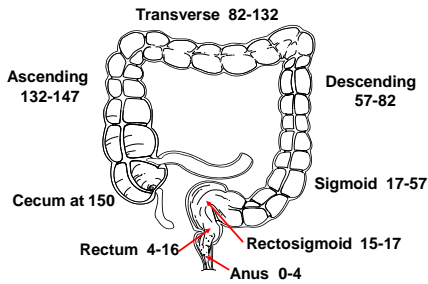


Image source: SEER Training Modules Colorectal Cancer

Colonoscopy Measurements



Distance from anal verge - approximations only.
Source: AJCC Cancer Staging Manual, fifth edition, page 85, 1997.

8

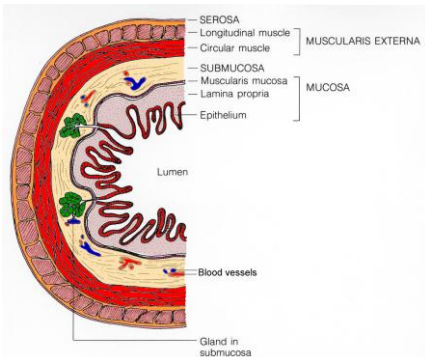
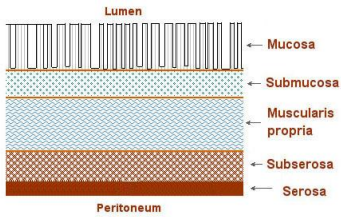


Image source: Emory Cancer Institute

9

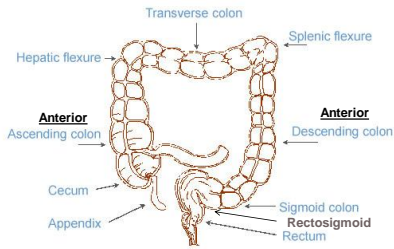
Colorectal Wall Anatomy



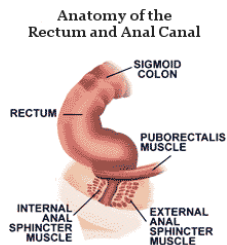
10

Image source: SEER Training Modules Colorectal Cancer

Intraperitoneal Colorectal Subsites



Rectosigmoid/Rectum Anatomy



12

Image source: International Foundation for Functional Gastrointestinal Disorders (IFFGD)

Regional Lymph Nodes

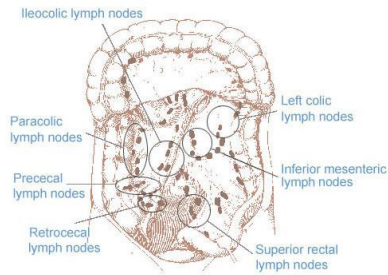


Image source: SEER Training Modules Colorectal Cancer

Metastatic Sites

- Large intestine
 - Liver
 - Lung
 - Seeding of other segments of colon, small intestine, or peritoneum
- Mucinous carcinoma of appendix
 - Peritoneal surfaces

Multiple Primary Rules Histology Coding Rules



15

Multiple Primary and Histology Coding Rules

January 01, 2007

National Cancer Institute
Surveillance Epidemiology and End Results Program
Bethesda, MD

16

Colon Equivalent Terms, Definitions and Illustrations C180-C189 (Excludes lymphoma and leiomyoma M9500-9989 and Kaposi sarcoma M9140)

Introduction
Note 1: Terms and subtypes are covered by the Colon Sites rule.
Note 2: For the purpose of these rules, the words "sigmoid" and "sigmoid" are synonymous with a polyp.
Use these rules only for cases with primary colon cancer.
Nearly eight percent of colon cancers are adenocarcinoma. Ten to fifteen percent of these cases produce enough mucus to be designated as mucinous (colloid). Mixed histologies and specific types that are mucinous or colloid are grouped all as rare.
*ACR Clinical Oncology

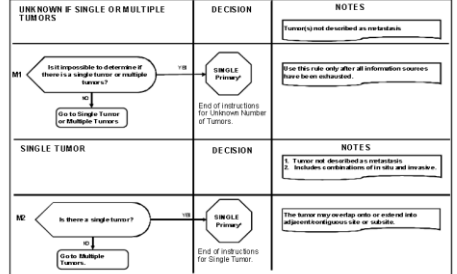
Equivalent or Equal Terms
Note: For the purpose of these rules, the words "exophytic" and "polypoid" are not synonymous with a polyp.

- Familial polyposis, familial adenomatous polyposis (FAP)
- Intramucosal, lateral extension
- Invasion through the wall, extension through the wall, transmural
- Low grade neuroendocrine carcinoma, carcinoid
- Mucinous, mucin features
- Mucin-producing, mucin secreting
- Mucinous, colloid
- Polyp, adenoma
- Trocha, raised polypoid
- Tumor, mass, lesion, neoplasm
- Type, subtype, predominantly, with features of, major, or with ____ differentiation

Definitions
Adenocarcinoma (C245-2): A specific histology commonly found in the appendix.
Adenocarcinoma, intestinal subtypes (C255): Usually used for colon primaries (see instructions).
Adenocarcinoma, intestinal type (C144): A form of stomach cancer. Do not use this code when the tumor occurs in the colon.
Adenoma: A benign lesion composed of tubular or villous structure showing **lateral extension** (See definition of **lateral extension** and **note**).

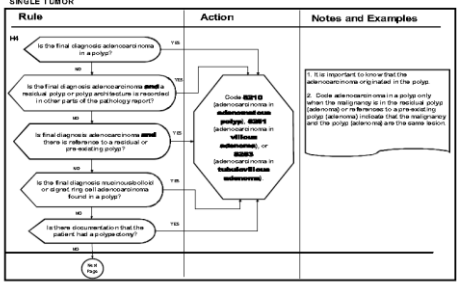
17

Colon Multiple Primary Rules - Flow chart C180-C189 (Excludes lymphoma and leiomyoma M9500-9989 and Kaposi sarcoma M9140)



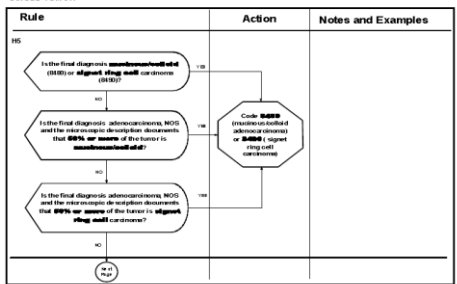
18

Colon Histology Coding Rules - Flowchart
C110-C115
(Excludes lymphoma and leukemia M900-9999 and Kaposi sarcoma M8140)



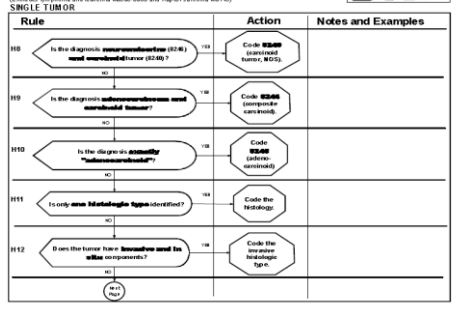
25

Colon Histology Coding Rules - Flowchart
C116-C120
(Excludes lymphoma and leukemia M900-9999 and Kaposi sarcoma M8140)



26

Colon Histology Coding Rules - Flowchart
C121-C125
(Excludes lymphoma and leukemia M900-9999 and Kaposi sarcoma M8140)



27

Colon Histology Coding Rules - Flowchart
 (C180-C189)
 (Excludes: Stomach and Duodenum M850-0000 and Kaposi Sarcoma M8470)

SINGLE TUMOR

Rule	Action	Notes and Examples
<p>H13</p> <p>Is there sarcoma, malignant complex, NOS (8800) and a more specific histology?</p> <p>NO</p> <p>Is there sarcoma, NOS (8800) and a more specific carcinoma?</p> <p>NO</p> <p>Is there adenocarcinoma, NOS (8490) and a more specific adenocarcinoma?</p> <p>NO</p> <p>Is there carcinoma, NOS (8000) and a more specific carcinoma (see above only)?</p> <p>NO</p>	<p>Code the more specific histology</p> <p>Code the more specific histology</p>	<p>1. The specific histology for all the tumors may be identified as pattern, architecture, type, subtype, predominantly, with features of, major, or with _____ differentiations.</p> <p>2. The specific histology for adenocarcinoma tumors may be identified as, type, subtype, predominantly, with features of, major, or with _____ differentiations.</p>
H14	Code the more specific histology (C18.0-C18.9 histology code)	

28

CSv2 Coding Instructions, CSv02.03.02

Colon
 C18.0-C18.9 (excluding appendix)

29

Schema Selection

- <http://www.cancerstaging.org/cstage/index.html>
- Colon (excludes Appendix, GIST, NET) of Colon
- Click on Site Specific Schema tab on the left
- Select the **Colon** Schema
- All Florida Cases are coded in CSv02.03.02

CSv02.03.02, Select Correct Schema

The screenshot shows the 'Collaborative Stage Version 2' interface. At the top, it says 'TM1 7 Schema List (v2.03.02)'. Below this is a table of schemas with columns for 'Schema Name', 'Description', and 'Status'. A green arrow points to the 'Check Version' button on the right. Another green arrow points to the 'Check Schema' button on the right. A red circle with the number '31' is in the bottom left corner.

Colon

Colon (excluding Appendix, Gastrointestinal Stromal Tumor, and Neuroendocrine Tumor)

C18.0, C18.2-C18.9

- C18.0 Cecum
- C18.2 Ascending colon
- C18.3 Hepatic flexure of colon
- C18.4 Transverse colon
- C18.5 Splenic flexure of colon
- C18.6 Descending colon
- C18.7 Sigmoid colon
- C18.8 Descending flexure of colon
- C18.9 Colon, NOS

CS Tumor Size	CS Site-Specific Factor 7
CS Extension	Microsatellite Instability (MSI)
CS Lymph Node Exam	CS Site-Specific Factor 8
CS Lymph Nodes Exam	Perineural Invasion
CS Lymph Nodes Exam	CS Site-Specific Factor 9
Regional Nodes Exam	NRAS
CS Metz at Dx	CS Site-Specific Factor 10
CS Metz Exam	Mtj Loss of Heterozygosity (LOH)
CS Site-Specific Factor 1	CS Site-Specific Factor 11 - 999
Carcinoembryonic Antigen (CEA)	CS Site-Specific Factor 12 - 999
CS Site-Specific Factor 2	CS Site-Specific Factor 13 - 999
Overall Assessment of Regional Lymph Nodes	CS Site-Specific Factor 14 - 999
CS Site-Specific Factor 3	CS Site-Specific Factor 15 - 999
Carcinoembryonic Antigen (CEA) Lab Value	CS Site-Specific Factor 16 - 999
CS Site-Specific Factor 4	CS Site-Specific Factor 17 - 999
Tumor Deposits	CS Site-Specific Factor 18 - 999
CS Site-Specific Factor 5	CS Site-Specific Factor 19 - 999
Tumor Regression Grade	CS Site-Specific Factor 20 - 999
CS Site-Specific Factor 6	CS Site-Specific Factor 21 - 999
CS Site-Specific Factor 7	CS Site-Specific Factor 22 - 999
CS Site-Specific Factor 8	CS Site-Specific Factor 23 - 999
Circumferential Resection Margins (CRM)	CS Site-Specific Factor 24 - 999
	CS Site-Specific Factor 25 - 999

32

Colon

Histology Inclusion Table AJCC 7th ed.

Code
8000-8152
8154-8231
8243-8245
8347
8348
8250-8276
8940-8950
8960-8961

33

Colon

CS Tumor Size

Code	Description
000	No macrotumor found
001-989	001- 989 millimeters (mm) (Exact size in mm)
989	989 mm or larger
990	Microscopic focus or foci only, no size of focus given
991	Described as "less than 1 cm"
992	Described as "less than 2 cm," or "greater than 1 cm," or "between 1 cm and 2 cm"
993	Described as "less than 3 cm," or "greater than 2 cm," or "between 2 cm and 3 cm"
994	Described as "less than 4 cm," or "greater than 3 cm," or "between 3 cm and 4 cm"
995	Described as "less than 5 cm," or "greater than 4 cm," or "between 4 cm and 5 cm"
998	Familial/multiple polyposis (M-8220/8221)
999	Unknown, size not stated Size of tumor cannot be assessed Not documented in patient record

34

Colon - CS Tumor Size

- 998 = Familial/multiple polyposis
- (M-8220/8221)



35

Colon

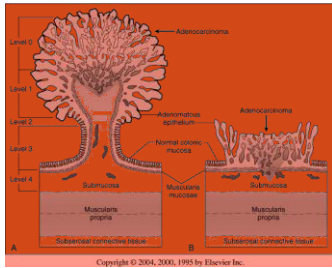
CS Extension

- Note 1: Ignore intraluminal extension to adjacent segments of colon/rectum or to the lumen from the cecum, code depth of invasion or extension, deemed as indicated.
- Note 2: Codes 000-009 are used for contiguous extension from the site of origin. Discontiguous involvement is coded in CS Sites of Dx.
- Note 3: Tumor that is adjacent to other organs or structures, macroscopically, is classified as FD. If tumor is adjacent in adherence to another structure, but is not pathologically confirmed to be adherent, the tumor is classified as T1. Use code 989 for macroscopically confirmed tumor in adherence. If tumor is pathologically confirmed to be adherent, the classification is based upon extent of tumor invasion into or through the wall. Use codes 000-009, 100-200, 300-400, 500-600, 700-800, 900-989 as appropriate to describe the macroscopically confirmed depth of tumor invasion for these cases. Use codes 000, 989, 990 to code extent of tumor invasion for these cases.
- Note 4: High grade dysplasia and severe dysplasia are generally not reportable in cancer registries, but regularly does collect these, code 000 should be used.

Code	Description	T1M 7 Map	T1M 8 Map	5377 Map	532000 Map
000	In situ, intraepithelial, noninvasive	Tis	Tis	IS	IS
000	(Adenocarcinoma, noninvasive, in a polyp or adenoma)	Tis	Tis	IS	IS
100	Invasive tumor confined to mucosa, NOS, including intramucosal NOS	Tis	Tis	L	L
110	Invasive lamina propria, including lamina propria in the stalk of a polyp	Tis	Tis	L	L
120	Confined to and not through the muscularis mucosae, including intramucosal mucosa in the stalk of a polyp	Tis	Tis	L	L
130	Confined to head of polyp, NOS	T1	T1	L	L
140	Confined to stalk of polyp, NOS	T1	T1	L	L
150	Invasive tumor in polyp, NOS	T1	T1	L	L
160	Invasive submucosa (superficial invasion), including submucosa in the head or stalk of a polyp	T1	T1	L	L
170	Stated as T1 with no other information on extension	T1	T1	L	L

36

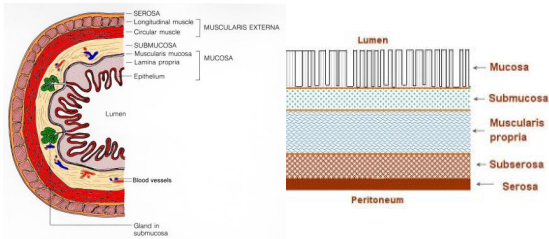
Types of Colon Polyps



Source: Abelloff et al: Clinical Oncology, third edition, Elsevier Churchill Livingstone, 2004

37

Colorectal Wall Anatomy



200	Muscularis propria invaded Stated as T2 with no other information on extension	T2	T2	L	L
300	Localized, NOS Confined to colon, NOS	T1	T1	L	L
400	Extension through wall, NOS Invasion through muscularis propria or muscularis, NOS Non-peritonealized pericolic tissues invaded Perimuscular tissue invaded Subserosal tissue/subperosal fat invaded Transmural, NOS Wall, NOS	T3	T3	L	L
410	OBsolete data converted V0203 See code 478 Stated as T3 with no other information on extension	ERROR	ERROR	ERROR	ERROR
420	OBsolete data converted V0203 See code 458 Fat, NOS	ERROR	ERROR	ERROR	ERROR
450	Extension to: All colon sites: Adjacent tissues, NOS Connective tissue Mesenteric fat Mesentery Mesocolon Pericolic fat Ascending and descending colon Retroperitoneal fat Transverse colon and flexures Gastrocolic ligament Grosser omentum	T3	T3	RE	RE
458	Fat, NOS	T3	T3	RE	RE
460	OBsolete data retained and reviewed V0203 See Note 3, codes 560 and 570 Adherent to other organs or structures, but no microscopic tumor	T3	T3	RE	RE

39

470	Stated as T3 with no other information on extension	T3	T3	RE	RE
500	Invasion through serosa (mesocolon) (mesenteric peritoneum) Tumor penetration to surface of mesentery (peritoneum)	T4a	T4	RE	RE
550	500 + (450 + 458)	T4a	T4	RE	RE
560	Stated as T4a with no other information on extension	T4a	T4	RE	RE
565	Adherent to other organs or structures clinically with no microscopic examination Tumor found in adhesions if microscopic examination performed	T4b	T4	RE	RE
570	Adherent to other organs or structures, NOS	T4b	T4	RE	RE
600	All colon sites: - Small intestine - Cecum - Cecal appendix - Ascending colon - Cecal appendix - Cecal appendix - Liver, right lobe - Transverse colon and flexures - Colicoduodenal junction - Kidney - Liver - Pancreas - Spleen - Sigmoid - Descending colon - Cecal appendix - Cecal appendix - Sigmoid colon - Cecal appendix - Cecal appendix - Cecal appendix - Cecal appendix	T4b	T4	RE	RE
650	OBsolete DATA RETAINED AND REVIEWED V0303 See codes 855 and 875 All colon sites: - Abdominal wall - Mesoperitoneum (including fat)	T4b	T4	RE	RE

40

675	Sigmoid colon - Mesoperitoneum (including fat)	T4b	T4	D	RE
700	Cecum, ascending, descending and sigmoid colon: - Fallopian tube - Ovary - Uterus	T4b	T4	D	D
750	All colon sites unless otherwise stated above: - Adrenal (suprarenal) gland - Bladder - Diaphragm - Falx to sinu - Gallbladder - (Other segments) of colon via vessels	T4b	T4	D	D
800	Further contiguous extension: - Cecum - Kidney - Liver - Uterus - Transverse colon and flexures - Ovary - Fallopian tube - Uterus - Uterus - Sigmoid colon - Culae sac (incubutermine pouch) - Uterus	T4b	T4	D	D
850	Stated as T4b with no other information on extension	T4b	T4	RE	RE
900	Stated as T4 (NOS) with no other information on extension	T4NOS	T4	RE	RE
950	No evidence of primary tumor	T0	T0	U	U
999	Unknown, extension not stated Primary tumor cannot be assessed Not documented in patient record	TX	TX	U	U

41

Colon - CS Extension

- Codes 600-800 are used for contiguous extension from the site of origin. Discontinuous involvement is coded in CS Mets at DX.

42

Colon

Collaborative Stage for T4M 7, Revised 11/20/2010 [Schema]

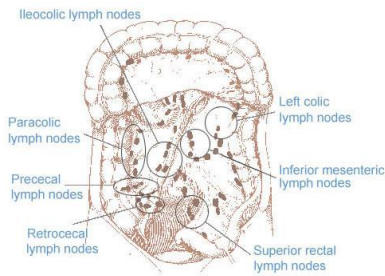
CS Lymph Nodes

- Note 1: Code only regional nodes and nodes NOS in this field. Note 2 specifies when to code certain tumor deposits (TD) (see Distant nodes) are coded in CS Mets at DX.
- Note 2: Code or more distant sentinel/peritoneal nodes in the peritoneal/adipose tissue of a primary carcinoma without histologic evidence of residual lymph node in the node(s) may represent discontiguous spread, venous invasion with extracapsular spread, or a totally regional lymph node. If the primary tumor is treated and maps to T1 or T2 and this is the only information on lymph nodes, use code 000. The final number of TD must also be coded in CS Site Spec Dr, Part 3A. If there are TD and node involvement, code only the information on node involvement in this field, use a higher code number than TD.
- Note 3: While mesenteric nodes are coded in CS Mets at DX for cecum, ascending colon, transverse colon, and hepatic flexure. Superior mesenteric nodes are coded in CS Mets at DX for all colon sites.
- Note 4: The number of positive regional nodes is required to calculate the correct N1 category for this schema. Use codes 400-470 when the pathology report assigns an N1 or N2 category but does not specify the number of nodes involved, or the record identifies an N1 or N2 category but the specific information about number of nodes involved is not available. Use codes 110-300 rather than codes 400-470 when information about the number of positive nodes is available, or when nodes are clinically positive but not removed for examination.
- Note 5: Signet ring nodes for descending colon have been moved from code 200 in CS Version 1 to code 210.

Code	Description	T4M 7 Map	T4M 6 Map	S377 Map	S3200 Map
000	No regional lymph node involvement and no tumor deposits (TD)	N0	N0	NO	NONE
050	TD in the submucosa, mesentery, or nonperitonealized pericolic or perirectal tissues. WITHOUT regional nodal metastasis. Stated as N1c with no other information on regional lymph nodes	N1c	N1	RN	RN
100	OBSCLETE DATA CONVERTED AND REVIEWED V003 Code T40 was defined as "Regional lymph nodes for all colon sites. Colc (N03). Epatic (adjacent to bowel wall). Mesocolic (N03). Paracolic/pericolic, (nodal) or for in pericolic, fat adjacent to mesenteric/epatic fat" as C10c. Code T40 was defined as "Regional lymph nodes for all colon sites. Colc (N03). Epatic (adjacent to bowel wall). Mesocolic (N03). (Nonperitonealized)" in CS02 V001, V002. All cases should be reviewed and recoded to appropriate codes, see codes 050 and 110. Regional lymph nodes for all colon sites: Colc (N03) Epatic (adjacent to bowel wall)	+	+	RN	RN

43

Regional Lymph Nodes



210	Regional lymph nodes, for specific colon sites: Cecum: Anterior (ileocolic) Posterior (retrocecal), NOS Ileocolic: Right colic: Ascending colon: Ileocolic: Middle colic: Right colic: Transverse colon and flexure: Inferior mesenteric, for splenic flexure only Left colic for splenic flexure only Middle colic: Right colic for hepatic flexure only Descending colon: Left colic: Sigmoid colon: Inferior mesenteric: Sigmoidal (sigmoid mesenteric) Superior mesenteric: Superior rectal	+	+	RN	RN
220	Regional lymph nodes for descending colon: Sigmoid	+	+	D	RN
300	Regional lymph nodes for all colon sites: Mesenteric, NOS Regional lymph nodes, NOS	+	+	RN	RN
400	OBSCLETE DATA CONVERTED V003 See code 430 Stated as N1 pathologic	ERROR	ERROR	ERROR	ERROR
410	Stated as pathologic N1a with no other pathologic information on regional lymph nodes	N1a	N1	RN	RN
420	Stated as pathologic N1b with no other pathologic information on regional lymph nodes	N1b	N1	RN	RN
430	Stated as pathologic N1 (N03) with no other pathologic information on regional lymph nodes	N1(N03)	N1	RN	RN

45

Rectosigmoid & Rectum C19.9-C20.9

Schema Selection

- <http://www.cancerstaging.org/cstage/index.html>
- Rectum (excludes GIST and NET of rectum)
- Rectosigmoid and Rectum are combined
- Click on Site Specific Schema tab on the left
- Select the **Rectum** Schema
- All Florida Cases are coded in CSv02.03.02

Collaborative Stage Version 2

TMI 7 Schema List (v02.03)

Check Version

Check Schema

Rectum

CS Extension

- Note 1: For rectosigmoid, ignore intraluminal extension to adjacent segment(s) of colon and rectum; code depth of invasion or extra-rectosigmoid spread as indicated.
- Note 2: Codes 000 - 750 are used for contiguous extension from the site of origin. Discontinuous involvement is coded in CS Meds at DX.
- Note 3: Tumor that is adherent to other organs or structures, macroscopically is classified as T4. If tumor is present in adhesions upon microscopic examination, the tumor is classified as pT4. Use code 905 for macroscopically confirmed tumor in adhesions. However, if no tumor is present in adhesions, the classification is determined by the classification based upon extent of tumor invasion into or through the wall. Use codes 000 - 143, 200, 210, 400, 410, 415, 420, 500, 505, and 555 as appropriate to describe the rectosigmoid. Confirmed depth of tumor invasion for these cases. Use code 905 for macroscopically confirmed tumor in adhesions. The measure of adhesion/structures from the adherent tumor.
- Note 4: High grade dysplasia and severe dysplasia are generally not reportable in certain sites. If severity does collect these, code 000 should be used.

Code	Description	TMM 7 Map	TMM 6 Map	5177 Map	512000 Map
000	In situ, intraepithelial, noninvasive	Ts	Ts	IS	IS
050	(Adeno)carcinoma, noninvasive, in a polyp or adenoma	Ts	Ts	IS	IS
150	Invasive tumor confined to mucosa, NOS including intraluminal	Ts	Ts	L	L
110	Invasives lamina propria, including lamina propria in the stalk of a polyp	Ts	Ts	L	L
120	Confined to and not through the muscularis mucosae, including muscularis mucosae in the stalk of a polyp	Ts	Ts	L	L
130	Confined to head of polyp, NOS	T1	T1	L	L
140	Confined to stalk of polyp, NOS	T1	T1	L	L
150	Invasive tumor in polyp, NOS	T1	T1	L	L
160	Submucosa (superficial invasion), including submucosa in the head or stalk of a polyp	T1	T1	L	L
165	For rectum: Tumor invading submucosa with intraluminal extension to colon	T1	T1	L	L

55

140	Confined to stalk of polyp, NOS	T1	T1	L	L
150	Invasive tumor in polyp, NOS	T1	T1	L	L
160	Submucosa (superficial invasion), including submucosa in the head or stalk of a polyp	T1	T1	L	L
165	For rectum: Tumor invading submucosa with intraluminal extension to colon and/or anal canal/sphincter	T1	T1	L	L
170	Stated as T1 with no other information on extension	T1	T1	L	L
200	Muscularis propria invaded	T2	T2	L	L
210	For rectum: Tumor invading muscularis propria with intraluminal extension to colon and/or anal canal/sphincter	T2	T2	RE	L
250	Stated as T2 with no other information on extension	T2	T2	L	L
300	Confined to rectosigmoid junction, NOS Localized, NOS	T1	T1	L	L
400	Extension through wall, NOS Invasion through muscularis propria or muscularis, NOS Non-perforated/perforated pericolic tissues invaded Pericolic tissue invaded Subserosal tissue/subperitoneal fat invaded Transmural, NOS	T3	T3	L	L
410	OBsolete DATA CONVERTED V2003 See code 415	ERROR	ERROR	ERROR	ERROR
415	Stated as T3 with no other information on extension	T3	T3	RE	L
415	For rectum: Tumor invading through muscularis propria with intraluminal extension to colon and/or anal canal/sphincter	T3	T3	RE	L
420	OBsolete DATA CONVERTED V2003 See code 415	ERROR	ERROR	ERROR	ERROR

56

450	Adjacent (connected) tissue: For all sites: Pericolic fat For rectosigmoid: Mesentery (including mesenteric fat, mesocolon) Pericolic fat For rectum: Extension to ampulla Rectovesical septum	T3	T3	RE	RE
455	Adjacent (connected) tissue: For all sites: Pericolic fat For rectosigmoid: Mesentery (including mesenteric fat, mesocolon) Pericolic fat For rectum: Rectovesical septum	T3	T3	RE	RE
458	Fat, NOS	T3	T3	RE	RE
490	OBsolete DATA RETAINED AND REVIEWED V2003 See Note 3, codes 505, 510	T3	T3	RE	RE
490	Adherent to other organs or structures but no tumor found in adhesions	T3	T3	RE	RE
470	Stated as T3 with no other information on extension	T3	T3	RE	RE
490	OBsolete DATA CONVERTED V2003 See code 905	ERROR	ERROR	ERROR	ERROR
490	Stated as T4(NOS) with no other information on extension	T3	T3	RE	RE
500	Invasion of/through serosa (mesothelium) (visceral peritoneum) Tumor penetrates visceral peritoneum	T4a	T4	RE	RE
550	OBsolete DATA RETAINED AND REVIEWED V2003 See codes 555, 610 (500) with (420) or (450)	T4a	T4	RE	RE

57

555	550 + (R5, 210, 415, or 458)	T4a	T4	RE	RE
560	Stated as T4a with no other information on extension	T4a	T4	RE	RE
565	Adherent to other organs or structures (desply with no microscopic examination Tumor based adhesion(s) if microscopic examination performed	T4b	T4	RE	RE
570	Adherent to other organs or structures, NOS	T4b	T4	RE	RE
ABSOLUTE DATA CONVERTED VALUES See code 015					
600	Rectosigmoid Cul de sac (rectosigmoide pouch) Falcis wall Small intestine				
	Rectum Bulbar for males only Cul de sac (rectosigmoide pouch) Ductus deferens Falcis wall Prostate Rectovesical falcis for male only Seminal vesicles Sphincter muscle of pelvic floor Vagina	ERROR	ERROR	ERROR	ERROR
	For rectosigmoid Cul de sac (rectosigmoide pouch) Falcis wall/gastic omentum Small intestine				
	For rectum Inferior mesenteric metastasically Bulbar for males only Cul de sac (rectosigmoide pouch) Ductus deferens Falcis wall Prostate Rectovesical falcis for male only Seminal vesicles Sphincter muscle of pelvic floor Vagina	T4b	T4	RE	RE
	For all sites				
	For all sites				

58

Rectum - CS Extension

- Codes 600-800 are used for contiguous extension from the site of origin. Discontinuous involvement is coded in CS Mets at DX.

59

Rectum

CS Lymph Nodes

- Note 1: Code only regional nodes and nodes, NOS, in this field. Note 2: Specifies when to code tumor deposits (TD) here. Distant nodes are coded in CS Mets at DX.
- Note 3: One or more malignant satellite peritoneal nodules in the peritoneal adipose tissue of a primary carcinoma without histologic evidence of nodular lymph nodes in the nodules may represent disseminated, serosal, vesicular, or mucosal with intravascular spread, or a totally separate lymph node. If the primary tumor is localized and maps to T1 or T2 and this is the only information on lymph nodes, use code 000. The total number of TD must always be coded in CS. See Specific Factors 4. If there are TD and node involvement, code only the information on node involvement in this field. Use a higher code number than 000.
- Note 4: Rectal nodes, NOS are coded 100. Middle or superior rectal nodes are coded 200 for both rectosigmoidal and rectal primaries. Inferior rectal nodes are coded 300 for rectal primaries. Inferior rectal nodes are coded in CS Mets at DX for rectosigmoidal primaries.
- Note 5: Middle or superior hemorrhoidal nodes are coded 200 for both rectosigmoidal and rectal primaries. Inferior hemorrhoidal nodes are coded 300 for rectal primaries. Inferior hemorrhoidal nodes are coded in CS Mets at DX for rectosigmoidal primaries.
- Note 6: Mesenteric nodes, NOS are coded 300. Inferior mesenteric or sigmoid mesenteric nodes are coded 200. Superior mesenteric nodes are coded in CS Mets at DX.
- Note 7: CS does not collect information on otherwise negative lymph nodes containing isolated tumor cells (ITCs) for this schema. CS does not derive ITC status for this schema. Count otherwise negative regional nodes containing ITCs as negative nodes.
- Note 8: The number of positive regional nodes is required to calculate the correct N category for this schema. Use codes 400-470 when the pathology report assigns an N1 or N2 category but does not specify the number of nodes involved, or the record identifies an N1 or N2 category but the specific information about number of nodes involved is not available. Use codes 100-300 rather than codes 400-470 when information about the number of positive nodes is available, or when nodes are clinically positive but not resected for examination.

Code	Description	T4b Mapping	T4 Mapping	5977 Map	82300 Map
000	No regional lymph node involvement and no tumor deposits (TD)	N0	N0	NONE	NONE
050	TD in the subcutis, mesentery, or nonperitonealized peritoneal or peritoneal tissues WITHOUT regional nodal metastasis Stated as N1c with information that regional lymph nodes are not involved	N1c	N1	RE	RE
ABSOLUTE DATA REMAINED AND REVIEWED VALUES See codes 050, 110					
100	Regional lymph nodes Rectosigmoid Parasigmoide Prostate Rectum	-	+	RN	RN

60

100	Regional lymph nodes: Rectosigmoid Parasigmoid/colic Perirectal Rectal Node(s) or foci in pericolic fat/adacent mesenteric/mesocolic Rectum Perirectal Rectal, NOS Node(s) or foci in perirectal fat	-	*	RN	RN
110	Regional lymph nodes: All sites Perirectal Rectal, NOS Rectosigmoid Parasigmoid/colic	-	*	RN	RN
200	Regional lymph nodes for rectosigmoid and rectum: Hemorrhoidal node Hemorrhoidal, superior Minor mesorectal Rectal, middle Rectal, superior Sigmoidal (sigmoid mesenteric) Regional lymph nodes for rectosigmoid Colic, NOS Left colic Regional lymph nodes for rectum: Hemorrhoidal, inferior Internal iliac (hypogastric), NOS Obturator Rectal, inferior Sacro, NOS Lateral (sacrosacral) Middle (promontorial) (Gardner's node) Perirectal Sacral promontory	-	*	RN	RN
300	Metastatic, NOS Regional lymph nodes, NOS	-	*	RN	RN
400	OBsolete DATA CONVERTED V000 See code 430	ERROR	ERROR	ERROR	ERROR

61

Collaborative Stage for T1M7 - Revised 11/2010 (Systems)

Rectum

CS Mets at DX

* Note: For metastases limited to a single distant lymph node chain, use code 08 or 16. For metastases involving multiple distant lymph node chains, use codes 29 or 31.

Code	Description	T1M7 Map	T1M8 Map	S177 Map	S2300 Map
00	No distant metastasis	M0	M0	NONE	NONE
05	OBsolete DATA CONVERTED V000 See code 18	ERROR	ERROR	ERROR	ERROR
08	Metastases to a single distant lymph node chain: For rectosigmoid: Internal iliac (hypogastric), NOS Obturator	M1a	M1	RN	D
10	OBsolete DATA RETAINED V000 See codes 11 and 20 Distant lymph nodes, NOS	ERROR	M1	D	D
11	OBsolete DATA RETAINED V000 See codes 11 and 20 Rectosigmoid Internal iliac (hypogastric) Obturator	ERROR	M1	RN	D
12	OBsolete DATA RETAINED V000 See codes 11 and 20 Other distant lymph nodes, including external iliac or common iliac	ERROR	M1	D	D
	OBsolete DATA CONVERTED V000				

62

18	Metastases limited to a single distant lymph node chain, NOS See code 16	M1a	M1	RN	D
20	OBsolete DATA CONVERTED V000 See code 16	ERROR	ERROR	ERROR	ERROR
25	OBsolete DATA CONVERTED V000 See code 20 Metastases to other single distant lymph node chains, including external iliac or common iliac	ERROR	ERROR	ERROR	ERROR
26	OBsolete DATA CONVERTED V000 See code 20 Metastases to a single distant organ	ERROR	ERROR	ERROR	ERROR
27	Metastases limited to a single distant organ except peritoneum	M1a	M1	D	D
27	Stated as M1a with no other information on distant metastases	M1a	M1	RN	D
29	Metastases to multiple distant lymph node chains included in code 08 only	M1b	M1	RN	D
30	OBsolete DATA CONVERTED V000 See code 31 Metastases to more than one distant lymph node chain	ERROR	ERROR	ERROR	ERROR
31	Metastases to multiple distant lymph node chains listed in code 16, with or without distant lymph node chains listed in code 08	M1b	M1	D	D
33	Metastases to multiple distant lymph node chains, NOS	M1b	M1	D	RN
35	OBsolete DATA REVIEWED V000 See codes 36, 48 Distant metastases to more than one distant organ Metastases to the peritoneum Carcinomatous Stated as M1b, NOS	M1b	M1	D	D
36	Metastases to more than one distant organ except distant lymph nodes Metastases to peritoneum Carcinomatous	M1b	M1	D	D

63

Colon and Rectum Site-Specific Factors

FCDS-Required ONLY SSFs for this Presentation

Schema Number	Schema Name	FCDS Required	CoC Additional Required
50	Appendix	2, 7, 10, 11	1, 3
53	Colon	2, 7, 9, 10	1, 3, 4, 6, 8
56	Rectum	2, 5, 7, 9, 10	1, 3, 4, 6, 8

CS Site-Specific Factor 2 Clinical Assessment of Regional Lymph Nodes

- Note: In the row instance that the number of clinically positive nodes is stated but a clinical N category is not stated, code 1-3 nodes or 100 (N1), and 4 or more nodes are 200 (N2).

Code	Description
000	Nodes not clinically evident
100	Clinically N1
200	Clinically N2
400	Clinically positive regional nodes, NOS
888	OBSCLETE DATA CONVERTED V000 See code 988. Not applicable for this site
988	Not applicable. Information not collected for this case. (May include cases converted from code 888 used in CSv1 for "not applicable" or when the item was not collected. If this item is required to derive T, N, M, or any stage, use of code 988 may result in an error.)
999	Unknown if nodes are clinically evident

FCDS Required = YES
CoC Required = Yes

65

Rectum

Collaborative Stage for TMM 7 - Revised 10/23/2019 | Schemas |

CS Site-Specific Factor 5 Tumor Regression Grade

- Note 1: Record the pathologic response to preoperative adjuvant treatment as documented in the pathology report. The response may be called "treatment effect" and will often be stated in terms of a Tumor Regression Grade, if this 5. The response may also be characterized in descriptive terms. Consult the pathologist if a different grading system is used.
- Note 2: Tumor regression grade or treatment effect should only be assessed on the primary tumor.
- Note 3: If a response is stated to be present or found but is not described further, use code 999.

Code	Description
000	Tumor Regression Grade 0 Complete response. No viable cancer cells. No residual tumor
010	Tumor Regression Grade 1 Moderate response. Single cells or small groups of cancer cells.
020	Tumor Regression Grade 2 Minimal response. Residual cancer outgrown by fibrosis
030	Tumor Regression Grade 3 Poor response. Minimal or no tumor. All extensive residual cancer
888	OBSCLETE DATA CONVERTED V000 See code 988. Not applicable for this site
988	Not applicable. Information not collected for this case. (May include cases converted from code 888 used in CSv1 for "not applicable" or when the item was not collected. If this item is required to derive T, N, M, or any stage, use of code 988 may result in an error.)
989	Response present, but degree of response not further described
998	No preoperative treatment or no resection of primary site after preoperative treatment
999	Unknown or no information Not documented in patient record

FCDS Required = YES - RECTUM ONLY
CoC Required = No

66

**CS Site-Specific Factor 7
Microsatellite Instability**

Note: The Microsatellite Instability (MSI) test is a genetic test performed on tumor tissue to look for differences in length of certain non-functioning sections of DNA. The differences are caused by problems with the genes that normally repair DNA. MSI testing is less expensive and faster than testing for the defects in the functional genes. A high positive MSI result may indicate that the gene repair problem is related to the development of the cancer, and that the patient may have HNPCC (hereditary non-polyposis colorectal cancer, also known as Lynch syndrome). A low positive or stable MSI result (stable meaning that there are no differences in the lengths) means it is unlikely that the cancer is genetic.

Code	Description
020	MSI Stable, No microsatellite instability
040	MSI unstable low, Positive, low
050	MSI unstable high, Positive, high
060	MSI unstable, NOS, Positive, NOS
988	Not applicable Information not collected for this case
997	Test ordered, results not in chart
998	Test not done (test was not ordered and was not performed)
999	Unknown or no information Not documented in patient record

FCDS Required = YES - NEW
CoC Required = NO

67

**CS Site-Specific Factor 9
KRAS**

Note: KRAS is a gene which belongs to a class of genes known as oncogenes. When mutated, oncogenes have the potential to cause normal cells to become cancerous. Studies suggest that KRAS gene mutations are often present in colorectal cancer.

Code	Description
010	Abnormal (mutated) Positive for mutations
020	Normal (wild type) Negative for mutations
988	Not applicable Information not collected for this case
997	Test ordered, results not in chart
998	Test not done (test was not ordered and was not performed)
999	Unknown Not documented in patient record

FCDS Required = YES - NEW
COC Required = YES

68

**CS Site-Specific Factor 10
18q Loss of Heterozygosity (LOH)**

Note 1: This is a special molecular diagnostic test performed on tumor tissue to identify loss of genetic material normally found on the long arm of one of the patient's two copies of chromosome 18. A normal cell will contain two complete copies of each chromosome, one from each parent, and this normal state is termed heterozygous. Loss of heterozygosity (LOH) is an abnormal state reflecting damage to the chromosome.

Note 2: Other terms for loss of heterozygosity include gene deletion and allelic loss.

Code	Description
010	Test positive for loss of heterozygosity
020	Test negative for loss of heterozygosity
988	Not applicable Information not collected for this case
997	Test ordered, results not in chart
998	Test not done (test was not ordered and was not performed)
999	Unknown or no information Not documented in patient record

FCDS Required = YES - NEW
COC Required = NO

69

Non-Invasive Tumors

- Polypectomy – No lymph node assessment
- Depending upon type of polyp may require further resection
- May not even recommend further resection if pedunculated
- No KRAS Test
- No MSI Test
- No LOH Test
- No Chemo

73

T1 or T2 (minimally invasive)

- Resection with nodes (negative nodes presumed here)
- Full TNM Staging – assess penetration through wall
- No KRAS Test
- No MSI Test
- No LOH Test
- No Chemo

74

T3 or T4

- Penetration partially or fully through colon wall
 - T4 lesion may recommend neoadjuvant chemo/XRT
- High likelihood of positive nodes
- Adjuvant chemo recommended
 - FOLFOX
 - 5FU Leucovorin
- KRAS Test - possible
- MSI Test – possible
- LOH Test – possible

75

Folfox and 5FU/Leucovorin

Regimen	Agent Name	NDC #	Std Dose	Std Unit	Delivery Method	Schedule
Folfox	Oxaliplatin	016646	85	mg/m ²	IV	Day 1
	Leucovorin	003900	400	mg/m ²	IV	Day 1
	5-FU	019893	400	mg/m ² /day	IV	Day 1
Folfox	Oxaliplatin	016646	1200	mg/m ² /day	IV	Day 2, 3 (continuous infusion)
	Leucovorin	003900	10	mg/m ²	IV	over 2 hours, days 1, 8, 15, 22, 29, and 36
	5-FU	019893	300	mg/m ²	IV	3 hours after start of leucovorin days 1, 8, 15, 22, 29 and 36
5-FU/Lev (LV5FU2)	Leucovorin	003900	400	mg/m ²	IV	over 2 hours on day 1 followed by 5-FU
	5-FU	019893	400	mg/m ²	IV	over 2 hours on day 1 followed by 5-FU
	Leucovorin	003900	10	mg/m ²	IV	over 2 hours on day 2 followed by 5-FU
Weekly	Leucovorin	003900	10	mg/m ²	IV	over 2 hours on day 2 followed by 5-FU
	5-FU	019893	500	mg/m ²	IV	bolus injection 1h after the start of leucovorin
	Leucovorin	003900	300	mg/m ²	IV	24 hour infusion plus leucovorin

76

KRAS Wild Regimens and Other Chemo

- Irinotecan (not FDA approved for 1st line therapy)
- Capecitabine (KRAS wild) – T3 and higher
- Panitumumab (KRAS wild) – T3 and higher
- Bevacizumab – T3 and higher
- LOH + - NO 5FU regimens – will be resistant

77

KRAS Wild Regimens and Other Chemo

Cetuximab (KRAS wild-type gene only)	Cetuximab	714602	400	mg/m ²	IV	Day 1 infusion, then 250mg/m ²
	OR					
Irinotecan	Cetuximab	714602	500	mg/m ²	IV	Every 2 weeks
	Irinotecan	616348	300-350	mg/m ²	IV	Every 3 weeks
	OR					
	Irinotecan	616348	180	mg/m ²	IV	Every 2 weeks
	OR					
	Irinotecan	616348	125	mg/m ²	IV	Days 1, 8 and repeat 3 weeks
Cetuximab (KRAS wild-type gene only)	Cetuximab	714602	400	mg/m ²	IV	Day 1 infusion, then 250mg/m ² IV weekly
Panitumumab (KRAS wild-type gene only)	Panitumumab	X000X	6	mg/kg	IV	over 60 minutes every 2 weeks

78

N1-N2 and higher

- KRAS Test - possible
- MSI Test – possible
- LOH Test – possible

- Chemo depends on above outcomes
 - FOLFOX
 - FLOX
 - CapeOX

79

Advanced Disease

- KRAS Test – yes (new agents)
- MSI Test – yes (familial/hereditary)
- LOH Test – yes (response to 5FU)

- Chemo based on results of above

- Clinical Trial recommendations

80

Irinotecan – not FDA first line drug

- Okay for Advanced Disease
- Okay after patient failed some other regimen
- Regimens with Irinotecan
 - Irinotecan alone
 - Irinotecan + Cetuximab (KRAS wild type)
 - IROX
 - FOLFOXIRI
 - FOLFIRI

81

What about neo-adjuvant treatment?

- T4 Colon
- T3, T4 Rectum – or any rectum
- Chemo alone
- Radiation alone
- Radiation plus chemo
- Intent of neo-adjuvant treatment
- Measuring response to treatment
- Surgery must take place
- What happens after surgery?

82

Inquiry & Response System

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



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Collaborative Stage Data Collection System Web Site
www.cancerstaging.org/cstage
