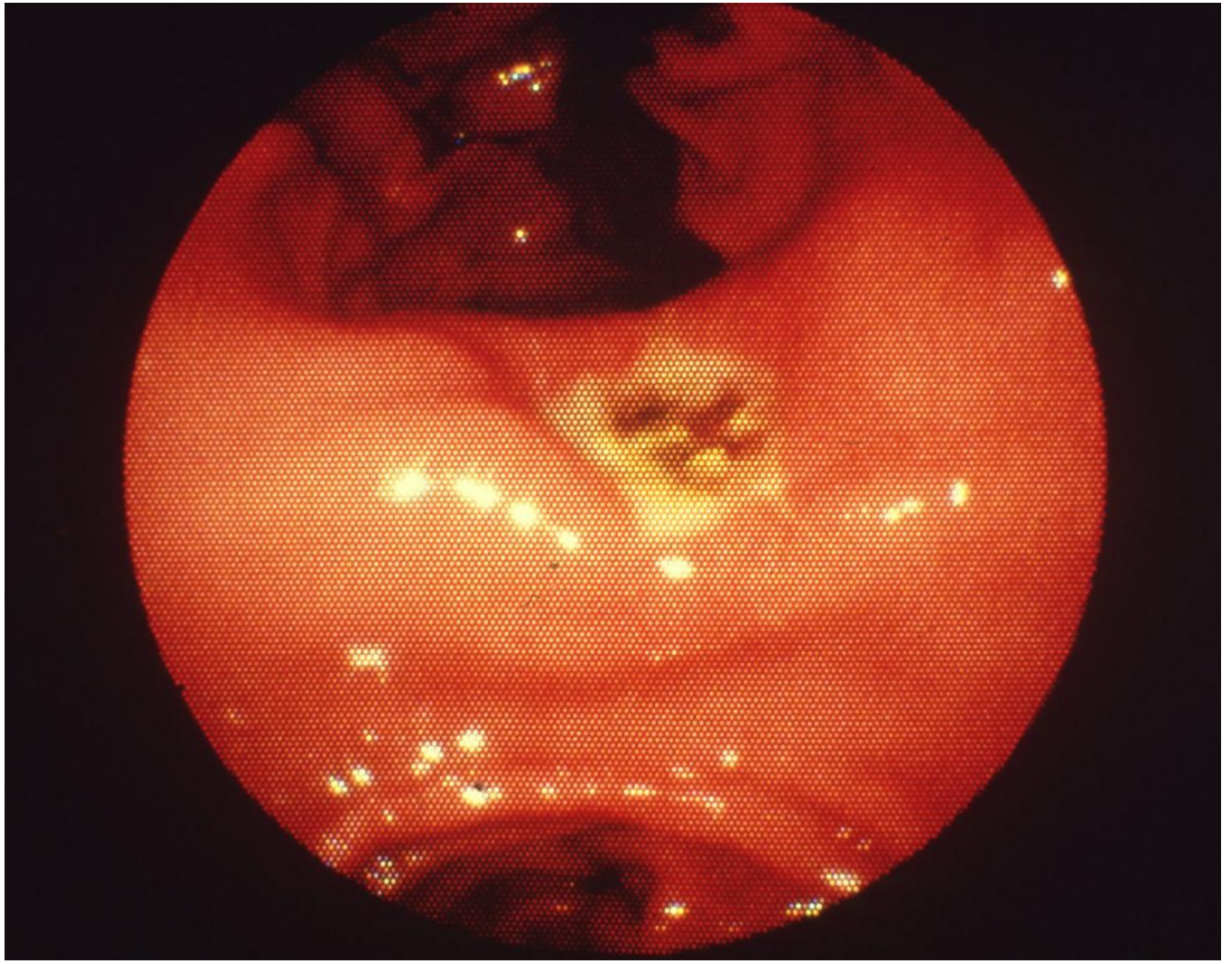
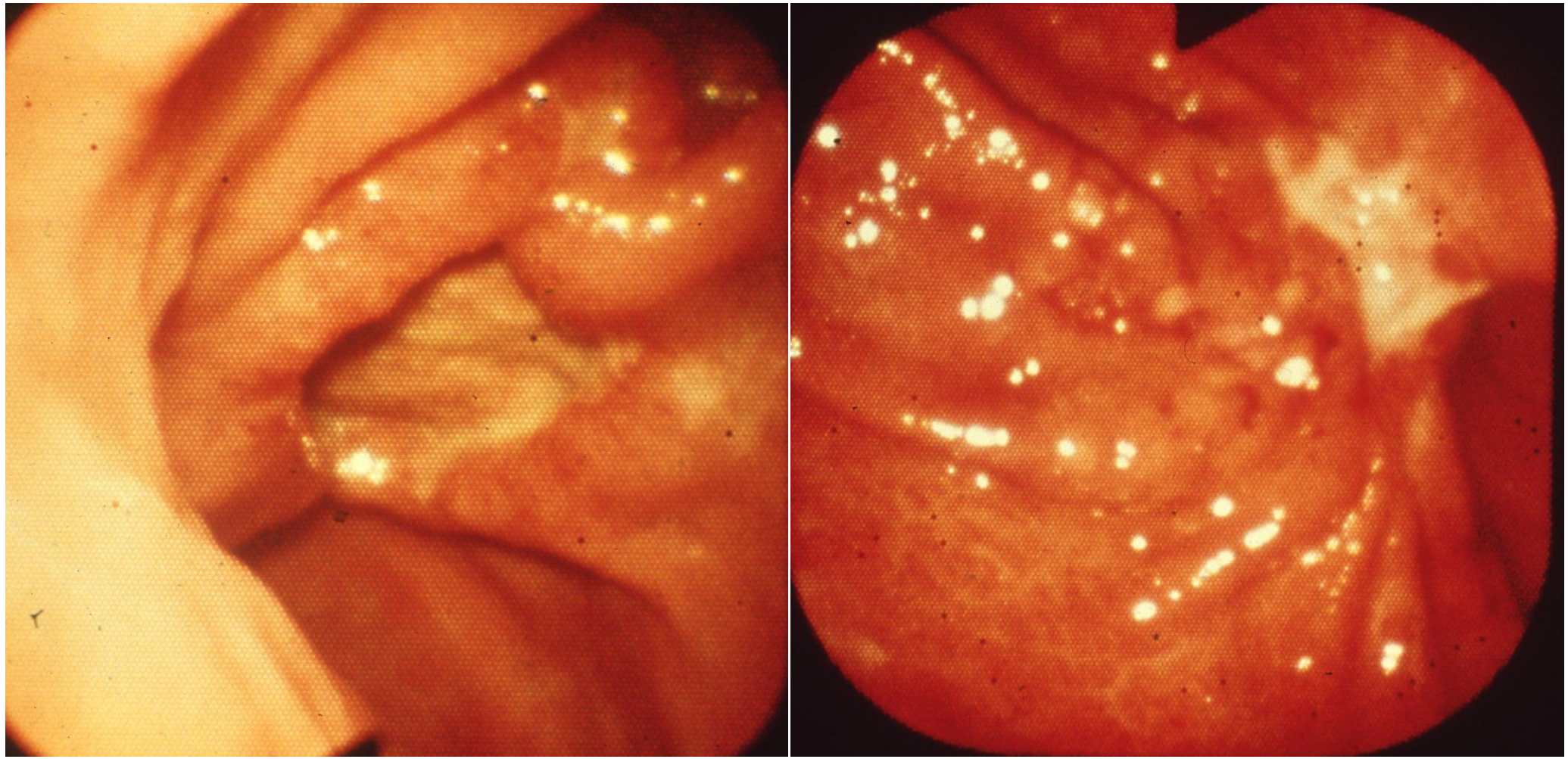
Gross appearance of benign gastric ulcer

Gross appearance of benign gastric (peptic) ulcer is featured by clean edges and a smooth surface. The ulcer is typically devoid of dirty base or irregular borders that are indicative of malignant ulcers. The ulcer base may show a clean base with the absence of any abnormal tissue within the ulcer. Gastric folds are assembled around the ulcer, and the ulcer edge is often edematous. There may be exposed arteries at the ulcer base.

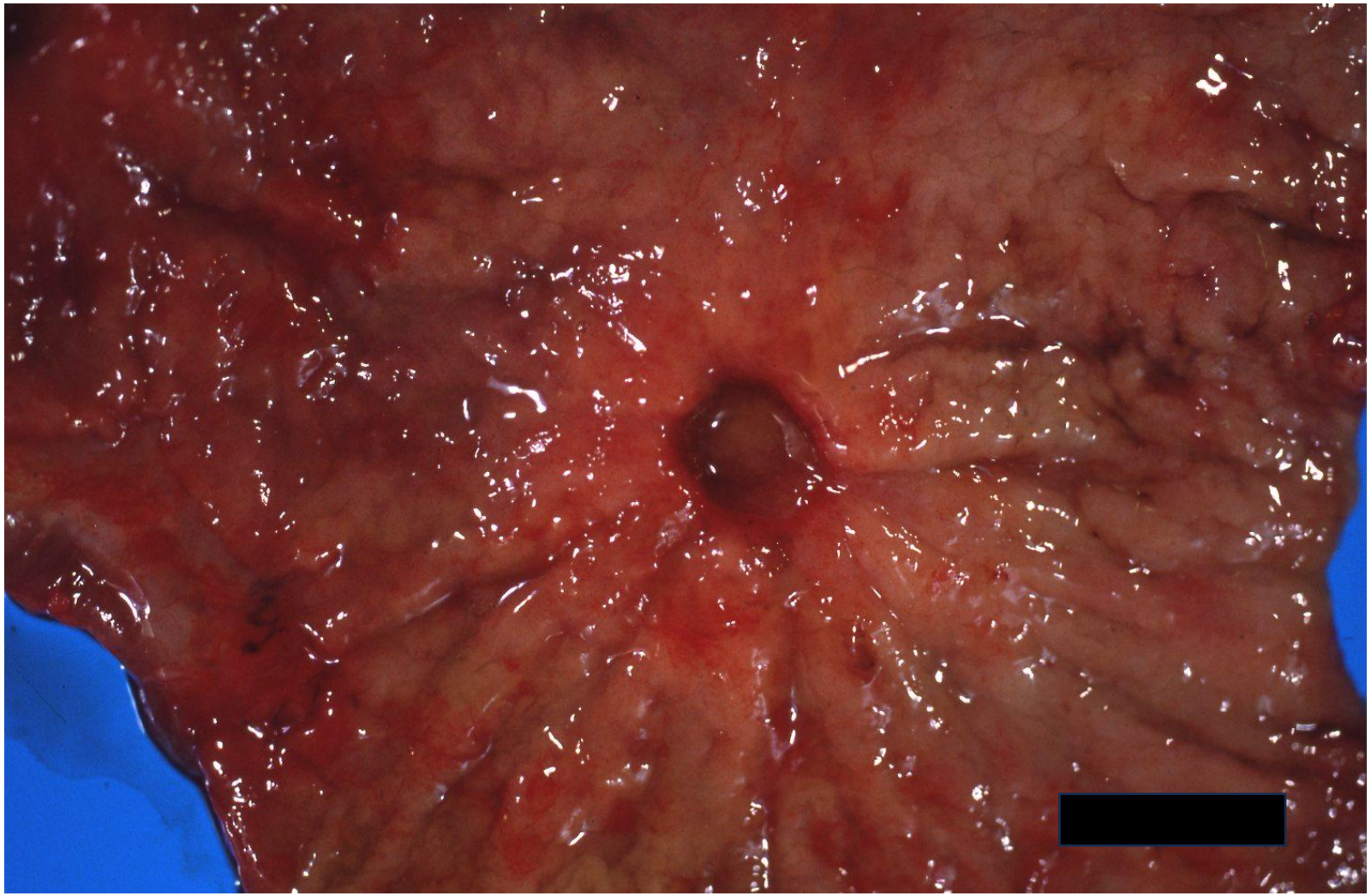
Ref.: Klang E, et al. Differentiation between malignant and benign endoscopic images of gastric ulcers using deep learning. Clin Exp Gastroenterol 2021; 14: 155-162. doi: 10.2147/CEG.S292857



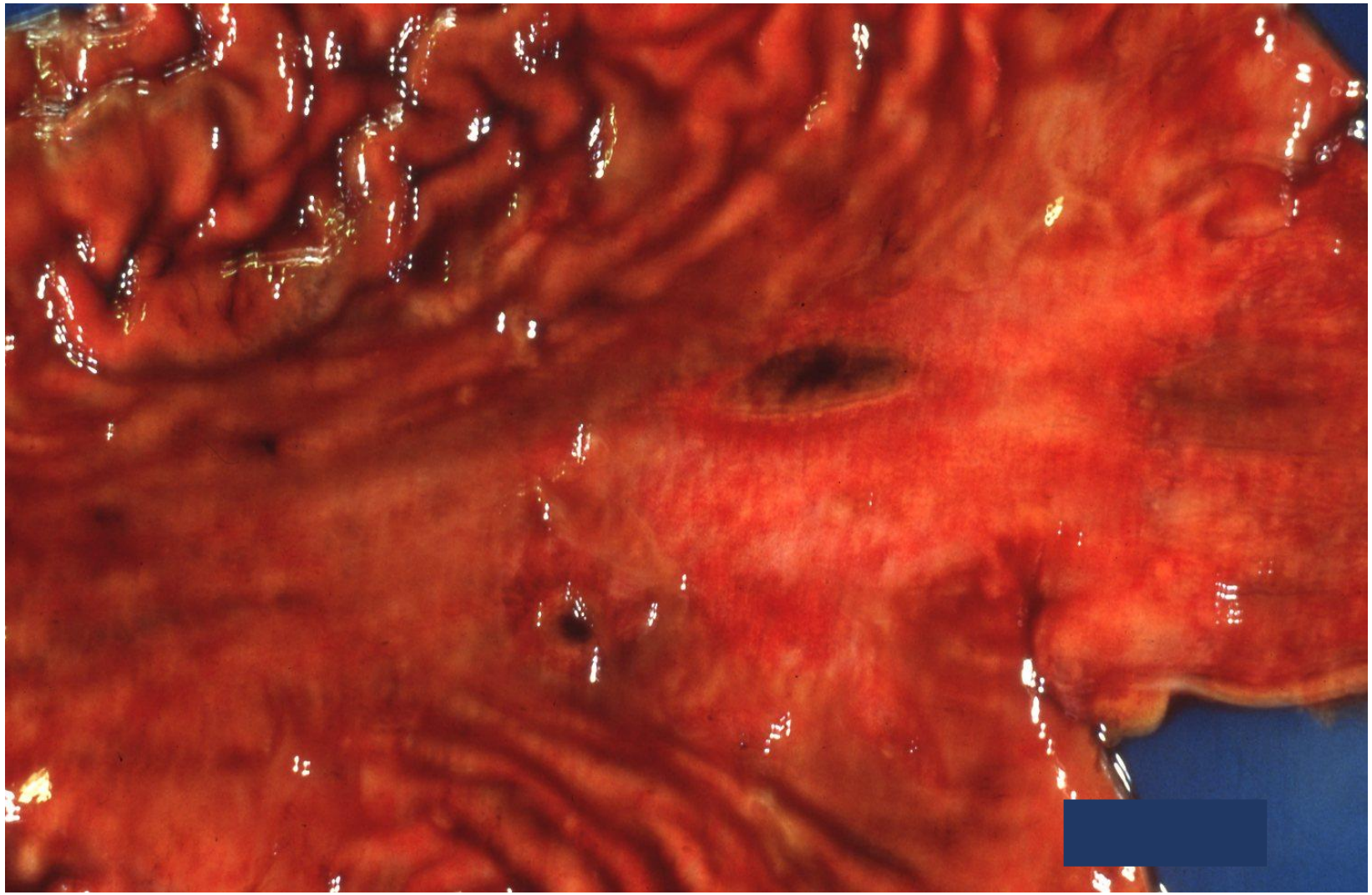
Benign peptic ulcer at the gastric angle seen in a male patient aged 50’s. Endoscopically, hemorrhagic change is evident at the yellowish-colored ulcer base. The margins are sharply demarcated, and edematous change is associated around the ulcer.



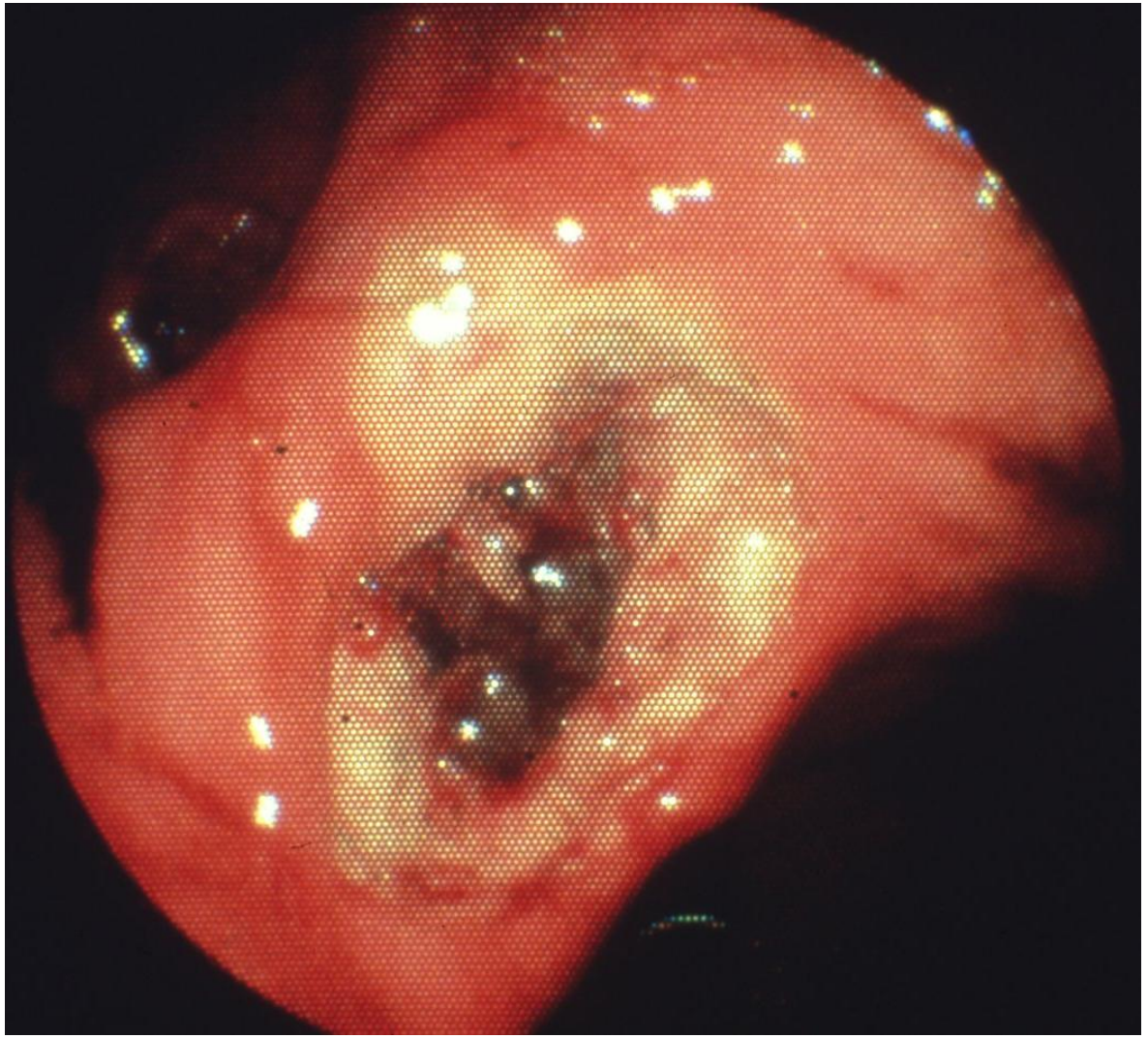
Benign peptic ulcer at the supragastric angle seen in a male patient aged 40's. Endoscopically, a sharply demarcated ulcer with yellowish-colored ulcer base formed at the proximal region of the gastric angle. The margins of the lesion are sharply demarcated, and gastric rugae are assembled around the ulcer.



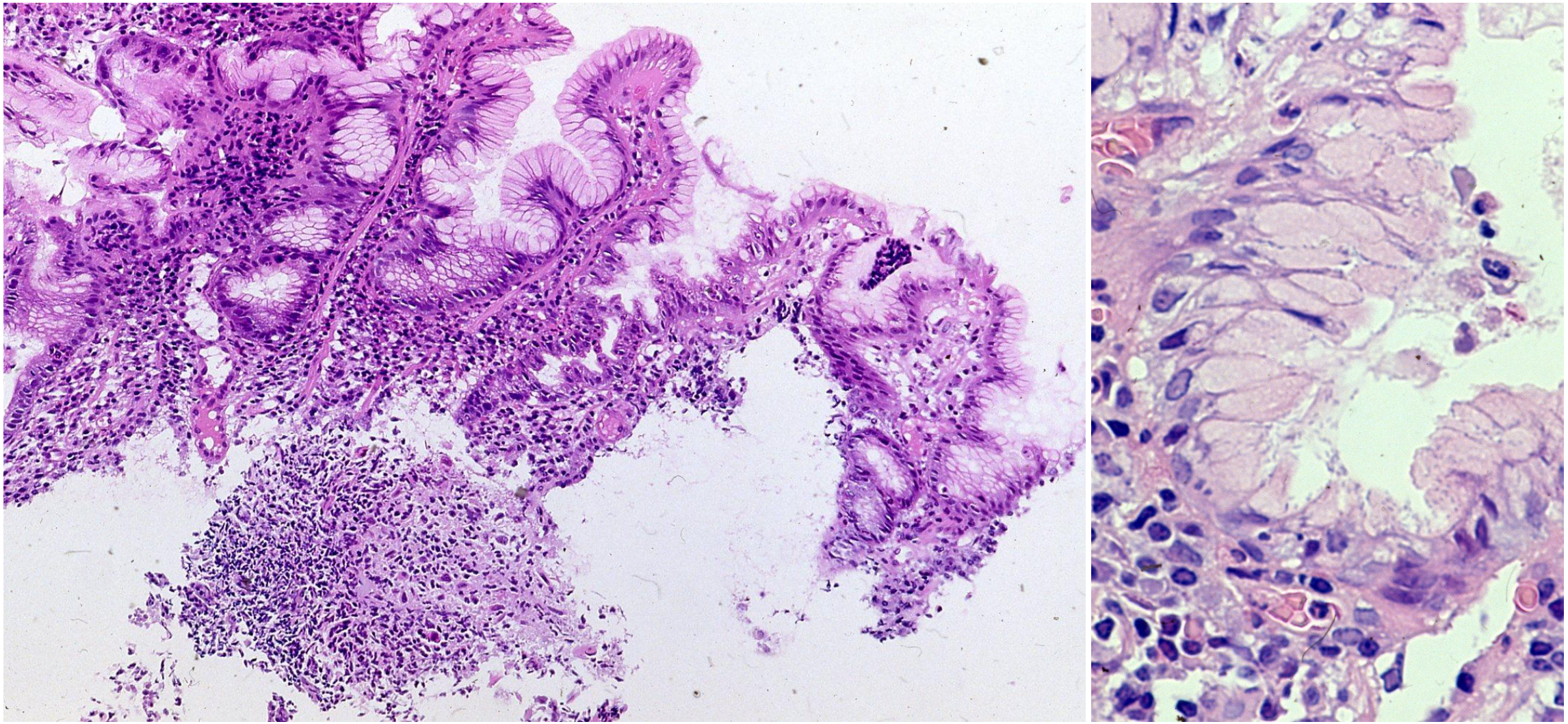
Benign peptic ulcer seen in a 63 y-o male patient. Hemorrhage was uncontrollable endoscopically, and partial gastrectomy was performed. A deep ulceration with sharply demarcated margins is observed at the proximal region of the gastric angle. Mild elevation around the benign ulcer is called ulcer mound.



Benign hemorrhagic ulcer seen at autopsy of a male patient aged 50’s with lethal brain hemorrhage. Shallow hemorrhagic ulceration (Cushing’s ulcer) is multifocally distributed around the gastric angle.

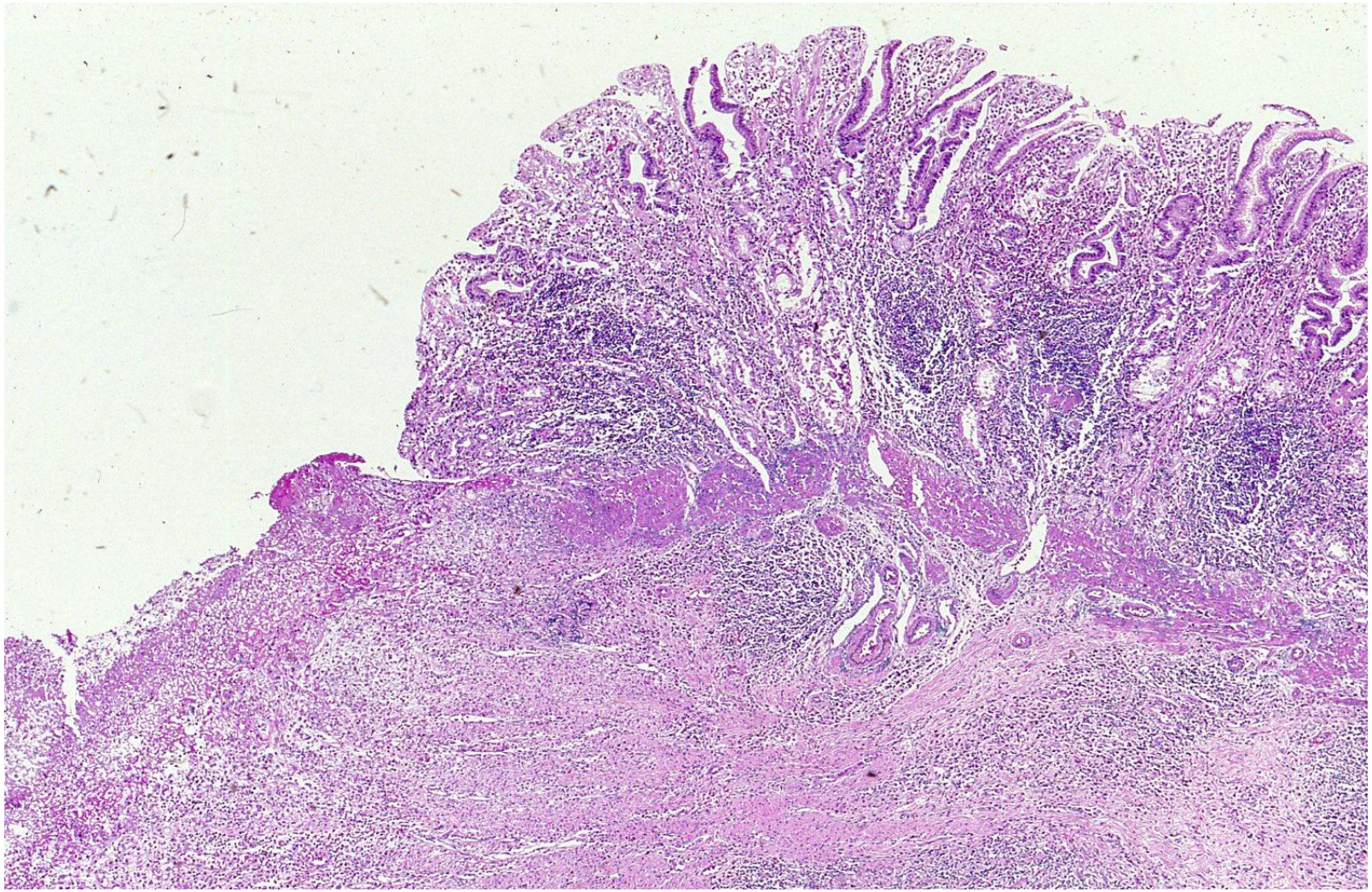


Benign peptic ulcer at the gastric angle seen in a male patient aged 40’s. Endoscopically, ruptured arteries are evident at the hemorrhagic ulcer base. The margins are sharply demarcated, and edematous change is associated around the ulcer.



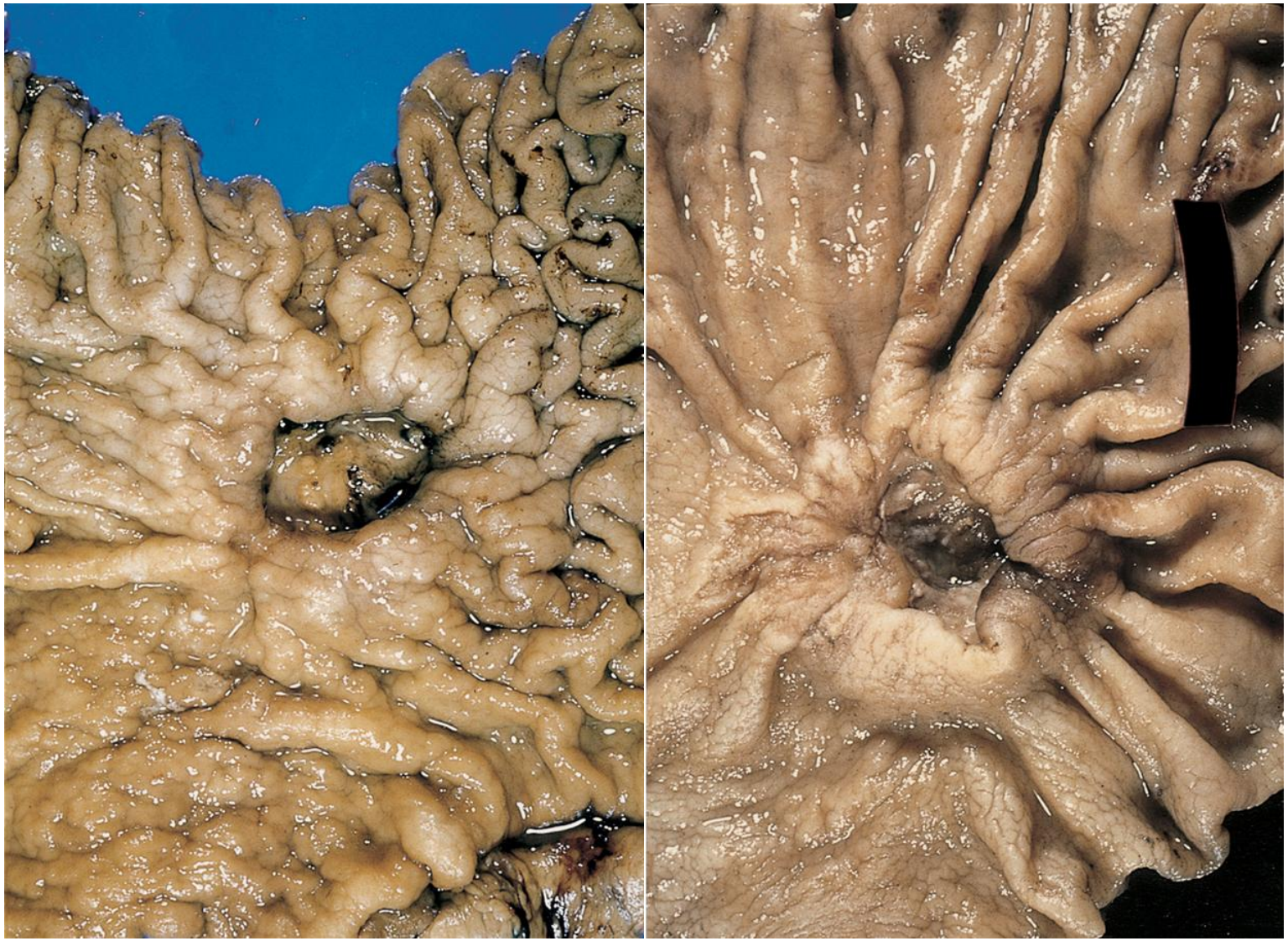
Benign peptic ulcer at the gastric angle seen in a male patient aged 40's. Endoscopic biopsy reveals actively inflamed regenerative gastric mucosa and ulcer base necrotic debris (left). *Helicobacter pylori* infection is proven (right), but without malignancy (H&E).

Benign peptic ulcer at the anterior wall of the gastric angle seen in a male patient aged 40's. Hemorrhage was uncontrollable, and partial gastrectomy was performed. A large-sized and demarcated hemorrhagic ulcer is observed (top). The cut surface reveals UL4 deep ulceration with hemorrhagic change (bottom). Gross appearance after formalin fixation.

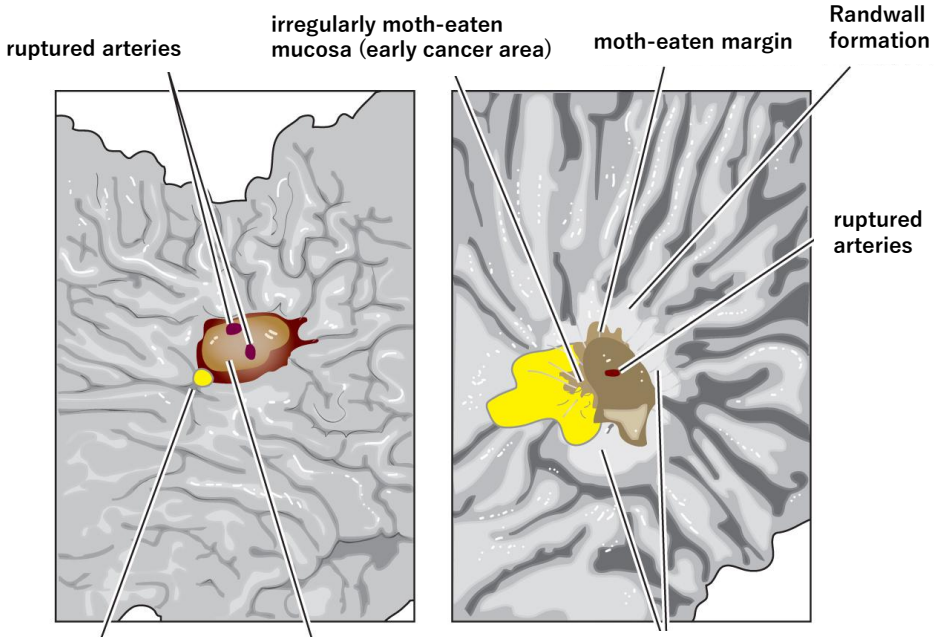


Benign peptic ulcer at the anterior wall of the gastric angle seen in a male patient aged 40’s. Microscopically, a deep ulceration with mild fibrosis is seen. No malignancy is identified (H&E)

Benign peptic ulcer at the anterior wall of the gastric angle seen in a male patient aged 40’s. A ruptured artery is exposed onto the ulcer base granulation tissue Disruption of the elastic lamina and thrombosis formation are noted (VB-H&E)



Hemorrhage was uncontrollable endoscopically, hence gastrectomy followed in both cases. Note a sharp margin of the ulcer in **benign peptic ulcer (left)** and Randwall formation with moth-eaten mucosa in **advanced gastric cancer (Borrmann type 2) (right)**. Gross appearance after formalin fixation.



Differential diagnosis between benign and malignant ulcer. Two cases of hemorrhagic gastric ulcer seen at the gastric angle of a 55 y-o male patient (left) and at the posterior wall of the gastric angle of a 41 y-o female patient (right).