Rectal Cancer Survivors – What the Gastroenterologist Needs to Know

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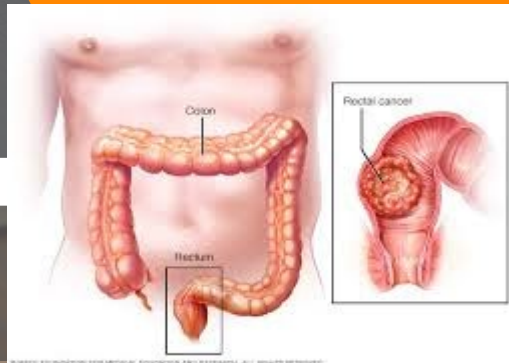


Care of Rectal Cancer Survivors

- CRC survivors are experiencing normal issues of aging, which may be compounded by the long-term effects of prior cancer and cancer therapy.

Long-term CRC survivors are at risk for :

- recurrent CRC
- A new primary CRC
- other cancers
- both short- and long-term treatment toxicity.
- psychological, reproductive, genetic, social, and employment concerns.

- Ten-year cancer-specific survival rates for patients with stage I, II, III, and IV disease at the time of resection were 89, 80, 63, and 11 percent, respectively.

- Only approximately one-third of the observed deaths in patients with stages I to III disease were related to rectal cancer.

- Despite potentially curative surgery and the use of modern locoregional and systemic therapy, approximately 40 percent of patients who present with stage II or III disease will have a disease recurrence following primary therapy .

- Over 90% of recurrences develop within five years, most within the first three years.

Most patients who develop recurrent disease will die from it, although a small subset, mainly those with isolated limited metastatic disease to the liver or lungs, may be eligible for additional curative intent surgery:

- Five-year survival rates approaching 40% in hepatectomy for limited hepatic metastases .
- Five-year survival rates of 35 to 45 % for lung cancer metastectomy.

CRC survivor

- individual who has completed treatment for CRC (ie, surgery, chemotherapy, and/or radiation therapy) and has no evidence of disease.



phases of survival in cancer patients

- Acute stage (diagnosis and treatment)
- Extended stage (remission and/or maintenance, with a main focus on surveillance for disease recurrence)
- Permanent stage (long-term survival or "cure," with a focus on long-term risks of treatment and prevention of subsequent diseases)

Epidemiology and Survivorship Trends

- Rectal cancer survival has improved substantially due to earlier detection and advances in multimodal therapy.
- Five-year survival now exceeds 70% for localized disease.
- Consequently, the number of survivors is rising, emphasizing the need for structured post-treatment care.

Goals of Post-treatment Care

- Early detection of recurrence or new primary tumors
- Management of treatment-related complications (bowel, urinary, sexual)
- Optimization of nutritional and psychosocial health
- Coordination between oncology, surgery, and gastroenterology teams

Multidisciplinary Roles

Successful survivorship care requires coordination among:

- ✓ colorectal surgeons
- ✓ oncologists
- ✓ gastroenterologists
- ✓ dietitians
- ✓ pelvic floor specialists
- ✓ primary care providers.

Gastroenterologists ensure surveillance colonoscopy, symptom evaluation, and management of chronic bowel dysfunction.

Coordination of care

- The updated 2013 ASCO guidelines for follow-up care for survivors of CRC explicitly state that a treatment plan from the specialist should be sent to the patient's other providers, especially the primary care physician, with clear directions on appropriate follow-up.

Secondary prevention

- The 2013 updated ASCO guidelines endorsed the following Cancer Care Ontario recommendations for secondary prevention :
- ●Patients should be advised to eat a healthy diet and seek to maintain a healthy body weight.
- ●Survivors should engage in a physically active lifestyle, seeking to engage in at least 150 minutes per week of moderate intensity, or 75 minutes per week of vigorous activity aerobic activity, as recommended by the American College of Sport Medicine .
- ●There remains uncertainty regarding the benefits of regular use of aspirin or a cyclooxygenase inhibitor and in which survivors.

Alcohol and tobacco use

- Excess alcohol intake has been linked to an elevated risk for CRC, although its influence on survival after a diagnosis of CRC is unclear .

- Cigarette smoking (especially post diagnosis smoking) has been associated with an increased risk for and mortality from CRC .
- Survivors should be encouraged to quit smoking and use alcohol in moderation, if they drink.


RECTAL CANCER
SURVEILLANCE

NCCN and ESMO Surveillance Overview

- **Stage I disease:** After curative intent resection, most patients with stage I CRC do not require surveillance beyond interval colonoscopy because the risk is very low.

For some patients with higher-risk disease :

- rectal cancer treated with endoscopic or transanal excision
- colon cancers treated with endoscopic resection alone
- patients who did not undergo guideline-based treatment surveillance-based detection, as is used for higher-stage disease, might reveal a potentially salvageable recurrence.

- The European Society for Medical Oncology (ESMO) guidelines for post-treatment surveillance after treatment of localized colon cancer and localized rectal cancer are the same for stage I, II, and III disease.

Both NCCN and ESMO recommend structured follow-up:

Hx,ph/ex :Every 3 to 6 months for the first 3 years and every 6 months during years 4 and 5.

The Ph/ex should include a rectal examination for those patients who have undergone low anterior resection or transanal excision for rectal cancer.

- CEA every 3–6 months for 2 years, then every 6 months to 5 years
- CT chest/abdomen/pelvis every 6–12 months for 5 years
- Colonoscopy at 1 year post-resection, then at 3 years, then every 5 years
- Pelvic MRI for rectal cancer with risk of local recurrence

- For patients who have undergone low anterior resection for rectal cancer and who have not received RT, we obtain a flexible proctosigmoidoscopy along with transrectal EUS every six months for up to five years.

- Gadolinium-enhanced rectal MRI is an appropriate alternative to transrectal EUS, if available.

Role of Gastroenterologists in Surveillance

- Perform and interpret colonoscopy
- Evaluate anastomotic sites and neorectum
- Identify strictures, local recurrence, or radiation proctitis
- Manage post-surgical functional sequelae

Endoscopic Findings After Rectal Resection

Common post-surgical findings include:

- ❑ Anastomotic scar or narrowing
- ❑ Radiation-induced mucosal changes
- ❑ Granulation or ulceration mimicking recurrence
- ❑ Neorectal mucosal inflammation after anastomosis

Timing of Recurrence

- Most local or distant recurrences occur within the first 2–3 years after curative surgery.

- Regular surveillance allows early detection and potentially curative intervention.

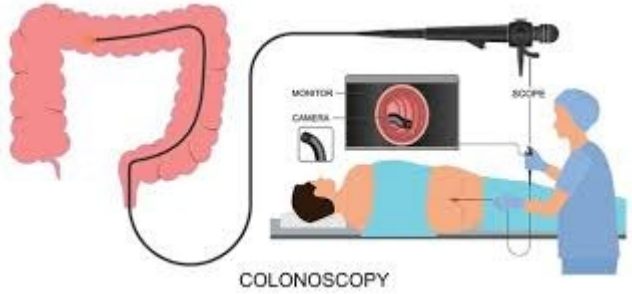
Local Recurrence Detection

- Endoscopy and MRI are complementary.
- Endoscopy: mucosal recurrence, biopsy capability
- MRI: deep wall or extraluminal recurrence
- Combined assessment yields higher sensitivity and specificity.

Colonoscopy Quality and Timing

- High-quality colonoscopy after rectal cancer resection improves detection of metachronous neoplasia.

- Preparation quality, adequate withdrawal time, and awareness of surgical anatomy (anastomosis, pouch, or stoma) are essential.



Functional Sequelae After Rectal Cancer Treatment

Functional impairment is common among rectal cancer survivors. Up to 80% experience altered bowel habits, urgency, or incontinence . Causes include:

- loss of rectal reservoir
- autonomic nerve damage
- pelvic radiation injury.

Low Anterior Resection Syndrome (LARS) Overview

- Definition: A spectrum of bowel dysfunction after sphincter-preserving rectal surgery, including frequency, urgency, clustering, and incontinence.
- Incidence: Moderate-to-severe **LARS affects ~40–50%** of patients long term.
- Note that severity depends on anastomotic height, radiation exposure, and time since surgery.

LARS Score

Validated scoring tool to quantify symptoms:

- Symptom Scoring (0–42)
- Frequency of bowel movements 0–7
- Clustering 0–11
- Urgency 0–11
- Incontinence for gas/liquid 0–10
- Stool fragmentation 0–3
- Interpretation:
- 0–20: No LARS
- 21–29: Minor LARS
- 30–42: Major LARS

Pathophysiology of LARS

- Loss of rectal reservoir and compliance
- Sphincter dysfunction or denervation
- Altered motility and colonic transit
- Radiation-induced fibrosis

Evaluation of Post-Surgical Bowel Dysfunction

- Assessment includes:
- Detailed symptom history and LARS score
- Digital rectal exam for tone and anastomosis
- Endoscopy for structural issues
- Manometry and balloon expulsion testing if indicated

Management Overview

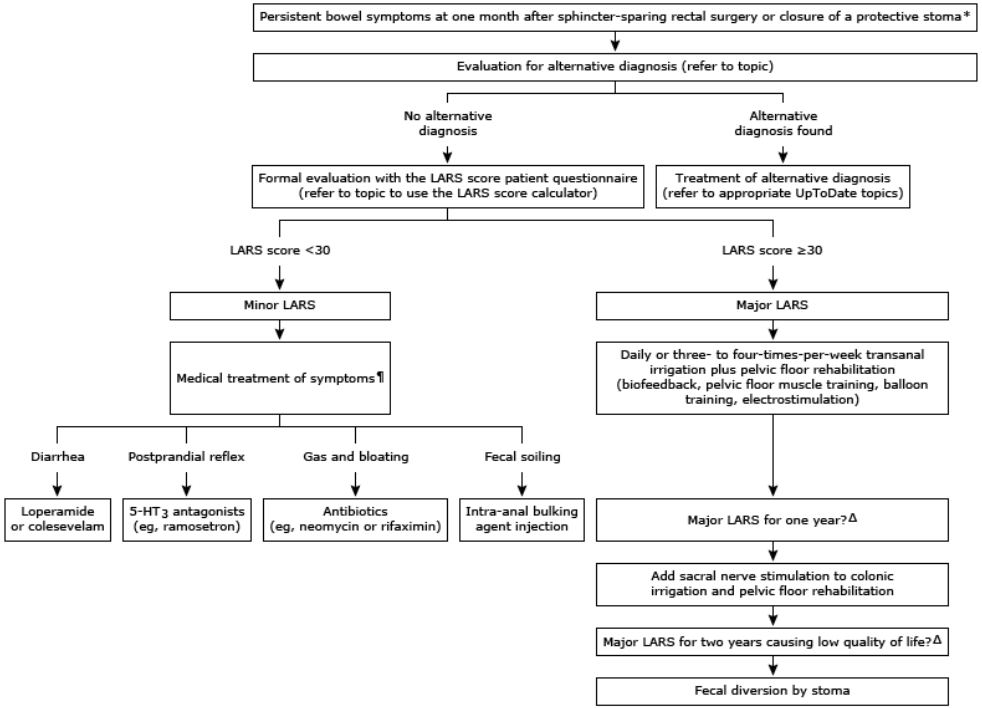
Stepwise, multidisciplinary approach:

- 1. Dietary modification (fiber titration, small frequent meals)
- 2. Antidiarrheal therapy (loperamide, codeine)
- 3. Bile acid sequestrants (cholestyramine if bile acid malabsorption)
- 4. Pelvic floor rehabilitation / biofeedback
- 5. Transanal irrigation or neuromodulation for refractory cases

Dietary and Lifestyle Strategies

- Avoid caffeine, alcohol, spicy foods
- Optimize hydration
- Soluble fiber supplementation (psyllium)
- Regular physical activity to improve motility
- Toilet scheduling after meals

Treatment algorithm for low anterior resection syndrome (LARS)



* Symptoms suggestive of LARS include fecal incontinence or urgency, frequent or fragmented bowel movements, emptying difficulties, and increased intestinal gas.

¶ Treatments may be combined if patients have more than one symptom.

Δ Patients who have minor LARS on reassessment can be treated medically. Refer to the "Minor LARS" section for details.

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Radiation therapy

- At least in the United States, the more common approach is preoperative standard fractionation RT with concomitant radiosensitizing doses of a fluoropyrimidine.

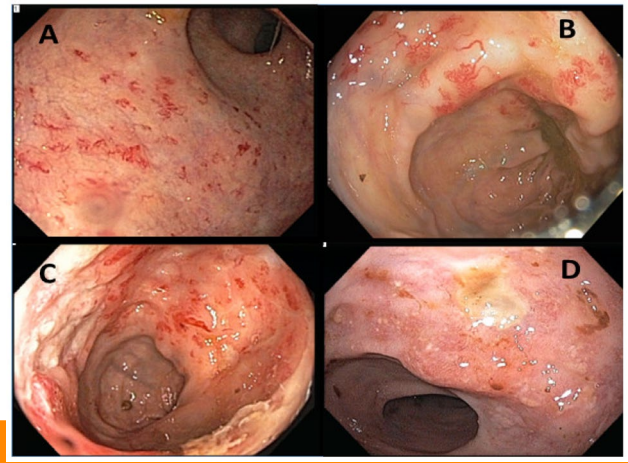
- One of the advantages of neoadjuvant as compared with adjuvant chemoradiotherapy is a lower rate of long-term GI toxicity, particularly anastomotic stricture.

Complications due to radiation therapy



Radiation-Induced Gastrointestinal Effects

- Pelvic radiotherapy can lead to acute and chronic bowel toxicity.
- **Acute:** diarrhea, urgency, bleeding (usually self limited).
- **Chronic:** radiation proctitis, strictures, malabsorption, and fistulas.



Management of Radiation Proctitis

- **Acute radiation proctitis:**
- Because of self-limiting, up to 20 % of will require short interruptions in their treatment to improve symptoms.
- supportive treatment consisting of hydration and antidiarrheals as needed.
- **sodium butyrate enemas(short-chain fatty acid)** for three weeks to induce remission of symptoms .

Management of Radiation Proctitis

- Sucralfate enemas (20 mL of a 10 percent sucralfate suspension in water twice daily four-week)
- Argon plasma coagulation (APC)
- Mesalamine suppositories and/or glucocorticoid enemas are often used to help treat rectal ulceration associated with APC
- Radiofrequency ablation
- Hyperbaric oxygen ?
- Hormonal therapy?
- Antioxidants ?

Pelvic fractures

- Pelvic RT may predispose to bone loss and a heightened risk of bone fracture.

CRC survivors who have received pelvic RT should undergo:

- long-term monitoring of bone density
- appropriate medical treatment for osteopenia and osteoporosis
- careful evaluation if symptoms suggesting fractures develop.

Second malignancies

- Radiation-associated secondary malignancies are a known but infrequent complication of pelvic irradiation.
- Few studies have assessed the risk of a second cancer in patients treated with RT before or after surgery for rectal cancer, with varying results .
- Some have found an increased risk of developing a second cancer after RT , while others have not

Side effects related to chemotherapy

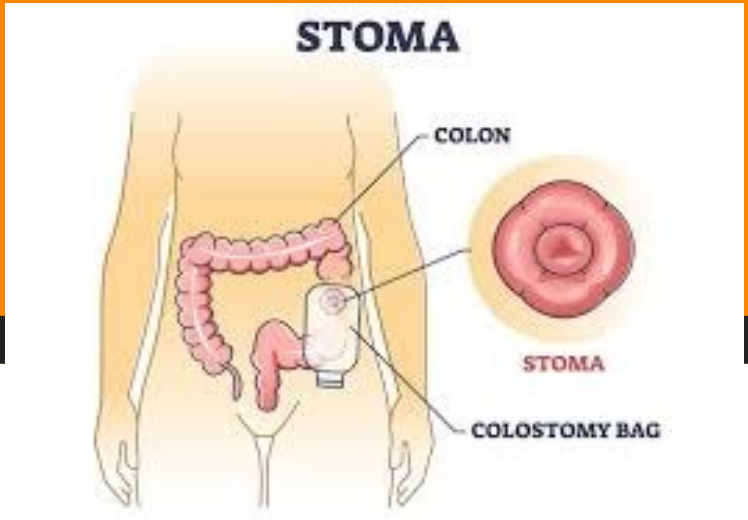
- Chemotherapies that are commonly used in the setting of CRC can be associated with :
- Mucositis
- Emesis
- Diarrhea
- febrile neutropenia
- fatigue
- hand-foot syndrome
- cardiotoxicity.

Fortunately, most of these symptoms are reversible with cessation of the chemotherapy.

Oxaliplatin-induced peripheral neuropathy

- Oxaliplatin is associated with a cumulative, dose-limiting, late-onset symmetric distal (stocking-glove pattern) axonal neuropathy, typically without motor involvement.
- Up to 90% of patients receiving a six-month course of an oxaliplatin-containing adjuvant chemotherapy regimen develop a neuropathy during treatment.
- Neuropathy is generally reversible, although it may take several years.

Ostomy Care and GI Involvement



- Some survivors have permanent colostomies.
- Common issues:
- skin irritation
- high-output stomas
- Hernias
- dehydration.

Gastroenterologists can support ostomy patients through education, stool consistency control, and collaboration with stoma nurses.

Sexual and Urinary Dysfunction

- Autonomic nerve damage and radiation can impair sexual and bladder function.
- Men: erectile dysfunction, ejaculation issues
- Women: vaginal dryness, dyspareunia, reduced libido
- Urinary urgency or incontinence

Normalize discussions about sexual health. Early referral to urology/gynecology or pelvic rehab improves quality of life.

Psychosocial Impact

- Cancer survivorship often brings anxiety, depression, body image issues, and fear of recurrence.
- Multidisciplinary support (psychologists, social workers, survivor groups) enhances adherence and recovery.



Quality of Life and Long-term Outcomes

- Focus not only on recurrence prevention but also on restoring quality of life.
- Monitor bowel function, diet, fatigue, and sexual health at each visit.
- Survivorship programs improve satisfaction and reduce healthcare fragmentation.

SCREENING OF FAMILY MEMBERS

- A positive family history for CRC, particularly in first degree relatives, increases the risk of developing CRC.
- Thus, when caring for a patient with CRC, the clinician should recommend screening of family members beginning at age 40

- **Assessing genetic susceptibility**

Key Takeaways

- Early surveillance (first 3 years) is critical for recurrence detection.
- Functional and nutritional sequelae are common and manageable.
- Multidisciplinary coordination ensures holistic care.
- Gastroenterologists are vital in both surveillance and symptom management.

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THANKS