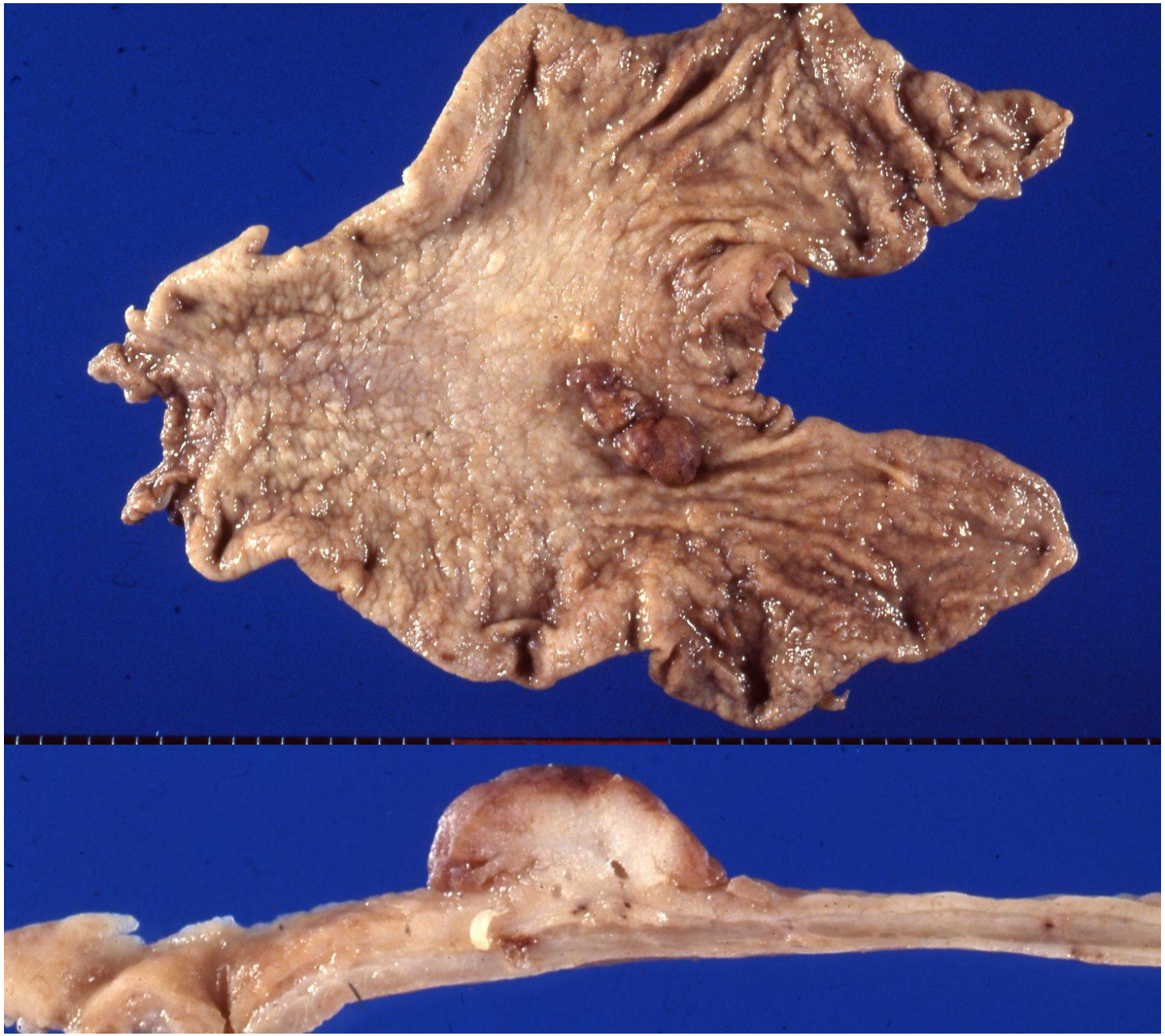
Gross appearance of gastric cancer

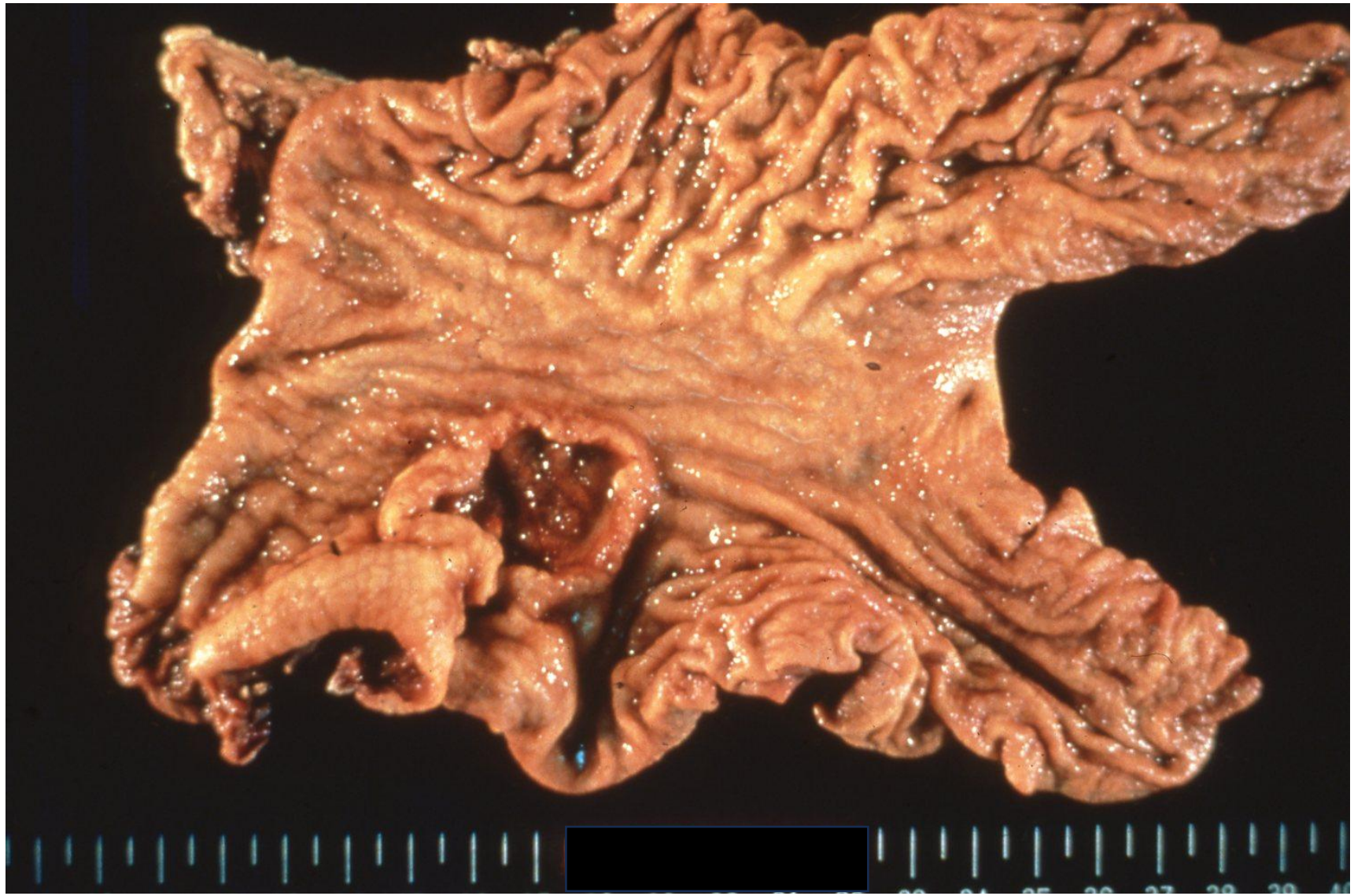
Gastric cancer can be divided into early gastric cancer (invading mucosa or submucosa) and advanced gastric cancer (invading the proper muscle layer or deeper). Grossly, advanced gastric cancer is typed, according to the Borrmann's classification, into type 1 (mass forming), type 2 (ulcerative), type 3 (infiltrative ulcerative), type 4 (diffuse infiltrative) and type 5 (unclassifiable), while early gastric cancer (type 0) is typed to 0-I (protruding), 0-IIa (superficial elevated), 0-IIb superficial flat),0-IIc (superficial depressed) and 0-III (excavated). Microscopically, the elevated lesions tend to be well-differentiated adenocarcinoma, while the depressed lesions tends to be poorly differentiated adenocarcinoma. Representative gross appearance of the resected stomach is presented herein.

Ref.: Japanese Gastric Cancer Association. Japanese classification of gastric carcinoma: 3rd English edition. Gastric Cancer 2011; 14: 101-112. doi: 10.1007/s10120-011-0041-5

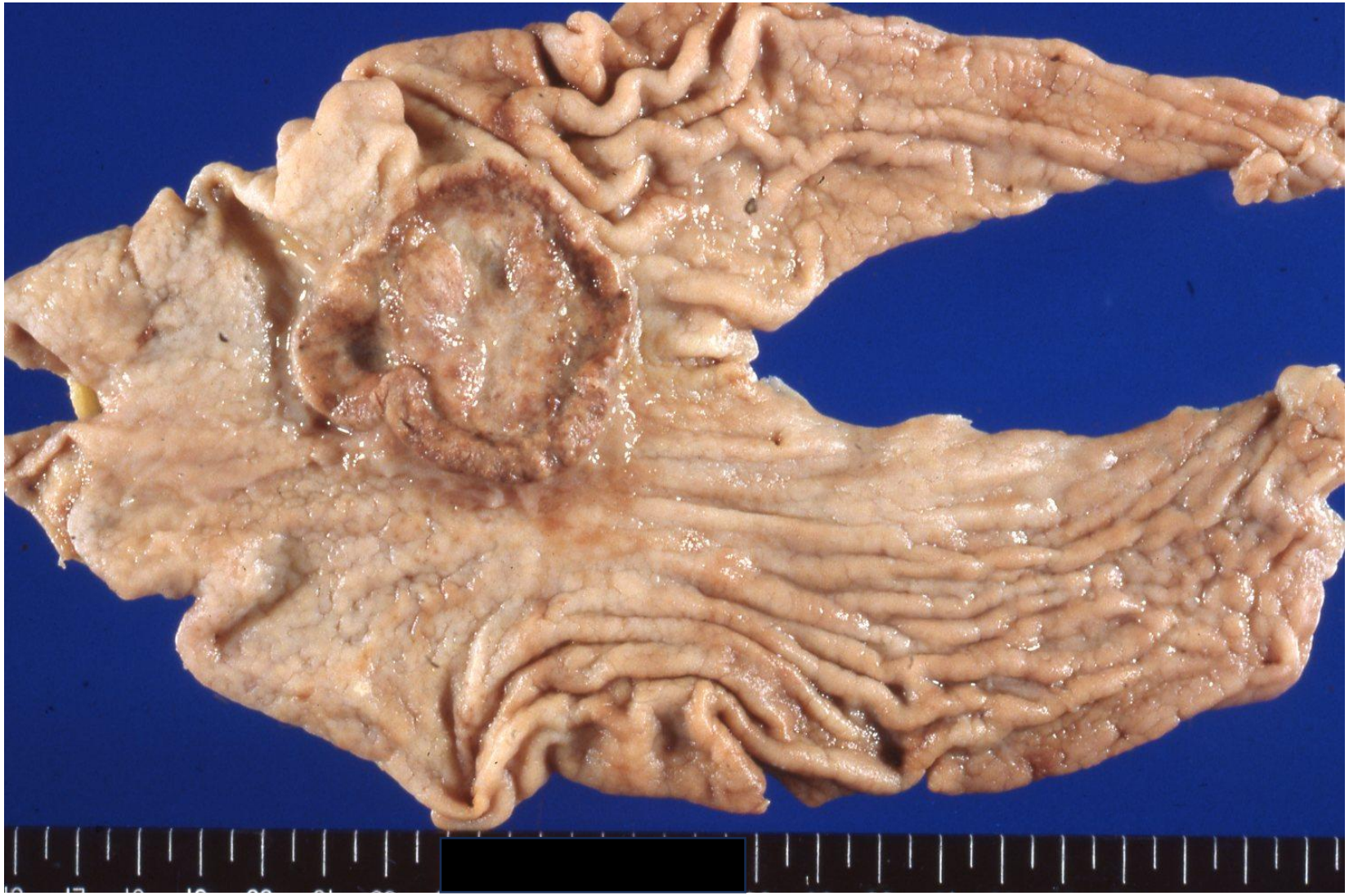
Advanced gastric cancer, Borrmann’s type 1, invading to the esophagus, after formalin fixation



Advanced gastric cancer, Borrmann's type 1, invading to the proper muscle layer (bottom: cut surface) after formalin fixation

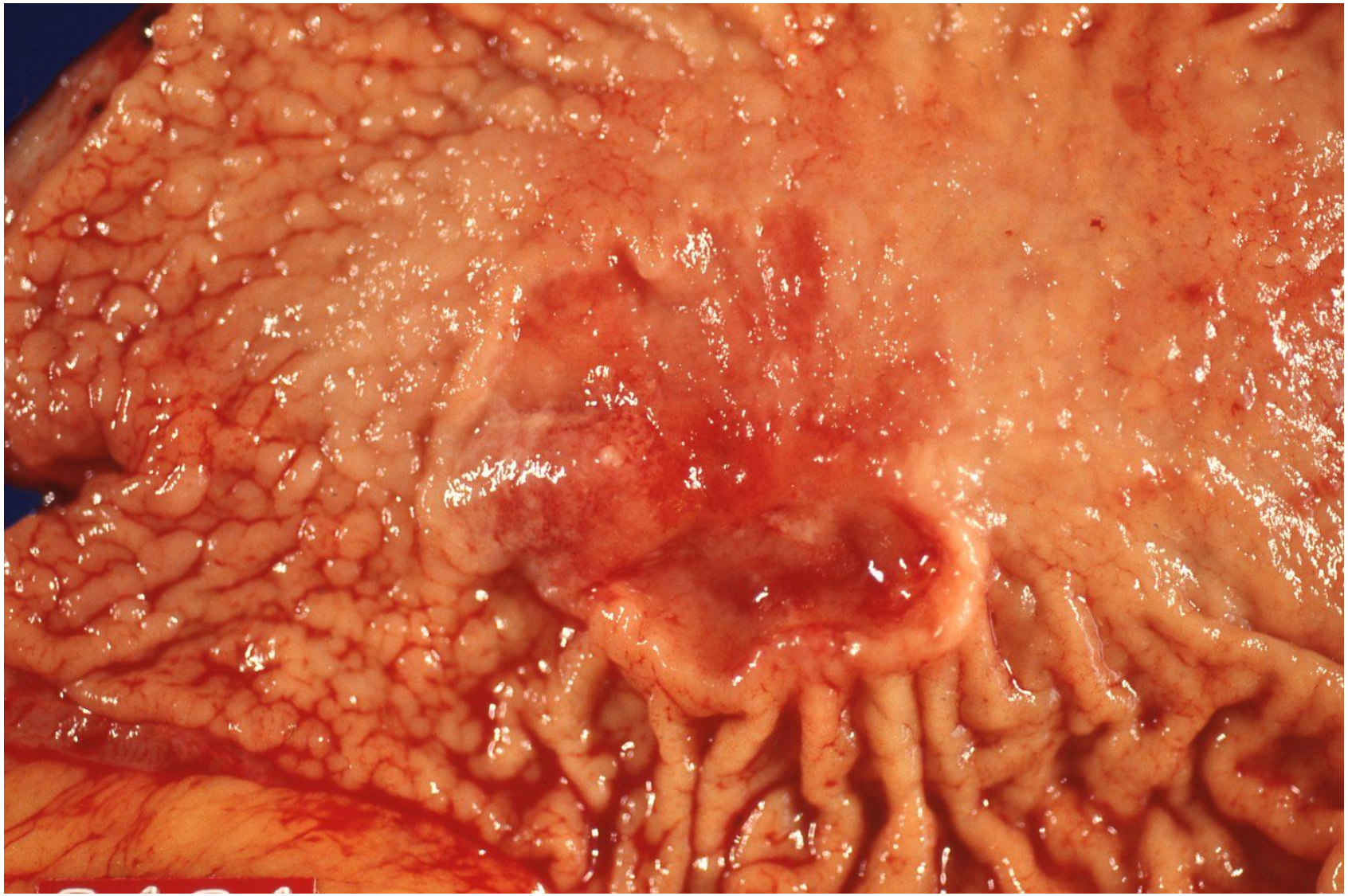


Advanced gastric cancer, Borrmann’s type 2, after formalin fixation

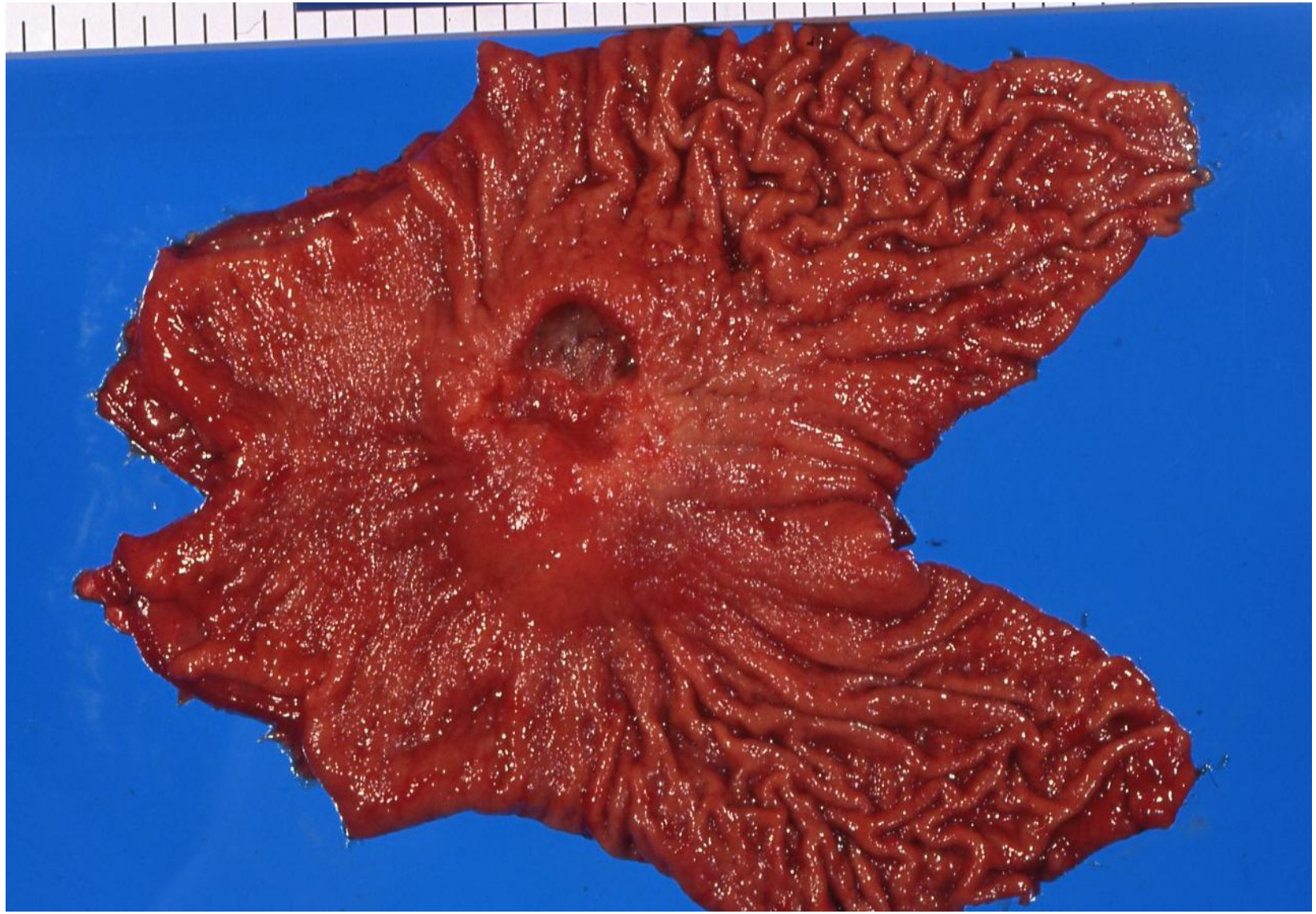


Advanced gastric cancer, Borrmann’s type 2, after formalin fixation

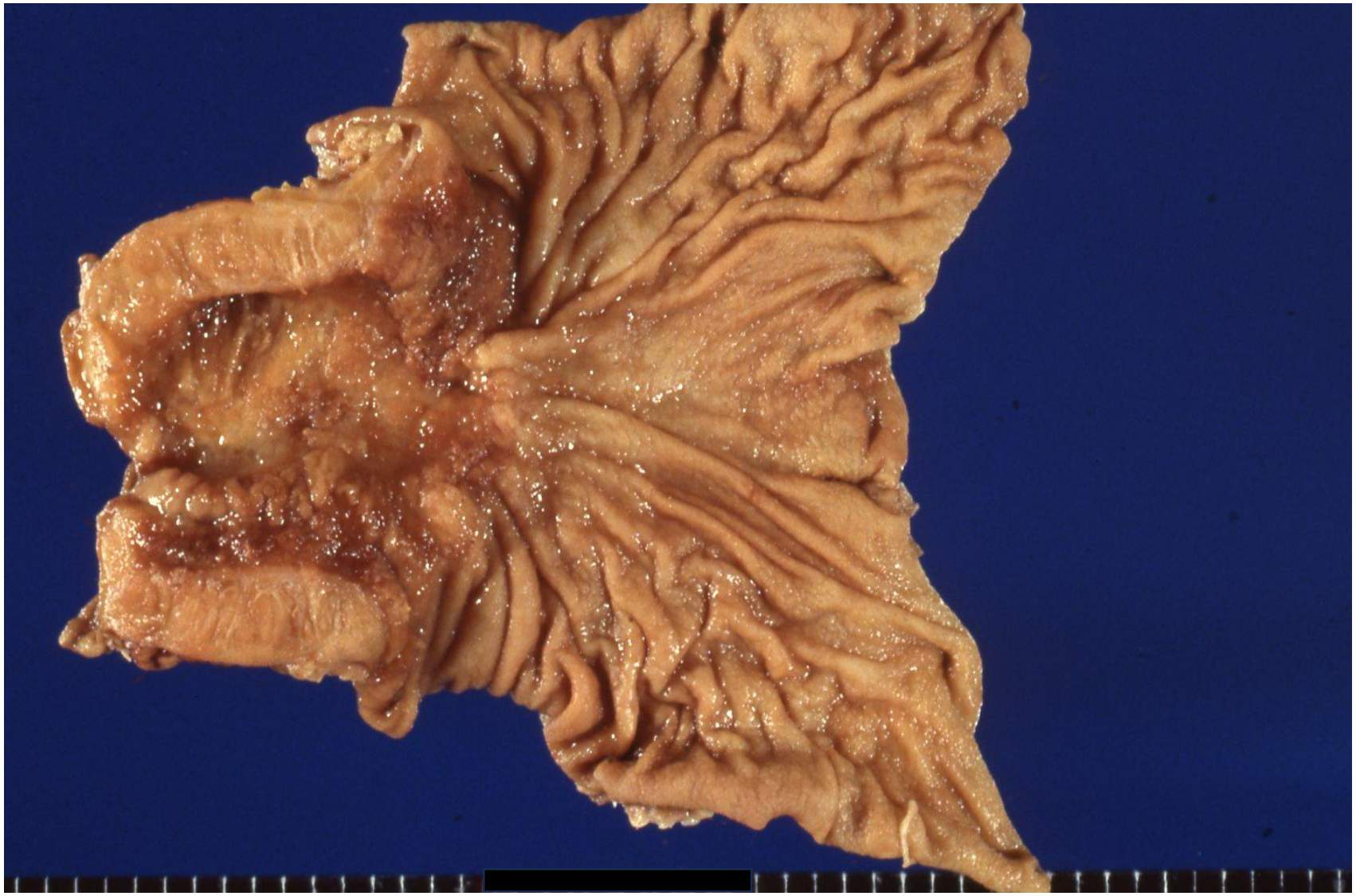
Advanced gastric cancer, Borrmann’s type 3, after formalin fixation



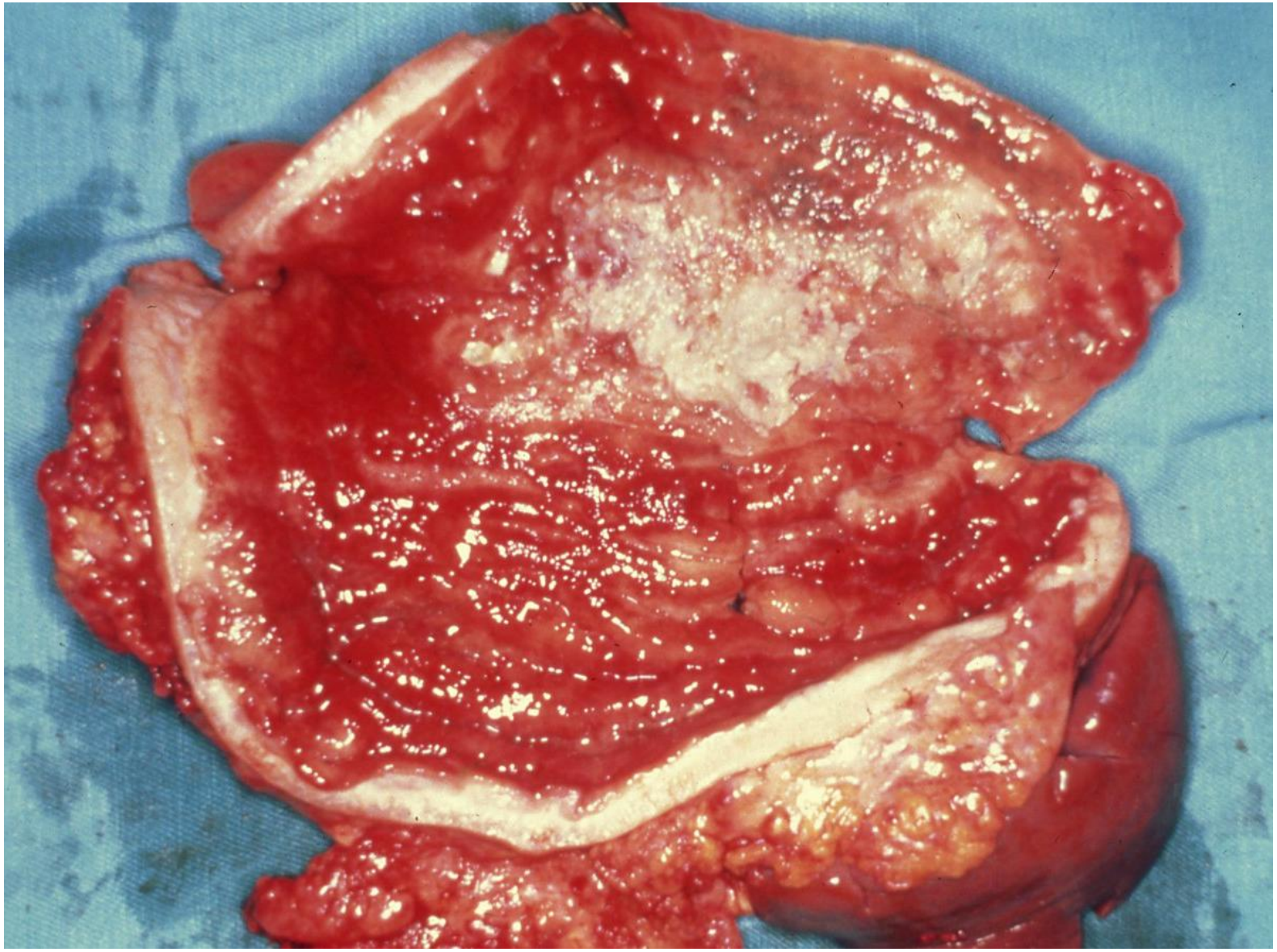
Advanced gastric cancer, Borrmann’s type 3, unfixed fresh material



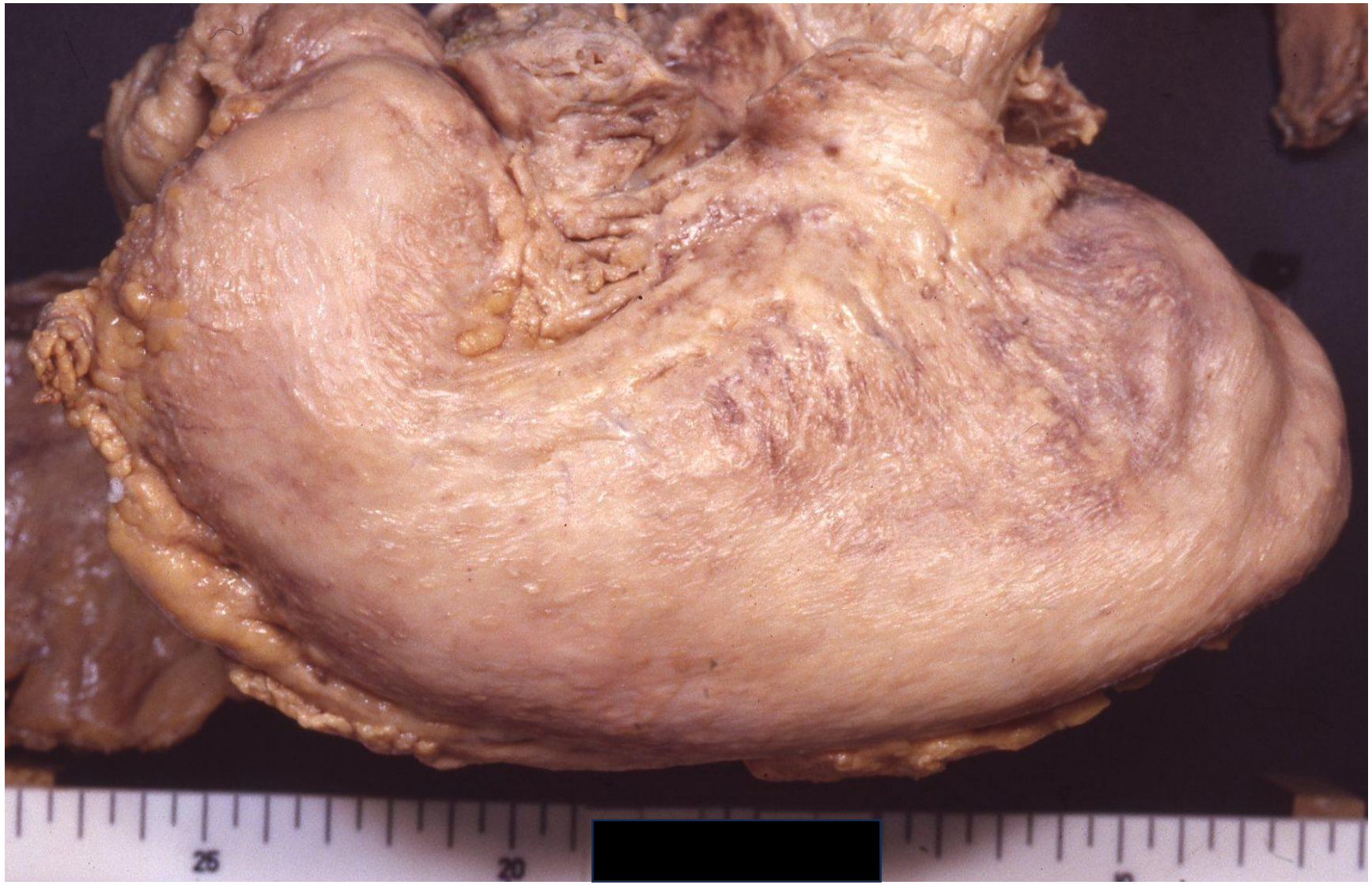
Advanced gastric cancer, Borrmann’s type 3, unfixed fresh material



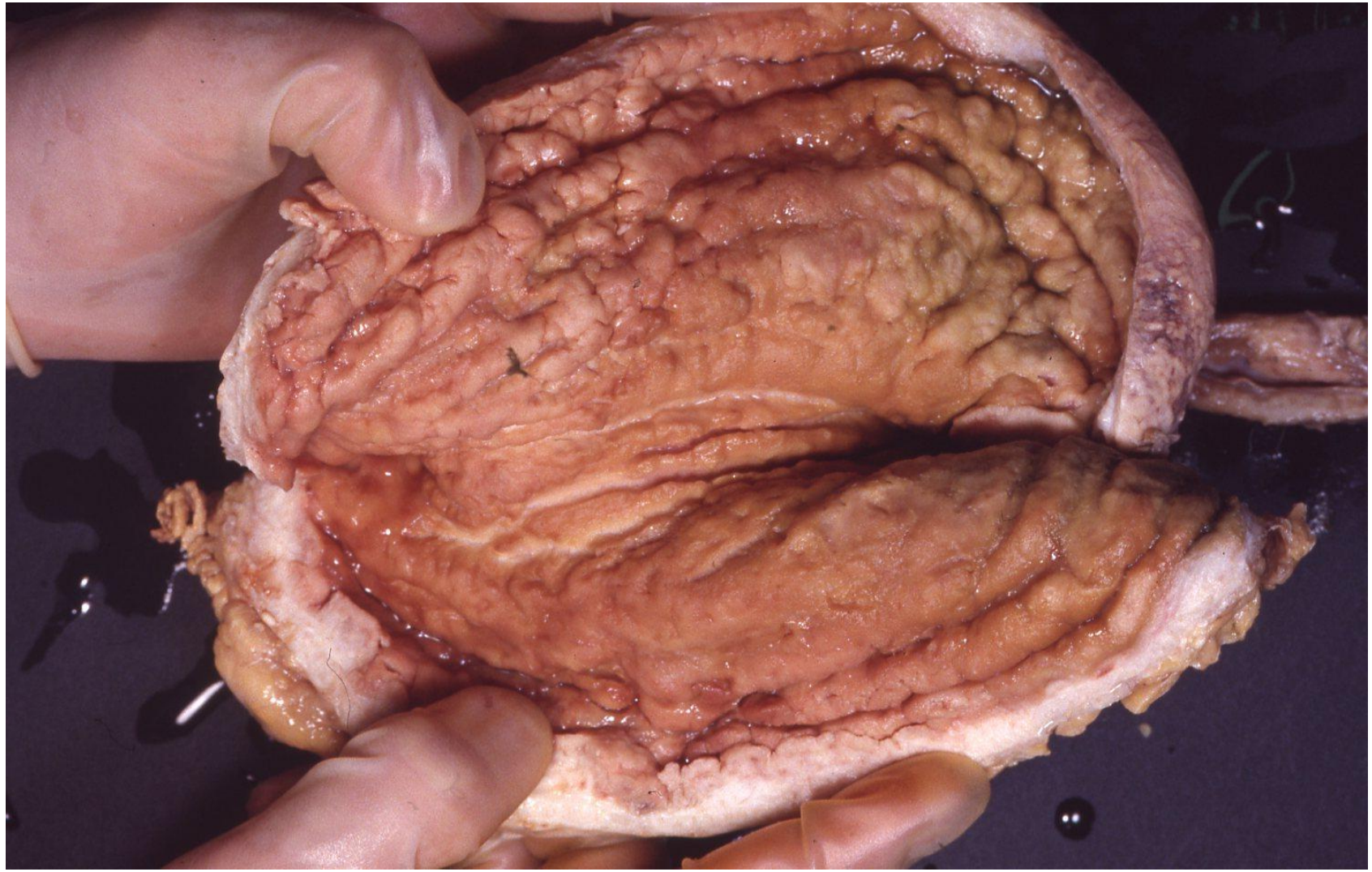
Advanced gastric cancer, Borrmann’s type 3, after formalin fixation



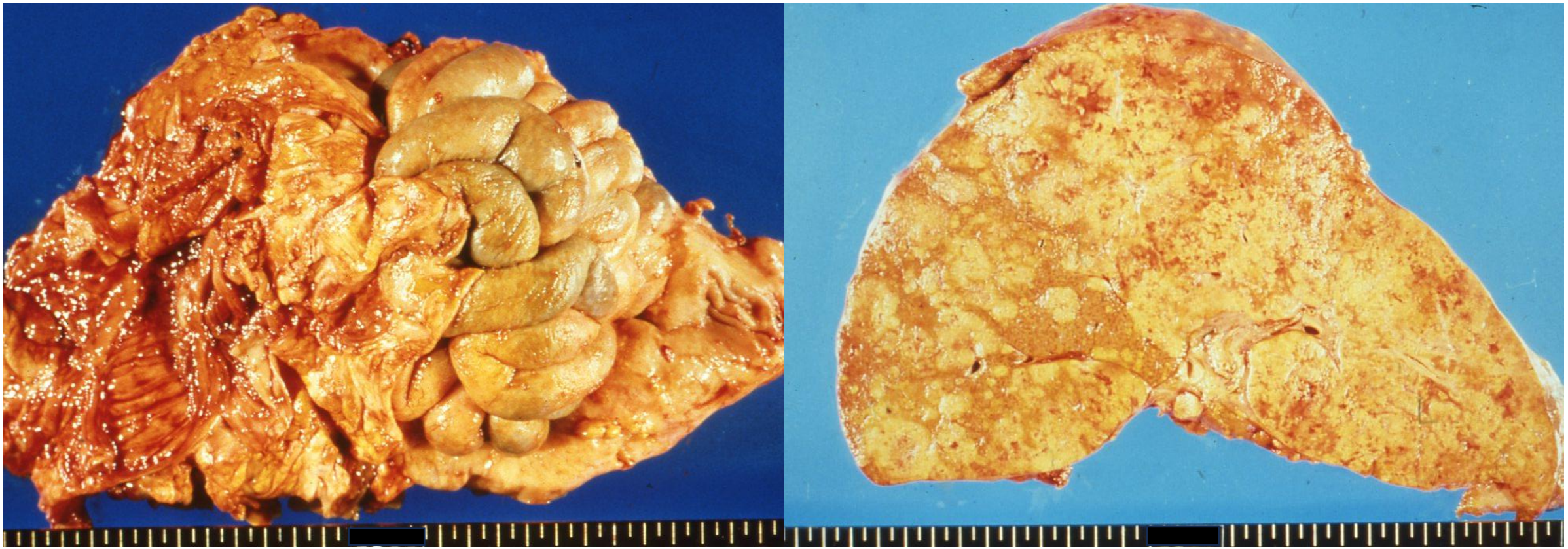
Advanced gastric cancer, Borrmann’s type 4, unfixed fresh material



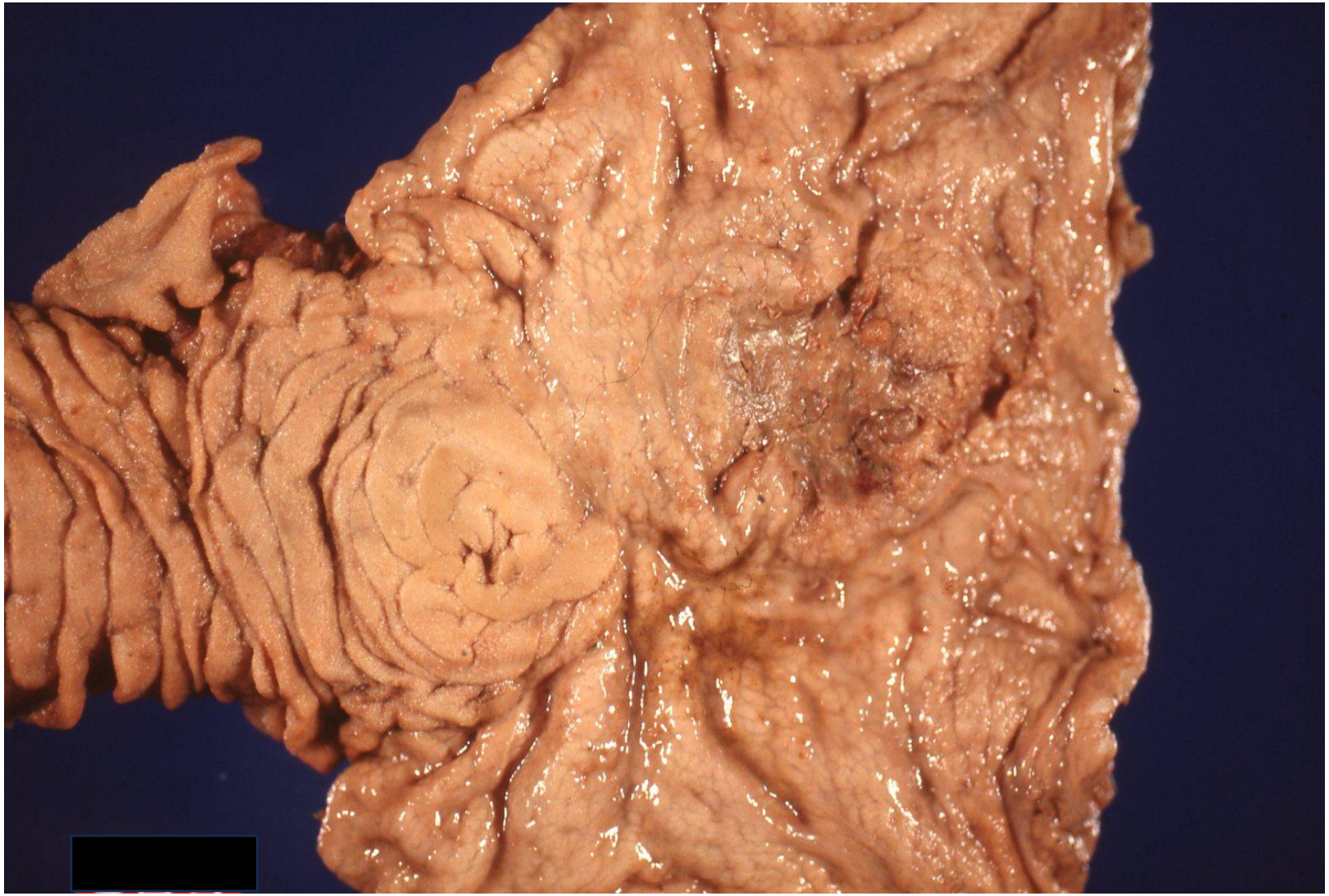
Advanced gastric cancer, Borrmann’s type 4, after formalin fixation, an autopsy case



Advanced gastric cancer, Borrmann’s type 4, after formalin fixation, an autopsy case

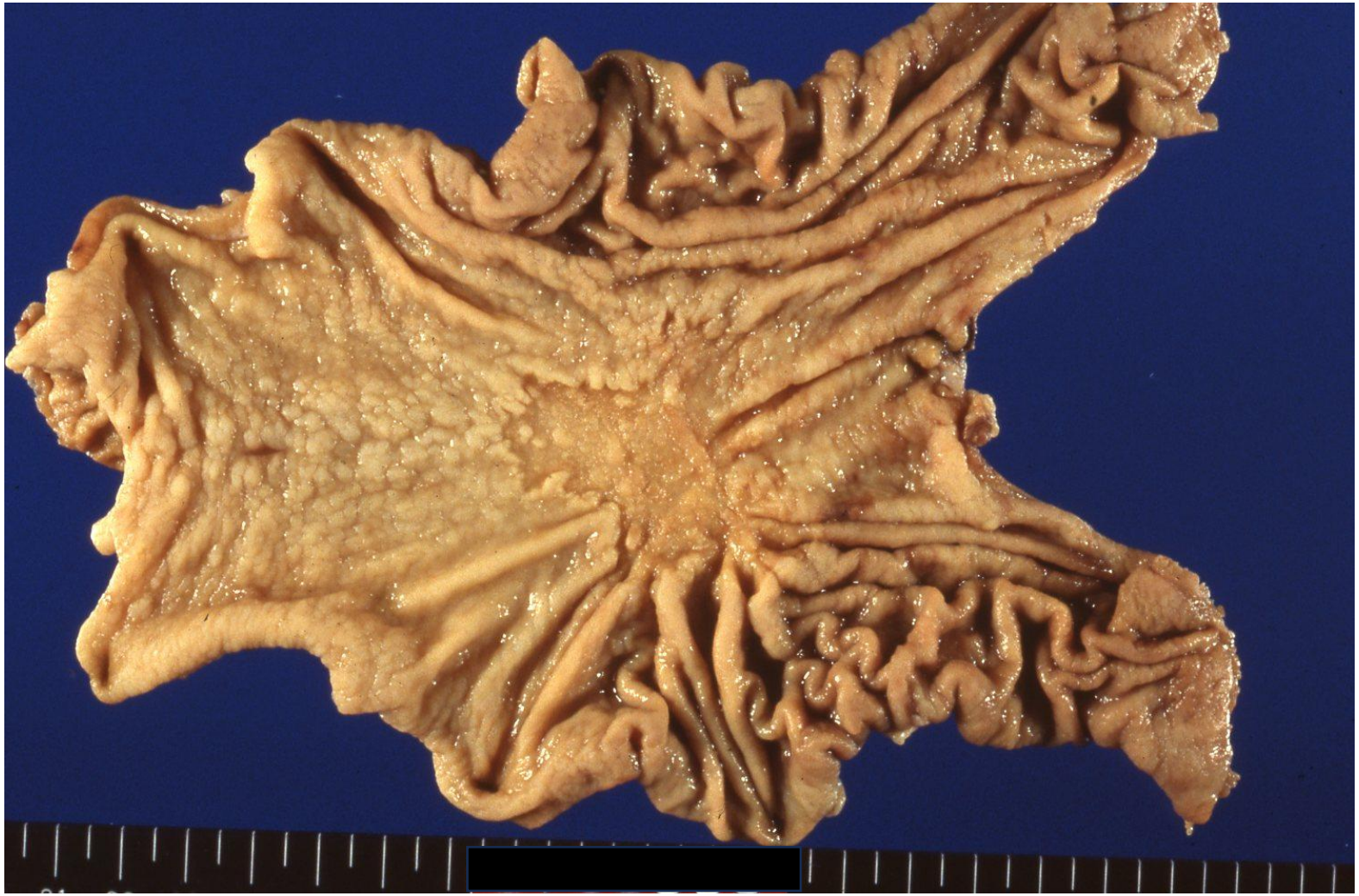


Two types of metastasis of gastric cancer (autopsy cases after formalin fixation). Left: peritoneal carcinomatosis (by poorly differentiated adenocarcinoma, Bormann's type 3), right: liver metastasis (by well-differentiated adenocarcinoma, Borrmann's type 2)



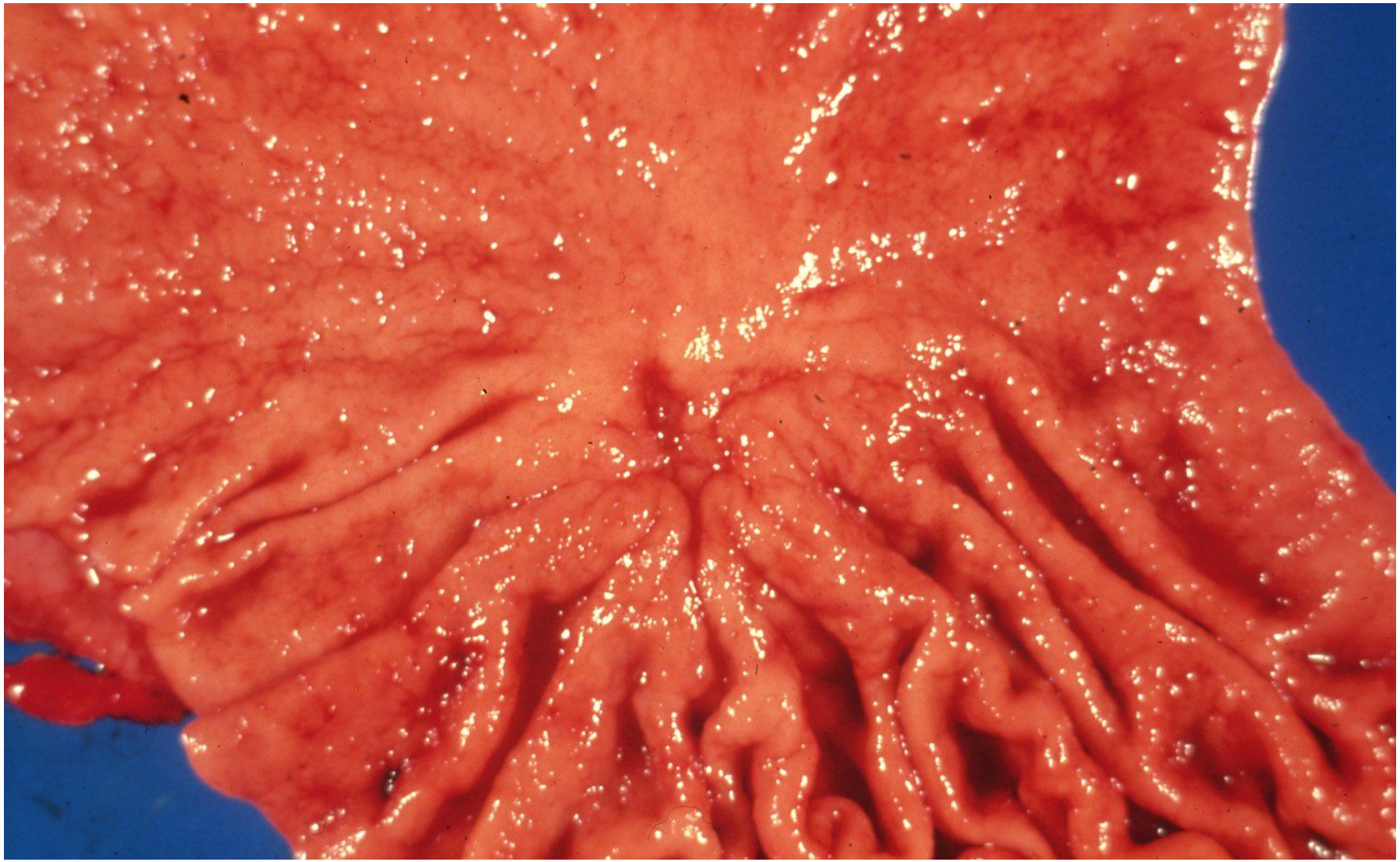
Advanced gastric cancer, Borrmann’s type 3, occurring in the remnant stomach, after formalin fixation. The remnant stomach after partial gastrectomy can be regarded as a pre-cancerous state.

Early gastric cancer, type 0-I, in the anterior wall of the gastric body, after formalin fixation. The cut surface (bottom) reveals intramucosal growth of the tumor.

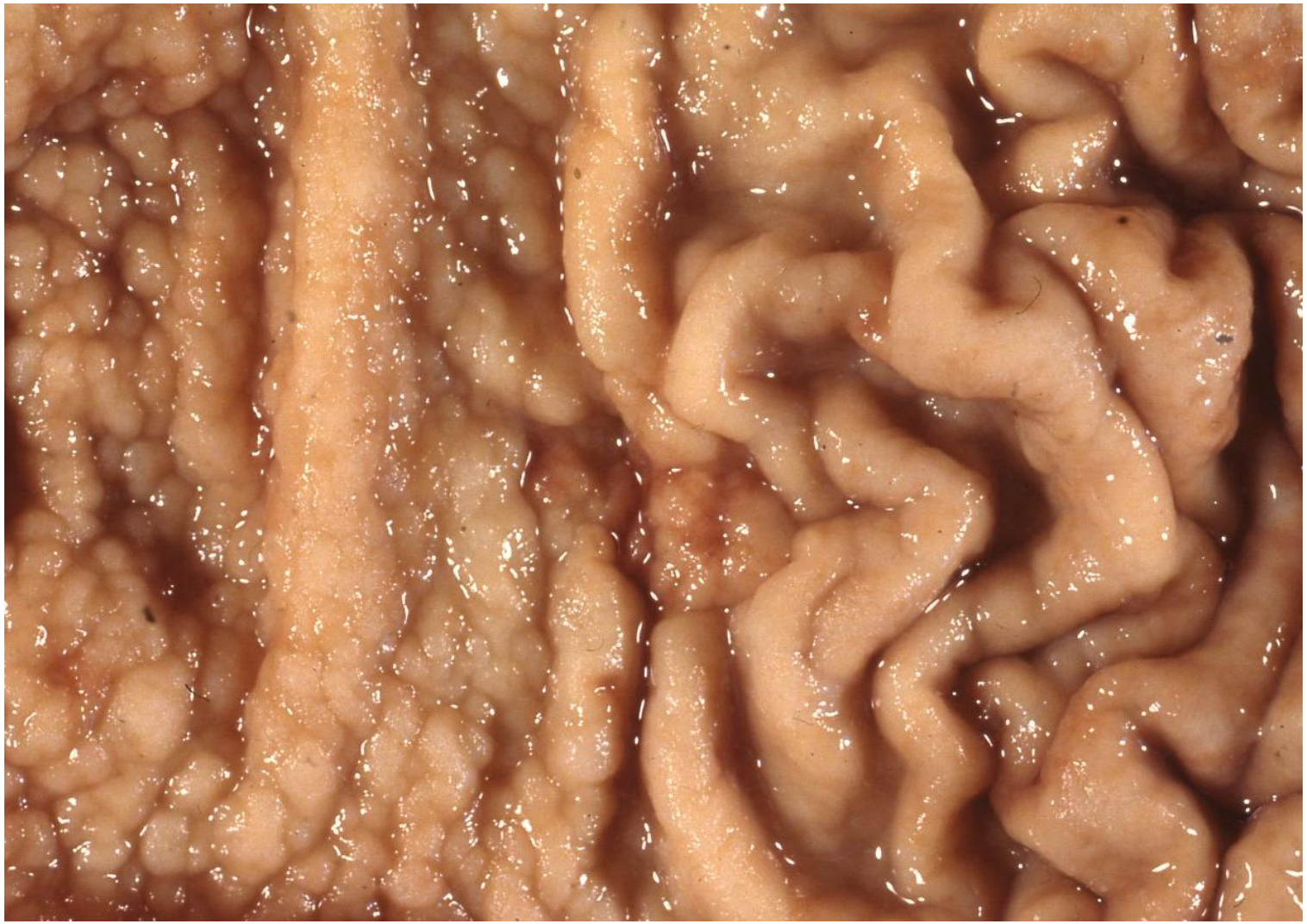


Early gastric cancer, type 0-IIc, at the gastric angle, after formalin fixation. Moth-eaten features of the gastric fold are observed.

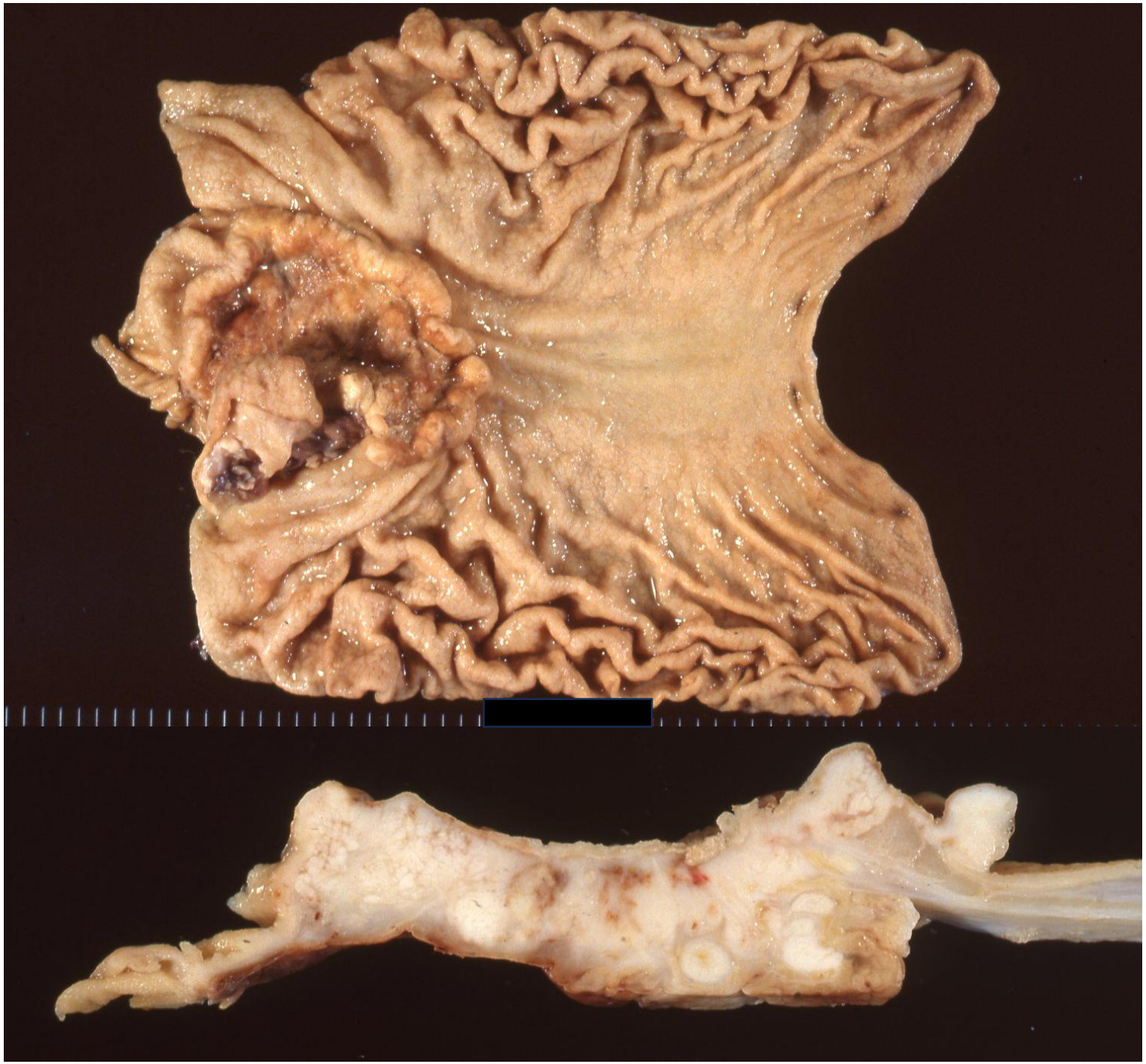
Early gastric cancer, type 0-III, in the posterior wall at the gastric angle, after formalin fixation. Microscopic confirmation of the depth of invasion is important. It the invasion reaches the proper muscle layer, it is called type III advanced.



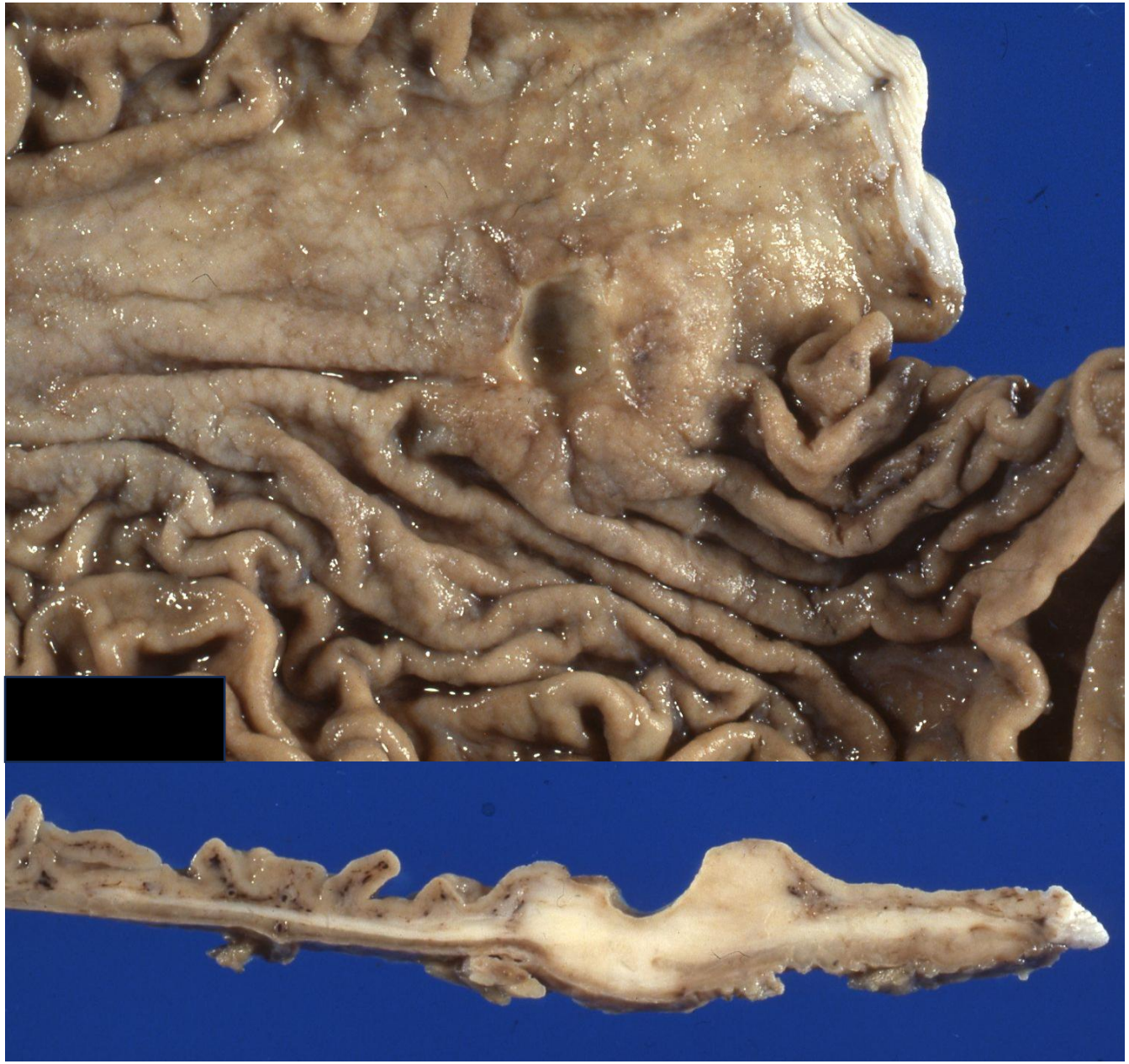
Early gastric cancer, type 0-IIc plus III, in the posterior wall, unfixed fresh material. Microscopic confirmation of the depth of invasion is important. It the invasion reaches the proper muscle layer, it is called type IIc advanced.



Early gastric cancer, type 0-IIc plus IIa, in the posterior wall, after formalin fixation. Microscopic confirmation of the depth of invasion is important.



AFP-producing gastric carcinoma, Borrmann's type 2, in the antrum, after formalin fixation. The cut surface (bottom) reveals deep invasion with venous involvement.



EBV-related medullary carcinoma with lymphoid stroma (lymphoepithelioma-like carcinoma), occurring in the gastric body, after formalin fixation. Bottom: cut surface of the tumor. Submucosal tumor-like invasive growth is characteristic.