

IN PROCESS Collaborative Stage for TNM 7 - Revised 06/30/2008 [Schema]

Rectum

CS Tumor Size

Code	Description
000	No mass/tumor found
001-988	001 - 988 millimeters (code exact size in millimeters)
989	989 millimeters or larger
990	Microscopic focus or foci only; no size 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 Not documented in patient record



PROCESS Collaborative Stage for TNM 7 - Revised 08/25/2009 [Schema]

Rectum

CS Extension

- Note 1: Ignore intraluminal extension to adjacent segment(s) of colon/rectum and code depth of invasion or extracolonic spread as indicated.
- Note 2: Codes 600-800 are used for contiguous extension from the site of origin. Discontinuous involvement is coded in CS Mets at DX.
- Note 3: Tumor that is adherent to other organs or structures, macroscopically, is classified T4b. However, if no tumor if present in the adhesion, microscopically, the classification should be pT3.
- Note 4: High grade dysplasia and severe dysplasia are generally not reportable in cancer registries, but if a registry does collect it, code 000 should be used.

Code	Description	TNM 7 Map	TNM 6 Map	SS77 Map	SS2000 Map
000	In situ; non-invasive; intraepithelial	Tis	Tis	IS	IS
050	(Adeno)carcinoma in a polyp or adenoma, noninvasive	Tis	Tis	IS	IS
100	Invasive tumor confined to mucosa, NOS, including intramucosal, NOS	Tis	Tis	L	L
110	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 muscularis mucosae 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	Submucosa (superficial invasion), including submucosa in the stalk of a polyp	T1	T1	L	L
170	Stated as T1, NOS	T1	T1	L	L
200	Muscularis propria invaded Stated as T2, NOS	T2	T2	L	L
300	Localized, NOS Confined to rectum, 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/(sub)serosal fat invaded Transmural, NOS	Т3	Т3	L	L
410	Stated as T3, NOS	Т3	T3	L	L
420	Fat, NOS	T3	Т3	RE	RE
450	Adjacent (connective) tissue: For all sites: Perirectal fat For rectosigmoid: Mesentery (including mesenteric fat, mesocolon) Pericolic fat For rectum: Extension to anus Rectovaginal septum	Т3	Т3	RE	RE
460	Adherent to other organs or structures but no tumor found in adhesion(s)	Т3	Т3	RE	RE
490	Stated as T4, NOS	T4NOS	T4	RE	RE
500	Invasion of/through serosa (mesothelium) (visceral peritoneum) Stated as T4a, NOS	T4a	T4	RE	RE
550	(500) with [(420) or (450)]	T4a	T4	RE	RE

570	Adherent to other organs or structures, NOS	T4b	T4	RE	RE
600	Rectosigmoid: Cul de sac (rectouterine pouch) Pelvic wall Small intestine Rectum: Bladder for males only Cul de sac (rectouterine pouch) Ductus deferens Pelvic wall Prostate Rectovesical fascia for male only Seminal vesicle(s) Skeletal muscle of pelvic floor Vagina	T4b	Т4	RE	RE
700	Rectosigmoid: Bladder Colon via serosa Fallopian tube(s) Ovary(ies) Prostate Ureter(s) Uterus Rectum: Bladder for female only Bone(s) of pelvis Uretus Uretus Urethra Uterus	T4b	Т4	D	D
800	Further contiguous extension	T4b	T4	D	D
950	No evidence of primary tumor	T0	T0	U	U
999	Unknown extension Primary tumor cannot be assessed Not documented in patient record	TX	ТХ	U	U



IN PROCESS Collaborative Stage for TNM 7 - Revised 08/10/2009 [Schema]

Rectum

CS Tumor Size/Ext Eval

Code	Description	Staging Basis
0	Does not meet criteria for AJCC pathologic staging: No surgical resection done. Evaluation based on physical examination, imaging examination, or other non-invasive clinical evidence. No autopsy evidence used.	С
1	Does not meet criteria for AJCC pathologic staging: No surgical resection done. Evaluation based on endoscopic examination, diagnostic biopsy, including fine needle aspiration biopsy, or other invasive techniques, including surgical observation without biopsy. No autopsy evidence used.	С
2	Meets criteria for AJCC pathologic staging: No surgical resection done, but evidence derived from autopsy (tumor was suspected or diagnosed prior to autopsy)	р
3	Either criteria meets AJCC pathologic staging: Surgical resection performed WITHOUT pre-surgical systemic treatment or radiation OR surgical resection performed, unknown if pre-surgical systemic treatment or radiation performed AND Evaluation based on evidence acquired before treatment, supplemented or modified by the additional evidence acquired during and from surgery, particularly from pathologic examination of the resected specimen. No surgical resection done. Evaluation based on positive	p

	biopsy of highest T classification.	
5	Does not meet criteria for AJCC y-pathologic (yp) staging: Surgical resection performed AFTER neoadjuvant therapy and tumor size/extension based on clinical evidence, unless the pathologic evidence at surgery (AFTER neoadjuvant) is more extensive (see code 6).	С
6	Meets criteria for AJCC y-pathologic (yp) staging: Surgical resection performed AFTER neoadjuvant therapy AND tumor size/extension based on pathologic evidence, because pathologic evidence at surgery is more extensive than clinical evidence before treatment.	У
8	Meets criteria for autopsy (a) staging: Evidence from autopsy only (tumor was unsuspected or undiagnosed prior to autopsy)	а
9	Unknown if surgical resection done Not assessed; cannot be assessed Unknown if assessed Not documented in patient record	С



PROCESS Collaborative Stage for TNM 7 - Revised 10/21/2009 [Schema]

Rectum

CS Lymph Nodes

- Note 1: Code only regional nodes and nodes, NOS, in this field. Distant nodes are coded in the field Mets at DX.
- Note 2: One or more malignant satellite peritumoral nodules in the pericolorectal adipose tissue of a primary carcinoma without histologic evidence of residual lymph node in the nodule may represent discontinuous spread, venous invasion with extravascular spread or a totally replaced lymph node. If the primary tumor is localized and maps to T1 or T2 and this is the only information you have on lymph nodes, use code 050. The total number of tumor deposits must also be coded in SSF4. If there are tumor deposits and node involvement, code the information on node involvement. That is, do not use code 050.
- Note 3: The number of positive regional nodes is required to calculate the correct N category for this site. Codes 400-470 are for use when this number is not available, but the pathology report assigns an N1 or N2 category. If information about the number of positive nodes is available, use codes 100, 200, or 300 rather than codes 400-470. The actual number of involved nodes will be coded in Reg LN Pos.

Code	Description	TNM 7 Mapping	TNM 6 Mapping	SS77 Map	SS2000 Map
000	None; no regional lymph node involvement	NO	NO	NONE	NONE
050	Tumor deposit(s) in the subserosa, or non-peritonealized pericolic or perirectal tissues without regional nodal metastasis	N1c	N1	RE	RE

100	Regional lymph nodes: Rectosigmoid: Paracolic/pericolic Perirectal Rectal Nodule(s) or foci in pericolic fat/adjacent mesentery/mesocolic fat Rectum: Perirectal Rectal, NOS Nodule(s) or foci in perirectal fat	^	*	RN	RN
200	Regional lymph node(s): Rectosigmoid: Colic, NOS Left colic Hemorrhoidal, superior or middle Inferior mesenteric Middle rectal Sigmoidal (sigmoid mesenteric) Superior rectal Rectum: Hemorrhoidal, superior, middle or inferior Inferior mesenteric Internal iliac (hypogastric) Obturator Rectal, superior, middle, or inferior Sacral, NOS Lateral (laterosacral) Middle (promontorial) (Gerota's node) Presacral Sacral promontory Sigmoidal (sigmoid mesenteric)	^	*	RN	RN
300	Mesenteric, NOS Regional lymph node(s), NOS	۸	*	RN	RN
400	Stated as N1 pathologic	N1NOS	N1	RN	RN
410	Stated as N1a pathologic	N1a	N1	RN	RN

420	Stated as N1b pathologic	N1b	N1	RN	RN
450	Stated as N2 pathologic	N2NOS	N2	RN	RN
460	Stated as N2a pathologic	N2a	N2	RN	RN
470	Stated as N2b pathologic	N2b	N2	RN	RN
800	Lymph nodes, NOS	^	*	RN	RN
999	Unknown; not stated Regional lymph node(s) cannot be assessed Not documented in patient record	NX	NX	U	U

- * For codes 100-300 and 800 ONLY: when CS Lymph Nodes Eval is 0, 1, 5, or 9, the N category is assigned from the Lymph Nodes Clinical Evaluation 6th Table, using Reg LN Pos and CS Site-Specific Factor 2; when CS Regional Nodes Eval is 2, 3, 6, 8, or not coded, the N category is determined from the Lymph Nodes Pathologic Evaluation 6th Table Also Used When CS Reg Nodes Eval is Not Coded using Reg LN Pos.
- ^ For codes 100-300 and 800 ONLY: when CS Lymph Nodes Eval is 0, 1, 5, or 9, the N category is assigned from the Lymph Nodes Clinical Evaluation 7th Table, using Reg LN Pos and CS Site-Specific Factor 2; when CS Regional Nodes Eval is 2, 3, 6, 8, or not coded, the N category is determined from the Lymph Nodes Pathologic Evaluation 7th Table Also Used When CS Reg Nodes Eval is Not Coded using Reg LN Pos.



NPROCESS Collaborative Stage for TNM 7 - Revised 09/23/2009 [Schema]

Rectum

CS Lymph Nodes Eval

- Note 1: This field is used primarily to derive the staging basis for the N category in the TNM system. It records how the code for the item "CS Lymph Nodes" was determined based on the diagnostic methods employed and their intent.
- Note 2: In the 7th edition of the AJCC manual, the clinical and pathologic classification rules for the N category were changed to reflect current medical practice. The N is designated as clinical or pathologic based on the intent (workup versus treatment) matching with the assessment of the T classification. When the intent is workup, the staging basis is clinical, and when the intent is treatment, the staging basis is pathologic.
 - A. Microscopic assessment including biopsy of regional nodes or sentinel nodes if being performed as part of the workup to choose the treatment plan, is therefore part of the clinical staging. When it is part of the workup, the T category is clinical, and there has not been a resection of the primary site adequate for pathologic T classification (which would be part of the treatment).
 - B. Microscopic assessment of regional nodes if being performed as part of the treatment is therefore part of the pathologic staging. When it is part of the treatment, the T category is pathologic, and there has been a resection of the primary site adequate for pathologic T classification (all part of the treatment).
- Note 3: Microscopic assessment of the highest N category is always pathologic (code 3).
- Note 4: If lymph node dissection is not performed after neoadjuvant therapy, use code 0 or 1.
- Note 5: Only codes 5 and 6 are used if the node assessment is performed after neoadjuvant therapy.

Code	Description	Staging Basis
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0	Does not meet criteria for AJCC pathologic staging: No regional lymph nodes removed for examination. Evidence based on physical examination, imaging examination, or other non-invasive clinical evidence. No autopsy evidence used.	С
1	Does not meet criteria for AJCC pathologic staging based on at least one of the following criteria: No regional lymph nodes removed for examination. Evidence based on endoscopic examination, or other invasive techniques including surgical observation, without biopsy. No autopsy evidence used. OR Fine needle aspiration, incisional core needle biopsy, or excisional biopsy of regional lymph nodes or sentinel nodes as part of the diagnostic workup, WITHOUT removal of the primary site adequate for pathologic T classification (treatment).	С
2	Meets criteria for AJCC pathologic staging: No regional lymph nodes removed for examination, but evidence derived from autopsy (tumor was suspected or diagnosed prior to autopsy).	р
3	Meets criteria for AJCC pathologic staging based on at least one of the following criteria: Any microscopic assessment of regional nodes (including FNA, incisional core needle bx, excisional bx, sentinel node bx or node resection), WITH removal of the primary site adequate for pathologic T classification (treatment) or biopsy assessment of the highest T category. OR Any microscopic assessment of a regional node in the highest N category, regardless of the T category information.	р
5	Does not meet criteria for AJCC y-pathologic (yp) staging: Regional lymph nodes removed for examination AFTER neoadjuvant therapy AND lymph node evaluation based on clinical evidence, unless the pathologic evidence at surgery (AFTER neoadjuvant) is more extensive (see code 6).	С

6	Meets criteria for AJCC y-pathologic (yp) staging: Regional lymph nodes removed for examination AFTER neoadjuvant therapy AND lymph node evaluation based on pathologic evidence, because the pathologic evidence at surgery is more extensive than clinical evidence before treatment.	у
8	Meets criteria for AJCC autopsy (a) staging: Evidence from autopsy; tumor was unsuspected or undiagnosed prior to autopsy.	а
9	Unknown if lymph nodes removed for examination Not assessed; cannot be assessed Unknown if assessed Not documented in patient record	С



PROCESS Collaborative Stage for TNM 7 - Revised 03/30/2009 [Schema]

Rectum

Reg LN Pos

• Note: Record this field even if there has been preoperative treatment.

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



PROCESS Collaborative Stage for TNM 7 - Revised 03/02/2009 [Schema]

Rectum

Reg LN Exam

Code	Description
00	No nodes examined
01-89	1 - 89 nodes examined (code exact number of regional lymph nodes examined)
90	90 or more nodes examined
95	No regional nodes removed, but aspiration or core biopsy of regional nodes performed
96	Regional lymph node removal documented as sampling and number of nodes unknown/not stated
97	Regional lymph node removal documented as dissection and number of nodes unknown/not stated
98	Regional lymph nodes surgically removed but number of lymph nodes unknown/not stated and not documented as sampling or dissection; nodes examined, but number unknown
99	Unknown if nodes were examined; not applicable or negative Not documented in patient record



IN PROCESS Collaborative Stage for TNM 7 - Revised 07/17/2009 [Schema]

Rectum

CS Mets at DX

Code	Description	TNM 7 Map	TNM 6 Map	SS77 Map	SS2000 Map
00	No; none	MO	MO	NONE	NONE
05	Metastasis to a single distant lymph node chain, NOS	M1a	M1	D	D
10	OBSOLETE DATA RETAINED V0200 See codes 15 and 20 Distant lymph node(s), NOS	ERROR	M1	D	D
11	OBSOLETE DATA RETAINED V0200 See codes 15 and 20 Rectosigmoid: Internal iliac (hypogastric) Obturator		M1	RN	D
12	OBSOLETE DATA RETAINED V0200 See codes 15 and 20 Other distant lymph node(s), including external iliac or common iliac	ERROR	M1	D	D
15	Metastasis to a single distant lymph node chain Rectosigmoid: Internal iliac (hypogastric) Obturator	M1a	M1	D	D
20	Metastasis to other single distant lymph node chains, including external iliac or common iliac	M1a	M1	D	D
25	Metastasis to a single distant organ	M1a	M1	D	D
27	Stated as M1a, NOS	M1a	M1	D	D

30	Metastasis to more than one distant lymph node chain	M1b	M1	D	D
35	Distant metastases to more than one distant organ Metastases to the peritoneum Carcinomatosis Stated as M1b, NOS	M1b	M1	D	D
40	OBSOLETE DATA RETAINED V0200 See codes 35 and 55 Distant metastases except distant lymph node(s) codes 10-12 Carcinomatosis	ERROR	M1	D	D
45	(05 or 15 or 20) plus (25 or 35) Distant lymph node(s) plus other distant metastases	M1b	M1	D	D
50	OBSOLETE DATA RETAINED V0200 See code 45 (40)+ any of [(10 or (12)] Distant lymph node(s) plus other distant metastases	ERROR	M1	D	D
60	Distant metastasis, NOS M1, NOS	M1NOS	M1	D	D
99	Unknown if distant metastasis Distant metastasis cannot be assessed Not documented in patient record	МО	MX	U	U



PROCESS Collaborative Stage for TNM 7 - Revised 07/28/2009 [Schema]

Rectum

CS Mets Eval

- Note 1: This item reflects the validity of the classification of the item CS Mets at DX only according to the diagnostic methods employed.
- Note 2: If a specific subcategory of M1 will be derived from CS Mets at DX, then determine if there was any pathological evidence for the highest subcategory. If so, select an Eval code that will derive a "p" staging basis. If there was only clinical evidence of the highest subcategory, select an Eval code that will derive a "c" staging basis. See also CS Mets Eval in Part 1.

Code	Description	Staging Basis
0	Does not meet criteria for AJCC pathologic staging of distant metastasis: Evaluation of distant metastasis based on physical examination, imaging examination, and/or other non-invasive clinical evidence. No microscopic examination of metastatic specimen performed or microscopic examination was negative.	С
1	Does not meet criteria for AJCC pathologic staging of distant metastasis: Evaluation of distant metastasis based on endoscopic examination or other invasive technique, including surgical observation without biopsy. No microscopic examination of metastatic specimen performed or microscopic examination was negative.	С

2	Meets criteria for AJCC pathologic staging of distant metastasis: No microscopic examination of metastatic specimen done prior to death, but positive metastatic evidence derived from autopsy (tumor was suspected or diagnosed prior to autopsy).	р
3	Meets criteria for AJCC pathologic staging of distant metastasis: Specimen from metastatic site microscopically positive WITHOUT pre-surgical systemic treatment or radiation OR specimen from metastatic site microscopically positive, unknown if pre-surgical systemic treatment or radiation performed OR specimen from metastatic site microscopically positive prior to neoadjuvant treatment.	р
5	Does not meet criteria for AJCC y-pathologic (yp) staging of distant metastasis: Specimen from metastatic site microscopically positive WITH pre-surgical systemic treatment or radiation, BUT metastasis based on clinical evidence.	С
6	Meets criteria for AJCC y-pathologic (yp) staging of distant metastasis: Specimen from metastatic site microscopically positive WITH pre-surgical systemic treatment or radiation, BUT metastasis based on pathologic evidence.	У
8	Meets criteria for AJCC autopsy (a) staging of distant metastasis: Evidence from autopsy based on examination of positive metastatic tissue AND tumor was unsuspected or undiagnosed prior to autopsy.	а
9	Not assessed; cannot be assessed Unknown if assessed Not documented in patient record	С



PROCESS Collaborative Stage for TNM 7 - Revised 08/20/2009 [Schema]

Rectum

CS Site-Specific Factor 1 Pre-Operative Carcinoembryonic Antigen (CEA)

Code	Description	
000	Test not done	
010	Positive/elevated	
020	Negative/normal; within normal limits	
030	Borderline; undetermined whether positive or negative	
998	Test ordered; results not in chart	
999	Unknown or no information Not documented in patient record	



PROCESS Collaborative Stage for TNM 7 - Revised 08/12/2009 [Schema]

Rectum

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

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

Code	Description
000	Nodes not clinically evident
100	Clinically N1
200	Clinically N2
400	Clinically positive regional nodes, NOS
888	OBSOLETE DATA CONVERTED V0200 See code 988: Not applicable for this site.
988	OBSOLETE DATA CONVERTED AND RETAINED V0100
999	Unknown if nodes are clinically evident



PROCESS Collaborative Stage for TNM 7 - Revised 09/21/2009 [Schema]

Rectum

CS Site-Specific Factor 3 Pre-Operative Carcinoembryonic Antigen (CEA) Lab Value

 Note: Record the highest CEA lab value recorded in the medical record prior to treatment. A pretreatment CEA of 7 nanograms/millileter (ng/ml) would be recorded as 070.

Code	Description
000	0 ng/ml
001	0.1 or less ng/ml
002-979	0.2-97.9 ng/ml
980	98.0 or greater ng/ml
988	OBSOLETE DATA CONVERTED AND RETAINED V0200 Code 888 was used in version 1 and was converted to 988 for version 2.
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



PROCESS Collaborative Stage for TNM 7 - Revised 08/19/2009 [Schema]

Rectum

CS Site-Specific Factor 4 Tumor Deposits

- Note 1: Tumor deposits are defined as one or more satellite peritumoral nodules in the pericolorectal adipose tissue of a primary carcinoma without histologic evidence of residual lymph node in the nodule may represent discontinuous spread, venous invasion with extravascular spread or a totally replaced lymph node.
- Note 2: Record the number of of tumor deposits whether or not there are positive lymph nodes.

Code	Description
000	None
001-080	1-80 Tumor Deposits (code exact number of tumor deposits)
081	Greater than 80 Tumor Deposits
888	OBSOLETE DATA CONVERTED V0200 See code 988: Not applicable for this site.
988	OBSOLETE DATA CONVERTED AND RETAINED V0200
998	Tumor deposits identified, number unknown
999	Unknown if tumor deposits are present Not documented in patient record



PROCESS Collaborative Stage for TNM 7 - Revised 09/15/2009 [Schema]

Rectum

CS Site-Specific Factor 5 Tumor Regression Grade

- Note 1: Record the pathologic response to preoperative adjuvant treatment as documented on the pathology report. If the specific tumor regression grade is not stated on the pathology report, code as unknown (999).
- Note 2: Tumor Regression Grade should only be assessed on the primary tumor.

Code	Description
000	Tumor Regression Grade 0 Complete Response - No viable cancer cells No residual tumor
010	Tumor Regression Grade 1 Moderate Response - Single 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 kill; extensive residual cancer
888	OBSOLETE DATA CONVERTED V0200 See code 988: Not applicable for this site.
988	OBSOLETE DATA CONVERTED AND RETAINED V0200
998	No preoperative treatment or no surgery No histologic confirmation
999	Unknown Not documented in patient record



PROCESS Collaborative Stage for TNM 7 - Revised 08/12/2009 [Schema]

Rectum

CS Site-Specific Factor 6 Circumferential Resection Margin (CRM)

- Note 1: Tumor involvement of the circumferential resection margin (CRM) appears to be a strong prognostic factor for local or systemic recurrences and survival after surgery.
- Note 2: The CRM may also be referred to as the circumferential radial margin.
- Note 3: According to AJCC 7th edition, "the CRM is the surgically dissected non-peritonealized surface of the specimen. It corresponds to any aspect of the colorectum that is not covered by a serosal layer of mesothelial cells and must be dissected from the retroperitoneum or subperitoneum in order to remove the viscus. In contradistinction, serosalized surfaces of the colorectum are not dissected; they are naturally occurring anatomic structures and are not surgical margins. The circumferential surface of surgical resection specimens of ascending colon, descending colon or upper rectum is only partially peritonealized, and the demarcation between the peritonealized surface and the non-peritonealized surface (corresponding to the CRM) of such specimens is not always easily appreciated on pathologic examination."
- Note 4: Record in millimeters to the first decimal point, the distance between leading edge of tumor and nearest edge of surgically dissected margin as recorded in the pathology report. For example, if the CRM is 2 millimeters, code 020. If the margin IS involved (positive), use code 000.

Code	Description
000	Margin IS involved with tumor Circumferential resection margin positive Described as "less than 1 millimeter"
001-009	.19 millimeters (code exact size in millimeters)
010-980	1- 98 millimeters (code exact size in millimeters)
888	OBSOLETE DATA CONVERTED V0200 See code 988: Not applicable for this site.

991	Margins clear, distance from tumor not stated Circumferential resection margin negative
992	Described as "less than 2 mm," or "greater than 1 mm," or "between 1 mm and 2 mm"
993	Described as "less than 3 mm," or "greater than 2 mm," or "between 2 mm and 3 mm"
994	Described as "less than 4 mm," or "greater than 3 mm," or "between 3 mm and 4 mm"
995	Described as "less than 5 mm," or "greater than 4 mm," or "between 4 mm and 5 mm"
996	Described as "greater than 5 mm"
997	No Residual Tumor identified on specimen
988	OBSOLETE DATA CONVERTED AND RETAINED V0200 Code 888 was used in version 1 and was converted to 988 for version 2.
998	Patient did not have surgery No histologic confirmation
999	Unknown CRM not mentioned Not documented in patient record



PROCESS Collaborative Stage for TNM 7 - Revised 09/21/2009 [Schema]

Rectum

CS Site-Specific Factor 7 Microsatellite Instability

• Note: The Microsatellite Instability (MSI) test is a genetic test performed ontumor 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 NonPolyposis 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
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



PROCESS Collaborative Stage for TNM 7 - Revised 08/19/2009 [Schema]

Rectum

CS Site-Specific Factor 8 Perineural Invasion

• Note: Code the presence or absence of perineural invasion as documented in the pathology report.

Code	Description
000	None; no perineural invasion present
010	Perineural invasion present
998	No histologic examination of primary site
uuu	Unknown Not documented in patient record



PROCESS Collaborative Stage for TNM 7 - Revised 09/21/2009 [Schema]

Rectum

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)
020	Normal (wild type)
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



PROCESS Collaborative Stage for TNM 7 - Revised 09/21/2009 [Schema]

Rectum

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

• Note: This is a special assay test used to identify loss of heterozygosity on the long arm of chromosome 18, which contains several genes with potential importance in colorectal cancer pathogenesis and progression.

Code	Description
010	Test positive for loss of heterozygosity
020	Test negative for lost of heterozyosity
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