

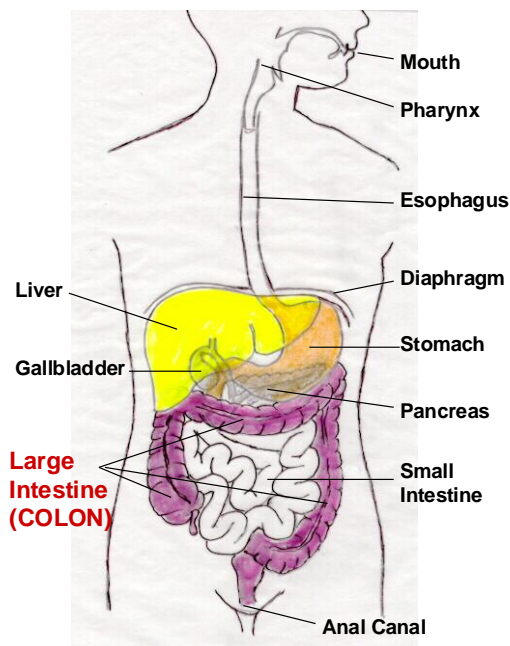
Colorectal Introduction & Anatomy Effective 2018 dx and forward

Presented by Melissa Riddle, ODS-C
ICR Video Training Series | Iowa Cancer Registry
March 2025



1

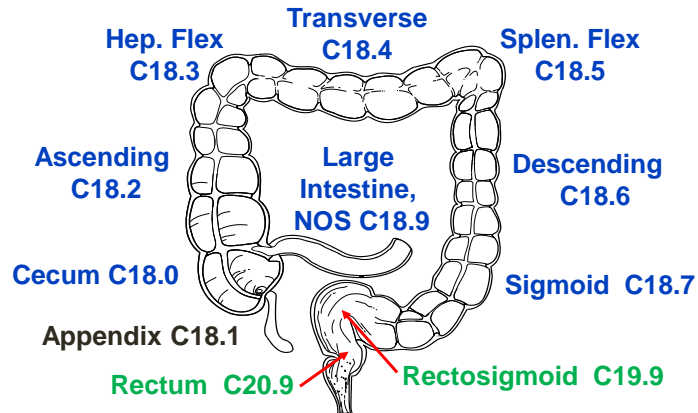
Gastrointestinal Tract Anatomy



2

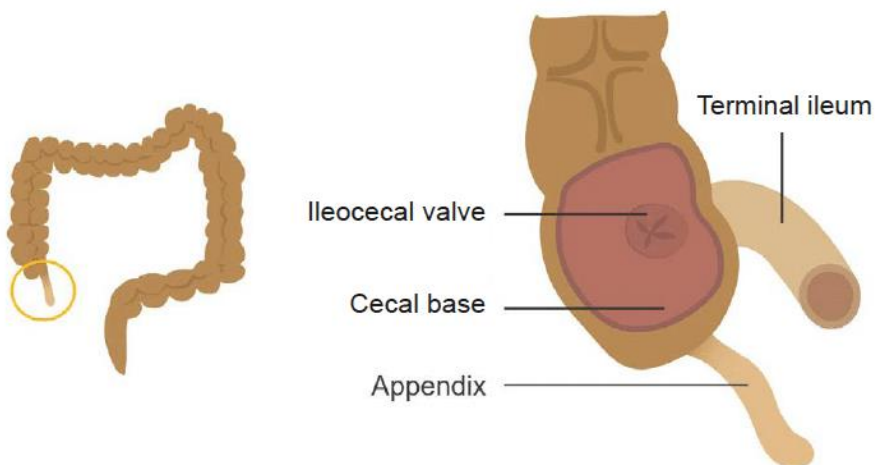
Colorectal Anatomy

Primary Site ICD-O Codes for Colon and Rectum



3

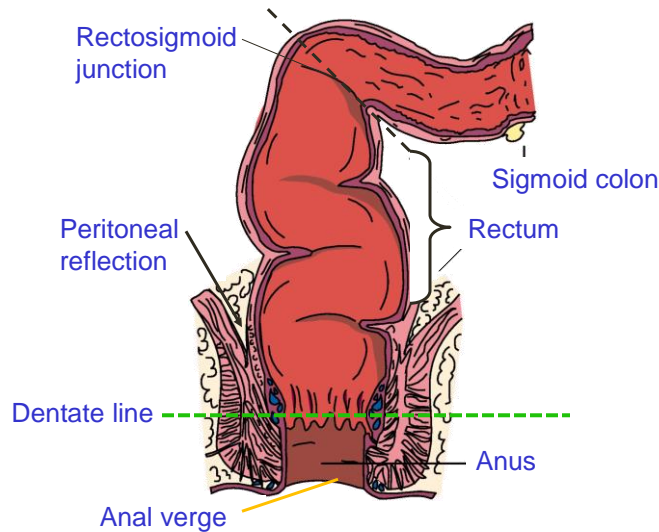
Ileocecal Junction



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4

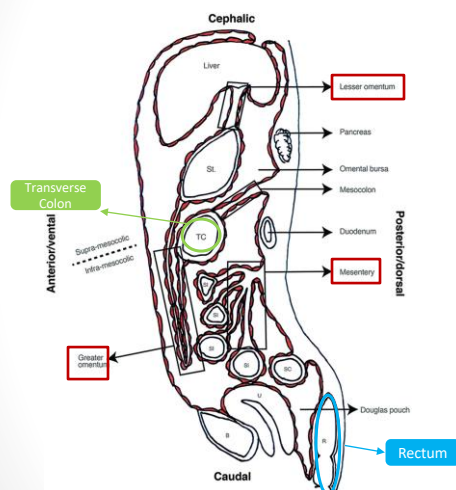
Rectum, Rectosigmoid, and Anus



5

5

Peritoneum



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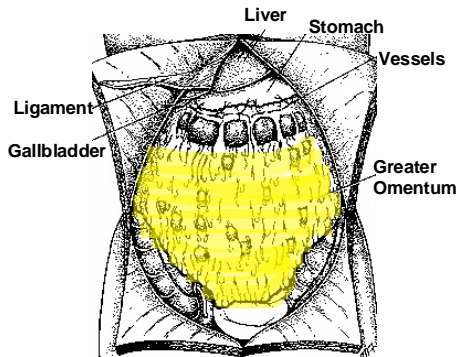
- **Peritoneum:** serous membrane lining the interior of the abdominal cavity and covers the abdominal organs.
- Rectum is “**extraperitoneal**”
 - Rectum lies below the peritoneal reflection and outside of peritoneal cavity



6

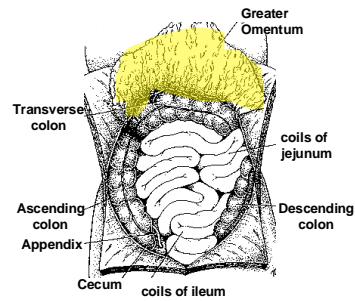
6

Greater Omentum

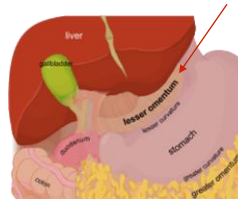


Omentum

Greater Omentum: (reflected upward)



slide 10



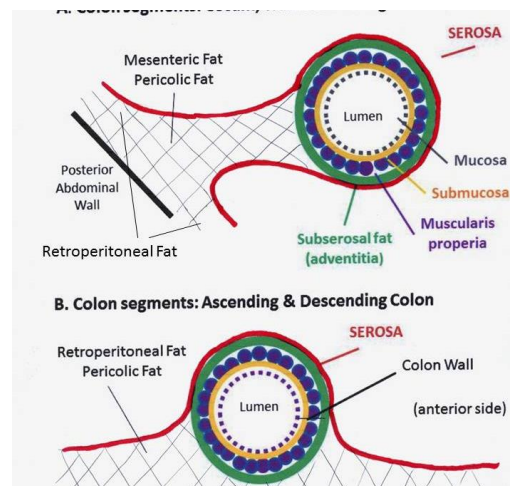
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7

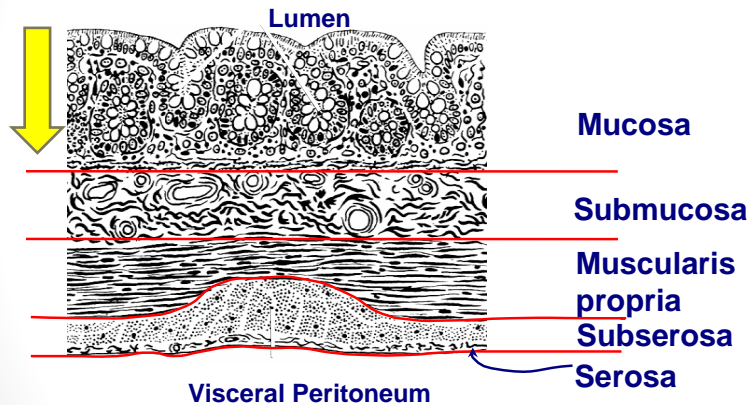
Peritoneum

- **Mesentery (Mesenteries):** folds of peritoneum- these attach the colon to the posterior abdominal wall.
- **Visceral peritoneum:** = Serosa covering of colon (organs)
- **Parietal peritoneum:** = Serosa covering of ABD cavity (body cavities)



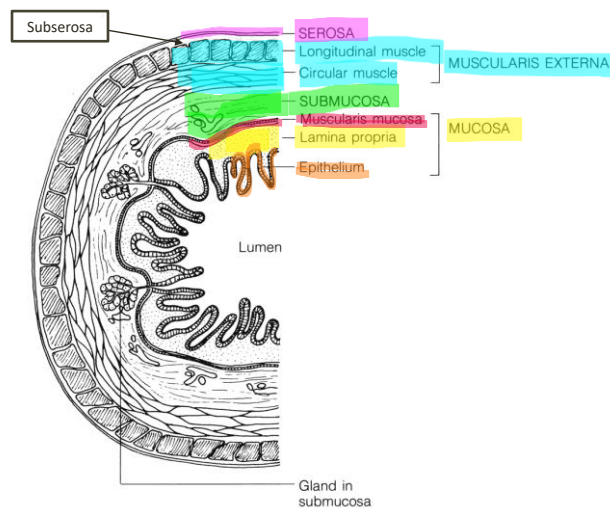
8

Colon & Rectum Wall Anatomy



9

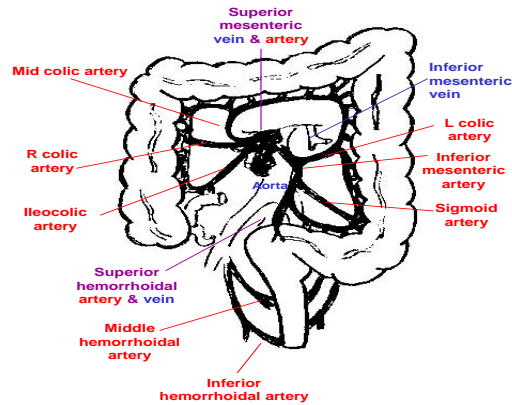
Colon & Rectal Wall Anatomy



10

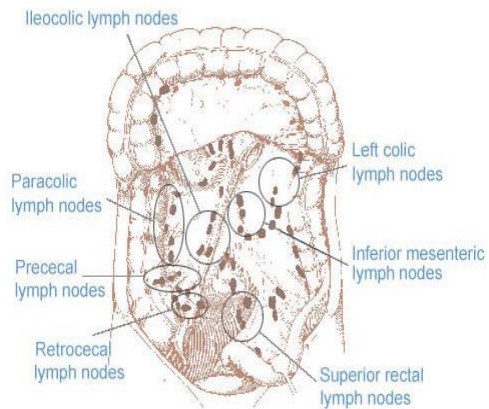
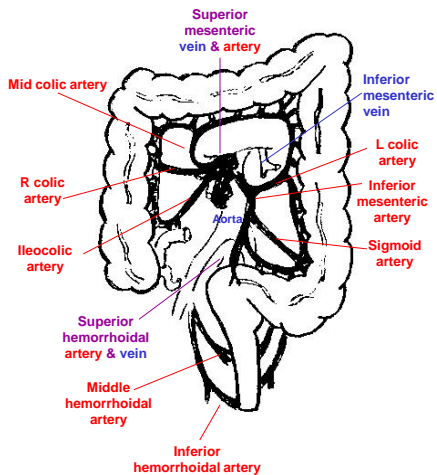
Blood Supply

Colon: Arterial & Venous Blood Supply



11

Lymph Nodes



<https://training.seer.cancer.gov/colorectal/anatomy/lymph-nodes.html>

12

COLORECTAL CANCER INFORMATION



[13]

13

Development of CRC

- Develop in a multistep process
 - Series of histological, morphological, and genetic changes
- Allows for screening and early-stage detection
 - Begins from changes in a benign polyp
 - Find precancerous polyps and remove them
 - Slowly grows (7-10 years)
 - Once symptomatic is often already cancerous



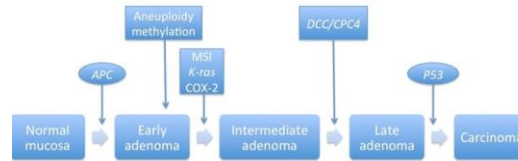
[14]

14

Development of CRC

- DNA mutations inherited

- MLH1
- MSH2
- PMS2
- APC (rare)



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- DNA mutations acquired (sporadic) (somatic)

- DNA mismatch repair mutations
 - 2 main genetic pathways
 - Development of traditional adenoma (65-70% sporadic CRC)
 - First mutation within APC gene and then develop KRAS oncogene thus causing a loss of function of p53 gene
 - Development of sessile serrated polyps
 - Begin with BRAF mutation or aberrant gene promoter region hypermethylation

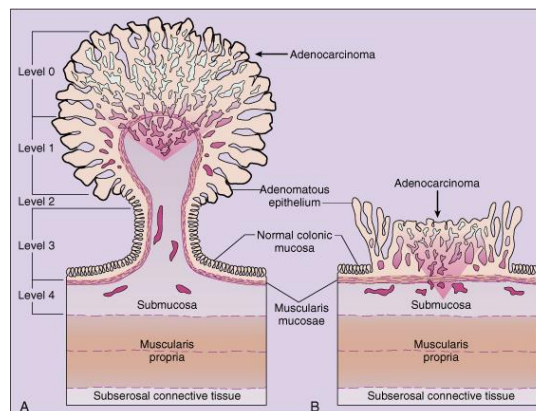


15

Types of Polyps I

**Pedunculated
(on a stalk)**

**Sessile
(flat)**



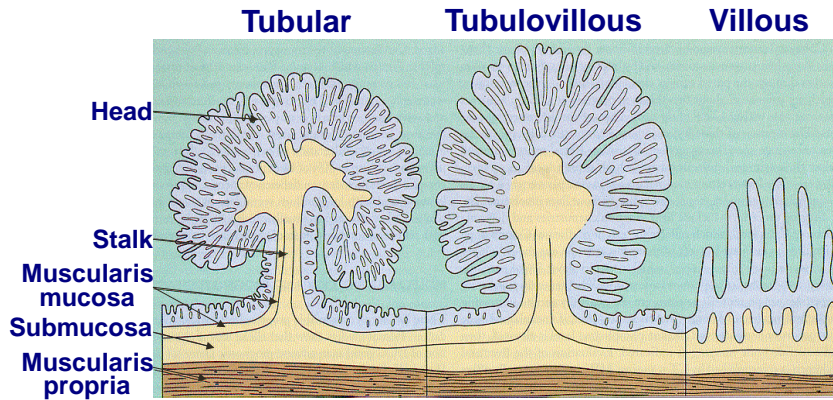
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Source: Abelloff et al: Clinical Oncology, third edition, Elsevier Churchill Livingstone, 2004



16

Types of Polyps II

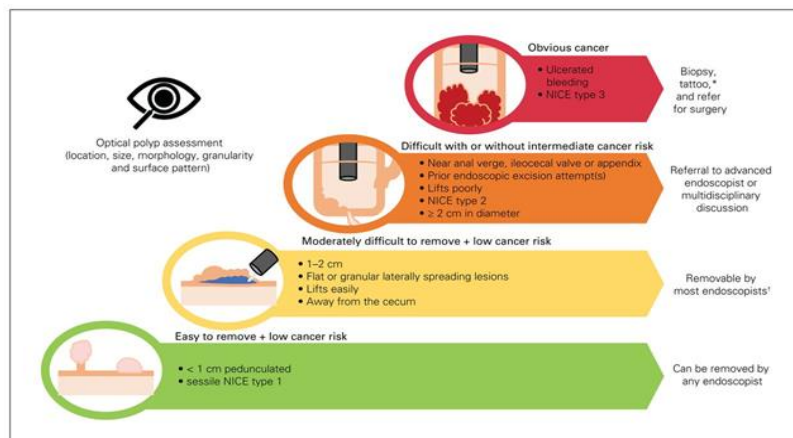


Source: A.T. Skarin, Atlas of Diagnostic Oncology, 2nd ed., Mosby Wolfe, 1996



17

CRC Screening



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18

ANATOMY QUIZ



[19]

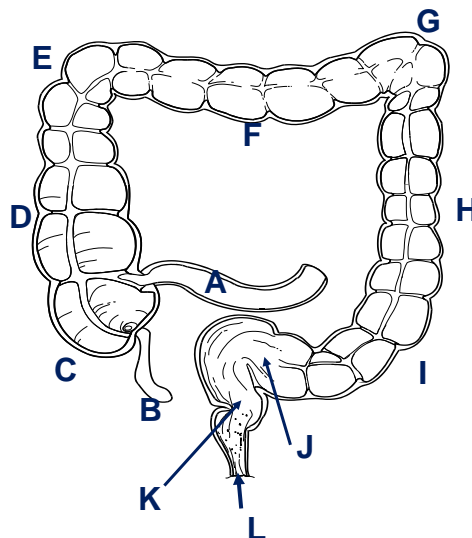
19

Match Terms below to Letters,
(a letter maybe used more than once)

Appendix ____
Anus ____
Ascending Colon ____
Cecum ____
Descending Colon ____
Hepatic Flexure ____
Ileum ____
Left colon ____
Rectum ____
Rectosigmoid ____
Right colon ____
Sigmoid ____
Splenic Flexure ____
Transverse colon ____

Place an **X** on the spot to
represent the Ileocecal
valve/junction.

Colorectal Anatomy



Which is the **Distal** end of
the large bowel?

Which is the **Proximal**
end?

If surgery removed a
segment of colon, from
the ascending colon to
mid-transverse colon;
which end of the surgical
specimen is the **distal**
end? D or F ?

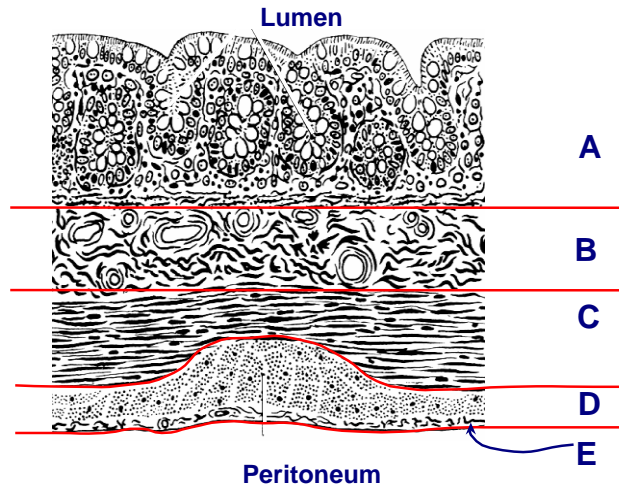
This relates to surgical
margins:
D is the ____ margin
F is the ____ margin

Colon surgery: segment
H to J is removed. What
is the Distal and Proximal
margins?

20

Colon & Rectum Wall Anatomy

Mucosa ____
Muscularis propria ____
Serosa ____
Submucosa ____
Subserosa ____



WHAT is “outside” the Serosa layer?

22

Questions?

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24