

# Acute Gastrointestinal Hemorrhage, Sequela of Pancreatic Neuroendocrine Tumor

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## Purpose

Pancreatic neuroendocrine tumors (PNET) account for less than 5% of pancreatic malignancies<sup>6</sup>. Portal hypertension in the setting of malignancy results from vascular occlusion by tumor invasion, hypercoagulability, or extrinsic compression<sup>2,4</sup>. This case describes the approach to therapy for an acute upper GI hemorrhage in a patient with both portal and splenic vein thrombosis secondary to a PNET.

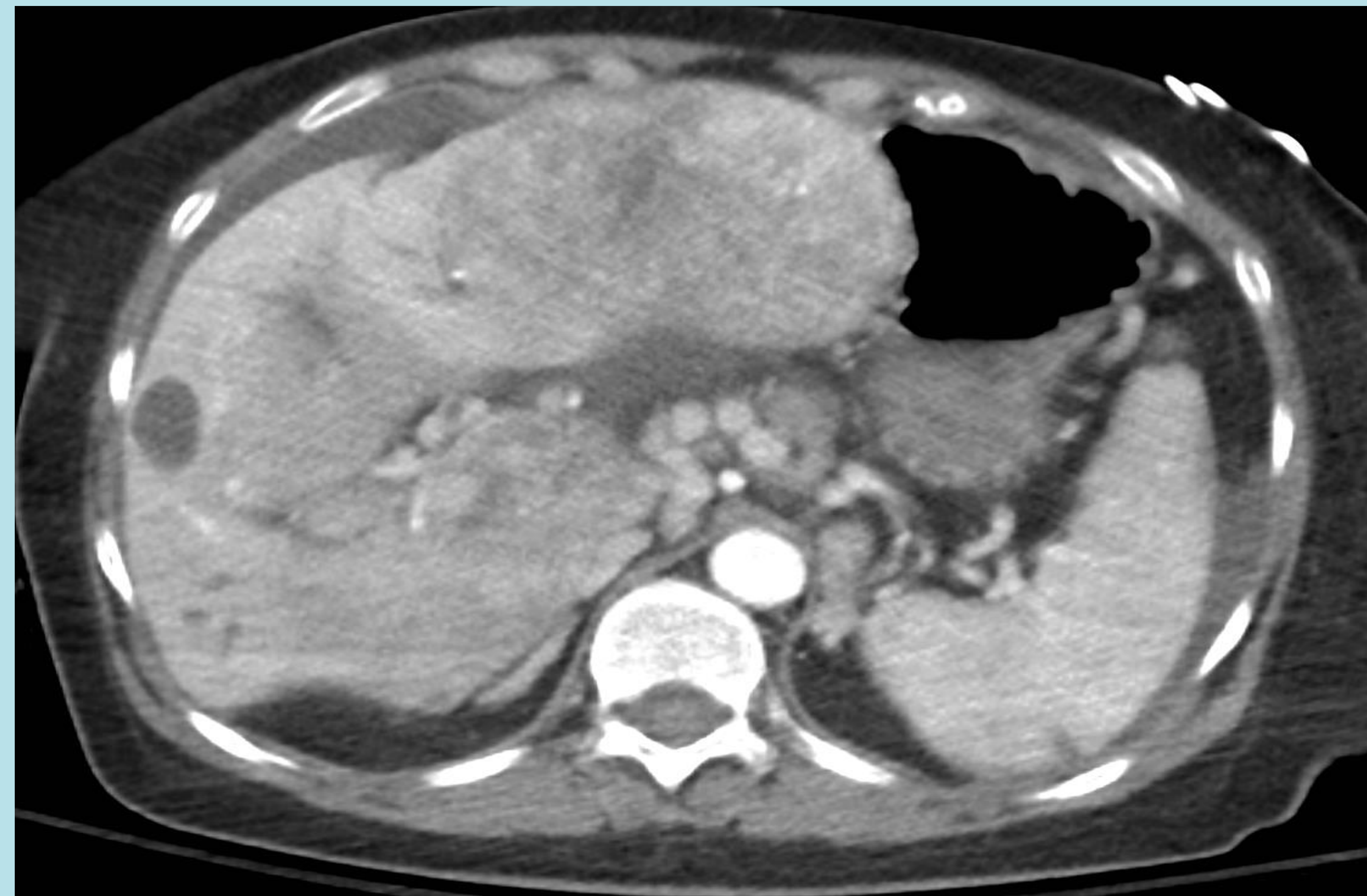


Figure 1

## Materials and Methods

The patient is a 64-year-old female with history of PNET with metastasis to the liver, splenic and portal vein thrombosis, and gastroesophageal varices, who presented with coffee ground emesis and melena. Initial labs noted a Hgb/HCT of 9.5/28. EGD revealed grade II esophageal varices with no stigmata of recent bleeding and three esophageal varices were banded. Repeat labs noted a decreased Hgb/HCT of 8.5/24.2. CT of the abdomen/pelvis showed a heterogeneously enhancing 11.8cm left hepatic lobe mass, flattened IVC, thrombosed portal and splenic veins, and esophageal, gastrohepatic, and splenorenal varices (Figure 1). Interventional radiology was consulted and the patient was taken to the angiography suite.

## Results

Venography via the left renal vein noted large gastric varices draining into the left renal vein. Balloon occluded retrograde transvenous obliteration (BRTO) could not be safely performed as the balloon occlusion catheter would not pass into the junction of the varices and left renal vein. Multiple platinum coils were placed in the gastric varix to temporize the bleeding (Figure 2). Angiogram showed large varices draining from the splenic hilum into the left upper quadrant. Upper and middle pole branches of the splenic artery were embolized with Embosphere microspheres 500µm size and partial stasis was achieved. No significant filling of varices was noted and forward blood flow into the spleen was preserved (Figure 3). Hgb and HCT stabilized and the patient was discharged home.

## Conclusion

Unlike esophageal varices, bleeding from gastric varices is often more severe with a mortality of approximately 45%<sup>5</sup>. Per the American Association for the Study of Liver Diseases (AASLD), endoscopic variceal band ligation or obturation with cyanoacrylate is first line therapy<sup>1</sup>. However, if endoscopic therapy fails, TIPS or BRTO is considered the next best step<sup>6</sup>. Given our patients portal vein thrombosis and anatomy, neither of these procedures could be performed. In cases such as this, temporization with coils and/or partial splenic arterial embolization are considered alternative therapies for the management of acute upper GI hemorrhage due to gastric varices<sup>3,4</sup>.

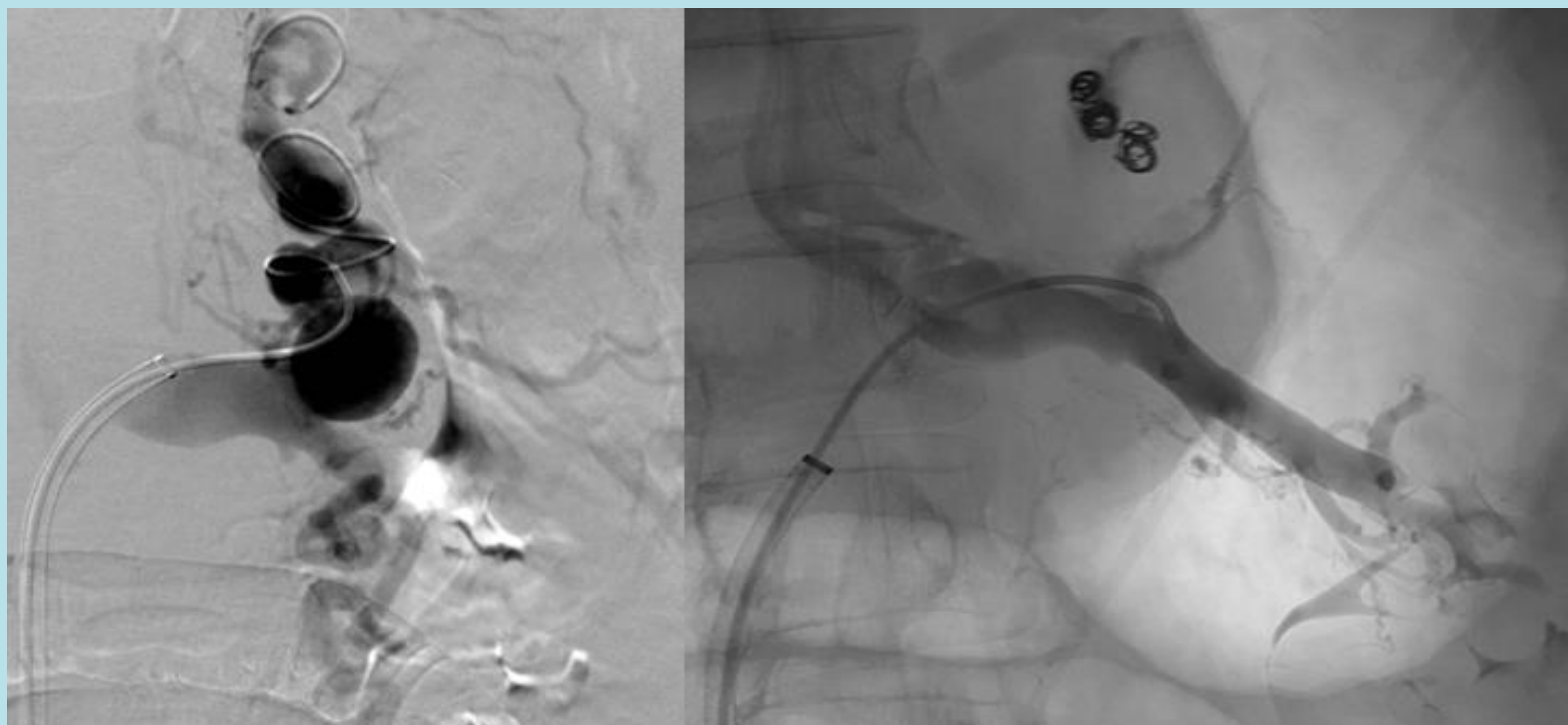


Figure 2



Figure 3

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