



# Primary Small Cell Carcinoma: A Most Unusual and Disturbing Colonoscopy Finding



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## Introduction

Generally of pulmonary origin, small cell cancer is a locoregionally aggressive malignancy that can infrequently arise from the integumentary, upper respiratory, genitourinary, lymphatic, and gastrointestinal tracts. Rectal SCC (RSCC) is particularly rare, accounting for < 0.2% of large bowel cancer. Prognosis is dismal with a median untreated survival of 6-12 months. Here we present a case of RSCC presenting as a rectal ulcer in a patient evaluated for hematochezia.

## Case Report

A 75-year-old white male nonsmoker with cardiomyopathy, coronary artery disease on aspirin, atrial fibrillation on rivaroxaban, hypertension, chronic kidney disease, heavy alcohol use, colonic polyposis, and a remote history of prostate cancer status post radiotherapy, presented with one day of gross hematochezia with rectal tenesmus and several months of altered bowel habits without weight loss, abdominal pain, or anorexia.

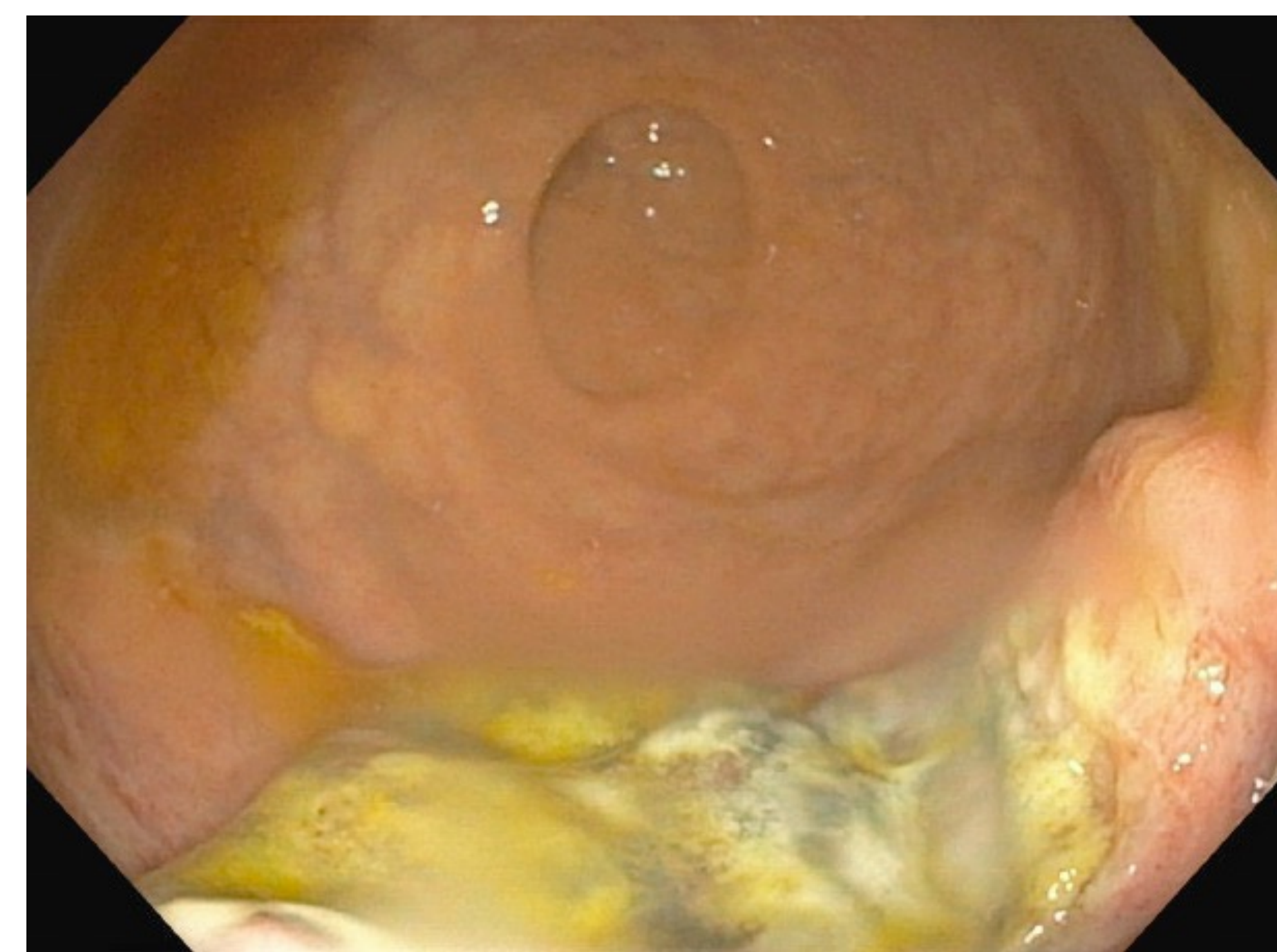
Physical exam (including digital rectal exam) was unremarkable, and a hemoglobin of 11.9 gm/dl was noted from a baseline of 13.5 five months prior. Colonoscopy revealed a firm 3 cm ulcerative rectal mass near the anal verge that was biopsied (Fig. 1). Pelvic MRI redemonstrated the mass abutting the prostate (Fig 2), and brain MRI was negative for intracranial metastasis. Whole-body PET CT showed abnormal radiotracer uptake in the rectal mass as well as perirectal, posterior pelvic, right and left inguinal lymph nodes but no intrathoracic uptake (Fig. 3).

Histopathological analysis revealed RSCC with strong diffuse CD56 expression, weak diffuse expression of synaptophysin and chromogranin, and absent CD45 expression (Fig. 4), which was also shown in a subsequent biopsy of an inguinal lymph node identified on PET CT. Final staging was T3a-T4bN2aM0 (group IIIC).

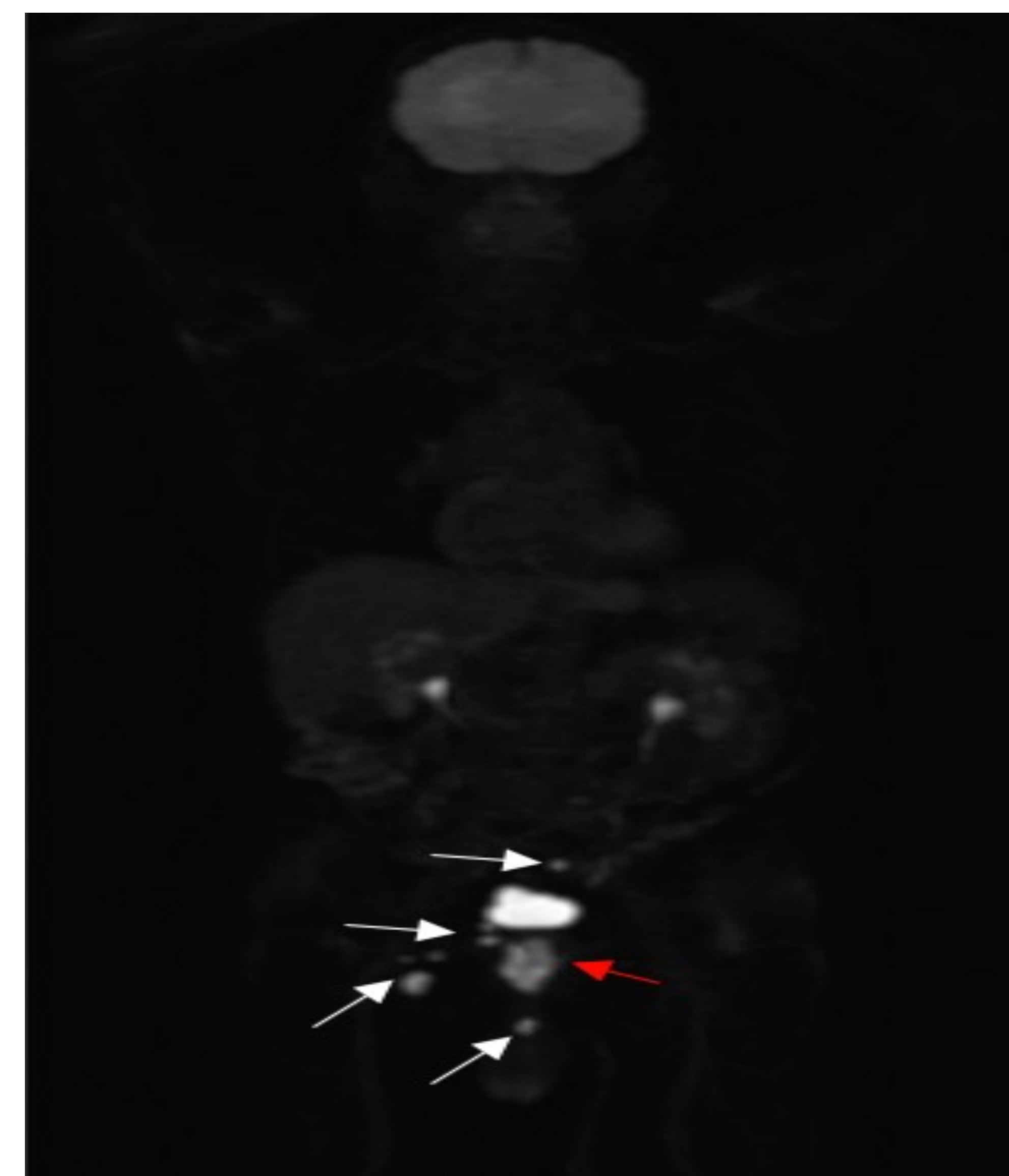
Although the patient's past radiotherapy for his prostate cancer made further radiotherapy for his RSCC unfeasible, he is undergoing chemotherapy with etoposide/carboplatin. He is being considered for either abdominoperineal resection or pelvic exenteration based on his chemotherapy response.

## Contact

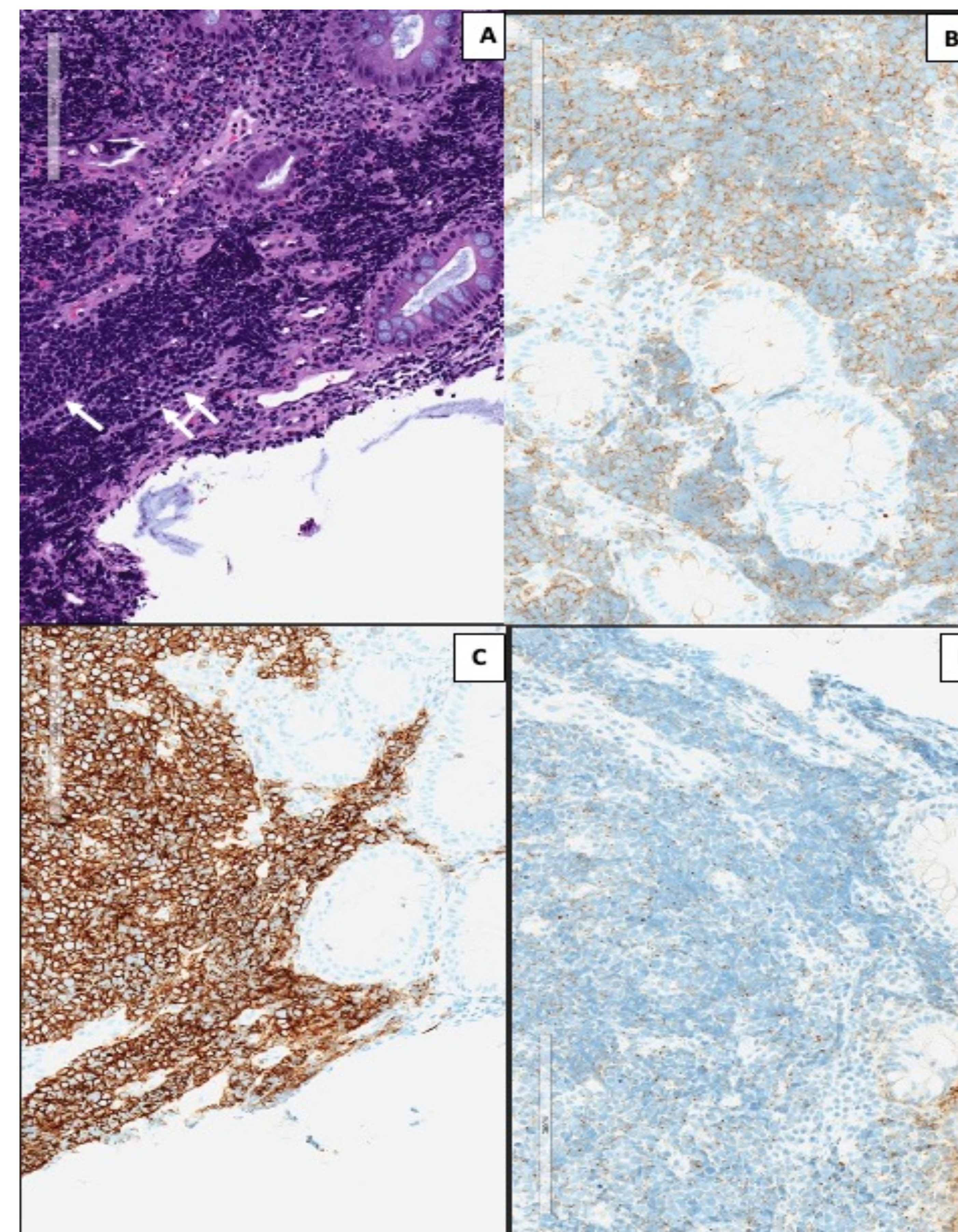
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**Figure 1.** Colonoscopy image of a large, ulcerative, friable rectal mass with heaped up borders unlike the typical appearance of colorectal adenocarcinoma as a polypoid, fungating, and/or circumferentially obstructive mass.



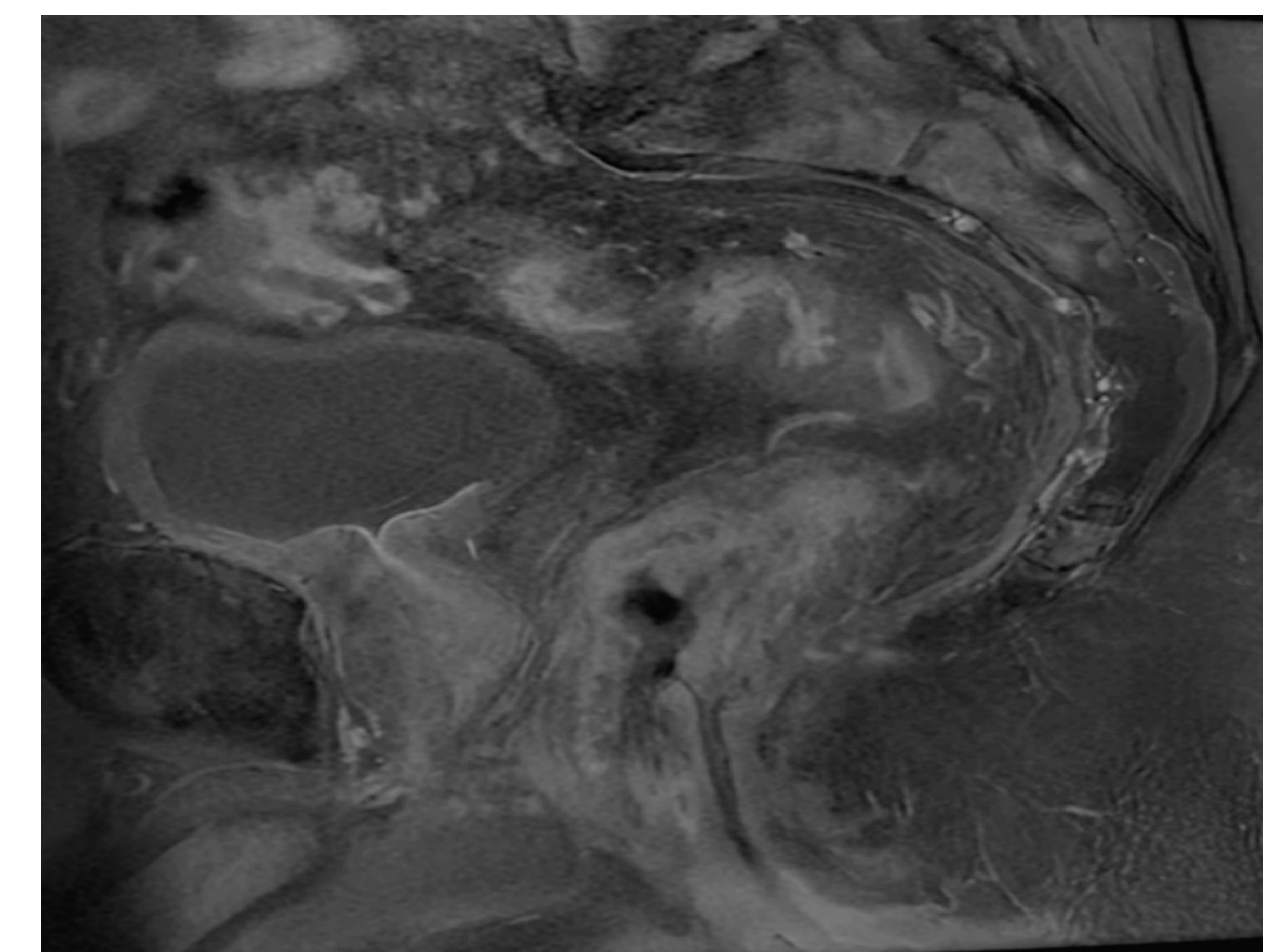
**Figure 3.** Whole-Body PET-CT showing significant radiotracer uptake at site of large rectal mass on colonoscopy (red arrow), as well in numerous perirectal, inguinal, and posterior pelvic lymph nodes (white arrows).



**Figure 4.** Rectal mass biopsy histopathology. Hematoxylin-eosin stain (A) shows dense clusters of oval or round cells (arrows) with round or oval nuclei, high nuclear/cytoplasmic ratios, prominent mitoses, and conspicuous necrosis that are characteristic of small cell cancer. Cells stain weakly for synaptophysin (B), avidly for CD56 (C), and weakly for Chromogranin (D) reflecting their neuroendocrine origin. Histopathology images courtesy of Pathology and Laboratory Medicine Service, Southeast Louisiana Veterans Health Care System.

## Discussion

Colorectal cancer (CRC) is relatively common, with 151,030 new cases of large bowel cancer diagnosed annually in the United States. Primary rectal small cell cancer, by contrast, is particularly rare mostly described in case series and isolated reports. As patients tend to present with clinically advanced, metastatic RSCC, prognosis is poor. However, radiotherapy and chemotherapy can be effective treatments in neoadjuvant, adjuvant, and palliative contexts, especially when used to permit surgical resection. Though radiotherapy significantly increases survival in RSCC, our patient's close tumor proximity to his prostate cancer radiotherapy site precluded further radiotherapy. Overall, the prognosis for RSCC remains dismal, with mean relapse of 1 year, even in treated patients. Given its aggressive metastatic potential, RSCC remains an important, albeit uncommon differential diagnosis for CRC when confronted with hematochezia and a rectal mass on endoscopy.



**Figure 2.** Sagittal T1-weighted Pelvic MRI image redemonstrating large, rectal mass seen on colonoscopy abutting the prostate.

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