

5

Colorectal Carcinoma

I. GROSS DESCRIPTION

Specimen

- investigation of colorectal cancer is by endoscopy and biopsy with staging of biopsy-proven cancers by CT scan of chest, abdomen and pelvis for local and distant spread. MRI of rectal cancers complements clinical examination by imparting information about nodal disease and the status of the tumour edge in relation to the mesorectal envelope and its fascial plane, that influences neoadjuvant and operative management decisions.
- rectal/sigmoidoscopic/colonoscopic biopsy, right or left hemi-/transverse/sigmoid/ subtotal or total colectomy/anterior or abdominoperineal resection.
- weight (g) and size/length (cm), number of fragments. Curative colorectal cancer surgery excises the primary lesion with adequate longitudinal and deep radial margins and en bloc resection of the relevant colonic lymphovascular mesenteric pedicle, or the mesorectum.

Tumour

Site

- caecum/ascending colon/hepatic flexure/transverse colon/splenic flexure/descending or sigmoid colon/rectum/multifocal (10%—synchronous or metachronous). Rectosigmoid (50%) are the commonest sites. Tumour site strongly influences clinical presentation, e.g. caecal carcinoma—anaemia, right iliac fossa mass; sigmoid colon carcinoma—alteration in bowel habit; rectal cancer—bright red blood per rectum, tenesmus.
- for rectum: above/at/below the peritoneal reflection. Tumours below the reflection have a higher rate of local recurrence and tumours above/at the reflection anteriorly may involve peritoneum. The lateral angled descent of the peritoneum results in variation of the anatomical relationships with the upper rectum orientated to mesorectum posteriorly and laterally and peritoneum anteriorly. The mid rectum is surrounded by mesorectum, whereas the lower rectum is below the level of

the mesorectum encircled by pelvic sphincteric and levator muscle. Elsewhere in the colorectum the bowel is orientated to serosa and a mesentery but the proximal ascending and descending colons and rectosigmoid junction have a posterior non-peritonealized retroperitoneal bare area. As in the mesorectum, this constitutes a deep radial soft tissue resection margin, although this can be difficult to identify in individual cases. Sigmoid colon ends where the external longitudinal muscle bands (taeniae coli) blend with the rectal muscularis propria.

- distances (cm) to the dentate line and nearest longitudinal resection limit. These figures can audit the rates of anterior resection versus abdominoperineal resection, with the former being the operation of choice (with total mesorectal excision: TME) for mid- and upper rectal cancers. Low rectal cancers also have higher local recurrence rates. Anatomical definition of the rectum varies but, in general, distances from the anal verge are: lower rectum 0–5 cm; mid rectum 5–10 cm; upper rectum 10–15 cm. Tumour site within the rectum not only influences the choice of operative procedure but also neoadjuvant therapy, e.g. low rectal cancers may be given long course as opposed to short course preoperative radiotherapy. A further important audit factor is the integrity or completeness of the mesorectal envelope in the postoperative specimen. Deficiencies indicate a sub-optimal operation and greater potential for local pelvic recurrence. A suggested classification is Quirke 1 (incomplete), 2 (nearly complete) and 3 (complete). Categories 1 and 2 show variable mesorectal bulk and deficiencies or cuts into the mesorectal capsule but it is smooth and intact in category 3.

Size

- length × width × depth (cm) or maximum luminal dimension (cm).

Not shown to be an independent prognostic indicator.

Appearance

- polypoid/annular/ulcerated/mucoid/linitis plastica/stricture/plaque.

No independent influence on prognosis except linitis plastica (signet ring cell carcinoma). Proximal cancers tend to be exophytic masses, other sites ulcerated, endophytic and annular.

Edge

- circumscribed/irregular.

Perforation

- present/absent. Perforation has a higher incidence of local recurrence and poorer prognosis. Perforation through the tumour is TNM stage pT4 because of the potential contact with peritoneum. This does not include proximal ischaemic back-pressure perforation (e.g. caecum) due to an obstructing distal cancer. In this case the pT stage is determined by the degree of local spread of the distal cancer.