



# Metastatic Hepatocellular Carcinoma into the Transverse Colon

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## Introduction

Hepatocellular carcinoma (HCC) is the sixth most common tumor worldwide and is responsible for over 250,000 deaths annually [1]. Major advances have been made in the treatment of HCC. However, despite improvement in surgical and therapeutic management, HCC continues to have poor long-term outcomes due to its high recurrence rate and metastatic propensity. Among metastatic sites, the lungs, lymph nodes, bone, and adrenal glands are the most common [2]. Direct invasion of the gastrointestinal (GI) tract by HCC is very uncommon.

## Case Presentation

A 65-year-old man with no significant past medical history presented with 6-month duration of decreased

appetite, 20-lb unintentional weight loss, and abdominal pain. The patient reported a prior normal screening colonoscopy 15 years ago. The patient noted occasional alcohol use and denied any prior illicit drug use. Blood laboratory results were unrevealing. The patient underwent a diagnostic colonoscopy and upper endoscopy to exclude an underlying GI tract malignancy. Upper endoscopy was unrevealing. Colonoscopy revealed a large erythematous ulcerating transverse colon mass (Fig. 1). Histopathological examination of the mass showed poorly differentiated adenocarcinoma with large areas of ulceration and necrosis infiltrating the lamina propria and submucosa (Fig. 2). Immunostaining was positive for HEPPAR-1, CK AE1/AE3, CK7, CEA, EMA, CDX-2, and mucin and negative for CK20, CD56, PSA, and TTF-1 (Fig. 3). These findings were consistent with poorly differentiated metastatic hepatocellular carcinoma.

## Discussion

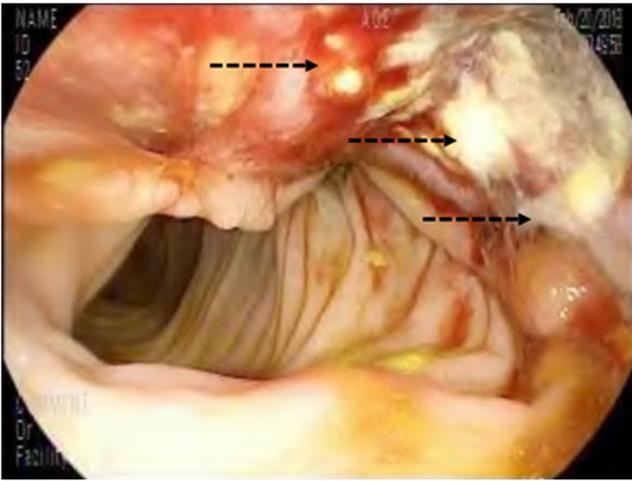
When HCC presents with metastasis, the most commonly reported sites include the lungs, lymph nodes, and bones [3]. Involvement of the GI tract in metastatic HCC occurs in 0.5 to 2% of cases [4]. Within the GI tract, there are 17 reported cases of colonic site metastasis with the ascending colon being the most commonly involved segment followed by the transverse colon [5]. Most patients with colonic HCC metastasis present with bloody stools [4, 6, 7].

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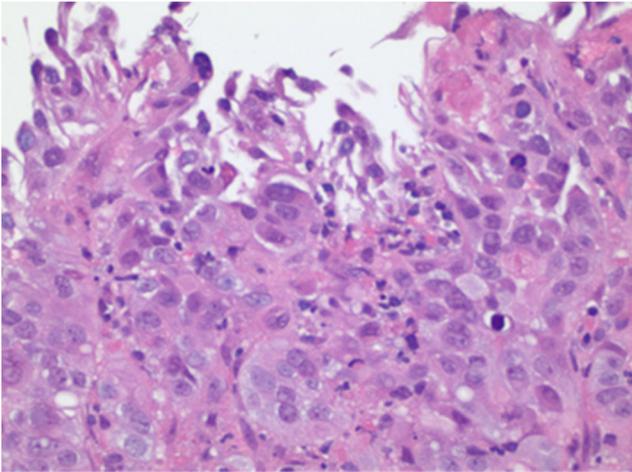
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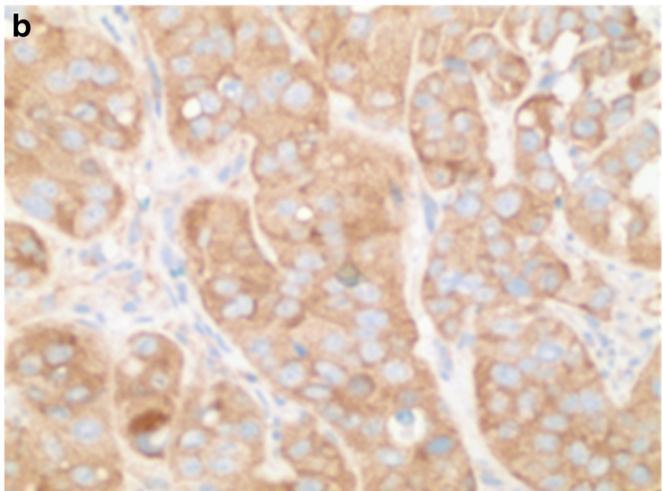
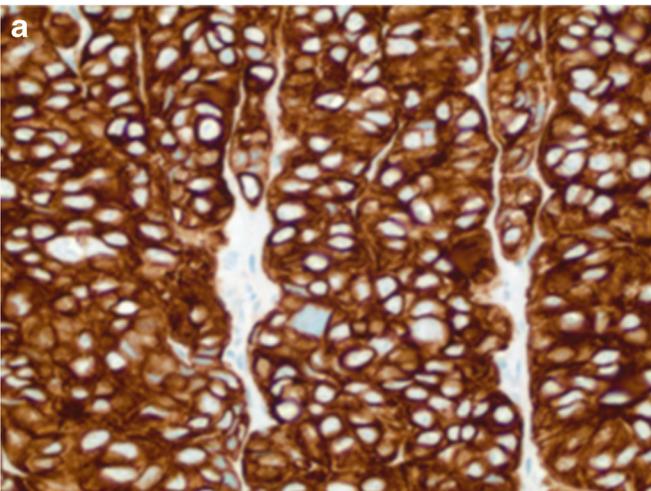
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**Fig. 1** Endoscopic view of erythematous ulcerated mass (arrows) seen in the transverse colon



**Fig. 2** Microscopic view showing poorly differentiated adenocarcinoma ( $\times 100$ )



**Fig. 3** **a** Cells showing CK7 immunopositivity ( $\times 40$ ). **b** Cells showing HEP-1 immunopositivity ( $\times 40$ )

The aggressive nature of HCC may be further aggravated under certain clinical settings. There are reports of colonic metastasis of HCC in patients who underwent liver transplantation as well as immunosuppression therapy [8–10]. These reports suggest that immune function may play a crucial role in the pathogenesis of HCC metastasis to the colon.

Metastatic HCC is a hallmark of advanced disease which regrettably has a very poor prognosis and short life expectancy [11]. Surgical resection of the affected segment of the GI tract may have a benefit in select patients. The median survival time for patients with metastatic HCC and GI involvement which was treated with surgical resection is 4.9 to 8.1 months [6]. However, for patients with widespread metastasis or more advanced stages of HCC, treatment with sorafenib can be used to target the tumor biology and improve overall survival [12].

## Conclusion

HCC is a progressively debilitating disease which can metastasize to almost any organ in the human body. Metastasis of HCC to the GI tract is a very rare condition with only a few reported cases of colonic involvement. While the pathogenesis of HCC metastasis to the colon is unclear, it appears that compromised immune function may facilitate its aggressive behavior. Clinicians should be aware that HCC has a propensity to metastasize to the colon and should be considered as a differential diagnosis in patients with colonic masses.

## Compliance with Ethical Standards

**Conflict of Interest** The authors declare that they have no conflict of interest.

**Consent** Obtained.

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