2018 Updates for Neoplasms of the Appendix, Colon, Rectum and GI NETs

2018-2019 FCDS WEBCAST SERIES
10/18/2018
STEVEN PEACE, CTR

CDC & Florida DOH Attribution

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2017 - Florida Changed How FCDS Awards CEUs for FCDS Webcasts
Attendees must take and pass a 3-5 question CEU Quiz to get CEUs
CEU Awards are Restricted to Attendees with a FLccSC LMS Account
The CEU Quiz will be posted to FLccSC 1-2 hours after the webcast ends

Only registered FLccSC Users will be given access to the CEU Quiz
Florida attendees must have a Florida FLccSC Account to take the Quiz
South Carolina attendees must have a South Carolina FLccSC Account
New FLccSC States will follow similar instructions for the CEU Quiz

Attendees can attend any of the live webcasts without receiving CEUs
Recorded Sessions are also available for non-FLccSC Users – No CEUs

Let us Help...

Our hearts go out to all affected by the 2017 and 2018 hurricanes and other natural disasters affecting our state and regional area communities. We know many of you are still struggling.

Each individual, family, community, Parrish, and even neighbors have been increasingly effected by enormous sudden change—you are amazing individuals, small groups and communities.

We will manage all of these interruptions in our work in stride as we always do...even facing changing rules, instructions, and guidelines. Please let us know if there is something we can do.

This is the face of the Cancer Registrar/Program Manager
2018 - A Year for Major Changes to Cancer Registry Data Standards

- New ICD-O-3 Histology Code & Behavior Codes
- New Histology Coding Rules and Tools
- New Reportable Cancers
- 2018 Solid Tumor MP/H Rules
- 2018 Hematopoietic MP/H Rules
- Cancer Staging Updates
  - SS2018
  - Grade Coding
  - Site-Specific Data Items
  - AJCC TNM 8th ed.
  - 2018 SEER EOD
- EDITS v18
- STORE Manual
- 2018 FCDS DAM

Presentation Outline

- Introduction to Neoplasms of the Colon & Rectum
- Introduction to Neoplasms of the Appendix and GI NETs
- Anatomy of the Colon and the Rectum
- Colon Cancer Screening Guidelines
- Colon Cancer Diagnostic Workup
- Changes to ICD-O-3 Rules for Colo-Rectal
- Changes to Grade for Colo-Rectal-NET-GIST
- Colon and Rectum MP/H Rules – Important!!
- Anatomic Staging & Site-Specific Data Items
- Biomolecular & Genetic Testing
- Text Documentation
- Practice Cases - Pending
- Questions

http://safetyca.info
Introduction

Figure 5. Leading Sites of New Cancer Cases and Deaths – 2018 Estimates

Estimated New Cancers

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prostate</td>
<td>Breast</td>
</tr>
<tr>
<td>104,850</td>
<td>205,220</td>
</tr>
<tr>
<td>15%</td>
<td>23%</td>
</tr>
<tr>
<td>Colon &amp; Rectum</td>
<td>Ovarian</td>
</tr>
<tr>
<td>75,610</td>
<td>64,448</td>
</tr>
<tr>
<td>11%</td>
<td>10%</td>
</tr>
<tr>
<td>Melanoma of the skin</td>
<td>Melanoma of the skin</td>
</tr>
<tr>
<td>65,120</td>
<td>59,384</td>
</tr>
<tr>
<td>26%</td>
<td>23%</td>
</tr>
<tr>
<td>Kidney &amp; renal pelvis</td>
<td>Pancreas</td>
</tr>
<tr>
<td>42,860</td>
<td>32,220</td>
</tr>
<tr>
<td>21%</td>
<td>14%</td>
</tr>
<tr>
<td>Non-Hodgkin Lymphoma</td>
<td>Leukemia</td>
</tr>
<tr>
<td>43,790</td>
<td>31,370</td>
</tr>
<tr>
<td>21%</td>
<td>20%</td>
</tr>
<tr>
<td>Lymphoma</td>
<td>Kidney &amp; renal pelvis</td>
</tr>
<tr>
<td>37,160</td>
<td>22,880</td>
</tr>
<tr>
<td>14%</td>
<td>13%</td>
</tr>
<tr>
<td>Liver &amp; intrahepatic biliary duct</td>
<td>All sites</td>
</tr>
<tr>
<td>30,850</td>
<td>878,899</td>
</tr>
<tr>
<td>12%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Estimated Deaths

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lung &amp; bronchi</td>
<td>Lung &amp; bronchi</td>
</tr>
<tr>
<td>65,550</td>
<td>79,500</td>
</tr>
<tr>
<td>22%</td>
<td>22%</td>
</tr>
<tr>
<td>Colorectal</td>
<td>Colorectal</td>
</tr>
<tr>
<td>24,520</td>
<td>24,520</td>
</tr>
<tr>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Liver &amp; intrahepatic biliary duct</td>
<td>Liver &amp; intrahepatic biliary duct</td>
</tr>
<tr>
<td>22,940</td>
<td>9,160</td>
</tr>
<tr>
<td>8%</td>
<td>3%</td>
</tr>
<tr>
<td>Leukemia</td>
<td>Brain &amp; other nervous system</td>
</tr>
<tr>
<td>12,010</td>
<td>7,340</td>
</tr>
<tr>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>Kidney &amp; renal pelvis</td>
<td>All sites</td>
</tr>
<tr>
<td>10,300</td>
<td>325,630</td>
</tr>
<tr>
<td>3%</td>
<td>100%</td>
</tr>
</tbody>
</table>

American Cancer Society – 2018 Cancer Facts & Figures

[Link to State Cancer Profiles]
Introduction – Incidence

Introduction – Mortality
Introduction – Trends – Male Death

Figure 1. Trends in Age-adjusted Cancer Death Rates* by Site, Males, US, 1930-2015

*Age-adjusted to the 2000 US standard population. #Mortality rates for pancreatic and liver cancers are increasing. Note: Due to changes in US coding, numerator information too changed over time. Rates for cancers of the liver, lung and bronchus, colorectal, and uterine are not comparable before 1973.


Introduction – Trends – Female Death

Figure 2. Trends in Age-adjusted Cancer Death Rates* by Site, Females, US, 1930-2015

*Age-adjusted to the 2000 US standard population. **Note: Due to changes in US coding, numerator information has changed over time. Rates for cancers of the liver, lung and bronchus, colorectal, and uterine are not comparable before 1973.

Introduction

- 1 in every 20 persons will develop colon or rectal cancer in their lifetime.
- Colorectal cancer is the #3 cause of cancer deaths in the U.S.
- Colorectal cancer often begins as a benign growth; a polyp.
- Adenomas are a type of polyp and are benign tumors of the tissue lining the colon or rectum.
- Most adenomas are benign.
- However, some adenomas have the potential to develop into cancer over the long term.
- When removed early, polyps are prevented from developing into malignant cancer.

American Cancer Society – Colorectal Cancer Facts & Figures 2017-2019

Introduction – More Trends

Figure 3: Colorectal Cancer Incidence (2009-2013) and Mortality (2010-2014) Rates by Race/Ethnicity and Sex, U.S.

- Rates are age-adjusted for the 2000 U.S. standard population.
- Statistics based on data from National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) Program, 2014 NCI-O/ESEER Program, and National Cancer Institute’s SEER-Medicare Linked Database.

American Cancer Society – Colorectal Cancer Facts & Figures 2017-2019
Introduction

American Cancer Society – Colorectal Cancer Facts & Figures 2017-2019

Figure 2. Colorectal Cancer Growth

Incidence

Table 2: Relative Risks for Established Colorectal Cancer Risk Factors

<table>
<thead>
<tr>
<th>Relative risk*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factors that increase risk:</td>
</tr>
<tr>
<td>Hereditary and medical history</td>
</tr>
<tr>
<td>First-degree relative</td>
</tr>
<tr>
<td>More than 1 relative</td>
</tr>
<tr>
<td>Relative with diagnosis before age 45</td>
</tr>
<tr>
<td>Inflammatory bowel disease</td>
</tr>
<tr>
<td>Diabetes</td>
</tr>
<tr>
<td>Behavioral factors</td>
</tr>
<tr>
<td>Alcohol consumption (daily average)</td>
</tr>
<tr>
<td>2-3 drinks</td>
</tr>
<tr>
<td>4 or more drinks</td>
</tr>
<tr>
<td>Obesity (body mass index 30 kg/m²)</td>
</tr>
<tr>
<td>Red meat consumption (100 g/day)</td>
</tr>
<tr>
<td>Processed meat consumption (50 g/day)</td>
</tr>
<tr>
<td>Smoking (ever-smoker)</td>
</tr>
<tr>
<td>Factors that decrease risk:</td>
</tr>
<tr>
<td>Physical activity (per month)</td>
</tr>
<tr>
<td>Daily consumption (400 g/day)</td>
</tr>
<tr>
<td>Risk consumption (20 g/day)</td>
</tr>
</tbody>
</table>

*Relative risk compares the risk of disease among people with a particular exposure to the risk among people without that exposure. Relative risk for dietary factors compares the highest with the lowest consumption. If the relative risk is more than 1.0, then risk is higher among exposed than unexposed persons. Relative risk less than 1.0 indicates a protective effect.

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Colon and Rectum

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BOWEL CANCER CASES:
PERCENTAGE DISTRIBUTION BY ANATOMICAL SITE

https://www.cancerresearchuk.org/health-professional/cancer-statistics/

Rectosigmoid and Rectum

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Male Anatomy

Female Anatomy

http://www.uptodate.com
Rectum – Anorectum – Anus

http://www.analcancerinfo.ucsf.edu

Colonoscopy Measurements

Distance from Anal Verge (approximations only)
Adapted from AJCC Cancer Staging Manual
Do I have to use the 2018 Coding Rules?

Do NOT Use Old Books or References
### List of 2018 Required Manuals, Rules & Tools

- 2018 FCDS Data Acquisition Manual (2018 FCDS DAM)
- 2018 Cancer Reporting Requirements for Florida
- 2018 Case Finding ICD-10-CM Code List Changes
- ICD-O-3 Third Edition – purple book still is used
- 2018 Guidelines for ICD-O-3 Histology Code and Behavior Update
  - ICD-O-3 New Histology Codes
  - ICD-O-3 Histology/Behavior Code Changes
  - ICD-O-3 Coding for Primary Site and Histology
- 2018 Solid Tumor Coding Rules (formerly MPH Rules for Solid Tumors)
- 2018 Hematopoietic Database & MPH Rules – web-based version only
- 2018 Grade Coding Manual, Instructions and Tables (Grade Manual and Appendices)
- 2018 Summary Stage Manual
- 2018 Site-Specific Data Items Manual (SSDI Manual)
- CoC STORE Manual - STandards for Oncology Registry Entry
- SEER*Rx – current web version
- FCDS v.18 EDITS Metafile – current version
- Reference: NAACCR 2018 Implementation Guidelines and Recommendations

### Histology

#### WHO ICD-O-3 and 2018 UPDATES

**Consensus Change Organizations**

- World Health Organization
- College of American Pathologists
- NCI SEER Program
- CDC NPCR Program
- NAACCR and NCRA
- NCCN – Evidence Based Cancer Guidelines
- American Joint Committee on Cancer
- Commission on Cancer
Histology

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CAP & Solid Tumor Rules by Site

Consensus Change Organizations

World Health Organization
College of American Pathologists
NCI SEER Program
CDC NPCR Program
NAACCR and NCRA
NCCN – Evidence Based Cancer Guidelines
American Joint Committee on Cancer
Commission on Cancer

Histology

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Site-Specific Grade and Site Specific Data Items

Consensus Change Organizations

World Health Organization
College of American Pathologists
NCI SEER Program
CDC NPCR Program
NAACCR and NCRA
NCCN – Evidence Based Cancer Guidelines
American Joint Committee on Cancer
Commission on Cancer
Histology – ICD-O-3 Updates

- WHO Classification of Neoplasms – 4th ed. – 2010
  - Epithelial Tumors – pre-malignant tumors
  - Serrated Lesions – reclassified to malignant 8213/3 in 2018
  - Carcinomas – conventional adenocarcinoma and subtypes
  - Neuroendocrine Neoplasms – NET G1, G2, small cell neuroendocrine and large cell neuroendocrine tumors
  - Mesenchymal Tumors – GIST, KS, rare sarcomas
  - Malignant Lymphoma – MALT, mantle cell lymphoma, DLBCL, Burkitt lymphoma, B-cell lymphoma, NOS

High Grade Dysplasia / In-Situ Adeno

- Dysplasia is another pre-cancerous condition. It means there’s an area in a polyp or in the lining of the colon or rectum where the cells look abnormal, but they don’t look like true cancer cells.

- The cancer is in its earliest stage. This stage is also known as carcinoma in situ or intramucosal carcinoma (Tis). It has not grown beyond the inner layer (mucosa) of the colon or rectum.

- The cancer has grown through the muscularis mucosa into the submucosa (T1), and it may also have grown into the muscularis propria (T2). It has not spread to nearby lymph nodes (N0) or to distant sites (M0). (Invasive localized cancer)
Histology – CAP & Solid Tumor Rules (MP/H)

- There were no significant changes in WHO ICD-O-3 New Codes or New Rules – However, there ARE significant changes to the Solid Tumor MP/H Rules for Colon, Rectum, NET, GIST, and coding polyps.
- Many ICD-O-3 Histology Codes will still exist in the software you use and in your printed manuals – but, you are being instructed in the Solid Tumor Rules not to use them.
- EDITS will catch some but not all of these changes.
- Staging will be effected when an ‘invalid for staging’ histology is used
- **DO NOT USE CODES - 8210, 8260, 8261, 8262, 8263, 8264**

Histology – CAP Checklist Organization

- Not All Cancers Have Established CAP Standards
  - Carcinoma of the Appendix
  - Neuroendocrine (Carcinoid) Tumors of the Appendix
  - Primary Carcinoma of the Colon and Rectum
  - Neuroendocrine Tumors of the Colon and Rectum
Histology – CAP & AJCC Chapter

Histology CAP – Biomarker Checklists

- Colon and Rectum – none for NET or GIST or other
  - Mismatch Repair Proteins – MLH1, MSH2, MSH6, PMS2
  - Microsatellite Instability (MSI)
  - MLH1 Promoter Methylation Analysis
  - KRAS Mutational Analysis
  - NRAS Mutational Analysis
  - BRAF Expression
  - BRAF V600E Mutational Analysis
  - PIK3CA Mutational Analysis
  - PTEN Mutational Analysis
DNA Mismatch Repair Mechanism

Histology CAP – Biomarker Checklists

- Multiparameter Gene Expression/Protein Expression Assay

<table>
<thead>
<tr>
<th>Chr</th>
<th>Pos</th>
<th>Gene</th>
<th>Mutation AA</th>
<th>Mutation Type</th>
<th>Expected Frequency (%)</th>
<th>Average (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>115254530</td>
<td>NRAS</td>
<td>Q61K</td>
<td>SNV</td>
<td>12.5</td>
<td>10.4</td>
</tr>
<tr>
<td>3</td>
<td>178936291</td>
<td>PI3KCA</td>
<td>E545K</td>
<td>SNV</td>
<td>9.0</td>
<td>7.1</td>
</tr>
<tr>
<td>4</td>
<td>55599321</td>
<td>KIT</td>
<td>D816V</td>
<td>SNV</td>
<td>10.0</td>
<td>9.1</td>
</tr>
<tr>
<td>7</td>
<td>149453126</td>
<td>BRAF</td>
<td>V600E</td>
<td>SNV</td>
<td>10.5</td>
<td>11.0</td>
</tr>
<tr>
<td>12</td>
<td>25398281</td>
<td>KRAS</td>
<td>G13D</td>
<td>SNV</td>
<td>15.0</td>
<td>15.3</td>
</tr>
<tr>
<td>12</td>
<td>25398284</td>
<td>KRAS</td>
<td>G12D</td>
<td>SNV</td>
<td>6.0</td>
<td>5.7</td>
</tr>
</tbody>
</table>

Figure 3. The Acro-Amplicon Plus Colorectal Cancer Panel consistently detected validated variants at the expected frequency in replicates from 10 ng of the Horizon Diagnostics Quantitative Multiplex DNA Reference Standard H2O0. Variants were called by Lofheq (Genome Institute of Singapore).
FDA-Approved Chemo – No Targeted Tx Yet

- Capecitabine (Xeloda)
- 5FU/Leucovorin
- Oxaliplatin
- Irinotecan
- Trifluridine/Tipiracil
- FOLFOX
- FOLFIRI
- FOLFIRINOX
- CAPEOX
- FLOX

Was more like finding needle in haystack.

Pace has accelerated to a frenzy with more funding for advances in next generation methods, advanced testing, new agents, multi-gene profiles and new technology.

2018 Solid Tumor Rules

Solid Tumor Rules
Effective with Cases Diagnosed 1/1/2018 and Forward
Published June 2018

Editors
Lora Udelson, CTR, MG1 MER
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Sotaro Noguchi, MD, Ph.D, CTR, MG1 MER

2018 Solid Tumor Rules

- MOST of the Changes to the Colon/Rectum Rules are HISTOLOGY RULES CHANGES – and they are big.
- Use each set of rules as intended for the sites and/or histology combinations in the header of each module.
- Each set of rules is available only in sentence format.
- There are no logic charts to follow or reference.
- Rules are to be shared to hospital and central registries
- Periodic updates are necessary to maintain methods
- ICD-O-3 is working on ICD-O-3.2 for 2019.
- ICD-O-5 will begin work in 2020.
- ICD-11 is also coming with fewer major changes.
- SEER is planning Training Webinars and Reliability Studies on their website at some time in the future – dates unknown.

MOST PEOPLE ONLY HAVE ONE CANCER
Some People or Their Families Have More

[Diagram showing family tree with cancer history]

Patients are Seen and Treated in Many Places

[Diagram showing healthcare settings]

https://www.curetoday.com/journey/cancer-guides/at-diagnosis/
Each Facility Must Report the Cancer/Tx

- How do we make sure tumor(s) that these patients tumor(s) or the family member(s) are counted and data are captured in the same manner – not just ‘in my registry’.
- We also need to define them the same, code them the same, Quality Check them the same, and use them the same.
- Without standards that go far beyond one program or one set of program’s goals with people’s lives in their hands; but with so many users with different special needs.
- Even our newest and brightest CTR and Candidate CTRs need hands on mentoring – not just training, testing and abstracting – we will need one another for 2018-2019 !!!

2018 Solid Tumor Rules

- Introduction
- Changes from 2007 MPH Rules
- Equivalent or Equal Terms
- Terms that are NOT Equivalent or Equal
- Table I: Specific Histologies, NOS and Subtypes Variants
- Table II: Histologies Not Reportable for Colon, Rectosigmoid and Rectum
- Illustrations
- Multiple Primary Rules
- Histology Coding Rules
2018 Solid Tumor Rules - Introduction

Introduction

- New terms and codes in these rules are based on the WHO Classification of Tumors of the Digestive System 2010 edition.

- Ninety-eight percent of colorectal cancers are adenocarcinomas and adenocarcinomas subtypes.

- Mixed histologies and specific variants or subtypes of adenocarcinomas other than ones specified or signet ring cell are new.

- Clear cell adenocarcinoma is included under gastrointestinal adenocarcinomas (MANEC 308 previously called ductal adenocarcinoma and neuroendocrine).

- The new terminology is applied to tumors arising from the gastrointestinal tract, but with more aggressive adenocarcinoma histology. It was also proposed because carcinoids are a subgroup of neuroendocrine carcinoma. Pancreatic NETs may still diagnose adenocarcinomas indifferently, neuroendocrine, or neuroendocrine and a specific gastrointestinal tumor or adenocarcinoma, among which is NET (including specific types of NET-like gastrointestinal neuroendocrine carcinoma).

- Bevacizumab (previously called Avastin) adenocarcinomas arise in the anastomosis of the bowel, not as a polyp.

Terms

- NEC = Neuroendocrine Carcinoma
- NET = Neuroendocrine Tumor
- GIST = Gastrointestinal Stomach Tumor
- MIS = Mixed Histology Carcinoma
- NETs are gradually replacing carcinoids; however, most pathologists are still using carcinoid and carcinoid tumor.

New E: Entities and/or terms are included in the ICD-O to allow for the cancer to be managed separately. Review the recently approved version of ICD-O.

New E: Entities and/or terms are included in the ICD-O to allow for the cancer to be managed separately. Review the recently approved version of ICD-O.

New 2: 2007 MPRI Rules and 2018 Solid Tumor Rules are used based on date of diagnosis.

- Tumors diagnosed 01/01/2007 through 12/31/2017 Use 2007 MPRI Rules
- Tumors diagnosed 01/01/2008 and later Use 2018 Solid Tumor Rules

- The original tumor diagnosed before 1/1/2018 and a subsequent tumor diagnosed 1/1/2018 or later in the same primary site. Use the 2018 Solid Tumor Rules.

Changes from 2007 MPRI Rules

These changes are effective with cases diagnosed 1/1/2018 and later.

1. Rectum and Rectosigmoid are now included with the Colon Rules. In the 2007 MPRI Rules, they were included with Other Sites.

2. There are new multiple primary rules which address anastomotic recurrence.

3. Neuroendocrine tumors (formerly carcinoids) among the appendix are reportable for cases diagnosed 1/1/2015 and forward.

4. Rule clarification: Pseudomyxoma peritonei (accumulation of mucus in the abdominal or pelvic cavity) now has its own ICD-O code (WHO 2010) that classifies pseudomyxoma peritonei as either high-grade or low-grade (see below). Pseudomyxoma peritonei is usually associated with mucinous tumors of the appendix and is rarely associated with ovarian mucinous tumors.

   - High-grade pseudomyxoma peritonei is malignant
   - Low-grade pseudomyxoma peritonei is not malignant

5. There are dysplasias which have been assigned an in situ behavior code 3 in ICD-O and in the ICD-O Update. Despite becoming 3 in 2017, they are not reportable in the US. They are reportable in Canada.

   A. Dysplasia was not collected in the past. If dysplasia is added to the database with the same code as in situ tumors, there will be a large surge in the incidence of in situ neoplasms.

   - There would be no way to separate the dysplasia from the in situ neoplasms in the database, which would cause problems with surveillance (long-term studies) since the prognosis and probabilities of disease progression are different between an in-situ tumor and a dysplasia.

   - Pathologists frequently use the term “severe dysplasia” or “high-grade dysplasia” in place of carcinoma in situ. Code CIS unless the pathologist expressly states “CIS”.

   B. The various agencies are working for solutions to this issue.

6. Polyps are not disregarded when coding histology. For example, adenocarcinomas in an adenomatous polyp is coded as adenocarcinoma 140.

7. New code deme已 is identified by asterisk (*) in the histology table in the Terms and Definitions.
2018 Solid Tumor Rules

Equivalent or Equal Terms

These terms can be used interchangeably:

- And with
  - Note: “And” and “with” are used to synthesize when describing multiple histologies within a single tumor
- Carcinoid, NET, neuroendocrine tumor
- Carcinoma, carcinoma NOS, adenocarcinoma, adenosquamous NOS, intestinal type adenocarcinoma NOS
- De novo, brisk adenocarcinoma (obscure)
- Familial polyposis; familial adenomatous polyposis (FAP) NOS
- Intramural, intramural extension within the muscular layer of the GI tract
- Intra luminal, invasion through colon wall, extension through colon wall, transmural
  - Note: The term “transmural” is used to describe extension through all layers of the wall, but not past the wall. Off extension through the colon into the peritoneum is listed in pathology report carefully.
- Mucinous, noncolonic, mucinous, colonic
- Neuroendocrine carcinoma, NEC
- Polyloid, adenomatous, polyloid NOS, adenomatous polyloid
  - Note: The term “polyloid” means projecting from a surface
  - Note: These are cancer types of polyloid. Most common are adenomas, which are part of the adenoma-cancer sequence
- Stromal, visceral peritoneal
- Ultrasound, existing at the same time, concurrent, prior to first course treatment
- Size, topography
- Tumor size, tumor mass, lesions, abnormal
  - The terms, tumor, mass, tumor mass, lesion, and abnormal are not used in a standardized manner in clinical diagnosis, some, or technically. Terminology the terms unless there is a pathologist’s statement that the term is malignant cancer
  - These terms are NOT used to determine multiple primaries
  - Do not use these terms for cross-referencing or determining resectability

Terms that are NOT Equivalent or Equal

This is a list of terms that are not equivalent. There are no cross-referencing implications:

- Component is not equivalent to subtype variant
  - Note: Component is not coded when the pathologist specifies the component as a second carcinoma
- The words “polypoid” and “polyloid” are not synonymous with either an adenoma or an adenomatous polypl. The terms “polypoid” and “polyloid” refer to anything projecting from the bowel mucosa into lumen. The lesion may be benign, malignant, or inflammatory
- Polypoid adenocarcinoma is not equivalent to adenocarcinoma in a polyp
2018 Solid Tumor Rules

Table 1: Specific Histologies, NOS, and Subtypes/Variants

Use Table 1 as directed by the Histology Rules to assign the more common histology codes for malignancies found in the colon, rectosigmoid, and rectum.

Note 1: Rare histologies may not be listed in the table. When a histology term is not found, reference ICD-O and all updates.

Note 2: Submit a question to Ask a SEER Registar when the histology code is not found in Table 1, ICD-O or all updates.

Note 3: Behavior codes are listed when the term has only one possible behavior (either a 7 or 8). For histologies which may be either 7 or 8, a behavior code is not listed. Code behavior from pathology.

Note 4: Typically, colon, rectal, and appendiceal carcinomas may exhibit comedo features or differentiation. Comedo describes the tumor appearance rather than a true histologic subtype/variant of adenocarcinoma. Code to adenocarcinoma 8140.

Column 1 contains specific and NOS histology terms.
- Specific histology terms do not have subtypes/variants.
- NOS histology terms do have subtypes/variants.

Column 2 contains synonyms for the specific or NOS term. Synonym have the same histology code as the specific or NOS term.

Column 3 contains subtypes/variants of the NOS histology. Subtypes/variants do not have the same histology code as the NOS term.

2018 Solid Tumor Rules

Specific and NOS Term and Code
- Adenocarcinoma 8140

Symptoms for Specific or NOS Term
- Adenocarcinoma NOS
- Adenocarcinoma with a medullary pattern and a pleomorphic pattern
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with a medullary pattern and a pleomorphic pattern
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
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- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocarcinoma with an adenocarcinoma, papillary type
- Adenocar...
2018 Solid Tumor Rules

Single Tumor

Note: Collision tumors are counted as two individual tumors for the purpose of determining multiple primaries. Collision tumors were originally two separate tumors that arose in close proximity. As the tumors increased in size, they merged or overlapped each other. Use the Multiple Tumors module.

Rule M2 Abstract a single primary when there is a single tumor.
   Note 1: A single tumor is always a single primary.
   Note 2: The tumor may overlap onto or extend into adjacent/contiguous sites or subunits.
   Note 3: The tumor may have in situ and invasive components.
   Note 4: The tumor may have two or more histologic components.

This is the end of instructions for Single Tumor

2018 Solid Tumor Rules

Rule M10 Abstract multiple primaries when the patient has a subsequent tumor after being clinically disease-free for greater than one year after the original diagnosis or last recurrence.
   Note 1: Clinically disease-free means that there was no evidence of recurrence or follow-up.
   Note 2: Clinically disease-free means no NED.
   Note 3: Alternatively, the patient must have been clinically disease-free for greater than one year from the date of last recurrence.
   Note 4: When the last course of treatment was a definitive or adjuvant treatment, there was no anatomic recurrence for greater than one year.
   Note 5: When an abdominal/pelvic recurrence is documented whether the patient had a recurrence, failed to discontinue follow-up, or was known to be disease-free after the last documented event, the patient has a subsequent tumor that is not considered a relapse.
   Note 6: Follow the rules to determine whether the physician's treatment.

Rule M11 Abstract a single primary when a subsequent tumor arises at the anatomic site AND:
   - The subsequent tumor occurs less than or equal to 24 months after the original tumor surgery OR
   - The tumor arises in a different wall and/or surrounding tumor, there is no involvement of the process OR
   - The physician does not document an anatomic recurrence.
   Note 2: The physician may order the subsequent tumor become the first site of recurrence.
   Note 3: These tumors are a single primary tumor. Regulations that collect recurrence information should record the information as the recurrence details.
2018 Solid Tumor Rules

1. Code histology when:
   A. Exact term is documented
   B. Histology is described as
      • Subtype
      • Type
      • Variants

2. Do not code the histology when:
   The following modifiers are used as a descriptor:
   • Architecture
   • Differentiation
   - Note: Only code differentiation when there is a specific code for the NOS with differentiation in Table 1.
   • Features (e.g., with features of)
   - Note: Only code features when there is a specific code for the NOS with features in Table 1.

Example 1: Adenocarcinoma with mucinous differentiation is coded 8877/3 (mucinous adenocarcinoma).

Example 2: Adenocarcinoma with neuroendocrine differentiation is coded 8877/3 (neuroendocrine differentiation).

---

2018 Solid Tumor Rules

B. The following anatomic terminology is used as a modifier:
   • Apparently
   • Apparently compatible with
   • Compatible with
   • Consistent with
   • Occurrence
   • Malignant appearing
   • Most likely
   • Presumed
   • Probable
   • Suspected
   • Progressive (for)
   • Treated (of)

Note 1: See SEER Program Manual and COC Manual. Anatomic terminology is used to determine reportability.

Note 2: Histology described by anatomic terminology is coded 8877/3 when a case is accessioned based on anatomic terminology and no other histology information is available or recorded.
2018 Solid Tumor Rules

Rule B1: Code adenocarcinoma with neuroendocrine differentiation 8744 when the final diagnosis is exact: “adenocarcinoma with neuroendocrine differentiation.”

Note: Staging varies by country.
- The diagnosis is the subclassification of adenocarcinoma with neuroendocrine differentiation.
- Any modifier other than differentiation is used, i.e. adenocarcinoma with neuroendocrine features.

Rule B2: Code the specific histology of the polyp when a carcinoma originates in a polyp.
Note: This is a change from the 2007 ICD-O rules which instructed registrars to use the codes for malignancies in a polyp, such as adenocarcinoma in a polyp 8266.
Note 2: Subsequent data has been collected to
- Determine the frequency with which carcinoma arise within polyps
- Establish patient care guidelines for individuals with colon polyps
Example: Colorectal surgery guidelines that mandates carcinoma in the polyp. Code mucinous adenocarcinoma 4840.

Rule B3: Code excised small cell carcinoma 8444 when the final diagnosis is small cell carcinoma AND any other carcinoma.
Examples:
- Small cell carcinoma 8444 and adenocarcinoma 8140
- Small cell carcinoma 8444 and mucinous adenocarcinoma 8440

Rule B4: Code excised carcinomas and squamous cell carcinoma as follows:
- Carcinomas and squamous cell carcinoma
  - Mucinous carcinoma and squamous cell carcinoma
    - Mucinous carcinoma documented as greater than 50% - code carcinomas 8440
    - Squamous cell carcinoma documented to greater than 50% - code squamous cell carcinoma 8440
  - Percentage of carcinomas and squamous cell carcinoma unknown and documented - code adenocarcinoma mixed subtypes 8255

Rule B5: Code adenocarcinoma NOS 8140 when the final diagnosis is:
- Two carcinomas:
  - Adenocarcinoma and squamous carcinoma
- Percentage of carcinomas unknown and documented
- Mucinous documented as less than 50% of tumor
- Adenocarcinoma and squamous cell carcinoma
- Percentage of squamous cell carcinoma unknown and documented
- Squamous cell carcinoma documented as less than 50% of tumor
- Adenocarcinoma in a polyp OR
- Adenocarcinoma OR
- Infiltrative adenocarcinoma OR adenocarcinoma intraepithelial type (no modifier or additional histologic term)
Note: Code only adenocarcinoma NOS even if pathology was intramural adenocarcinoma.
Note 2: Do not code 8344 adenocarcinoma intramural type in a collective primary. Stained type adenocarcinoma 8140 is used for tumors which arise in the stomach, small and large bowel, and specific CNS sites. It is called intramural because it resembles carcinoma which occurs in the colon, rectum or esophagus.
Note 3: When a diagnosis of intestinal type adenocarcinoma is further described by a specific term (such as mucinous intestinal type adenocarcinoma or squamous cell or intestinal type adenocarcinoma), it should be treated as an adenocarcinoma with a specific type variant.
2018 Solid Tumor Rules

Rule H6

Code invasive mucinous adenocarcinoma 8450 when the diagnosis is any of the following:

- Exactly "mucinous adenocarcinoma" (no modifiers)
- High-grade pseudomyxoma peritonei

**Note:** Be very careful when determining primary site. Almost all pseudomyxoma peritonei originate in the appendix C111. However, it can be metastatic disease from sites such as bowel, ovary, or bladder. Code the primary site as designated by a physician, when the primary site is not designated, code unknown primary C809 and the histology as mucinous carcinoma 8450.

**Note 2:** Report the appendiceal mucinous neoplasm as malignant 13 using the ICD-O matrix principle and the SEER and COC manuals when the pathology from the appendix is low-grade mucinous neoplasm (not reportable) AND:

- The pseudomyxoma peritonei are high-grade invasive/malignant OR

**Note 3:** If the following are non-reportable:

- Appendiceal neoplasm with low-grade pseudomyxoma peritonei AND no treatment
- No designation of high- or low-grade for the appendiceal neoplasm AND no treatment for the pseudomyxoma peritonei

---

2018 Solid Tumor Rules

Rule 18

Code the invasive histology when in situ and invasive histologies are present in the same tumor.

Rule 19

Code the subtype/variant when there is a NOS and a subtype/variant of that NOS, such as the following:

- Adenocarcinoma 8410 and a subtype/variant of adenocarcinoma
- Mixed adenocarcinoma: carcinosarcoma 8244 and a subtype/variant of mixed adenocarcinoma
- Nonendocervical carcinomas 8430 and a subtype/variant of nonendocervical carcinomas
- Nonendocervical tumors: grade 1-3 (8060) 8390 and a subtype/variant of nonendocervical tumors: grade 1-3 (8060)
- Sarcoma 8960 and a subtype/variant of sarcoma

**Note 1:** See 9.5.2 in the Explanatory Notes and Definitions for solid tumors for subtype/variant.

**Note 2:** Only code subtype/variant when pathology gives an exact diagnosis. Do not code subtype/variant when modified by terms such as differentiation, lesions, etc., unless there is a specific code for the histology term with the modifier.

This is the end of instructions for Single Tumor.
2018 Solid Tumor Rules

Multiple Tumors Abstained as a Single Primary

Note: Multiple tumors must be a single primary to use this module. See the Multiple Primary Rules to determine whether these tumors are a single primary.

Rule H10 Code adenocarcinomas in familial adenomatous polyposis coli (FAP) when:
- Clinical history states the patient has familial polyposis AND
  - There are greater than 100 polypos identified in the resected specimens

Note 1: Use this rule only when there are multiple polypos. Do not use for a single polypos (adenoma) or for a de novo (duct) malignancy or a malignancy as a single polypos.

Note 2: Use this rule ONLY for adenocarcinomas in FAP.

Rule H11 Code adenocarcinomas in multiple adenomatous polyposis when FAP is not mentioned AND
- There are at least 2 polypos with adenocarcinomas 5 or 5 AND
  - Less than or equal to 100 polypos are identified OR
  - The exact number of polypos is unknown and not documented

Note 1: Do not use this code for a malignancy in a single polypos (adenoma) or for a de novo (duct) malignancy.

Note 2: Use this rule ONLY for adenocarcinomas NOS in multiple polypos.

2018 Solid Tumor Rules

Rule H14 Code the subtype/variant when the diagnosis is a NOS and a single subtype/variant of that NOS such as the following:
- Adenocarcinoma 8449 and a subtype/variant of adenocarcinoma
- Mixed adenocarcinoma and a subtype/variant of mixed adenocarcinoma
- Neuroendocrine carcinoma 8346 and a subtype/variant of neuroendocrine carcinoma
- Neuroendocrine tumor Grade 1 (51) 8348 and a subtype/variant of neuroendocrine tumor Grade 1 (51)
- Sarcoma 8380 and a subtype/variant of sarcoma

Note 1: Tumors may be mixed histologies (NOS) and a subtype/variant of that NOS OR one tumor may be a NOS histology and the other tumor a subtype/variant of the NOS.

Note 2: Use Table 5 in the Equivalency Table and Definitions to find NOS and subtypes/variants.

Note 3: Check the Multiple Primary Rules to confirm that the tumors are a single primary.

Note 4: Only code the subtype/variant when pathology gives an exact diagnosis. Do not code the subtype/variant when modified by terms such as differentiation, feature(s), etc., unless there is a specific code for the pathology term with the modifier.
Histology - EDITS

Clinical Grade - the grade of a solid primary tumor before any treatment. Treatment may include surgical resection, systemic therapy, radiation therapy, or neoadjuvant therapy. NOTE: All surgical procedures are not treatment, e.g. TURB and endoscopic biopsies.

Pathological Grade - the grade of a solid primary tumor that has been surgically resected and for which no neoadjuvant therapy was administered. If AJCC pathological staging is being assigned, the tumor must have met the surgical resection requirements in the AJCC manual. This may include the grade from the clinical workup, as all information from diagnosis (clinical staging) through the surgical resection is used for pathological staging.

Post-Therapy Grade - the grade of a solid primary tumor that has been resected following neoadjuvant therapy. If AJCC post-therapy staging is being assigned, the tumor must have met the surgical resection requirements for yp in the AJCC manual. Neoadjuvant therapy must meet guidelines or standards, and not be that given for variable or unconventional reasons as noted in the AJCC manual.

2018 Site Specific Grade

- Clinical Grade - the grade of a solid primary tumor before any treatment. Treatment may include surgical resection, systemic therapy, radiation therapy, or neoadjuvant therapy. NOTE: All surgical procedures are not treatment, e.g. TURB and endoscopic biopsies.

- Pathological Grade - the grade of a solid primary tumor that has been surgically resected and for which no neoadjuvant therapy was administered. If AJCC pathological staging is being assigned, the tumor must have met the surgical resection requirements in the AJCC manual. This may include the grade from the clinical workup, as all information from diagnosis (clinical staging) through the surgical resection is used for pathological staging.

- Post-Therapy Grade - the grade of a solid primary tumor that has been resected following neoadjuvant therapy. If AJCC post-therapy staging is being assigned, the tumor must have met the surgical resection requirements for yp in the AJCC manual. Neoadjuvant therapy must meet guidelines or standards, and not be that given for variable or unconventional reasons as noted in the AJCC manual.
2018 Site Specific Grade

There are RULES for using this Manual and Menus

- Your Software will direct you – but cannot think for you.
  - This is the GRADE of the PRIMARY TUMOR.
  - DO NOT ASSIGN Grade from a metastatic site – EVER.
  - Clinical Grade Must NEVER BE BLANK
  - Either Pathological or Post-Therapy Grade Must BE BLANK
  - Either Pathological or Post-Therapy Grade Must BE FILLED
  - There are NOTES that accompany every single Grade Table.

- DO ASSIGN the highest grade identified from any type of biopsy (FNA, core, excisional, incisional) or resection (partial or complete) of the primary tumor assessed during the clinical time frame

- If there is only one grade available and it cannot be determined if it is clinical, pathological, or after neo-adjuvant therapy, assign as a clinical grade and code unknown (9) for pathological grade, and blank for post-therapy grade.

Grade - NET

<table>
<thead>
<tr>
<th>Scheme ID</th>
<th>Scheme ID Name</th>
<th>AJCC ID</th>
<th>AJCC Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>00290</td>
<td>NET Stomach</td>
<td>29</td>
<td>29</td>
</tr>
<tr>
<td>00001</td>
<td>NET Duodenum</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>00301</td>
<td>NET Ampulla of Vater</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>00110</td>
<td>NET Jejunum and Ascend</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>00020</td>
<td>NET Appendix</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>00390</td>
<td>NET Colon and Rectum</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>00340</td>
<td>NET Pancreas</td>
<td>34</td>
<td>34</td>
</tr>
</tbody>
</table>

**Code Grade Descriptions**

1. G1: Mitotic count (per 10 HPF) less than 2 AND Ki-67 index (%) less than 3
2. G2: Mitotic count (per 10 HPF) equal 2-20 OR Ki-67 index (%) equal 3-20
3. G3: Mitotic count (per 10 HPF) greater than 20 OR Ki-67 index (%) greater than 20
A. Well differentiated
B. Moderately differentiated
C. Poorly differentiated
D. Undifferentiated, anaplastic
E. Grade cannot be assessed (G23); Unknown
### Grade - GIST

**Grade ID 11 - Clinical Grade Instructions**

<table>
<thead>
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<th>Schema ID#</th>
<th>Schema ID Name</th>
<th>AJCC ID</th>
<th>AJCC Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>00450</td>
<td>GIST</td>
<td>43.1</td>
<td>Gastrointestinal Stromal Tumor: Gastric and Gastrointestinal Stromal Tumor: Small Intestinal, Esophageal, Colorectal, Mesenteric, and Peritoneal GIST</td>
</tr>
<tr>
<td></td>
<td></td>
<td>43.2</td>
<td></td>
</tr>
</tbody>
</table>

**Code** | **Grade Description**
--- | ---
L | Low: 5 or fewer mitoses per 5 square mm
H | High: Over 5 mitoses per 5 square mm
A | Well differentiated
B | Moderately differentiated
C | Poorly differentiated
D | Undifferentiated, anaplastic
9 | Grade cannot be assessed; Unknown

### Grade – Colon and Rectum

**Grade ID 02 - Clinical Grade Instructions**

<table>
<thead>
<tr>
<th>Schema ID#</th>
<th>Schema ID Name</th>
<th>AJCC ID</th>
<th>AJCC Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>00111</td>
<td>Oropharynx (p16)</td>
<td>11.1</td>
<td>Oropharynx (p16)</td>
</tr>
<tr>
<td>00112</td>
<td>Hypopharynx</td>
<td>11.2</td>
<td>Hypopharynx</td>
</tr>
<tr>
<td>00350</td>
<td>Cutaneous Squamous Cell Carcinoma of Head and Neck</td>
<td>15</td>
<td>Cutaneous Squamous Cell Carcinoma of the Head and Neck</td>
</tr>
<tr>
<td>00180</td>
<td>Small Intestine</td>
<td>18</td>
<td>Small Intestine</td>
</tr>
<tr>
<td>00200</td>
<td>Colon and Rectum</td>
<td>20</td>
<td>Colon and Rectum</td>
</tr>
<tr>
<td>00220</td>
<td>Liver</td>
<td>22</td>
<td>Liver</td>
</tr>
<tr>
<td>00360</td>
<td>Lung</td>
<td>36</td>
<td>Lung</td>
</tr>
<tr>
<td>00370</td>
<td>Pleura</td>
<td>37</td>
<td>Malignant Pleural Mesothelioma</td>
</tr>
<tr>
<td>00640</td>
<td>Skin of Eyelid</td>
<td>64</td>
<td>Eyelid Carcinoma</td>
</tr>
<tr>
<td>00650</td>
<td>Conjunctiva</td>
<td>65</td>
<td>Conjunctival Carcinoma</td>
</tr>
</tbody>
</table>

**Code** | **Grade Description**
--- | ---
1 | G1: Well differentiated
2 | G2: Moderately differentiated
3 | G3: Poorly differentiated
4 | G4: Undifferentiated
5 | Grade cannot be assessed (Gx), Unknown
Polyps and Colon Cancer

- 95-98% of colon cancers - adenocarcinoma
  - Most originate in polyps or adenomas – DO NOT CODE POLYPS !!!!
  - 10% of all adenomas develop into adenocarcinoma
  - **DO NOT USE 8210, 8260, 8261, 8263, 8264 for C18.0-C20.9**

- Types of adenoma – **still important**
  - Tubular
  - Villous
  - Tubulo-villous

- Process takes up to 10 years

- De Novo Cancers – mucinous, signet ring > 50% production
  - >10% of all colon ca are mucinous (>50% mucin production)
  - <1% of all colon ca are signet ring cell (>50% signet rings)
Polyps and Colon Cancer

DO NOT USE 8210, 8260, 8261, 8263, 8264 for C18.0-C20.9

http://hopkinscoloncancercenter.org

HYPERPLASTIC POLYP – NO CA
SMALL REACTIVE POLYP
NOT PRE-CANCEROUS

http://www.pathology.pitt.edu/lectures/gi/colon-a/14.htm
Polyps and Colon Cancer

TUBULAR ADENOMA
OFTEN BENIGN
>10% MAY CONTAIN a NON-INVASIVE or INVASIVE CANCER
POLYP REMOVAL WILL PREVENT COLON CANCER

http://www.pathology.pitt.edu/lectures/gi/colon-a/16.htm

Polyps and Colon Cancer

http://hopkinsecoloncancercenter.org
Polyps and Colon Cancer

http://www.pathology.pitt.edu/lectures/gi/colon-a/17.htm

Anatomic Staging – Colon and Rectum

http://www.pathology.pitt.edu/lectures/gi/colon-a/17.htm
Comparing SS2018 to TNM – Same Anatomy

- Size of Tumor
- Wall Extension
- Regional Nodes
- Distant Nodes
- Distant Sites
- Some SSDIs
- Most SSDIs Not for Staging but Tumor Characteristics

There is considerably more to AJCC TNM and UICC TNM in terms of standard language and shared definitions – key!

SS2018 – mixed stage/limited detail
EOD – mixed stage/mod detail/can convert to mixed stage TNM/SS2018
AJCC TNM – strict rules for clinical, pathological and post-treatment stage and slightly more detail than EOD/SS

Simplify Staging Parameters

- Combined Clinical and Pathological for SS2018 Staging
- Clinical (Pre-Tx) Stage is Critical for Rectal, Breast, Liver Cancers
- Primary Tumor Grade Important for NET/GIST

- Typical Colon/Rectal Cancers – Adenocarcinoma, NOS
  - (in-situ or local) Intramucosal Spread (“T”)
  - (local) Depth of Invasion into Wall (“T”)
  - (local or regional) Depth of Invasion thru Wall (“T”)  
  - Number of Lymph Nodes Examined (“N”)
  - Number of Lymph Nodes Positive (“N”) – (regional) if any + nodes
  - (regional) Extranodal Tumor Deposits (“N”)
  - Status of Resection Margins
  - Lymph-Vascular Invasion (LVI)
  - (distant) Metastatic Sites (“M”)
Layers of Colon Wall


Intramucosal Colon Cancer

Source: http://www.slideshare.net/giaffa/petruzziello
The serosa acts as barrier for tumors that begin on inside surface of the colon and invade down into the mucosa and through the wall of the colon (the serosa).

Some colon surfaces have no serosa at the exterior surface (around the hollow organ).

When there is no serosa – you lose a natural barrier that helps contain the colon cancer.

Non-Peritonealized Surfaces in Colon-Rectum:
- Rectum – no serosa in rectum below peritoneal reflection
- Descending Colon – no serosa covering posterior surfaces
- Ascending Colon – no serosa covering posterior surfaces

Surgical Resection

DEFINITIONS OF COMMON COLORECTAL RESECTIONS

The extent of colorectal resection depends on the location of the tumor, any underlying condition (e.g., inflammatory bowel disease, hereditary syndrome), and the vascular supply to the colon/rectum.

Definitions of common colorectal resections are as follows: 1

- A through C: Illeocectomy
- A through F: Right hemicolectomy
- A through G, H or I: Extended right hemicolectomy
- E through I: Transverse colectomy
- G through K: Left hemicolectomy
- F through I: Extended left hemicolectomy
- J through K: Sigmoid colectomy
- A through K: Total colectomy
- I through L: Low anterior resection with sphincter preservation
- I through M: Abdominoperineal resection without sphincter preservation
- A through M: Total proctocolectomy


NCCN Guidelines – Colorectal Cancer Screening

https://www.bcm.edu/healthcare/care-centers/general-surgery/procedures/colon-resection
Lymphatics of Colon / Rectum

AJCC Image - The regional lymph nodes of the colon and rectum are colored by anatomic location.

Modified AJCC Image - The regional lymph nodes of the colon and rectum are colored by anatomic location.
2018 SEER Summary Stage – USE IT.

SS2018 and earlier editions may appear to be a crude anatomic cancer staging system – it is the same pie sliced differently is all.

SEER Summary Stage – 2018

- Use All Information – history, clinical, imaging, labs, biopsy, resection, physician notes – use all info avail.

DIGESTIVE AND HEPATOBILIARY SYSTEMS

DIGESTIVE SYSTEM SITES

Below is information about the subsites of the colon:

- The ascending colon, measuring 15 to 20 cm, begins with the cecum, a 6 to 9 cm pouch that arises at the proximal segment of the right colon at the end of the terminal ileum. It is covered with a visceral peritoneum (serosa) and measures 15 to 20 cm. The ascending colon ends at the hepatic flexure, which transitions the ascending colon into the transverse colon, passing just inferior to the liver and anterior to the duodenum.
- The transverse colon, measuring 18 to 22 cm long, is completely intraperitoneal and supported on a mesentery that is attached to the pancreas. Anteriorly the sordere is continuous with the gastrocolic ligament. The transverse colon ends at the splenic flexure, which transitions into the descending colon.
- The descending colon, measuring 10 to 15 cm long, passes inferiorly to the spleen and anterior to the tail of the pancreas. The posterior aspect tacts sordere and is in direct contact with the retroperitoneum.
- The sigmoid colon, measuring 15 to 20 cm long, is completely intraperitoneal with a mesentery that develops at the medial border of the left psoas major muscle and extends to the rectum. The transition from the sigmoid colon to the rectum is marked by the fusion of the taeniae of the sigmoid colon to the cirtrunenital muscle of the rectum.
- The rectum, measuring 12 to 18 cm, is covered by peritoneum in front and on both sides.
SEER Summary Stage – 2018

Note 4: For the following ANOCA edition stages see in this manual: SS2018 stage cesarean, NOS.

1. Localized only (localized, NOS):
   - Confined to color, rectum, recategorized, NOS
   - Extension through wall, NOS
   - Intestinal extension to colon and/or rectal cord (unlabeled only)
   - Invasion of:
     - Intramural, NOS
     - Lamina propria
     - Muscles, NOS
     - Muscularis propria
     - Submucosa (superficial invasion)
     - Non-perineural muscular tissues included
     - Perineural tissue involved
     - Polyph (broad, NOS)
     - Submucosal tissue (submucosal fat involved
     - Tenon’s, NOS
     - Wall, NOS

2. Regional lymph node(s) involved only:
   - All sites:
     - Colon, NOS
     - Epithelial (adjacent to tumor wall)
     - Muscularis, NOS
     - Perineural
     - Periosteal
     - Peritoneal
     - Periosteal deposits (CT) in the subcutaneous, muscular, subcutaneous, or non-perineural muscular or peritoneal tissue WITHOUT regional nodal involvement
     - Regional lymph nodes, NOS
   - Cervix (C180):
     - Cervical, NOS
     - Adenocarcinoma (adenocarcinoma)
     - Carcinoma (carcinoma)
     - Adenoma (adenoma)
     - Premalignant (precancerous)
     - Intraepithelial (intraepithelial)
     - Perineural
     - Peritoneal
     - Peritoneal deposits (CT) in the subcutaneous, muscular, subcutaneous, or non-perineural muscular or peritoneal tissue WITHOUT regional nodal involvement
     - Regional lymph nodes, NOS
   - Hepatic flexure (C185):
     - Colon, NOS
     - Bile duct (bile duct)
     - Perineural
     - Peritoneal
     - Peritoneal deposits (CT) in the subcutaneous, muscular, subcutaneous, or non-perineural muscular or peritoneal tissue WITHOUT regional nodal involvement
     - Regional lymph nodes, NOS
   - Transverse colon (C186):
     - Colon, NOS
     - Spleen (spleen)
     - Mesenteric (mesentery)
     - Perineural (perineural)
     - Peritoneal (peritoneal)
     - Peritoneal deposits (CT) in the subcutaneous, muscular, subcutaneous, or non-perineural muscular or peritoneal tissue WITHOUT regional nodal involvement
     - Regional lymph nodes, NOS
   - Splenic flexure (C187):
     - Colon, NOS
     - Mesenteric (mesentery)
     - Perineural (perineural)
     - Peritoneal (peritoneal)
     - Peritoneal deposits (CT) in the subcutaneous, muscular, subcutaneous, or non-perineural muscular or peritoneal tissue WITHOUT regional nodal involvement
     - Regional lymph nodes, NOS
   - Descending colon (C188):
     - Colon, NOS
     - Mesenteric (mesentery)
     - Perineural (perineural)
     - Peritoneal (peritoneal)
     - Peritoneal deposits (CT) in the subcutaneous, muscular, subcutaneous, or non-perineural muscular or peritoneal tissue WITHOUT regional nodal involvement
     - Regional lymph nodes, NOS
   - Horizontal colon (C189):
     - Colon, NOS
     - Sigmoid (sigmoid)
     - Perineural (perineural)
     - Peritoneal (peritoneal)
     - Peritoneal deposits (CT) in the subcutaneous, muscular, subcutaneous, or non-perineural muscular or peritoneal tissue WITHOUT regional nodal involvement
     - Regional lymph nodes, NOS
   - Sigmoid colon (C190):
     - Colon, NOS
     - Mesenteric (mesentery)
     - Perineural (perineural)
     - Peritoneal (peritoneal)
     - Peritoneal deposits (CT) in the subcutaneous, muscular, subcutaneous, or non-perineural muscular or peritoneal tissue WITHOUT regional nodal involvement
     - Regional lymph nodes, NOS
   - Rectum (C191):
     - Colon, NOS
     - Mesenteric (mesentery)
     - Perineural (perineural)
     - Peritoneal (peritoneal)
     - Peritoneal deposits (CT) in the subcutaneous, muscular, subcutaneous, or non-perineural muscular or peritoneal tissue WITHOUT regional nodal involvement
     - Regional lymph nodes, NOS

Note 6: Ignore transmural invasion to adjacent or regional (N9) of colorectum or to the duodenum, scope depth of invasion or extramural growth as indicated

Note 7: Tumors designated by involvement of the mesentery (mesenteric, anterior) by direct extension in perforation in which the tumor cells are continuous with the normal mesenteric lymph nodes and are not limited to regional (code 6) or local (code 4).
“Tumor Deposits”

- **Definition**
  - Separate tumor nodules or tumor deposits of malignant cells in perirectal or pericolic fat with no evidence of lymph node tissue
  - Found in primary lymphatic drainage area
- **Other names**
  - Peri-tumoral deposits, satellite nodules, discontinuous extramural extension, or malignant tumor foci
- **N1c =** Specific TNM “N” Code for tumor nodule or deposit(s) in the subserosa, mesentery, or non-peritonealized pericolic or perirectal tissues without regional nodal metastasis.
“Tumor Deposits”

- Mesenteric
- Pericolonic
- Perirectal
- Subserosa
- All Regional Lymph Nodes Negative
- Deposits + LNs

N1c = Tumor deposit(s) in the subserosa, mesentery, or nonperitonealized pericolic or perirectal tissues without regional nodal metastasis.

SEER Summary Stage – 2018

7 Distant site(s)/lymph node(s) involved

- Distant site(s) (including further contiguous extension)
  - All sites
    - Adrenal (supraaortal) gland
    - Bladder
    - Duodenum
    - Fallopian tube
    - Fornix of the uterus
    - Other serosal(s) of colon via serosa
    - Ovary(ies)
  - Urethra
  - Cervix (C180)
  - Eviscerated: right
  - Liver
  - Ureter, right

- Distant length units, NOS
  - Colon
    - Duke (tumor, nodal)
      - Local extension (primary, involving colon, hepatic flexure, transverse colon)
      - Rectum
      - Recurrent
      - Intrahepatic
  - Rectum
    - Local (tumor, nodal)
      - Recurrent
      - Other organ(s)
      - Intrahepatic
    - Rectal extension
      - Rectal extension, NOS
      - Other organ(s)
      - Intrahepatic
      - Suprahepatic

- Distant metastases, NOS
  - Peritoneal cavity (peritoneum)
  - Distant metastasis WITH or WITHOUT distant (remote) site(s)
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Thank you