

**Done and presented by:**  
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## **Case Scenario: Lower Gastrointestinal Bleeding**

**Patient:** Mr. Ahmed, 58-year-old male

**Presentation:** Painless rectal bleeding for 2 weeks

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### **Step 1: Differential Diagnosis (DDx) for Lower GI Bleeding**

#### **١. Vascular / Mucosal lesions**

- Hemorrhoids (internal or external)
- Anal fissure
- Angiodysplasia / vascular ectasia

#### **٢. Inflammatory causes**

- Inflammatory bowel disease (Ulcerative colitis, Crohn's disease)
- Infectious colitis (bacterial, parasitic)
- Ischemic colitis

#### **٣. Neoplastic / Malignant**

- Colorectal carcinoma
- Polyps (adenomatous, juvenile, serrated)

#### **٤. Diverticular disease**

- Colonic diverticulosis

#### **٥. Miscellaneous / Systemic**

- Coagulopathies
  - Medication-induced bleeding (NSAIDs, anticoagulants)
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### **Step 2: History Taking**

#### **A. Presenting Complaint Details:**

- Character: Bright red, dark red, or maroon? Mixed with stool or on surface?
- Amount: Spotting vs. large volume
- Frequency: Continuous vs. intermittent
- Onset: Sudden vs. gradual
- Associated symptoms: Pain, tenesmus, urgency, diarrhea, mucus

## **B. Systemic Symptoms / Red Flags:**

- Weight loss, anorexia
- Fatigue, pallor (anemia)
- Fever, night sweats (infection or lymphoma)
- Abdominal pain, changes in bowel habits

## **C. Past Medical History:**

- History of GI diseases: IBD, diverticulosis, polyps
- Previous episodes of bleeding
- Coagulopathy or anticoagulant therapy
- Radiation exposure or abdominal surgery

## **D. Family History:**

- Colorectal cancer, polyps, IBD, bleeding disorders

## **E. Social / Lifestyle:**

- Diet (low fiber)
  - Smoking, alcohol
  - NSAID or herbal medication use
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## **Step 3: Physical Examination (PE)**

### **A. General:**

- Pallor, signs of anemia
- Cachexia or weight loss

### **B. Vital Signs:**

- Tachycardia, hypotension → significant blood loss

### **C. Abdominal Exam:**

- Palpable mass (right colon tumors may be felt)
- Tenderness (LLQ → diverticulosis)
- Hepatomegaly or liver nodules (metastases)
- Lymphadenopathy (rarely supraclavicular nodes → Virchow's node)
- Distension

### **D. Perianal / Rectal Exam:**

- Hemorrhoids, fissures, skin tags
- Palpable rectal mass or blood on glove (especially rectal cancer)

### E. Systemic Exam:

- Signs of coagulopathy (ecchymosis, petechiae)
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### Step 4: Laboratory Workup

Test	Purpose / Interpretation
CBC	Evaluate anemia, infection, plt
Coagulation profile (PT, aPTT, INR)	Rule out coagulopathy
Liver function tests	Rule out liver disease affecting coagulation
Renal function	Baseline before imaging / colonoscopy
CRP / ESR	Evaluate inflammation (IBD)
Stool studies	Infection (culture, C. difficile, parasites)
Tumor markers (optional, adults)	CEA for colorectal cancer follow-up

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### Step 5: Imaging and Diagnostic Workup

Imaging	Main Role
<b>Colonoscopy + biopsy</b>	Gold standard for diagnosis
<b>CT Colonography</b>	Alternative if colonoscopy not possible
<b>MRI Pelvis</b>	Rectal cancer local staging
<b>Endorectal US</b>	Early rectal cancer (T1–T2)
<b>CT Chest/Abdomen/Pelvis</b>	Standard distant staging
<b>PET-CT</b>	Occult mets, recurrence, surgical planning
<b>X-ray Abdomen</b>	Obstruction/perforation suspicion

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## Step 7: Management Considerations

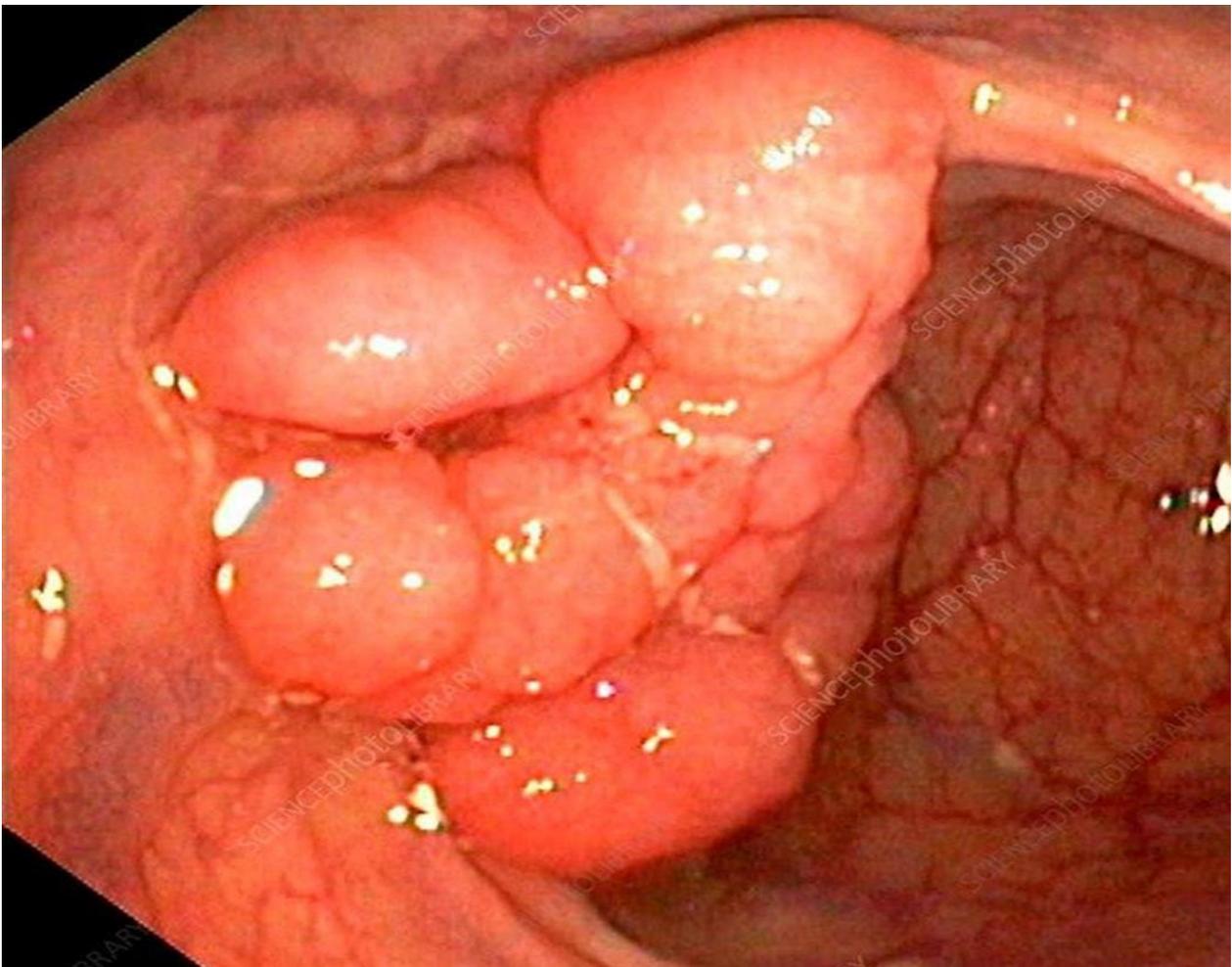
### A. Acute Bleeding

- Hemodynamic stabilization (IV fluids, blood transfusion)
- Endoscopic hemostasis (clips, cautery)

## Step 8: Breaking Bad News

### Framework (SPIKES protocol):

1. **Setting:** Private, quiet environment with support person
2. **Perception:** Ask patient what they understand about the tests/results
3. **Invitation:** Ask how much they want to know
4. **Knowledge:** Deliver information clearly
5. **Emotions / Empathy**
6. **Strategy / Summary:** Outline next steps (treatment, surgery, follow-up)



**Q1.**

The most common site of colorectal cancer is:

- A. Cecum
- B. Ascending colon
- C. Rectosigmoid region
- D. Transverse colon
- E. Descending colon

**Q2.**

The most common presenting symptom of left-sided colon cancer is:

- A. Iron deficiency anemia
- B. Change in bowel habit / obstruction
- C. Weight loss
- D. Tenesmus
- E. Jaundice

**Q3.**

The most common presenting symptom of right-sided colon cancer is:

- A. Abdominal pain
- B. Iron deficiency anemia
- C. Rectal bleeding
- D. Obstruction
- E. Tenesmus

**Q4.**

Which of the following is the single most important prognostic factor in colorectal cancer?

- A. Age of patient
- B. Histological type
- C. Tumor size
- D. Nodal involvement
- E. CEA level

**Q5.**

The most common site of distant metastasis in colorectal cancer is:

- A. Lung
- B. Bone
- C. Brain
- D. Liver
- E. Peritoneum

**Q6.**

A patient with colorectal cancer has CEA level of 15 ng/mL before surgery. What is the role of CEA here?

- A. Diagnostic test for colorectal cancer
- B. Screening tool in general population
- C. Preoperative baseline for follow-up
- D. Predicts tumor histology
- E. Detects liver metastasis only

- Q Correct Answer
- 1 C. Rectosigmoid region
- 2 B. Change in bowel habit / obstruction
- 3 B. Iron deficiency anemia
- 4 D. Nodal involvement
- 5 D. Liver
- 6 C. Preoperative baseline for follow-up
- 7 D. HNPCC (Lynch syndrome)

**Q7.**

The most common inherited syndrome associated with colorectal cancer is:

- A. Peutz-Jeghers syndrome
- B. Familial adenomatous polyposis (FAP)
- C. Gardner syndrome
- D. HNPCC (Lynch syndrome)
- E. Turcot syndrome

# SURGERY

❖ **SURGERY is the GOLD STANDARD**  
and principle therapy of primary and non metastatic ca colon

- Curative
- Palliative
- staging

Therapy type	Timing	Purpose	Common use
Adjuvant	After surgery	Eradicate microscopic disease	Stage III, high-risk Stage II
Neoadjuvant	Before surgery	Shrink tumor, improve surgery	Rectal cancer (locally advanced)

## AIM

- To excise the primary lesion with adequate margin ~5 cm in colon ( 2cm in rectum) of normal bowel proximal and distal to the tumor
- To reconstitute bowel continuity
- rt heme colectomy --eliocolic anastomosis
- lt heme colectomy--colorectal anastomosis
- ✓ The operations described are designed to remove the primary tumour and its draining local regional lymph nodes.

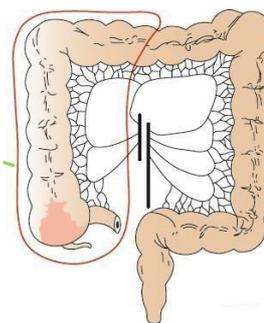


Figure 69.28 Schematic showing right hemicolectomy.

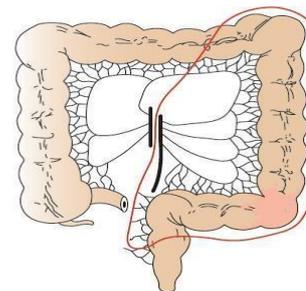


Figure 69.29 Schematic showing left hemicolectomy.

## Colectomy (bowel resection surgery)

■ Part of colon removed

### Left hemicolectomy



### Proctocolectomy



### Proctosigmoidectomy



### Sigmoid colectomy



Cleveland Clinic ©2005

## Common Regimens

- **FOLFOX** = 5-FU + Leucovorin + Oxaliplatin
- **FOLFIRI** = 5-FU + Leucovorin + Irinotecan
- **FOLFOXIRI** = 5-FU + Leucovorin + Oxaliplatin + Irinotecan (for fit patients, aggressive disease)
- **CapeOX (XELOX)** = Capecitabine + Oxaliplatin

## Chemotherapy

5-FU/Capecitabine  
leucovorin

## Targeted Therapy

Anti-VEGF  
Anti-EGFR

## Colon Cancer

### Early Stage (Stage I-II, some III)

• **Surgery = mainstay**

- Right hemicolectomy, left hemicolectomy, or sigmoid colectomy with **oncologic principles**:
  - Resection with  $\geq 5$  cm margins.
  - High vascular ligation.
  - $\geq 12$  lymph nodes removed for staging.

• **Stage II high-risk** (perforation, obstruction, poor differentiation,  $< 12$  nodes): consider adjuvant chemo.

### Stage III (node-positive)

• Surgery + **adjuvant chemotherapy**

### Stage IV (metastatic)

- **Resectable metastasis (e.g., liver/lung mets)**: surgery of primary + metastasectomy  $\pm$  perioperative chemotherapy.
- **Unresectable metastasis**: systemic chemotherapy  $\pm$  targeted therapy  $\pm$  palliative surgery/stent if obstruction/bleeding.

Tumor Location / Type	Surgery Type	Notes
Upper rectum (>10–12 cm from anal verge)	Anterior Resection (AR)	Often can preserve sphincter
Mid rectum (6–10 cm)	Low Anterior Resection (LAR)	Sphincter-preserving if margins adequate
Distal rectum (<6 cm)	Abdominoperineal Resection (APR)	Permanent colostomy required

neoadjuvant chemoradiotherapy over approximately 6 weeks may reduce its size and make curative surgery

### Ultra-Low Rectal Cancer

#### Definition:

- Tumors located <3–4 cm from the anal verge.
- Very close to the **anal sphincter**, making sphincter preservation challenging.



## Polyp Type / Feature

Small, pedunculated adenoma

Large sessile polyp

## Management

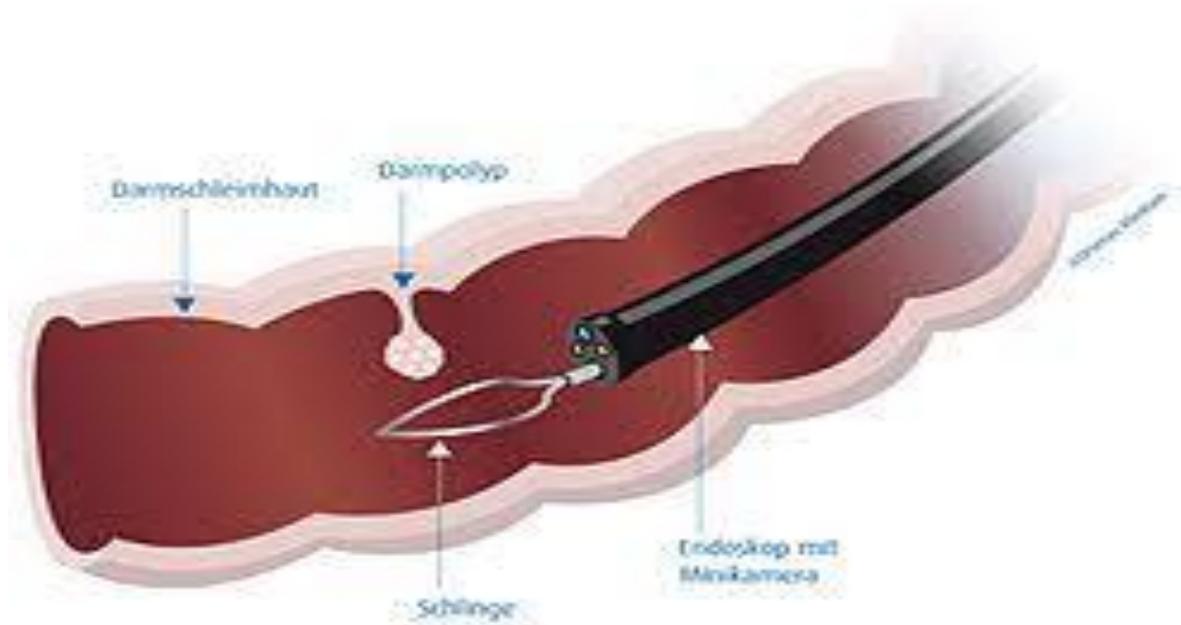
Snare Endoscopic polypectomy

Endoscopic mucosal resection (EMR)

## Follow-up

5–10 years

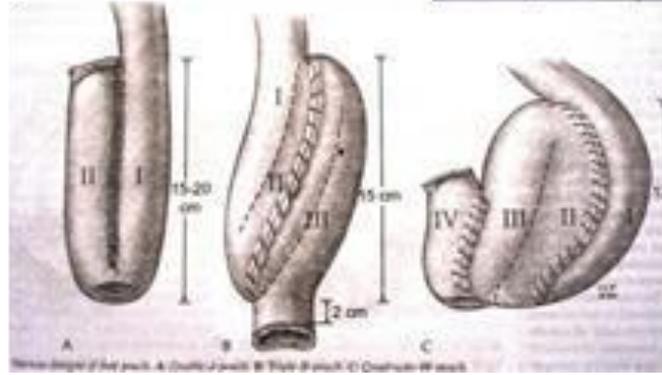
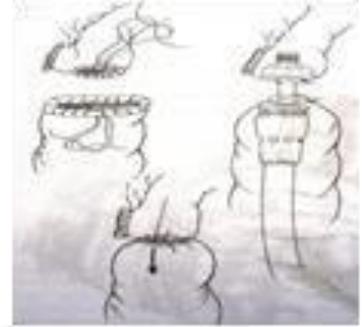
3 years



# FAP

-Total proctocolectomy)

and IPAA (ileal pouch anal anas.) standard



## Emergency Surgery in Colon Cancer

### Presentation:

- ~20% of colon cancer patients present as an **emergency**.
- Most common emergencies:
  - **Obstruction** (most frequent)
  - **Haemorrhage** (less common)
  - **Perforation** (rare, high risk)

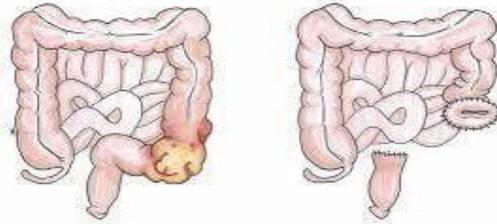
### Surgical Management

#### Right-sided lesions:

- Usually perform **right hemicolectomy with primary anastomosis**.
- Can **facilitate surgery by decompressing the bowel** at the start.
- **If perforation or unstable patient:** consider **ileostomy/colostomy** instead of primary anastomosis.

#### Left-sided lesions:

- Decision similar to **diverticular disease emergencies**:
  - **Hartmann's procedure**: resection with end colostomy + closure of rectal stump
  - **Primary resection with anastomosis**: if patient stable and contamination minimal



### Prognosis / Follow-Up

- **Overall 5-year survival: ~50%**

***When humanity is silent, the voice of injustice grows louder.***

ادْعُوا لِإِخْوَانِكُمْ، إِنَّكُمْ  
لَا تَنْصُرُونَ بِالْعِتَادِ وَالْعَدَدِ  
وَلَكِنْ تَنْصُرُونَ بِالذُّعَاءِ.

- عمر بن الخطاب.