

# Transcatheter Arterial Radioembolization (TARE)-Induced Gastric Ulcer in an Excluded Stomach after Roux-en-Y Gastric Bypass

Grace E. Kim, MD<sup>1</sup>; Dennis Chen, MD<sup>1</sup>

<sup>1</sup>University of Chicago, Department of Internal Medicine, Section of Gastroenterology, Hepatology, and Nutrition



AT THE FOREFRONT  
**UChicago**  
**Medicine**

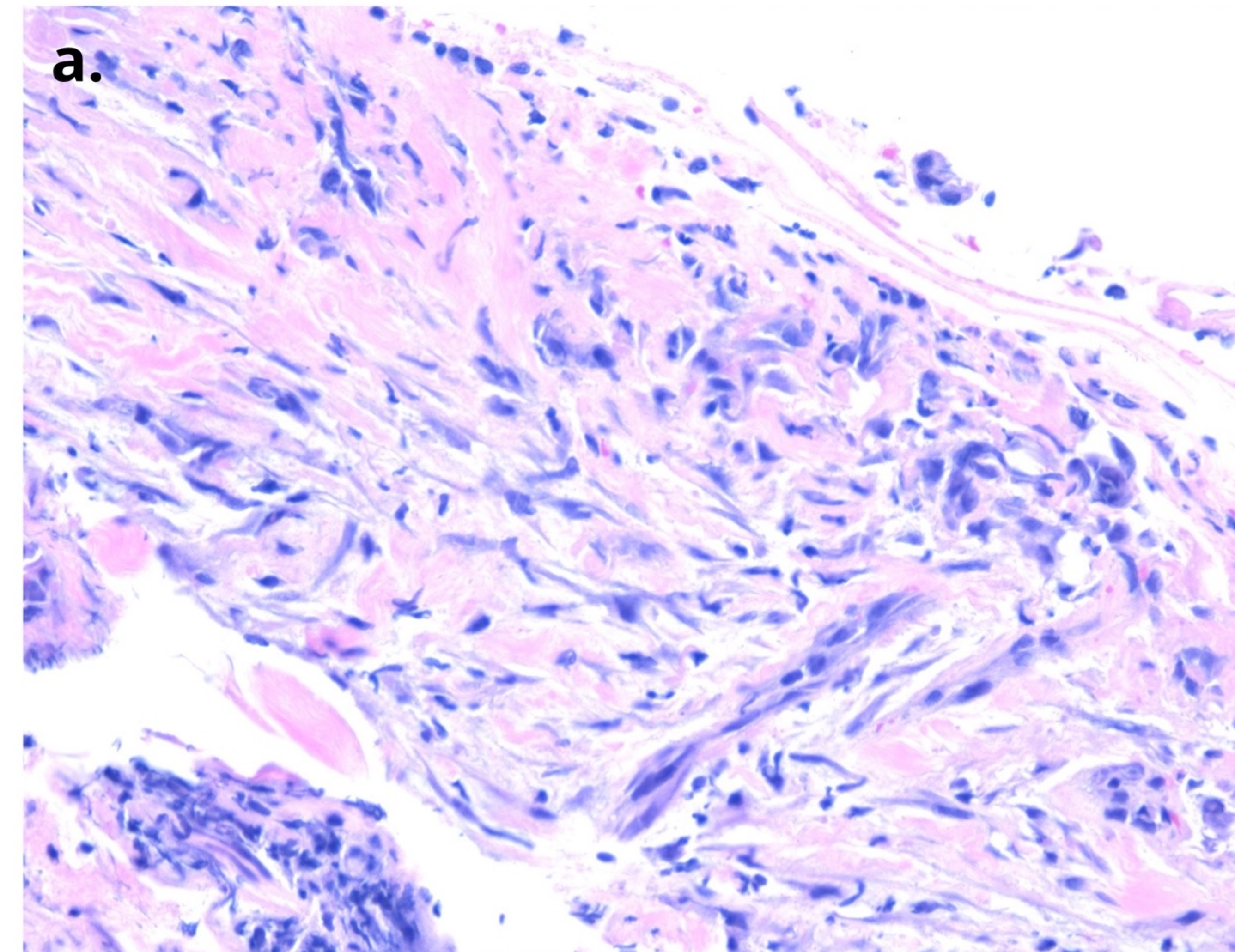
## Introduction

- Transcatheter arterial radioembolization (TARE) is a commonly utilized locoregional treatment for hepatocellular carcinoma (HCC).
- TARE confers lower risk of hepatic ischemia owing to the safety profile of Yttrium-90 glass microspheres used.
- However, peptic ulcer disease occurs in 1-5% of TARE treatments.
- Here we describe a unique case of a TARE-induced gastric ulcer in an excluded stomach after Roux-en-Y gastric bypass (RYGB).

## Case Presentation

- 70-year-old male with RYGB in 2012 and hepatitis C/nonalcoholic steatohepatitis cirrhosis complicated by HCC treated with TARE and liver transplant six months earlier presented with melena.
- Esophagogastroduodenoscopy, colonoscopy, and an antegrade double balloon-assisted enteroscopy (DBE) found no obvious source; the excluded stomach could not be reached during DBE.
- Due to continued melena and transfusion dependence, he underwent a laparoscopic assisted gastroduodenoscopy (GD) to evaluate the excluded stomach.
- This revealed a 3 cm gastric ulcer in the pre-pylorus with biopsies showing radiation induced ulcer without evidence of malignancy, viral infection, or helicobacter pylori (**Figure 1a**).
- Gastrostomy tube (G-tube) access was maintained in the excluded stomach to administer twice daily liquid proton pump inhibitor (PPI) via the G-tube.
- Repeat GD after eight weeks of treatment showed a well-healing gastric ulcer (**Figure 1b**).
- Patient's hemoglobin also stabilized and had no further transfusion requirement.

## Results



**Figure 1a.** High power view of the ulcer slough shows fibrosis with prominent atypical fibroblasts consistent with radiation enteritis (H&E, 400X).

**Figure 1b.** Repeat gastroduodenoscopy showing healing ulcer.

## Conclusions

- Gastric ulcers in the excluded stomach after RYGB are rare, especially 10 years after surgery.
- To our knowledge, this is the first reported incident of radiation induced ulcer in an excluded stomach.
- For treatment, G-tube access was maintained to the excluded stomach for administration of liquid PPI with excellent ulcer healing and resolution of melena and anemia.
- This treatment approach was selected based on previous data demonstrating benefit of open capsule PPI to treat marginal ulcers following RYGB<sup>1</sup>.
- Open capsule PPI administration is thought to enhance healing in these cases as this bypasses the need for capsular breakdown in the stomach for absorption, but it is unclear if a similar mechanism is true for an excluded stomach and warrants further studies to better understand its pharmacokinetics.
- This case highlights a unique case of a TARE-induced gastric ulcer in the RYGB excluded stomach that was successfully treated with liquid PPI.

## References

1. Schulman et al. Clin Gastroenterol Hepatol. 2017, 494-500.e1.