

### Introduction

- Signet ring cell carcinoma accounts for about one percent of all colorectal cancers. It is an aggressive subtype of adenocarcinomas with the tendency for intramural spread and peritoneal carcinomatosis.

### Case Presentation

A 41-year-old male without significant past medical history was referred to a gastroenterology clinic with bright red blood per rectum. Colonoscopy showed ulcerative recto-sigmoiditis with rectal bleeding, and there was stricture in the recto-sigmoid colon (Figure A). Biopsy was obtained from the stricture. The pathology revealed granulation tissue and abundant fibrinopurulent exudate showing small clusters, and individual atypical cells stained positive for CDX-2 immunostain. Unfortunately, the patient subsequently lost follow-up.

Three months later, the patient was hospitalized for small bowel obstruction. CT showed markedly enlarged heterogeneous and edematous rectum, an abnormal mass within the posterior pelvis/rectum, retroperitoneal and pelvic lymphadenopathy with thickening and nodularity of the peritoneum. Biopsy was obtained from an inguinal lymph node with histological examination showing metastatic adenocarcinoma composed of poorly cohesive signet-ring cells (Figure B). Immunostains revealed that the neoplastic cells were strongly and diffusely positive for CDX2 and CK20 while negative for CK7, confirming a colorectal primary. Accordingly, the diagnosis of colorectal signet ring cell carcinoma was made.

### Discussion

- The colonoscopic findings of colorectal SRCC could be nonspecific as diffuse circumferential thickening, stricture, or ulcerations.
- Typical pathological features may not appear on the initial biopsy sample. Immunohistochemical testing could help increase diagnostic yield and early identification of cancer cells.
- Our case hallmarked the importance of close follow-up for abnormal diffuse stricture and ulcerations in the colorectal area. These lesions may need to be rebiopsied, co-screened with abdominal imaging, and undergo an immunohistochemical investigation to characterize pathology further.

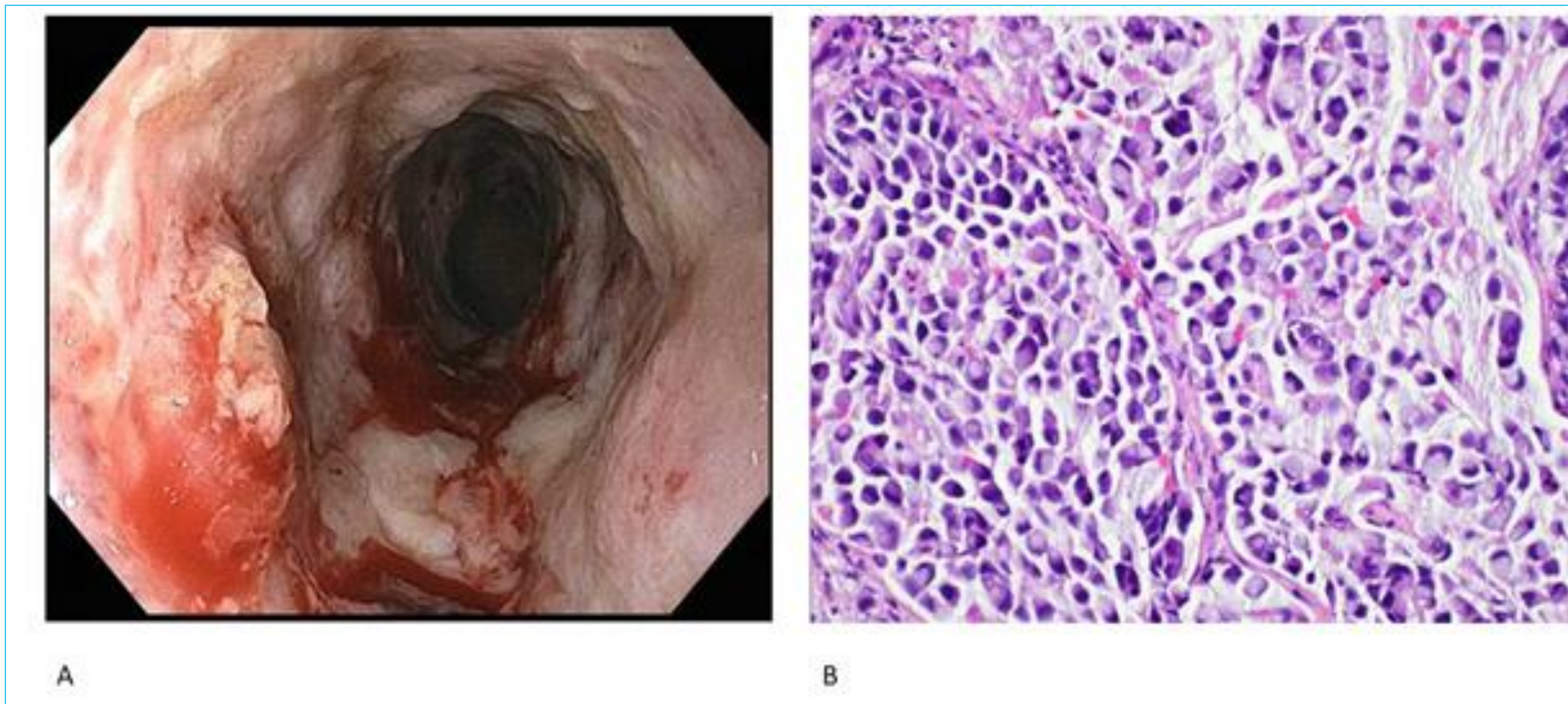


Figure A: Colonoscopy: An intrinsic inflammatory circumferential friable severe stenosis measuring 20cm (in length) \* 9 mm (inner diameter) was found in the recto-sigmoid colon.

Figure B: Hematoxylin & eosin stain of tissue from lymph node showed metastatic adenocarcinoma composed of poorly cohesive signet-ring cells.

### Reference

1. An Y, Zhou J, Lin G, et al. Clinicopathological and Molecular Characteristics of Colorectal Signet Ring Cell Carcinoma: A Review. *Pathol Oncol Res.* 2021;0.
2. Chu PG, Weiss LM. Immunohistochemical characterization of signet-ring cell carcinomas of the stomach, breast, and colon. *Am J Clin Pathol.* 2004;121(6):884-892.