

Colon Cancer: American Society of Colon and Rectal Surgeons Clinical Practice Guidelines for the Management of Colon Cancer (2022)

About the Guideline

- The American Society of Colon and Rectal Surgeons' Clinical Practice Guidelines committee was composed of members who have demonstrated expertise in colon and rectal surgery.
- The guidelines are meant to provide information to guide treatment but are not prescriptive and are not meant to dictate treatment.
- The guidelines are related to evaluation and treatment of colon and rectal cancer.

Key Clinical Considerations

Become familiar with the recommendations and best-practice statements in this guideline, especially if you work in an acute care setting.

Evaluation and Risk Assessment

- For patients with suspected colon cancer, obtain a cancer-specific history and family history, perform a physical examination, assess disease-specific symptoms, and evaluate perioperative medical risk. Routine laboratory values and carcinoembryonic antigen (CEA) should be obtained.
- For patients meeting clinical criteria or with a family history of increased susceptibility to colorectal cancer, provide a referral to a genetic counselor.
- Before any treatment is performed, a full colonic evaluation and histologic diagnosis must be performed and confirmed.

Staging

- For colon cancer staging, computerized tomography (CT) of the chest, abdomen, and pelvis with oral and IV contrast and an abdominal MRI (magnetic resonance imaging) are recommended.
- For routine colon cancer staging, positron emission tomography (PET)/CT is not generally recommended, but it may be useful in surgical decision-making for patients with stage IV disease.
- Staging should be completed according to the TNM staging system, including designation of residual tumor code "R," which signifies a postsurgical assessment of the tumor resection.
 - T—Definition of primary tumor (Tx, T0, Tis, T1, T2, T3, T4a, T4b)
 - N—Regional lymph node involvement (NX, N0, N1, N1a, N1b, N1c, N2a, N2b)
 - M—Distant metastasis (M0, M1a, M1b, M1c)

Surgical Treatment of the Primary Tumor

- Curative-intent colectomy should be performed without delay when neoadjuvant therapy is not included in the treatment plan.
- Perform a thorough exploratory surgery of the peritoneal cavity and abdominal and pelvic organs.
- The site of the primary lesion and its lymphovascular drainage should determine the extent of resection.
- The routine performance of extended lymphadenectomy is not recommended.
- A complete resection of the tumor along with adherent or actively involved adjacent organs should occur within the same surgery to achieve local tumor control.

- For grossly abnormal ovaries or contiguous extension of colon cancer, an oophorectomy is usually advised; however, routine prophylactic oophorectomy is not recommended.
- Neoadjuvant chemotherapy or radiotherapy can result in tumor regression and may facilitate margin-negative excision of locally advanced cancers in patients with locally advanced colon cancer.
- Synchronous lesions (a second primary colon cancer that is diagnosed at the same time or up to 12 months after primary tumor is detected) may be removed by two separate resections or by subtotal colectomy.
- A minimally invasive approach to elective colectomy is preferred when expertise is available.
- Robotic and hand-assisted laparoscopic surgical methods used in right colon cancer result in outcomes comparable to straight or open laparoscopic approaches.
- Either endoscopic excision or oncological resection, depending on histology and the thoroughness of excision, may be appropriate for patients with a malignant polyp.
- The morphology and histology of a malignant polyp determine the treatment.
- If no additional pathology is observed, resection for the colon should include proximal to distal margins of 5 cm to 7 cm.
- Complete lymph node evaluation should be performed, with at least 12 lymph nodes evaluated to assign a N0 stage.

Tumor-Related Emergencies

- 20% of colon cancer patients present with surgical emergencies, such as bleeding, perforation, and/or obstruction.
 - **Bleeding**
 - Acute gastrointestinal (GI) bleed resulting from colon cancer is a rare but life-threatening complication.
 - Nonsurgical approaches to control bleeding include resuscitation of the patient and localization of the bleeding site via radionuclide imaging, CT angiography, conventional angiography, and colonoscopy. Cessation of bleeding may occur via colonoscopy or angiographic embolization. (CT angiography proves superior with a sensitivity of 85%.)
 - Surgical intervention is required if nonsurgical methods fail to control the bleeding.
 - **Perforation**
 - For perforation or impending perforation, resection, followed by an oncologic plan, is recommended.
 - If perforation of the uninvolved colon next to the obstructing tumor occurs, tumor resection is usually performed, and the perforated segment is repaired or resected.
 - Stent placement is contraindicated in perforated colon cancer.
 - **Obstruction**
 - Treatment is dependent on whether the surgical approach would be curative or palliative, the patient's age, risk profile, degree of obstruction, and the therapeutic resources available.
 - For obstructing, left-sided, curable colon cancer, endoscopic stent decompression, diverting colostomy with interval colectomy, or initial treatment with oncological segmental colectomy may be performed.

- For obstructing, right-sided or transverse, curable colon cancer, initial colectomy or initial endoscopic stent decompression with subsequent interval colectomy may be performed.

Management of Stage IV Disease

- A multidisciplinary team should be utilized to individualize and guide patient care.
- Tumors and metastases are classified as resectable, potentially resectable, and unresectable.

Resectable and Potentially Resectable Stage IV Disease

- Neoadjuvant chemotherapy, followed by surgical resection or up-front surgery, may be utilized for patients with initially resectable colon cancer with liver metastasis.
 - Neoadjuvant treatment (treatment with chemotherapy preoperatively) may include 5-fluorouracil, leucovorin, and oxaliplatin (FOLFOX regimen).
- For initially unresectable colon cancer with liver metastasis, consider neoadjuvant chemotherapy to try to achieve a resectable disease.
- To potentially increase the resectability of colon cancer liver metastasis, hepatic artery infusion of chemotherapy, combined with systemic chemotherapy or immunotherapy, is recommended; but this should be performed only in centers with appropriate expertise.
- For patients with colon cancer and resectable liver metastasis, a single, combined operation is generally recommended for less complex cases, whereas staged operations are generally recommended for more complex cases.
- For patients with resectable colon cancer with lung metastasis, resection of lung lesions should be considered to prolong survival.
- For resectable colorectal peritoneal carcinomatosis, treatment options include systemic chemotherapy, targeted biologic therapy, resection of the peritoneal cancer, and intraperitoneal chemotherapy with mitomycin-C or oxaliplatin (with or without hyperthermia).

Unresectable Stage IV Disease

- Patients with widely metastatic colon cancer are generally not considered candidates for surgical intervention.
- Systemic chemotherapy is recommended as the initial treatment for patients with incurable stage IV colon cancer and an asymptomatic primary colon cancer.
- Palliative therapy is recommended for maintenance of quality of life and symptom relief.
- Palliative surgery for gastrointestinal (GI) tract obstruction and intractable bleeding includes resection, endoluminal stent therapy, ablative procedures, internal bypass, or a diverting stoma.
 - The patient's overall life expectancy should be considered prior to surgery.

Management of Locoregional Recurrence

- The treatment approach should be multidisciplinary.
- Potentially curative resection should be performed when overall survival can be improved.
- There is a low-recurrence risk (2% to 3%) following curative resection of localized colon cancer.
- Salvage surgical resection may be performed. Prolonged survival is dependent on the stage of the initial disease, presence of associated distant disease, and whether it is a single-site recurrence.
- Multimodality treatment protocols with chemotherapy and radiation are commonly employed.

Adjuvant Chemotherapy

- Adjuvant chemotherapy is used after curative resection to eliminate micrometastasis; it should be initiated within 8 weeks of colon resection.
- It is typically recommended for patients with stage III colon cancer.
- Choice of regimen is based upon the clinical findings from the surgical resection, disease stage, and comorbidities.
- First-line adjuvant chemotherapy for stage III colon cancer should include fluoropyrimidine (5FU/LV or capecitabine) and oxaliplatin. The dose-limiting side effect of grade 3 peripheral neuropathy occurs in 12% of patients.
- Oxaliplatin-based adjuvant chemotherapy should be considered for patients with high-frequency microsatellite instability (MSI) stage III colon cancer.
- Immunotherapy targeting programmed cell death-ligand 1 (PD-L1) or programmed cell death protein 1 (PD-1) should be considered for patients with certain stage IV colon cancers.
- High-risk stage II colon cancer patients may be considered for adjuvant therapy. These patients are considered high risk due to one or more factors: T4 cancer; a primary, perforating, or obstructing lesion; poorly differentiated histology; or resection with fewer than 12 lymph nodes harvested.
- For patients with stage II or III colon cancer, multigene assays may be used to complement multidisciplinary team decision-making.

Reference

Vogel, J. D., Eskicioglu, C., Weiser, M. R., Feingold, D. L., & Steele, S. R. (2017). The American Society of Colon and Rectal Surgeons Clinical Practice Guidelines for the Treatment of Colon Cancer. *Diseases of the colon and rectum*, 60(10), 999–1017. <https://doi.org/10.1097/DCR.0000000000000926>