

## RECTOSIGMOIDECTOMY

1. A rectosigmoidectomy specimen measuring XXX cm in length is received / with anal sphincter resection measuring XXX cm.
2. Externally, the mesorectal excision is complete / nearly complete / incomplete, without other remarkable features // a lesion / tattooed area / area of disruption measuring XXX cm is identified, located X cm from the closest margin.
3. The mesorectal margin is inked and the specimen is serially sectioned according to the "Viking protocol".
4. On opening, a lesion measuring XXX cm is identified, located on the anterior / posterior wall, right / left lateral aspect, and lying X cm from the distal / proximal margin. The lesion has an exophytic / flat / ulceroinfiltrative / polypoid morphology and partially / completely / X % occludes the lumen.
5. On sectioning, the lesion appears to infiltrate the muscular layer / adipose tissue / serosa, and lies X cm from the radial margin // it appears confined to the mucosa.
6. In addition, X polypoid / diverticular lesions are identified, ranging from X to X cm, located X cm from the X margin.
7. On palpation, X nodular formations are identified, the largest measuring X cm // despite extensive sampling, no definite nodular formations are identified.
8. Representative sections are submitted as follows:

### **1st Example (Rectosigmoidectomy for rectal adenocarcinoma):**

- A1: proximal surgical margin.
- A2: distal surgical margin / anal margin.
- A3 - A5: first complete cross-section of the specimen.
- A6 - A8: second complete cross-section of the specimen.
- A9 - A11: third complete cross-section of the specimen.
- A12 - A15: 4 nodular formations per block.

### **2nd Example (Rectosigmoidectomy for rectal adenocarcinoma):**

- A1: proximal surgical margin.
- A2: distal surgical margin / anal margin.
- A3 - A6: first complete cross-section of the specimen.
- A7 - A10: second complete cross-section of the specimen.
- A11 - A14: third complete cross-section of the specimen.
- A15 - A18: 4 nodular formations per block.

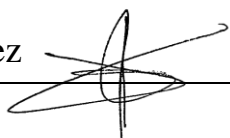
### **3rd Example (Post-neoadjuvant rectosigmoidectomy):**

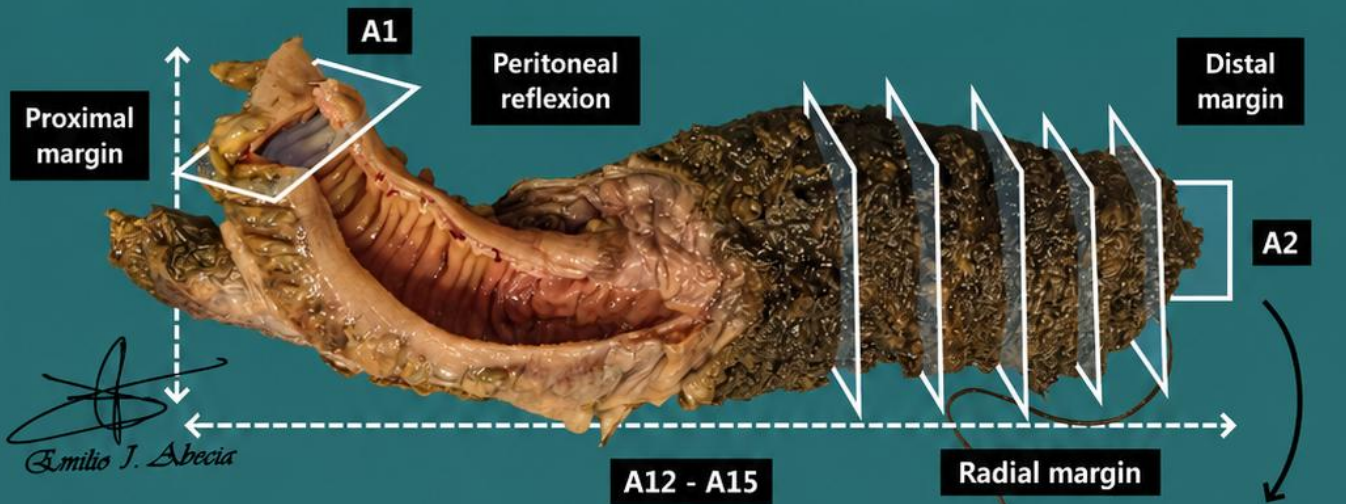
- A1: proximal surgical margin.
- A2: distal surgical margin / anal margin.
- A3 - A5: wall from the first cross-section.
- A6 - A8: radial margin from the first cross-section.
- A9 - A11: wall from the second cross-section.
- A12 - A14: radial margin from the second cross-section.
- A15 - A17: wall from the third cross-section.
- A18 - A21: radial margin from the third cross-section.
- A22 - A25: 4 nodular formations per block.



## TO CONSIDER

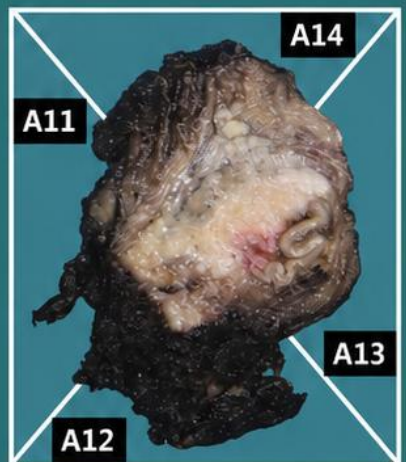
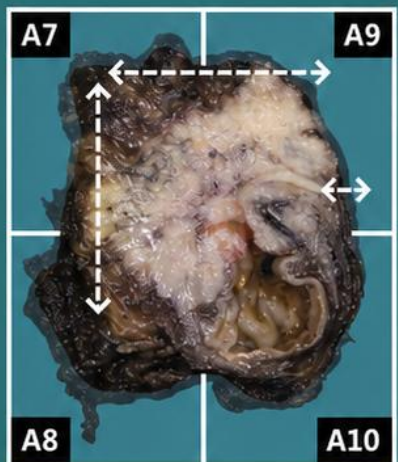
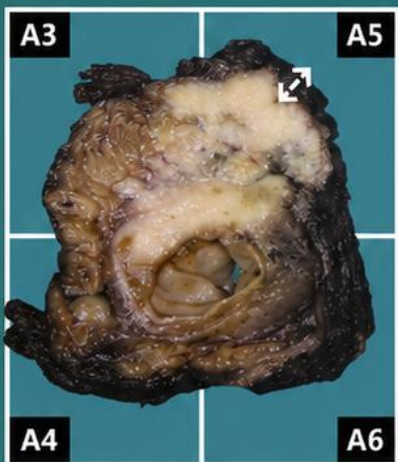
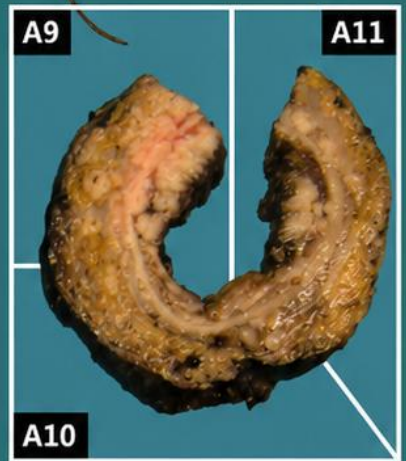
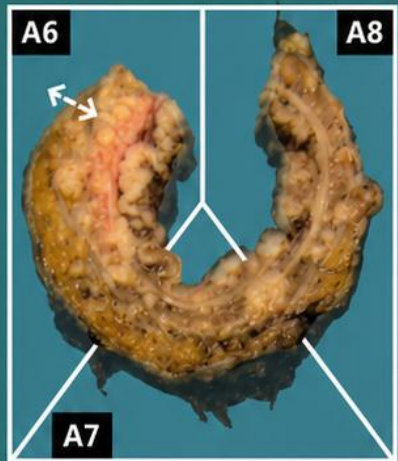
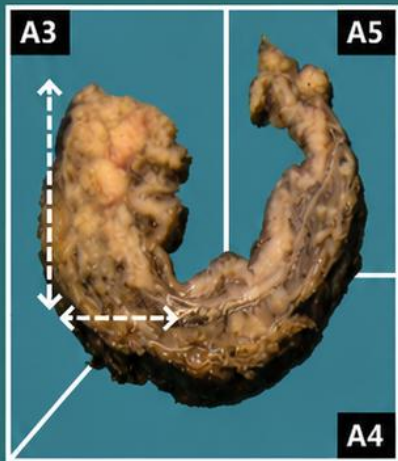
- Tumour resections for adenocarcinomas located in the rectum, which may or may not extend to the anal sphincter (abdominoperineal resection versus low anterior resection).
- Review the clinical history to confirm tumour location, multifocality, and whether the specimen has received neoadjuvant therapy (the lesion may show regressive changes, fibrosis, muscular hypertrophy, erosions, and lymph nodes may be difficult to identify).
- Measure and describe the specimen, including the integrity of the mesorectum, as this has surgical prognostic significance. Also document any perforations / bowel loop adhesions (macroscopic pT4 stage).
- Ink the mesorectal margin and open the sigmoid colon along the antimesenteric border:
  - If the lesion is above the anterior peritoneal reflection (upper rectum), the specimen may be handled similarly to a right hemicolectomy / sigmoidectomy.
  - If the lesion is at or below the peritoneal reflection, the “Viking protocol” should be performed, consisting of transverse serial sectioning of the mesorectum. Depending on the pathologist’s preference, two approaches may be used:
    - Longitudinally open the specimen first before transverse serial sectioning, allowing accurate measurement and description of the lesion without manipulation (although the radial mesorectal margin may be distorted).
    - Transversely serially section the specimen first to preserve the radial mesorectal margin (although lesion measurement and description may be affected).
- Measure and describe the lesion and its distance to the proximal, distal, and radial margins.
- Submit representative sections:
  - If the lesion is very close to a margin, consider inking or submitting that margin longitudinally (in relation to the lesion) rather than transversely.
  - Submit at least one section of tumour per centimetre of maximum tumour dimension. It is crucial to sample the area of deepest radial invasion.
  - Depending on section size:
    - Submit “quadrants”, including both bowel wall and radial margin in the same block (first and second examples).
    - If the mesorectum contains abundant adipose tissue, the radial margin may be submitted separately (third example).
  - If neoadjuvant therapy has been administered and no residual tumour is identified, entirely submit all indurated / ulcerated areas (tumour bed with regressive changes).
  - Submit sections of uninvolved bowel wall to assess for concomitant pathology.
- A minimum of 12–14 lymph nodes / nodular formations should ideally be identified. The highest yield for lymph node retrieval is generally in the peritumoral area. If no definite or insufficient nodular formations are identified, representative sections of adipose tissue, particularly from the peritumoral region, may be helpful.
- Inspect the remaining mucosa for additional lesions or associated pathology.





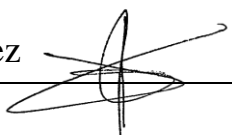
A12 - A15

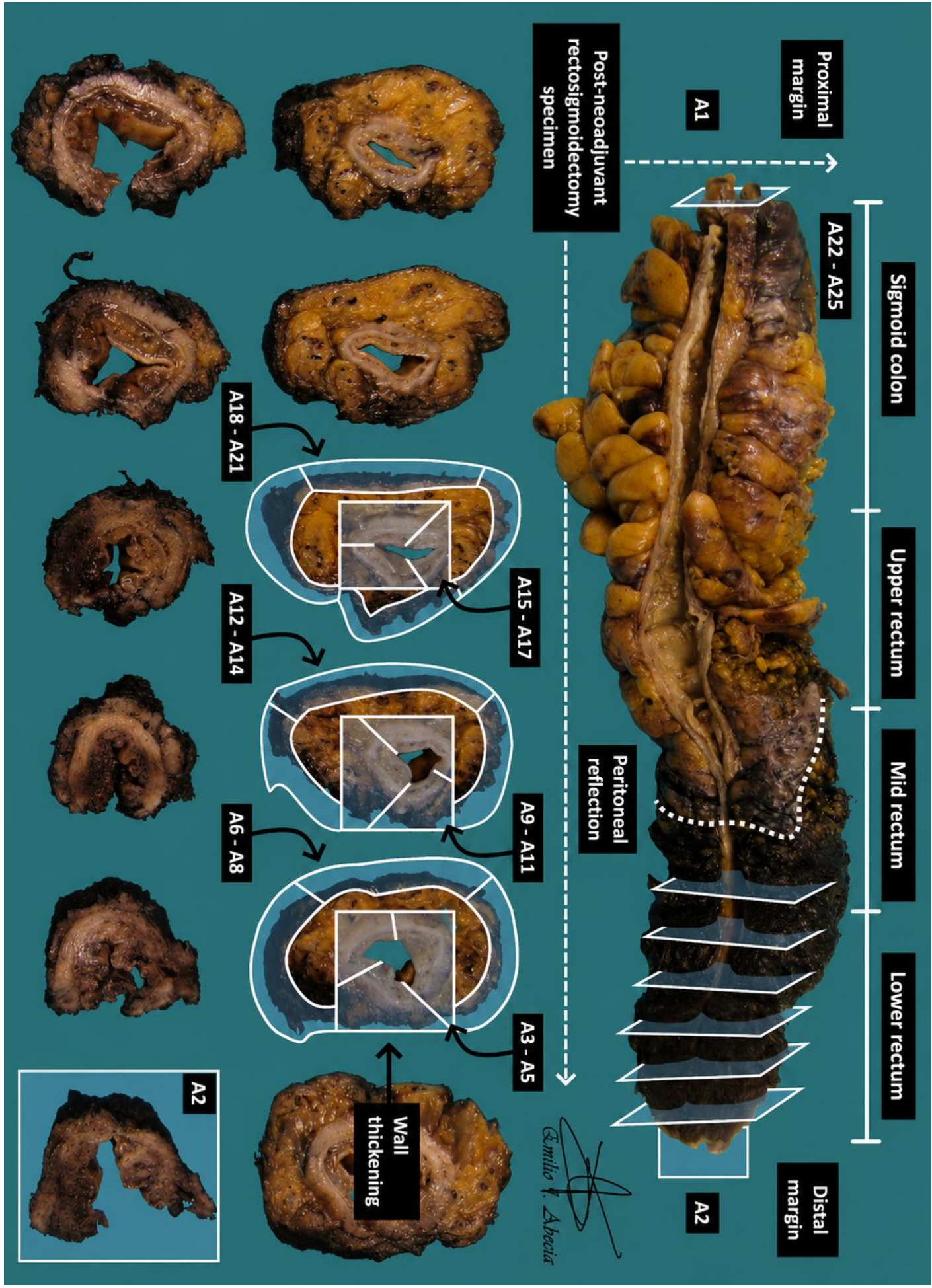
Radial margin



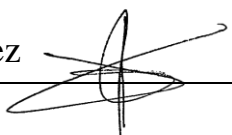
A15 - A18

1. Measure the specimen and record the identifiable anatomical components
2. Describe the specimen externally, including how the mesorectum has been resected
3. Identify the radial resection margin
4. Serially section transversely; localise and measure any lesion, and its distance to margins
5. Describe the lesion morphologically
6. Record any incidental lesions or findings (if present)
7. Palpate perirectal fat in search of nodular deposits (lymph nodes)
8. Include representative sections





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## DISCLAIMER

The image and text are provided for illustrative purposes only. The tissue sections submitted and the description provided will depend on the individual specimen characteristics, the clinical diagnostic suspicion, the experience of the dissector, and the institutional guidelines of the laboratory.

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