

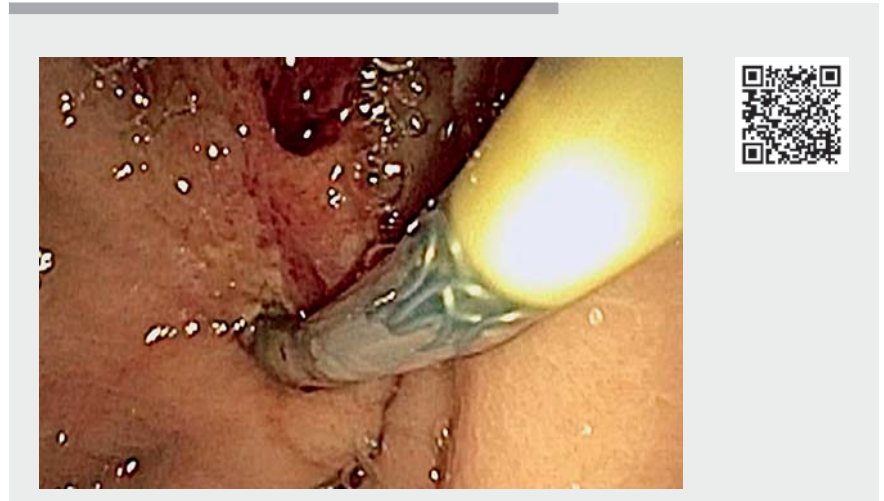
## Combined endoscopic ultrasound-guided gastrojejunostomy and anterograde biliary stenting

Malignant involvement of the second portion of the duodenum and surrounding structures can create therapeutic challenges. We report a case of combined endoscopic ultrasound (EUS)-guided gastrojejunostomy (GJ) and anterograde biliary stenting in a patient with an infiltrative porta hepatis mass causing gastric outlet obstruction (GOO) and biliary obstruction.

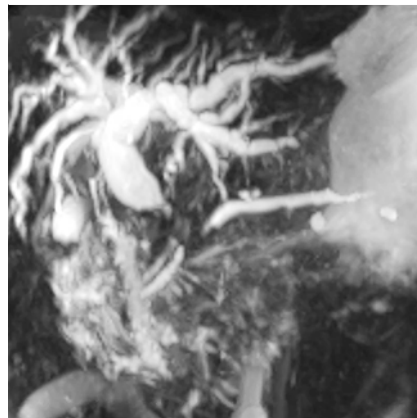
An 83-year-old woman with gastric adenocarcinoma was found to have a malignant biliary obstruction due to infiltration of the porta hepatis and common bile duct (CBD) on magnetic resonance cholangiopancreatography (► **Fig. 1**). Endoscopic retrograde cholangiopancreatography was attempted, but there was clear evidence of an evolving GOO with malignant involvement of the ampullary region.

We proceeded with combined EUS-GJ and EUS-guided gastrohepatic access with anterograde biliary stenting. The endoscope was advanced beyond the obstruction, and the duodenum distal to the ligament of Treitz was distended with saline, contrast, and methylene blue. The jejunum was identified on EUS and confirmed with needle aspiration. A 15-mm AXIOS electrocautery-enhanced lumen-apposing metal stent (Boston Scientific, Marlborough, Massachusetts, USA) was deployed under EUS guidance; egress of methylene blue confirmed successful placement.

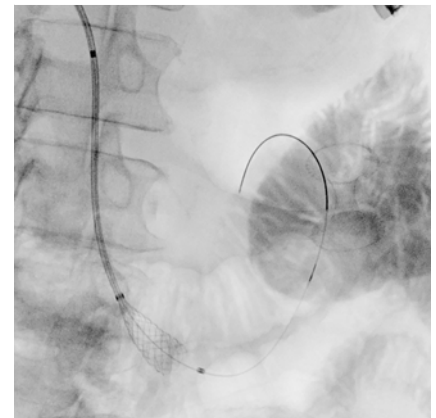
To address the biliary obstruction, a dilated left hepatic biliary radical was identified and punctured with a 19-gauge needle. Cholangiogram was notable for CBD stricture. A 0.025-inch guidewire was advanced anterograde into the duodenum. To facilitate anterograde stent deployment, and because there are no cystotomes readily available in the USA, the AXIOS catheter was reset and used over the wire to create a tract. This allowed for anterograde placement of an un-



► **Video 1** Combined endoscopic ultrasound-guided gastrojejunostomy and anterograde biliary stenting for treatment of malignant obstruction involving the duodenum and bile duct.



► **Fig. 1** Magnetic resonance cholangiopancreatography revealed an ill-defined infiltrative mass, approximately 5 × 4 cm, involving the gastric pylorus. The mass was causing extrinsic compression of the common bile duct with upstream dilatation.



► **Fig. 2** Anterograde placement of an uncovered biliary self-expandable metal stent across the distal biliary stricture.

covered 10 × 80-mm biliary metal stent across the biliary stricture (► **Fig. 2**). The puncture site was closed with an over-the-scope clip (► **Video 1**).

The patient tolerated the procedure without complications and was dis-

charged to a hospice. This report highlights how EUS can be used for a combined biliary and luminal obstruction, with the reuse of an electrocautery-enhanced catheter for stent delivery.

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## Competing interests

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The authors declare that they have no conflict of interest.

## The authors

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## Bibliography

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