

Late Metastatic Renal Cell Carcinoma Diagnosed by Abdominal Pain and Endoscopy: A Case Report

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Introduction

- Renal cell carcinoma (RCC) is among the ten most common cancers prevalent worldwide.
- The most usual sites of RCC metastases are the lung and bone. Liver, adrenal, and brain metastases are rare. Digestive metastases are even more unusual, occurring in less than 1% of RCC cases.
- Given the rarity of this phenomena as a late finding in the course of renal malignancy, we explore a case that emphasizes the need for including gastric metastases on the differential. Appropriate diagnostic imaging and targeted therapies for patients with poor prognoses is also crucial.

Case Narrative

- A 71-year-old female, initially diagnosed with renal cell carcinoma and treated with radical left nephrectomy in 2011, presented with worsening abdominal pain in the setting of nausea, vomiting, and anorexia.
- The patient was found to have unrevealing blood work and CT imaging upon presenting to a different hospital few weeks prior.
- On current presentation, repeat imaging was remarkable for an invasive mass encompassing the distal gastric body and antrum, multiple hypodense lesions throughout the liver, and extension of the mass into lymph nodes (Figure 1).
- The patient underwent an upper endoscopy. EGD findings indicated a friable, necrotic, and ulcerated mass extending from the incisura to the gastric antrum (Figure 2).
- Pathological evaluation of the mass demonstrated neoplastic cells compatible with metastatic RCC (Figure 3).
- Prior to discharge, the patient chose to be treated with systemic immunotherapy with continued outpatient care and medical management.

Imaging

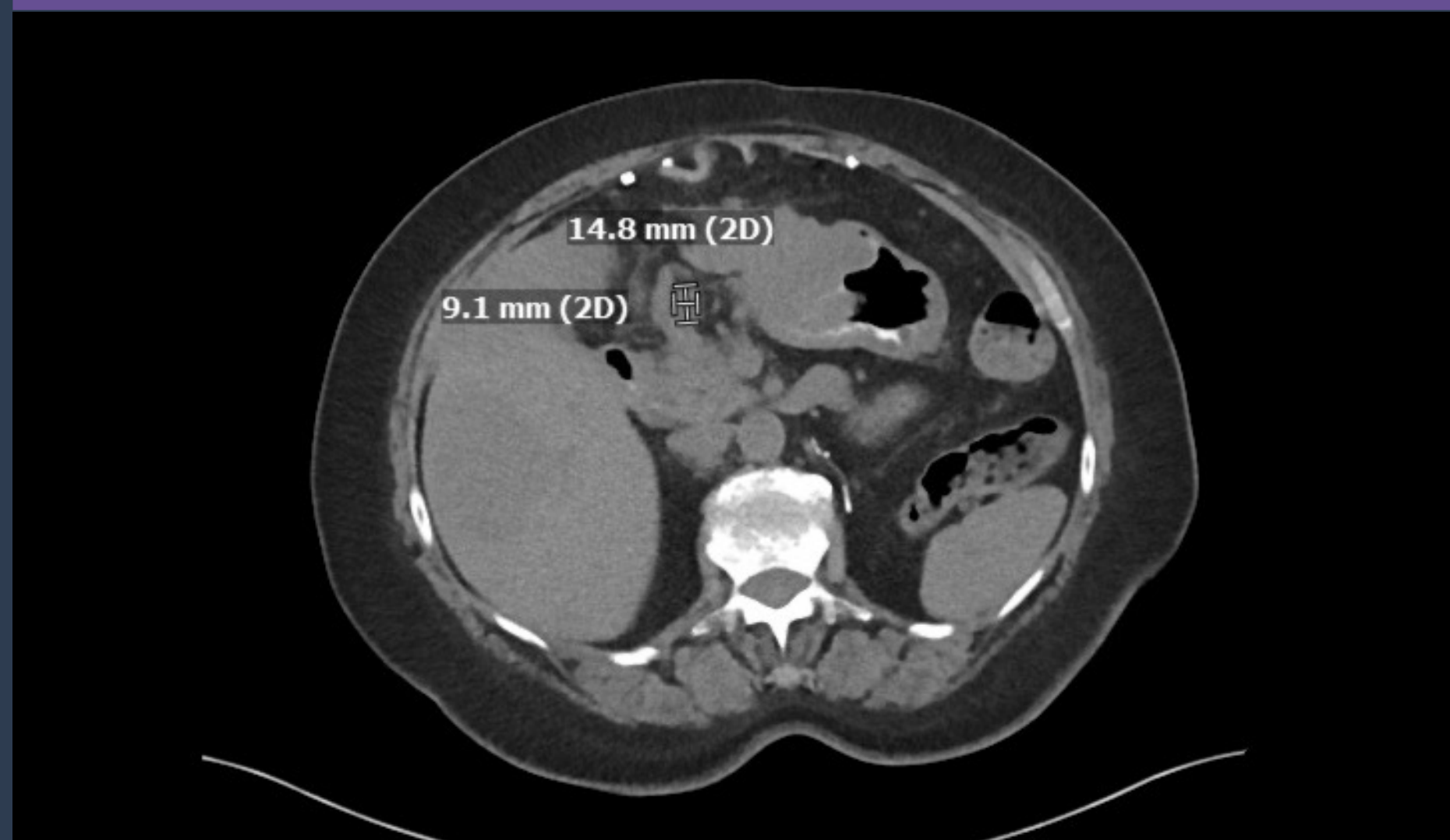


Figure 1: Invasive gastric mass in antrum, liver, and lymph nodes

Endoscopy



Figure 2: Endoscopic findings of gastric mass

Histopathology

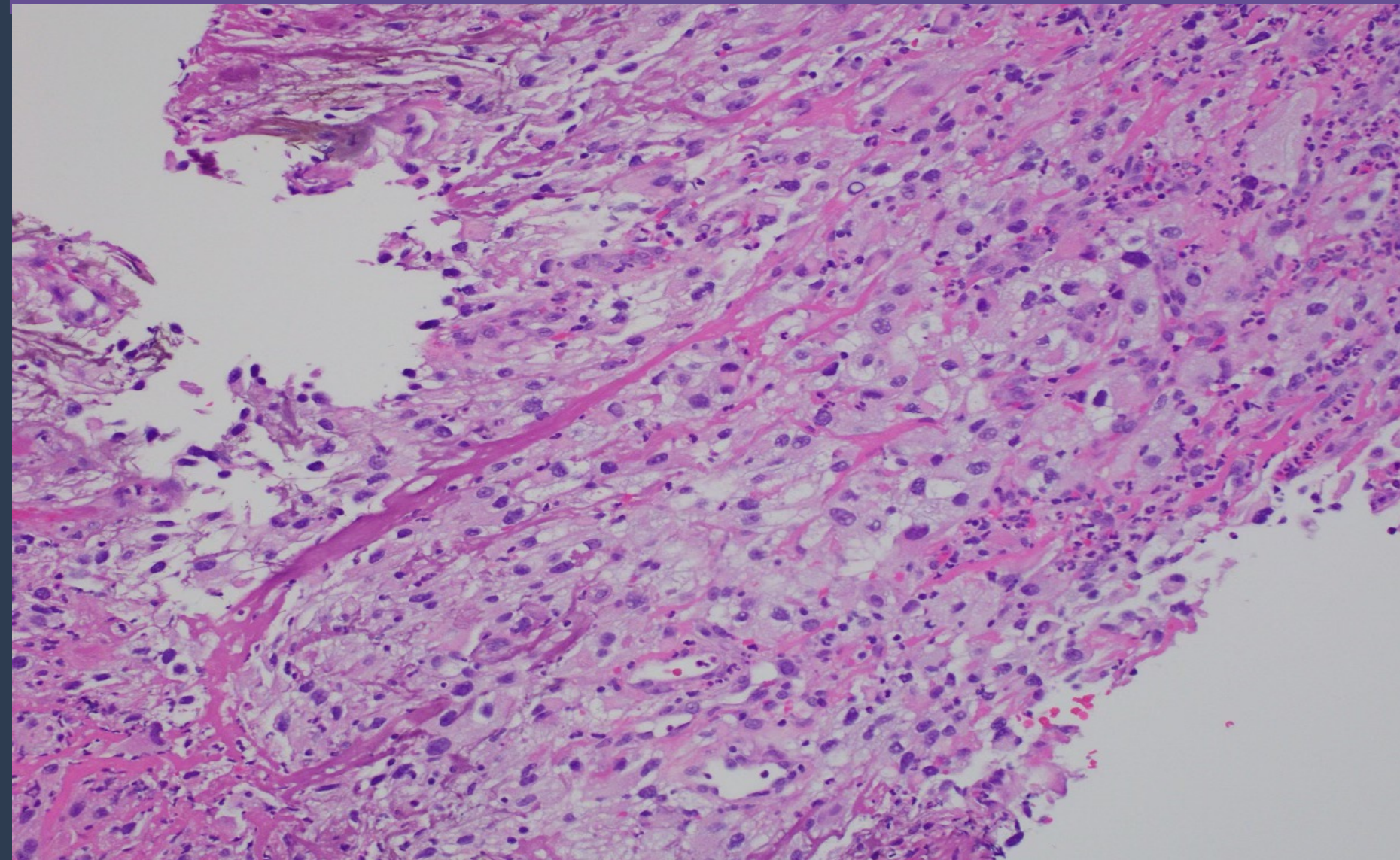


Figure 3: Histopathological evaluation of RCC metastases to stomach

Table 1. Common Presenting Symptoms for Patients with Primary RCC to Gastric Metastases (2002-2022)

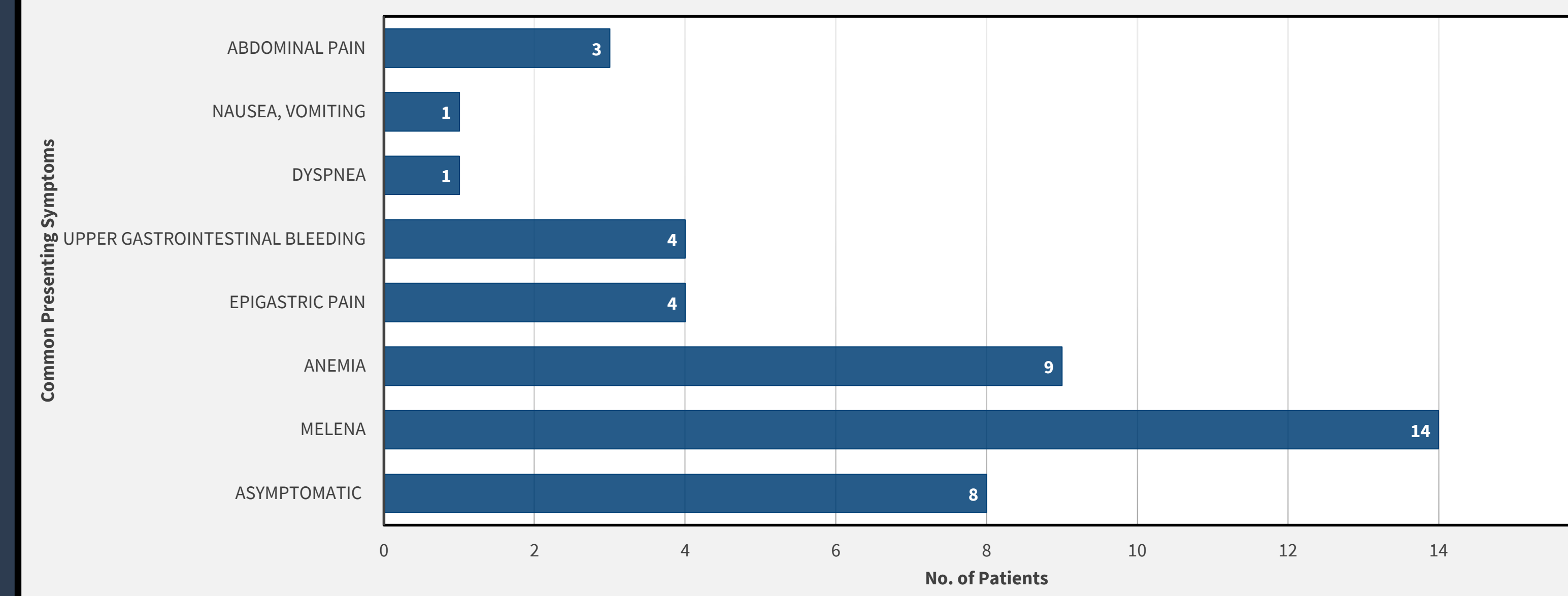


Table 2. Diagnostic Imaging Modality for Patients with Primary RCC to Gastric Metastases (2002-2022)

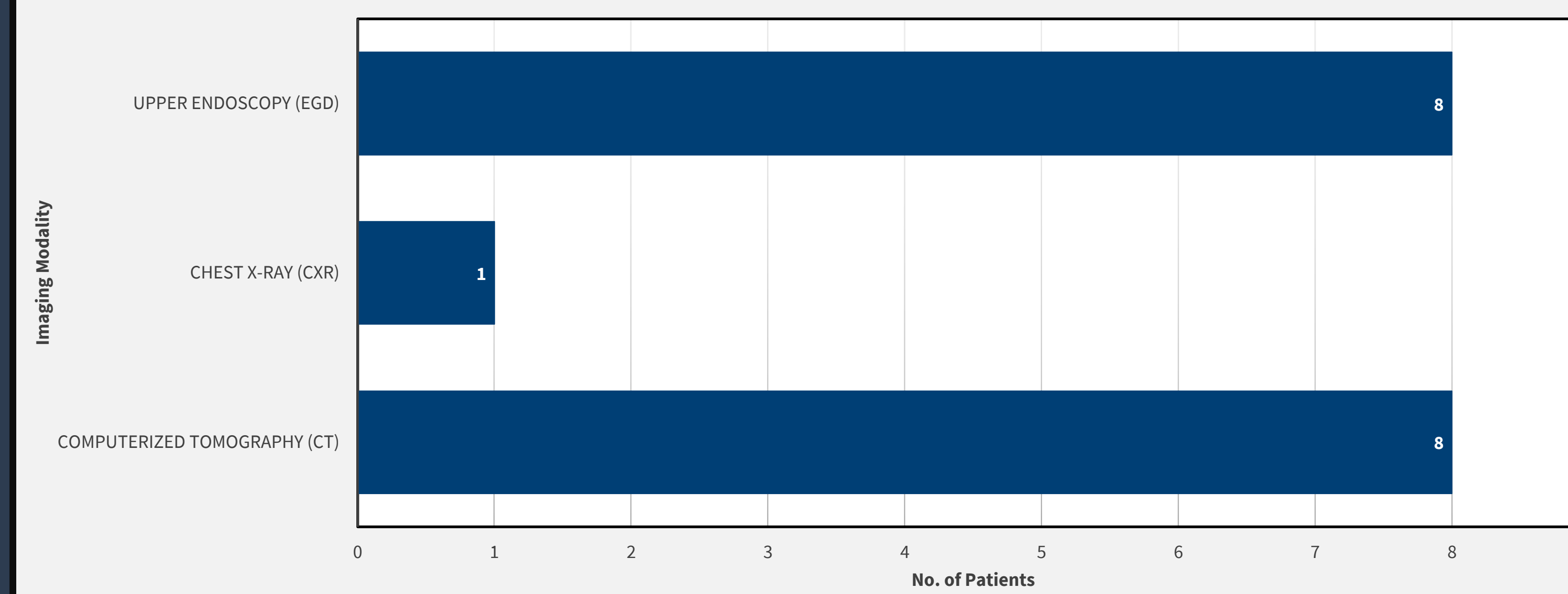
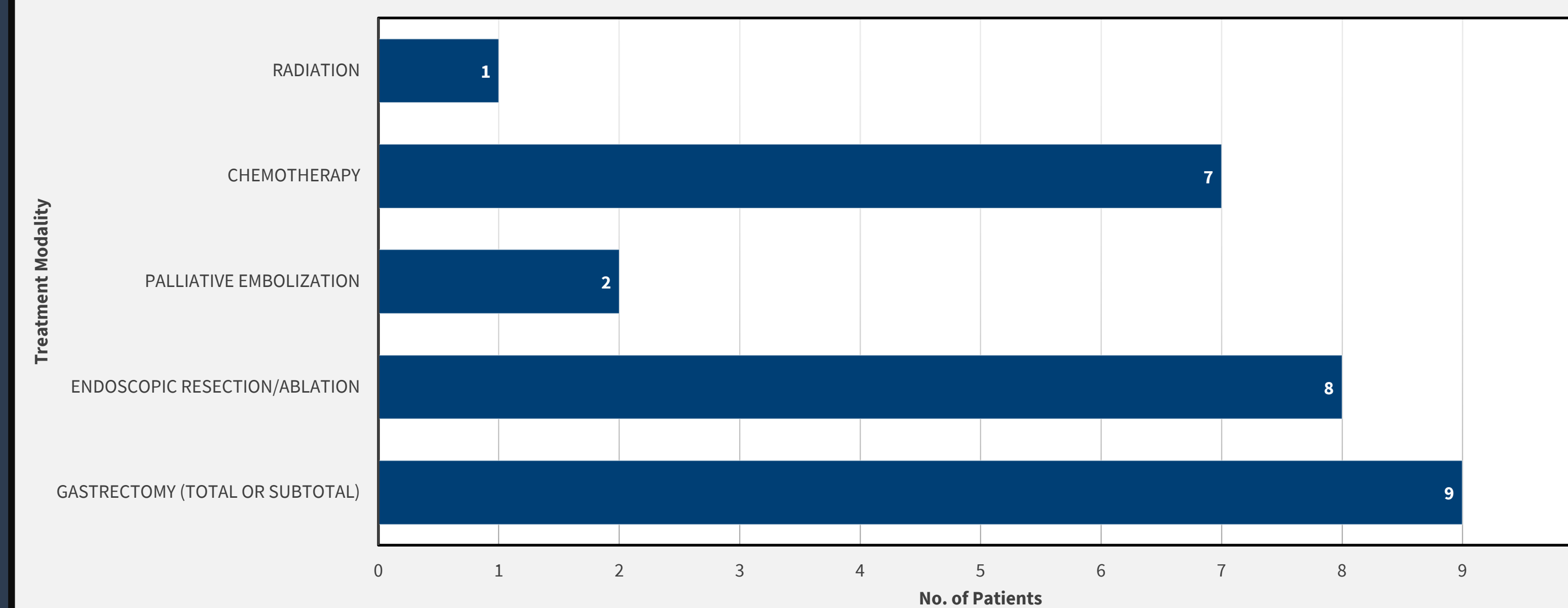


Table 3. Treatment Modality for Patients with Primary RCC to Gastric Metastases (2002-2022)



Discussion

- Unusual sites of RCC metastases include the pancreas, thyroid, liver, brain, and adrenals. Among these, RCC metastases to the stomach is even more infrequent.
- Despite the rarity, review of the literature in the PubMed database with the keywords “renal cell carcinoma”, “gastric metastasis”, “imaging”, and “symptoms”, identified up to 31 patients in the past two decades (2002 – 2022) with RCC gastric metastases.
- From this compilation, the mean age of the patients was 69.29 years. The average time from diagnosis of RCC to gastric metastasis was 6.87 years.
- Although there have been cases reporting intervals of synchronous metastases and those with 20-year time intervals, a longer interval from RCC diagnosis or nephrectomy to gastric metastases was indicative of better prognoses.
- Common presenting symptoms of RCC metastases to the stomach include melena and anemia. Many patients also presented asymptotically and were diagnosed by incidental findings (Table 1). Unlike most patients previously, our patient presented with abdominal pain.
- CT scans served as the diagnostic imaging modality in 25% of previous cases (Table 2). In this report, however, our patient had benign imaging initially. Diagnosis was confirmed through endoscopy. This discrepancy could be attributable to the diffuse peritoneal seeding and hypervascularity of primary RCC and its hematogenous spread to the stomach or the lack of established radiological features of RCC that manifest in the stomach.
- Gastric metastasis from RCC has a poor prognosis, with five-year survival rates ranging from 5-30%. Treatment modalities include total or subtotal gastrectomy, endoscopic resection, metastatic embolization, chemotherapy, and immunotherapy (Table 3).
- Although RCC metastases to the stomach is unusual, literature review suggests an increase in such cases over the recent years. This case report not only accentuates this rise, but also highlights the importance of appropriately diagnosing gastric metastases in patients with renal cell carcinoma, establishing radiological findings to prevent under-diagnosis, and exploring emerging treatment modalities for survival.