GASTROINTESTINAL PATHOLOGY GROSSING GUIDELINES

Specimen Type: APR (ABDOMINO-PERINEAL RESECTION)

Procedure:

1. Measure length and range of diameter or circumference. Measure the bowel and anus separately.
2. Describe external surface, noting color, granularity, adhesions, fistula, discontinuous tumor deposits, areas of retraction/puckering, induration, stricture, or perforation.
3. Note any enlarged lymph nodes and thrombosed vessels or other vascular abnormalities.
4. Open the bowel longitudinally along the anterior surface, while trying to avoid cutting through the tumor.
5. Measure any areas of luminal narrowing or dilation (location, length, diameter or circumference, wall thickness), noting relation to tumor.
6. Describe tumor, noting size, shape, color, consistency, appearance of cut surface, % of circumference of the bowel wall involved by the tumor, depth of invasion through bowel wall, and distance from margins of resection (radial/circumferential margin, mesenteric margin, closest proximal or distal margin).
   a. If resection includes mesorectum, gross evaluation of the intactness of mesorectum must be included. For rectum, the location of the tumor must also be oriented: anterior, posterior, right lateral, left lateral.
   b. If a rectal tumor is close to distal margin, the distance of tumor to the distal margin should be measured when specimen is stretched. This is usually done during intraoperative gross consultation when specimen is fresh. Describe the relation/distance of tumor to dentate line.
   c. If the tumor is in a retroperitoneal portion of the bowel (e.g. rectum), radial/retroperitoneal margin must be inked and one or more sections must be obtained (a shave margin, if tumor is far from the radial margin; and perpendicular sections showing the relationship of the tumor to the inked radial margin, if tumor is close to the radial margin).
   d. If the tumor is in a peritonealized portion of the bowel (e.g. sigmoid colon), then the serosal surface over the tumor needs to be inked. If tumor grossly puckers the serosa, one or more perpendicular sections must be taken to show the relationship of the tumor to the inked serosal surface).
   e. Mesentric margin is evaluated grossly for tumor involvement for segments with mesentery (transverse and sigmoid colon). The distance of tumor to the mesenteric margin should be described.
7. Describe the appearance of uninvolved mucosa.
8. Describe the size, appearance and location of any additional lesions such as polyps.
9. After submitting all sections that are needed to demonstrate the relationship of the tumor (or tumor bed) to the pericolic fat and serosa, **dissect the remaining pericolic and mesenteric adipose tissue off of the colonic segment**, slice it at 2-3 mm intervals, and thoroughly palpate the tissues to identify all lymph nodes and possible lymph nodes. Note range of size and appearance of cut surface of lymph nodes.

Gross Template:

MMODAL COMMAND: INSERT A P R

It consists of an abdominoperineal resection. [*Indicate orientation if provided****] The colon measures [***] cm in length from proximal margin to dentate line x [***] cm in average open circumference, and [***] cm in open circumference at the dentate line. The distance from the dentate line to the margin of resection of perianal skin measures ranges from [*smallest to largest****] cm. The pericolic/perirectal fat extends up to [***] cm from the bowel wall. The anterior peritoneal reflection is located [***] cm from the resection margin of the perianal skin. The mesorectal envelope is [*complete, nearly complete, incomplete- describe defects if necessary* ***].

The serosal surface is [*pink-tan and smooth, remarkable for describe area of induration, if applicable****]. The mucosa of the [*describe location-sigmoid, rectum, anus, etc.* ***] is remarkable for a [*describe lesion: size in three dimensions), shape (e.g. polypoid, ulcerated, fungating), color, consistency (e.g. soft, firm, friable)****] lesion. The lesion involves [***] % of the circumference of the bowel where the bowel measures [***] cm in open circumference. The lesion is located [***] cm [*proximal/distal/ or is located at the dentate line****] to the dentate line. [*Describe obstruction or strictures caused by lesion****] Sectioning of the lesion reveals a [*describe color, consistency/white-tan and firm****] cut surface. The lesion [*is grossly superficial, extends into the bowel wall, and extends through the bowel wall into the fibroadipose* tissue***] and has a maximum depth of [***] cm. The lesion measures [***] cm from the proximal margin, [***] cm from the distal margin, [***] cm from the [*circumferential radial/mesenteric****] margin, and [***] cm from the serosal surface [*if located above the level of peritoneal reflection****].

The remainder of the bowel serosa is [*tan, smooth, glistening, and unremarkable* or *describe any additional lesions****]. The remainder of the bowel mucosa is [*tan, glistening, folded, and unremarkable* or *describe any additional lesions****]. The bowel wall thickness ranges from [*smallest to largest****] cm. The anal skin ranges from [*smallest to largest****] cm in thickness. The unremarkable bowel wall measures [***] cm in thickness. After removing the pericolic/perirectal adipose tissue, it is thoroughly examined for lymph nodes. [*State number****] lymph nodes and possible lymph nodes are identified, ranging from [*smallest to largest****] cm in greatest dimension.

All identified lymph nodes are entirely submitted. [*The lesion/mass is entirely submitted (if applicable, otherwise skip to next sentence)****]Representative sections of the remaining specimen are submitted. Gross photographs are taken.

INK KEY:
Black mesenteric/radial margin overlying lesion
Blue serosa overlying lesion

[*insert cassette summary****]

Cassette Submission: 15-20 cassettes

- Proximal resection margin, shave (perpendicular if close to tumor)
- Distal resection margin, shave (perpendicular if close to tumor)
- Mesenteric/radial resection margin (perpendicular section with nearest approach to tumor), or a shave if tumor is far away

- One cassette per 1 cm of tumor (OR at least 5 sections of tumor OR if small enough, entirely submit)
  - Show maximum depth of invasion
  - Show nearest approach to serosal surface
  - Show relationship to unremarkable mucosa
  - Show relationship to any contiguous or adherent organs
- If the resection is for a large adenomatous polyp with no gross invasion - entirely submit
- Sampling any additional pathology in the gross description (ulcers, polyps, etc.)
- Representative sections of unremarkable colon/rectum in one cassette
- Dissect remaining pericolic and mesenteric adipose tissue and thoroughly dissect fat to look for all possible lymph nodes. Submit all lymph nodes identified (at least 12 lymph nodes are suggested for colorectal carcinoma)
- Note: If no tumor is grossly identified and instead an area of ulceration or scar is present (which is often the case for rectal carcinomas status post neoadjuvant therapy), then the entire ulcer or scar area needs to be submitted.

Assessment of Mesorectal Envelope

The nonperitonealized surface of the fresh specimen is examined circumferentially, and the completeness of the mesorectum is scored as described below. The entire specimen is scored according to the worst area.

Incomplete

- Little bulk to the mesorectum
- Defects in the mesorectum down to the muscularis propria
- After transverse sectioning, the circumferential margin appears very irregular

Nearly Complete

- Moderate bulk to the mesorectum
- Irregularity of the mesorectal surface with defects greater than 5 mm, but none extending to the muscularis propria
- No areas of visibility of the muscularis propria except at the insertion site of the levator ani muscles

Complete

- Intact bulky mesorectum with a smooth surface
- Only minor irregularities of the mesorectal surface
- No surface defects greater than 5 mm in depth
- No coning towards the distal margin of the specimen
- After transverse sectioning, the circumferential margin appears smooth