

Management of Rectal Cancer: Review Questions

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QUESTIONS

Choose the single best answer for each question.

- 1. A 60-year-old man presents for an annual physical examination. The examination is normal except for a palpable mass in the rectum on digital rectal examination. The patient denies any change in bowel habits and feels well. Rectal cancer is suspected. What is the next best step in the evaluation of this patient?**

 - Computed tomography (CT) scan of the abdomen and pelvis
 - Double-contrast barium enema
 - Flexible sigmoidoscopy with biopsy of the lesion
 - Full colonoscopy with biopsy of the lesion
 - Magnetic resonance imaging (MRI) scan of the abdomen and pelvis
- 2. A 62-year-old woman is found to have a rectal mass on screening colonoscopy. Biopsies of the lesion reveal adenocarcinoma. Which of the following modalities would best assess the local extent of disease in this patient?**

 - CT scan of the abdomen and pelvis
 - Endoscopic ultrasound (EUS) examination of the rectosigmoid colon
 - MRI scan of the abdomen and pelvis
 - Positron emission tomography (PET) scan of the abdomen and pelvis
 - Transabdominal ultrasound of the pelvis
- 3. A 78-year-old woman with coronary artery disease and severe chronic obstructive pulmonary disease is admitted to the hospital with painless jaundice.**

CT scan reveals the presence of multiple lesions in the liver, suggestive of metastases, and a nearly obstructing rectal mass. Colonoscopy demonstrates a large, ulcerated tumor in the proximal rectum and a residual lumen of less than 1 cm in diameter. While in the hospital, the patient develops a large bowel obstruction. What is the best treatment modality for this patient?

 - Immediate radiation therapy of the rectal mass
 - Placement of a colonic decompression tube
 - Emergency surgery with resection of the mass
 - Emergency surgery with creation of a diverting colostomy
 - Placement of a rectal self-expanding metal stent
- 4. A 57-year-old man is found to have a rectal mass on digital rectal examination. Subsequent colonoscopy and biopsy confirm rectal adenocarcinoma. EUS examination demonstrates penetration of the tumor into, but not through, the muscularis propria. EUS guided fine needle aspiration of a suspicious peritumoral lymph node yields positive cytology for malignancy. CT scan demonstrates no metastases. The patient is staged as T2N1M0. What procedure should be attempted to remove the primary lesion in this patient?**

 - Endoscopic mucosal resection (EMR) to remove the lesion
 - Endoscopic argon plasma coagulation (APC) therapy to cauterize and ablate the lesion
 - Surgical transanal excision of the lesion
 - Surgical colectomy
 - Surgical abdominoperineal resection (APR)
- 5. A 70-year-old man is found to have distal rectal cancer during a screening colonoscopy. The patient undergoes preoperative staging and is found to have a 1.5-cm rectal mass that does not invade**

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the muscularis propria of the rectal wall. There is no regional lymphadenopathy and no evidence of distant metastases. The patient is staged at T1N0M0. The patient is advised to undergo APR but refuses because it will lead to anal sphincter loss and permanent colostomy. Which of the following represents a viable alternate therapeutic option for this patient?

- (A) Chemotherapy alone
- (B) Radiation therapy alone
- (C) Chemoradiation therapy
- (D) Full-thickness surgical removal of the tumor (transanal excision)
- (E) Endoscopic ablation of the tumor with APC

ANSWERS AND EXPLANATIONS

1. **(D) Full colonoscopy with biopsy of the lesion.** The patient has a rectal mass of unclear etiology. Double-contrast barium enema may reveal the mass but will not allow a biopsy to be obtained. A CT or MRI scan of the abdomen is warranted once a diagnosis of rectal cancer is made to assess the extent of disease, but ordering them at this stage is premature. Flexible sigmoidoscopy allows visualization and biopsy of the lesion, but a full colonoscopy would accomplish both of these goals and also allows examination of the entire colon to rule out any synchronous lesions that also may require treatment.
2. **(B) EUS of the rectosigmoid colon.** While CT and MRI scans can give valuable information about the local extent of disease as well as the presence or absence of intraabdominal metastases, EUS is superior in terms of accuracy for determining the depth of invasion (T-stage) and the presence of locally involved lymph nodes (N-stage).¹ In addition, EUS can be used to sample suspicious peritumoral lymph nodes via fine needle aspiration to assess for malignant involvement. PET scans and transabdominal ultrasound are not used to assess the local extent of disease in rectal cancer.
3. **(E) Placement of a rectal self-expanding metal stent.** The patient has developed malignant large bowel obstruction secondary to her rectal cancer. A self-expanding metal stent allows both immediate bowel decompression and subsequent palliation of the tumor. A colonic decompression tube would relieve the acute obstruction but would not provide a long-term solution for the patient. Emergency surgery could be performed but would be less than ideal given the patient's comorbidities and advanced cancer. Radiation therapy is not a treatment for an acute large bowel obstruction.
4. **(E) Surgical APR.** The patient has stage III rectal cancer (positive regional lymph node involvement), thus excluding limited attempts at excision of the lesion (endoscopic approaches or surgical transanal excision). An APR is the appropriate surgery for this patient. Opinion diverges about the use of neoadjuvant or adjuvant therapy in this patient, but some additional therapy is required given his node-positive disease. A total colectomy is not required as only the rectum appears to be involved.
5. **(D) Full-thickness surgical removal of the tumor.** The patient has a mass lesion that should be removed entirely. Chemotherapy, radiation therapy, and combination chemoradiation therapy cannot guarantee complete destruction of the mass. Endoscopic ablation of the tumor with APC does not guarantee complete destruction and would not provide evidence of clear tissue margins. Only a full-thickness surgical removal of the tumor is an appropriate alternative to APR in this patient.

REFERENCES

1. Schwartz DA, Harewood GC, Wiersema MJ. EUS for rectal disease. *Gastrointest Endosc* 2002;56:100–9.

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