

Collecting Cancer Data: Lower Digestive System

NAACCR 2011-2012 Webinar Series
4/5/2012



Q&A

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

Reminder:

- 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



Agenda

- Overview
- Collaborative Stage Data Collection System
- Treatment
- Review of Case Scenarios

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OVERVIEW

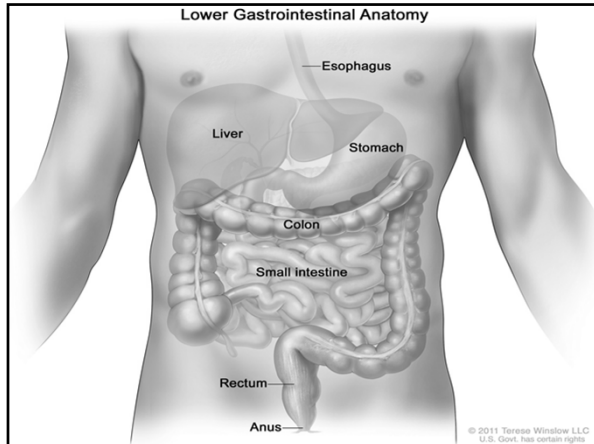


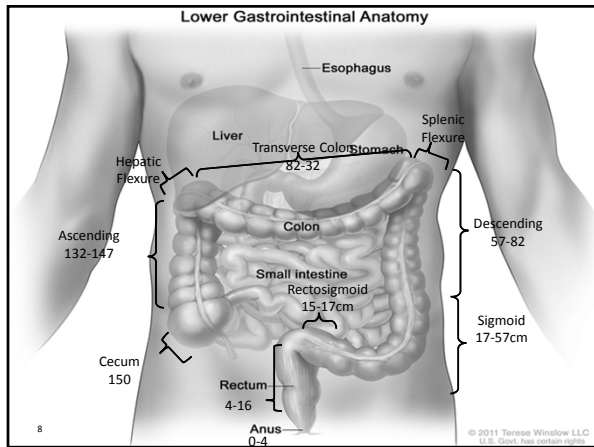
Statistics

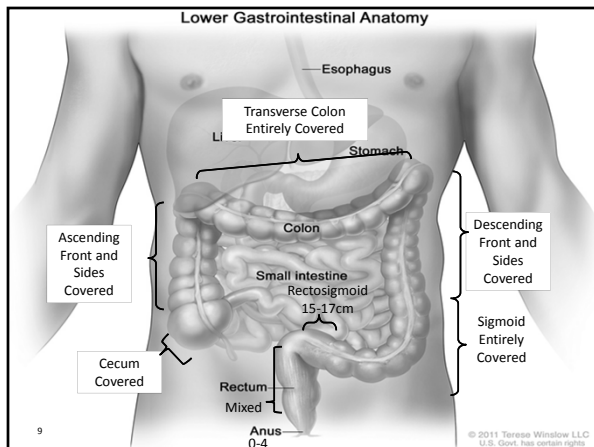
- Estimated new cases and deaths from colon and rectal cancer in the United States in 2012:
 - New cases:
 - 103,170 (colon)
 - 40,870 (rectum)
 - 6,230 (anal)
 - Deaths: 51,690 (colon and rectal combined)
 - Deaths: 780 (anal)
- Estimated new cases and deaths from colon and rectal cancer in Canada in 2011:
 - New Cases
 - 22,000 (colon)
 - Deaths
 - 8,900 (colon)

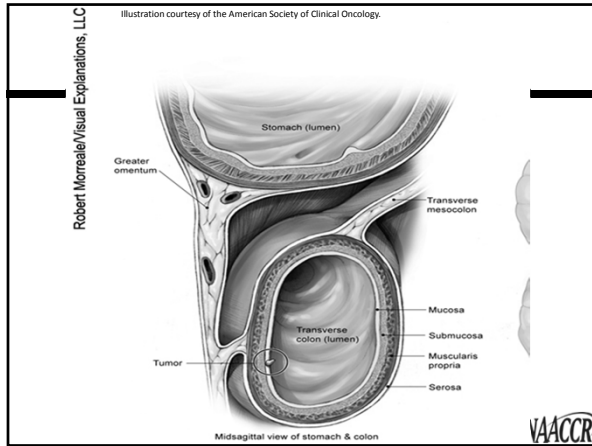
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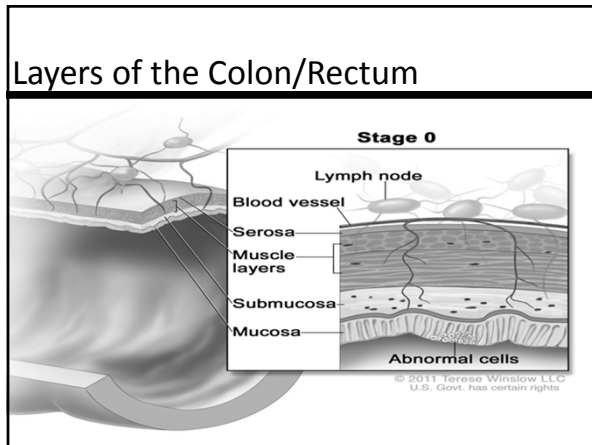


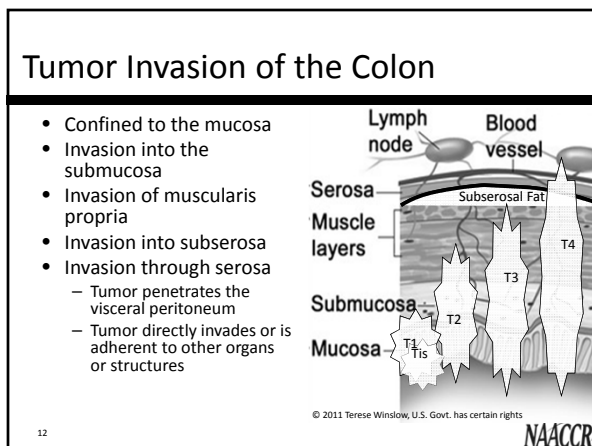






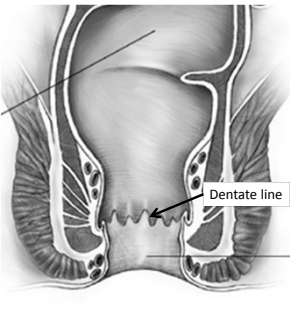






Anus

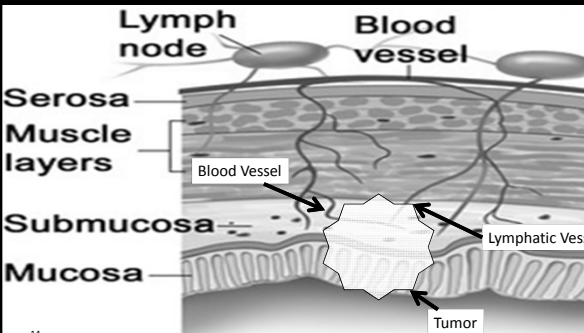
- The anus begins at the apex of the sphincter and ends where the squamous mucosa turns to skin
 - Where the rectum meets the anus is a band of transitional mucosa.
 - Beyond that is a layer of non keratinizing squamous epithelium



Dentate line

Illustration courtesy of the American Society of Clinical Oncology.

Lymph-Vascular Invasion



Labels in diagram: Lymph node, Blood vessel, Serosa, Muscle layers, Submucosa, Mucosa, Blood Vessel, Lymphatic Vessel, Tumor.

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Histology

- Adenocarcinoma
 - Ninety-eight percent of colon cancers are adenocarcinoma
 - Ten to fifteen percent of these cases produce enough mucin to be categorized as mucinous/colloid
 - Mixed histologies and specific types other than mucinous/colloid or signet ring cell are rare (2007 MPH Manual pg 29)

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Histology

- Mucinous/colloid adenocarcinoma (8480)
 - An adenocarcinoma containing **extra**-cellular mucin comprising more than 50% of the tumor
 - Note that “mucin-producing” and “mucin-secreting” are not synonymous with mucinous
- Signet ring cell carcinoma (8490)
 - An adenocarcinoma containing **intra**-cellular mucin comprising more than 50% of the tumor

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Histology

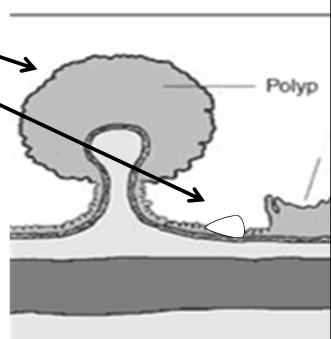
- Adenocarcinoma in an adenomatous polyp (8210)
 - Adenocarcinoma in a tubular adenoma
 - Carcinoma in adenomatous polyp
 - Adenocarcinoma in a polyp, NOS
 - Carcinoma in a polyp, NOS
- Adenocarcinoma in villous adenoma (8261)
- Adenocarcinoma in tubulovillous adenoma (8263)

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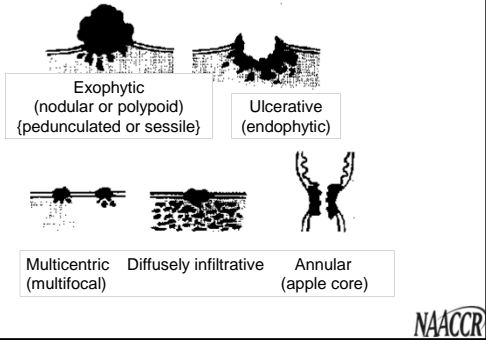
Terminology

- Frank Adenocarcinoma
 - No indication of a polyp
- Sessile Polyp
 - Polyp without a stalk
- Pedunculated Polyp
 - Polyp with a stalk
- Exophytic
 - Nodular or polypoid
 - Pedunculated or sessile
- Endophytic
 - Ulcerative



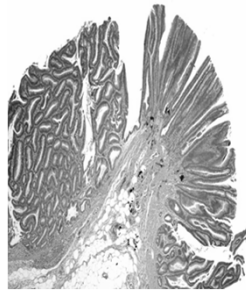
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Tumor Configurations



Polyps

- Tubular
- Tubulovillous
- Villous



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MP/H Coding

- Rule M4
 - Tumors in sites with ICD-O-3 topography codes that are different at the second (Cxxx), third, (Cxxx) or fourth (C1&x) character are multiple primaries
- Rule M5
 - Tumors diagnosed more than one (1) year apart are multiple primaries.
- Rule M6
 - An invasive tumor following an in situ tumor more than 60 days after diagnosis are multiple primaries
- Rule M7
 - A frank malignant or in situ adenocarcinoma and an in situ or malignant tumor in a polyp are a single primary.

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Question

- Patient was diagnosed with T4 colon cancer of the ascending colon in February of 2010. She had a hemicolectomy followed by chemotherapy.
- In April of 2011 she was found to have what the physician described as and adenocarcinoma “recurrent at the anastomotic junction”
 - Is this a second primary?



Answer

- Yes, this is a second primary per rule M4.
 - ... When a colon resection has taken place, the original primary site is no longer present. A colon resection usually includes a portion of uninvolved colon on either side of the tumor. A tumor diagnosed at the anastomotic junction cannot be located in the same site as the previous tumor.
 - SEER SINQ 20091116
- Rule M4
 - Tumors in sites with ICD-O-3 topography codes that are different at the second (Cxxx), third, (Cxxx) or fourth (C18x) character are multiple primaries.



Grade

Two Grade system

- 2 Low-grade
 - Well-differentiated and moderately differentiated
- 4 High-grade
 - Poorly differentiated and undifferentiated

Four Grade System

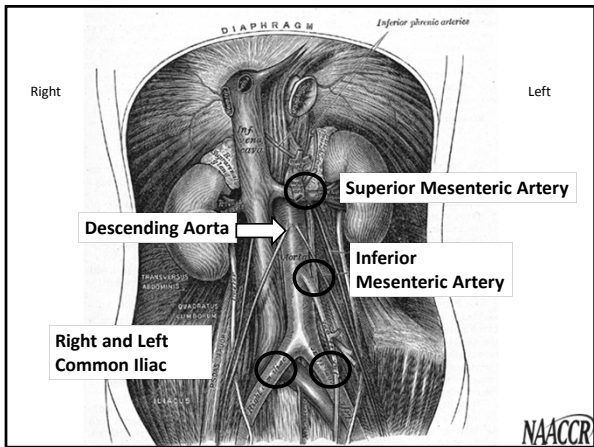
- 1 Well Differentiated
- 2 Mod Differentiated
- 3 Poorly differentiated
- 4 Undifferentiated

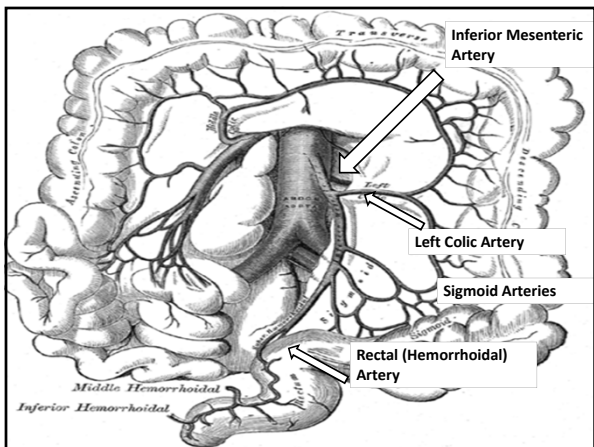


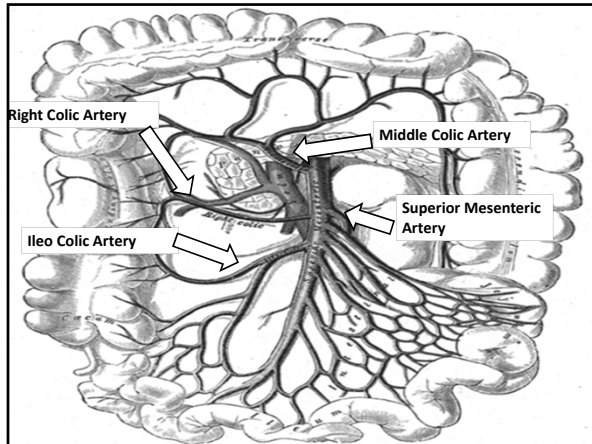
Pop Quiz

- Moderately to well differentiated adenocarcinoma of the sigmoid colon
 - What is Grade?
 - What is Grade Path Value and Grade Path System?
- Grade 1 of 2 adenocarcinoma of the sigmoid colon
 - What is Grade?
 - What is Grade Path Value and Grade Path System?









Lymph Nodes of the colon

- Superior mesenteric artery branches
 - 1 Ileocolic
 - 2 Right colic
 - 3 Middle colic
- Inferior mesenteric artery branches
 - 4 Ascending left colic
 - 5 Left colic
 - 6 Sigmoid branches
 - 7 Superior rectal artery
 - 8 Middle rectal artery
 - 9 Inferior rectal artery
 - 10 Inferior mesenteric vein

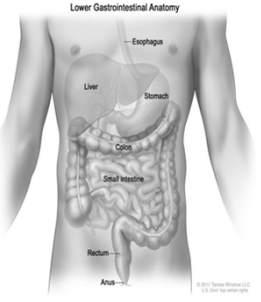
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Lymph Nodes of Colon

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 Image source: <http://training.seer.gov>

Common Metastatic Sites

- Liver
- Lung
- Abdominal seeding



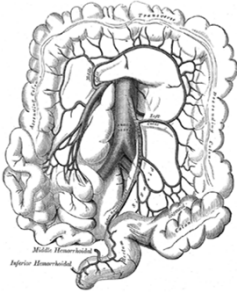
Lower Gastrointestinal Anatomy

Esophagus
Stomach
Liver
Colon
Small intestine
Rectum
Anus

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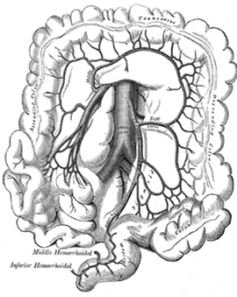
Distant Lymph Nodes



- Primary of the cecum
 - Superior mesenteric lymph node
 - Code under CS Lymph Nodes
 - Inferior mesenteric lymph node
 - Code under CS Mets at DX
 - Mesenteric lymph node
 - Code under CS Lymph Nodes

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Pop Quiz




- Primary of the cecum
- Are the following regional or distant lymph nodes?
 - Ileocecal lymph node
 - Common iliac lymph node
 - External iliac lymph node

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Questions?

QUIZ 1


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**COLLABORATIVE STAGE DATA
COLLECTION SYSTEM (CS)**



CS COLON & RECTUM



CS Extension: Colon & Rectum

- Codes 000 – 050
 - Noninvasive tumor
- Codes 100 – 120
 - Tumor confined to mucosa of colorectal wall
- Codes 130 – 170
 - Tumor invades submucosa of colorectal wall
- Codes 200 – 250
 - Tumor invades muscularis propria of colorectal wall

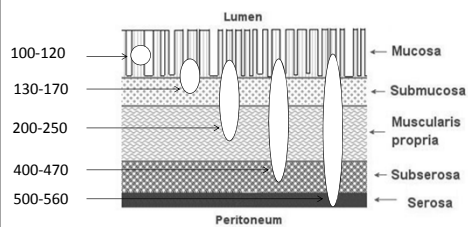


CS Extension: Colon & Rectum

- Codes 400 – 470
 - Tumor invades through muscularis propria into pericorectal tissues
- Codes 500 – 560
 - Tumor penetrates serosa (visceral peritoneum)
- Codes 565 – 850
 - Tumor invades or adheres to other organs or structures



CS Extension: Colon & Rectum



Pop Quiz: CS Extension

- Final diagnosis: Intramucosal carcinoma of cecum. Physician staged as Tis.
- What is the code for CS Extension?
 - 000 – In situ
 - 100 – Confined to mucosa including intramucosal



CS Lymph Nodes: Colon & Rectum

- Code 050
 - Tumor deposits in subserosa or non-peritonealized pericolic or perirectal tissues without regional nodal metastasis
- Code 300
 - Mesenteric NOS
 - Regional lymph nodes NOS
- Code 800
 - Lymph nodes NOS



Pop Quiz: CS Lymph Nodes

- Lesion 1: 11 cm adenocarcinoma of cecum with extension into superficial pericolic adipose tissue; pT3pN1
- Lesion 2: 1 cm adenocarcinoma of ascending colon arising in adenomatous polyp with invasion into submucosa; pT1pN0
- Metastatic adenocarcinoma involving 2/24 pericolic lymph nodes



Pop Quiz: CS Lymph Nodes

- What is the code for CS Lymph Nodes for the cecum primary?
 - 000 – No regional lymph nodes involved
 - 110 – Paracolic/pericolic
- What is the code for CS Lymph Nodes for the descending colon primary?
 - 000 – No regional lymph nodes involved
 - 110 – Paracolic/pericolic



CS Mets at DX: Colon & Rectum

- Single distant lymph node chain
 - Code 08, 16, or 18
- Multiple distant lymph node chains
 - Code 29, 31, or 33
 - Code 29 obsolete in v02.04.40 for colon
- Metastasis to single distant organ except peritoneum
 - Code 26
- Metastases to more than 1 distant organs except distant lymph nodes
 - Code 36




Pop Quiz: CS Mets at DX

- Rectosigmoidoscopy and biopsy: 6 cm rectal tumor, adenocarcinoma, extends into pelvic wall
- CT scan: Rectal tumor extending into pelvic wall with metastatic deposits in pelvic wall
- What is the code for CS Mets at DX?
 - 00: No distant metastasis
 - 26: Metastasis to a single distant organ
 - 36: Metastasis to more than 1 distant organ
 - 99: Unknown




SSF1: Carcinoembryonic Antigen (CEA)

Code	Description
010	Positive/elevated
020	Negative/normal; within normal limits
030	Borderline; undetermined if positive or negative
988	Not applicable: Info not collected for case
997	Test ordered, results not in chart
998	Test not done
999	Unknown or no information




SSF2: Clinical Assessment Regional Nodes

Code	Description
000	Nodes not clinically evident; imaging of regional nodes performed and nodes not mentioned
010	Metastasis in 1 regional node clinically Stated as clinical N1a
020	Metastases in 2-3 regional nodes clinically Stated as clinical N1b
030	OBSOLETE v02.04.40 Tumor deposits without regional nodal metastasis



SSF2: Clinical Assessment Regional Nodes

Code	Description
100	Metastases in 1-3 regional nodes clinically Stated as clinical N1 [NOS]
110	Metastases in 4-6 regional nodes clinically Stated as clinical N2a
120	Metastases in 7 or more regional nodes clinically Stated as clinical 2b
200	Metastases in 4 or more regional nodes clinically Stated as clinical N2 [NOS]



SSF2: Clinical Assessment Regional Nodes

Code	Description
400	Clinically positive regional nodes, NOS
988	Not applicable: Info not collected for case
999	Regional lymph node(s) involved pathologically, clinical assessment not stated Unknown if nodes are clinically evident Not documented in patient record



Pop Quiz: SSF2

- CT of abdomen pelvis: Cecal mass with circumferential mural thickening extending across the ileocecal valve to the ascending colon. Pericolic soft tissue stranding is present at this site along with a small node measuring 7 mm. This is most likely cecal carcinoma with local lymphadenopathy.




Pop Quiz: SSF2

- What is the code for SSF2?
 - 000 – Nodes not clinically evident
 - 010 – Metastasis in 1 regional node, determined clinically
 - 400 – Clinically positive regional nodes, NOS
 - 999 – Unknown if regional nodes clinically evident




SSF3: CEA Lab Value

Code	Description
000	0 ng/ml exactly
001	0.1 or less ng/ml
002-979	0.2 - 97.9 ng/ml Exact value to nearest tenth in ng/ml
980	98.0 or greater ng/ml
988	Not applicable: Info not collected for case
997	Test ordered, results not in chart
998	Test not done
999	Unknown or no information




Pop Quiz: SSF1 and SSF3

- 12/5/11 CEA lab value 4.2 ng/ml; lab's normal range < 2.5 ng/ml
- 12/12/11 Hemicolectomy: adenocarcinoma of splenic flexure extending through colon wall; 0/22 metastatic nodes



Pop Quiz: SSF1 and SSF3

- What is the code for SSF1?
 - 010 – Positive/elevated
 - 020 – Negative/normal
 - 999 – Unknown
- What is the code for SSF3?
 - 042
 - 420
 - 999 - Unknown



SSF4: Tumor Deposits

Code	Description
000	None
001-080	1-80 tumor deposits (TD) (Exact number of tumor TD)
081	81 or more TD
988	Not applicable: Info not collected for case
990	TD identified, number unknown
998	No surgical resection of primary site
999	Unknown or no information



Pop Quiz: SSF4

- Sigmoid polypectomy: Non-invasive adenocarcinoma confined to polyp. No other procedure was performed.
- What is the code for SSF4?
 - 000 – None
 - 998 – No surgical resection of primary site
 - 999 - Unknown




SSF5: Tumor Regression Grade

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




SSF5: Tumor Regression Grade

Code	Description
030	Tumor Regression Grade 3 Poor response: Minimal or no tumor kill; extensive residual cancer
988	Not applicable: Info not collected for case
990	Response present, but degree of response not further described
998	No preoperative treatment or no resection of primary site after preoperative treatment
999	Unknown




Pop Quiz: SSF5

- Large rectal tumor identified by endoscopic ultrasound; biopsy proven adenocarcinoma of rectum. Patient received neoadjuvant chemotherapy.
- Low anterior resection: Microscopic foci of rectal adenocarcinoma; 0/10 regional nodes metastatic; moderate treatment effect




Pop Quiz: SSF5

- What is the code for SSF5?
 - 010 - Tumor Regression Grade 1; Moderate response: Single cells or small groups of cancer cells
 - 990 – Response present, but degree of response not further described
 - 998 - No preoperative treatment or no resection of primary site after preoperative treatment
 - 999 - Unknown




SSF6: Circumferential Resection Margin (CRM)

Code	Description
000	Margin IS involved with tumor CRM positive Described as "less than 1 millimeter (mm)"
001-980	0.1 – 98.0 mm (Exact size to nearest tenth of mm)
981	98.1 mm or greater
988	Not applicable: Info not collected for case
990	No residual tumor identified on specimen
991	Margins clear, distance from tumor not stated CRM negative NOS




SSF6: Circumferential Resection Margin (CRM)

Code	Description
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"



SSF6: Circumferential Resection Margin (CRM)

Code	Description
998	No resection of primary site
999	Unknown or no information CRM not mentioned Not documented in patient record



Pop Quiz: SSF6

- Tumor site: Rectum
- Tumor size: 2 cm
- Tumor extension: Into muscularis propria
- Margins
 - Proximal: Uninvolved
 - Distal: Uninvolved
 - Circumferential: Uninvolved
 - Distance of invasive carcinoma from closest margin: 3.5 mm



Pop Quiz: SSF6

- What is the code for SSF6?
 - 035
 - 991: Margins clear, distance from tumor not stated; CRM negative NOS
 - 994: Described as "less than 4 mm," or "greater than 3 mm," or "between 3 mm and 4 mm"
 - 999: Unknown



SSF7: Microsatellite Instability

Code	Description
020	Microsatellite instability (MSI) stable; no MSI; negative NOS
040	MSI unstable low; positive, low
050	MSI unstable high; positive, high
060	MSI unstable, NOS; positive, NOS
988	Not applicable: Info not collected for case
997	Test ordered, results not in chart
998	Test not done
999	Unknown or no information



Pop Quiz: SSF7

- Colonoscopy with polypectomy and biopsy: Adenocarcinoma confined to head of sigmoid colon polyp. Biopsy of hepatic flexure positive for adenocarcinoma.
- Hemicolectomy: No residual carcinoma in sigmoid colon. Adenocarcinoma of hepatic flexure, 3 cm, extending into pericolic fat. 00/14 nodes negative for tumor.
- Molecular studies
 - MSI result stable



Pop Quiz: SSF7

- What is the code for SSF7 for the sigmoid colon primary?
 - 020 – MSI stable
 - 999 - Unknown
- What is the code for SSF7 for the hepatic flexure primary?
 - 020 – MSI stable
 - 999 - Unknown



SSF8: Perineural Invasion

Code	Description
000	None; no perineural invasion present
010	Perineural invasion present
988	Not applicable: Info not collected for case
998	No histologic examination of primary site
999	Unknown Not documented in patient record



Pop Quiz: SSF8

- The patient had polypectomy at an outside facility. Physician at our facility stated that the pathology report showed "well differentiated adenocarcinoma in a tubulovillous adenoma". Pathology report is not available for review. Colectomy was performed at our facility and showed no residual carcinoma.



Pop Quiz: SSF8

- What is the code for SSF8?
 - 000 – None; no perineural invasion present
 - 010 – Perineural invasion present
 - 998 – No histologic examination of primary site
 - 999 - Unknown



SSF9: KRAS

Code	Description
010	Abnormal (mutated) Positive for mutations
020	Normal (wild type) Negative for mutations
988	Not applicable: Info not collected for case
997	Test ordered, results not in chart
998	Test not done
999	Unknown



Pop Quiz: SSF9

- 6/15/11 Segmental resection of sigmoid colon: Adenocarcinoma in tubulovillous adenoma; KRAS test not done
- 12/15/11 Hemicolectomy: Recurrent adenocarcinoma of sigmoid colon; KRAS mutated
- What is the code for SSF9?
 - 010 – Abnormal (mutated); positive for mutations
 - 998 – Test not done
 - 999 – Unknown



SSF10: 18q Loss of Heterozygosity

Code	Description
010	Test positive for loss of heterozygosity (LOH)
020	Test negative for LOH; normal heterozygous state
030	Undetermined if LOH positive or negative
988	Not applicable: Info not collected for case
997	Test ordered, results not in chart
998	Test not done
999	Unknown or no information



Pop Quiz: SSF10

- Hemicolectomy: Adenocarcinoma of descending colon infiltrating pericolic fat
- Addendum: Test for 18q gene deletion normal
- What is the code for SSF10?
 - 010 – Test positive for LOH
 - 020 – Test negative for LOH; normal heterozygous state
 - 998 – Test not done
 - 999 – Unknown



Standard Setters SSF Requirements

- Colon
 - CoC, SEER
 - SSF: 1-4, 6, 8, 9
 - NPCR
 - SSF2
 - Canadian Council of Cancer Registries
 - SSF: 1, 2, 3*, 4-10**
 - * Collect if readily available in clinical chart
 - ** Collect if in path report

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Standard Setters SSF Requirements

- Rectum
 - CoC, SEER
 - SSF: 1-4, 6, 8, 9
 - NPCR
 - SSF2
 - Canadian Council of Cancer Registries
 - SSF: 1, 2, 3*, 4-5**, 6, 7-10**
 - * Collect if readily available in clinical chart
 - ** Collect if in path report

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CS ANUS AND ANAL CANAL

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CS Tumor Size: Anus

- Assignment of T1, T2, and T3 categories is based on tumor size
- Use physician's statement of T category to code CS tumor size if it is the only information about tumor size
 - Code 992: Stated as T1 with no other information on tumor size
 - Code 995: Stated as T2 with no other information on tumor size
 - Stated as T2 moved from 993 to 995 in v02.04.40
 - Code 996: Stated as T3 with no other information on tumor size



CS Extension: Anus

- Code 000
 - In situ, intraepithelial, noninvasive
 - AIN III (anal intraepithelial neoplasia grade III)
 - Reportable to standard setters except Commission on Cancer
- Codes 100-400
 - T category based on value of CS Tumor Size
- Codes 600-850
 - Tumor invades adjacent organs



Pop Quiz: CS Tumor Size & CS Extension

- CT scan: 1.5 cm tumor of anal canal; no lymphadenopathy; no organomegaly
- Anal biopsy: Squamous cell carcinoma, well differentiated
- Per physician clinical T1 N0 M0
- Treatment: Chemotherapy, fluorouracil and mitomycin



Pop Quiz: CS Tumor Size & CS Extension

- What is the code for CS Tumor Size?
 - 015
 - 992 - Described as "less than 2 cm," or "greater than 1 cm," or "between 1 cm and 2 cm"; Stated as T1 with no other information on tumor size
- What is the code for CS Extension?
 - 300 – Localized NOS
 - 310 – Stated as T1 with no other information on extension
 - 999 - Unknown



CS Lymph Nodes: Anus

- Use codes for anal canal unless tumor is stated to occur at anus
- Perirectal lymph nodes
 - Codes 110 – 140
- Unilateral internal iliac AND/OR inguinal lymph nodes
 - Codes 200 – 405
 - Codes 400 & 405 – Combination of unilateral iliac and inguinal nodes



CS Lymph Nodes: Anus

- Perirectal and inguinal nodes AND/OR bilateral internal iliac and/or inguinal nodes
 - Codes 415 – 550
 - Codes 415, 425 & 440 – Combination of perirectal and inguinal nodes
 - Code 530 – Combination of bilateral iliac & inguinal nodes
- Regional nodes NOS
 - Code 600



CS Mets at DX: Anus

- Standard table is used
- Common metastatic sites
 - Liver
 - Lungs
 - Abdominal cavity



**SSF1: Human Papilloma Virus (HPV)
Status**

- Record results of HPV test on pathology specimen
 - Primary tumor or metastatic site may be tested
- Use code 000 or 060 if HPV test only reports negative or positive results
 - Code 000 – HPV negative
 - Code 060 – HPV positive for high-risk types NOS
- Codes 010 – 050 are hierarchical



Standard Setters SSF Requirements

- Anus
 - CoC, SEER, NPCR
 - None required
 - Canadian Council of Cancer Registries
 - SSF1: Collect if available in clinical chart



Questions?

QUIZ 2

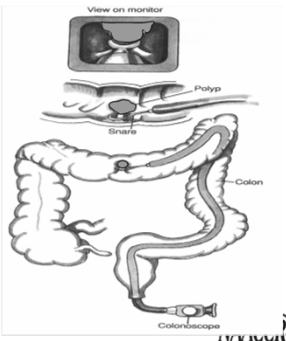
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TREATMENT

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Colonoscopy

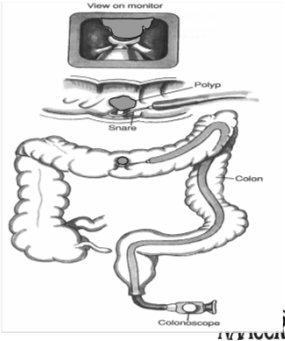
- Colonoscopy with biopsy
 - Diagnostic/Staging Procedure
- Colonoscopy with polypectomy
 - Surgical procedure
- The area that is biopsied is often tattooed for future reference



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Clinical Staging

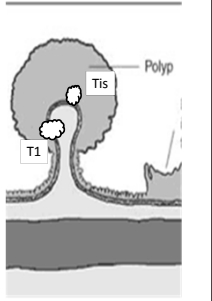
- Endoscopic ultrasound
 - Can be used to determine the depth of invasion
 - Can be used to assess the status of regional lymph nodes
- MRI
 - Can be used to assess depth of invasion
 - Can be used to assess status of regional lymph nodes.



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Treatment for Polyps

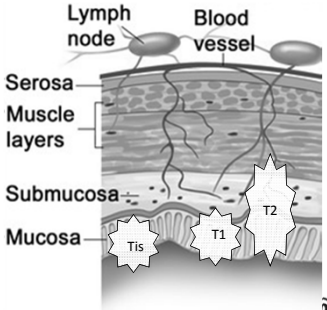
- Polypectomy may be only treatment necessary if...
 - Tis or T1
 - Grade 1 or 2
 - No lymph-vascular invasion
 - Negative surgical margins
- Sessile polyps may require additional surgery even with favorable histologic features



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Treatment-Colon or Rectum

- Tis, T1 or T2 with no further mets (Stage 1)
 - Surgery
 - Open
 - Laparoscopic
 - Surveillance



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Treatment-Colon

- Low-risk stage II Surgery
 - Possibly chemotherapy
 - Surveillance
- High risk stage II
 - Surgery (If resectable)
 - Chemotherapy
 - Surveillance

The diagram illustrates the layers of the colon wall: Mucosa, Submucosa, Muscle layers, and Serosa. It shows two stages of cancer: T3, which invades the submucosa and muscle layers, and T4, which invades the serosa. It also depicts lymph node and blood vessel involvement. Labels include 'Lymph node', 'Blood vessel', 'Serosa', 'Muscle layers', 'Submucosa', and 'Mucosa'. A 'Subsero' label points to the area between the muscle layers and serosa. The NAACCR logo is at the bottom right, and a copyright notice for Terese Winslow is at the bottom left.

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Stage II Poor Prognostic Features

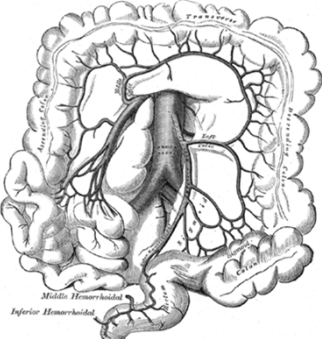
- T4A or T4B
- Histologic grade 3 or 4
- Lymphovascular invasion (LVI)
- Perineural invasion
- Bowel obstruction
- Lesions with perforation
- Close or positive surgical margins
- Inadequate lymph node sampling (fewer than 12 lymph nodes)

Treatment Colon

- Stage III (lymph nodes positive, but no distant mets)
 - Surgery
 - Chemotherapy
 - 5-fu/leucovorin/oxaliplatin
- Stage IV
 - Surgery of the colon primary with resection of liver or lung mets.
 - Neoadjuvant chemotherapy followed by surgery to the colon and to the liver or lung
 - If unresectable, chemotherapy.
 - Reassessment for surgical candidacy after 2 months.

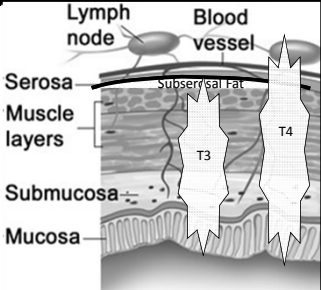
Surgical Procedures-Colon

- Polypectomy
 - Endoscopic
 - Surgical Excision
- Partial/ Segmental Resection
- Hemicolectomy
- Colectomy



Treatment-Rectum

- cT3 or cN1-2
 - Neoadjuvant radiation and /or neoadjuvant chemo
 - Resection
 - Adjuvant chemo
- cT4 or distant mets
 - Neoadjuvant radiation and /or neoadjuvant chemo
 - Resection (if resectable)
 - Adjuvant chemo



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Neoadjuvant Treatment-Rectum

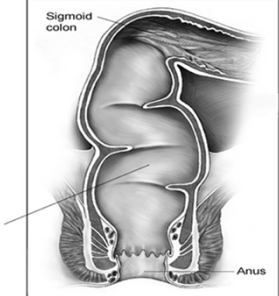
<p>Chemotherapy/ Radiation</p> <ul style="list-style-type: none"> • 5-fu and radiation therapy for about 5 ½ weeks <ul style="list-style-type: none"> – Radiation to the tumor, pre sacral nodes and internal iliac nodes. 	<p>Surgery</p> <ul style="list-style-type: none"> • May be 5-10 weeks after completion of chemo/radiation. <p>Adjuvant Chemotherapy</p> <ul style="list-style-type: none"> • 5-fu and leucovorin • FOLFOX
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Surgical Resection-Rectum

- Transanal Endoscopic Microsurgery (TEM)
- Low Anterior Resection (LAR)
 - Performed for lesions in the rectum and rectosigmoid 4-5cm from the anal verge
 - Total Mesorectal Excision (TME)
 - Coloanal anastomosis
- Abdominoperitoneal Resection (APR)

Illustration courtesy of the American Society of Clinical Oncology.
Cross-section of Rectum and Sigmoid Colon



Treatment-Anal Squamous Cell Carcinoma

- T1 tumors (2cm or less) may be treated with local excision
- Tumors greater than 2cm's are primarily treated with concurrent chemotherapy/radiation
 - Mitomycin and 5-Fu
 - Radiation doses based on stage of disease

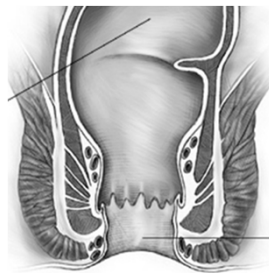


Illustration courtesy of the American Society of Clinical Oncology.



QUIZ 3



Coming up!

- 5/3/12
 - Collecting Cancer Data: Hematopoietic
- 6/14/12
 - Using and Interpreting Data Quality Indicators

**And the winners of the
fabulous prizes are....**

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Thank You!

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