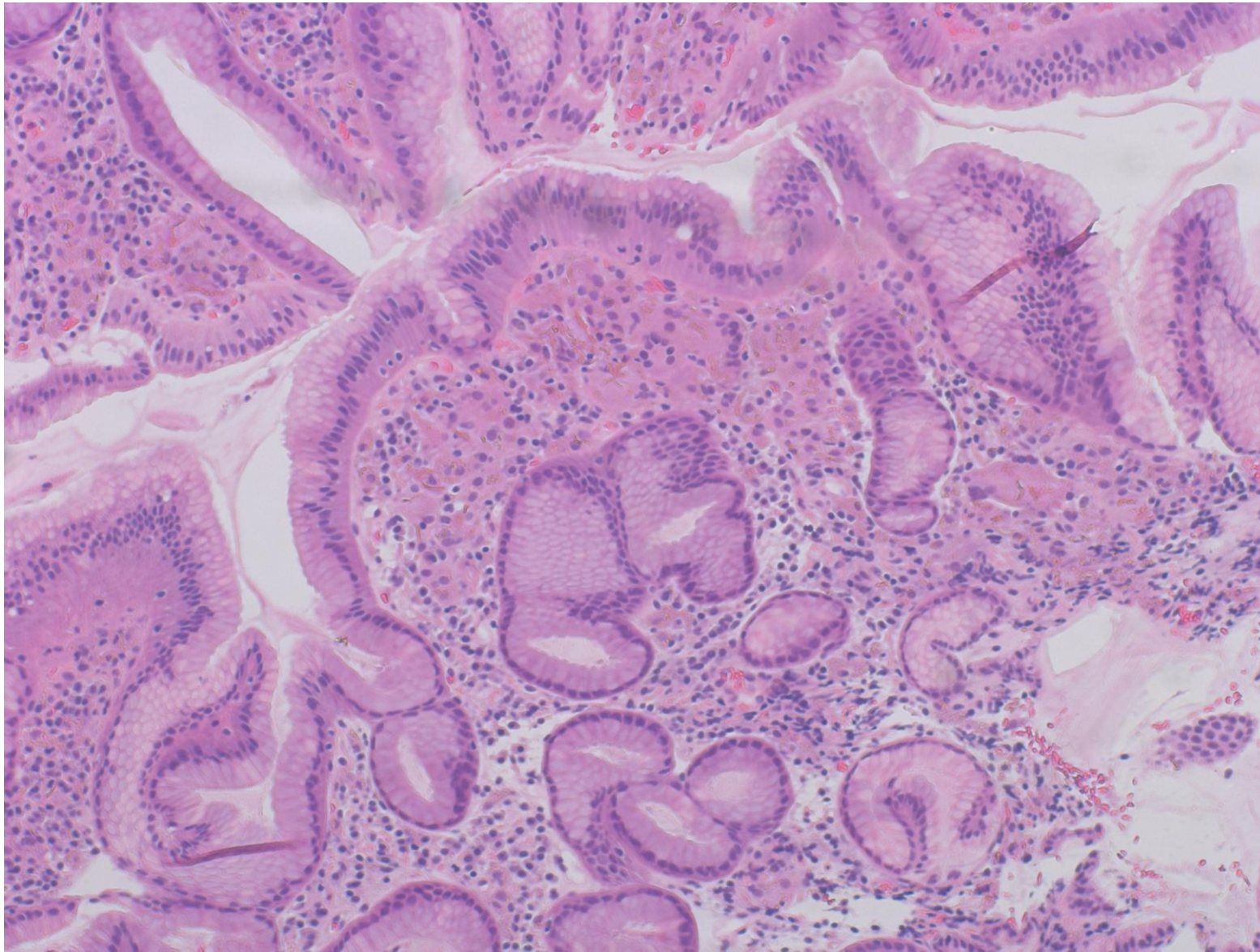


Lanthanum carbonate deposition, resembling intramucosal signet ring cell carcinoma

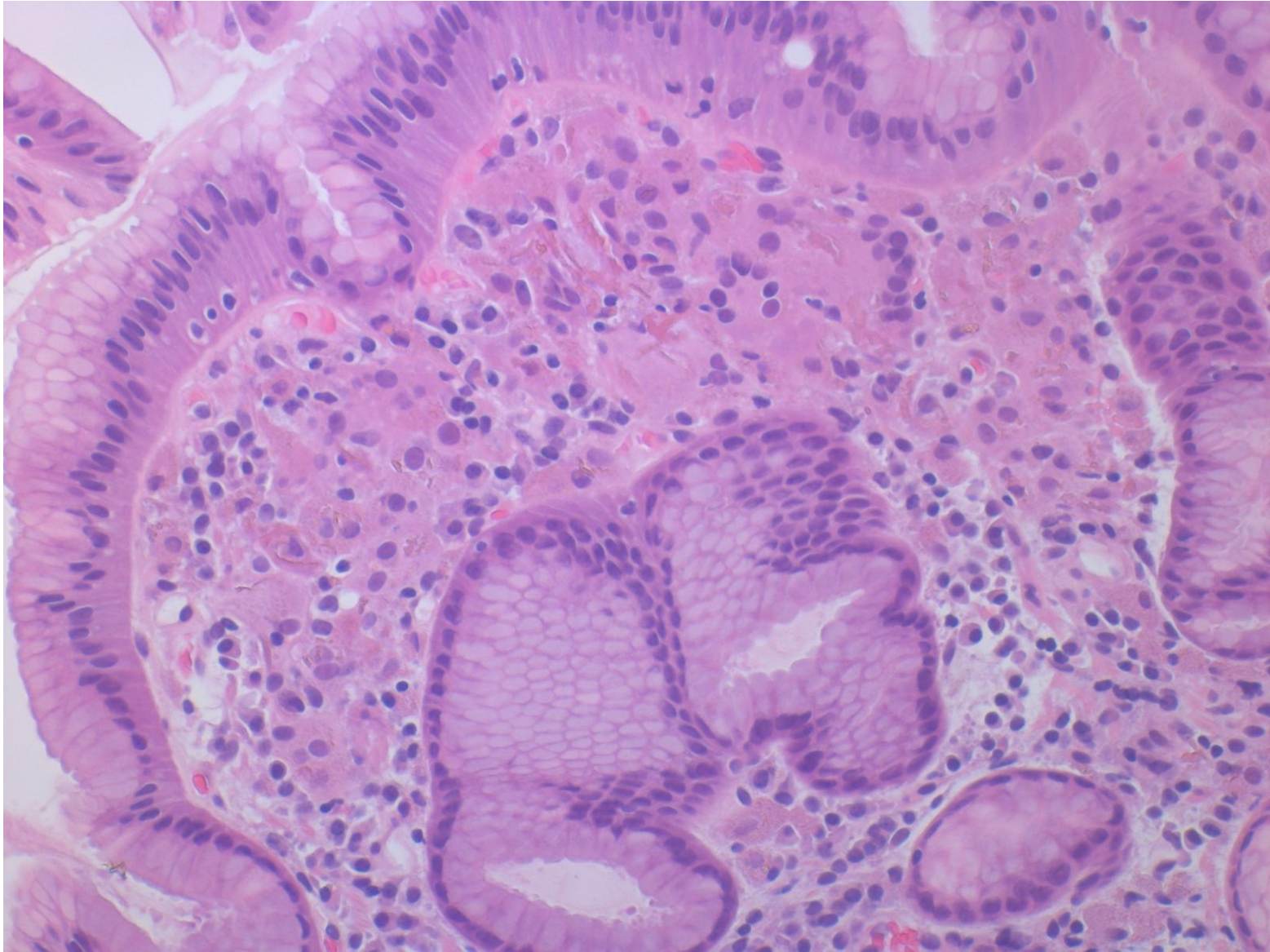
Lanthanum carbonate (Fosrenol®) is an oral phosphate binder (a calcium-free phosphate adsorbent) used to treat hyperphosphatemia in patients with end stage renal disease. The crystal deposition is seen in the gastrointestinal tract, particularly in the gastric mucosa. The deposition is occasionally associated with early gastric cancer. Endoscopically, early gastric cancer of depressed type was clinically suspected in the present 63 y-o male patient. No information on the hemodialysis status and administration of Lanthanum carbonate was given. Diffuse infiltration of macrophages with wide cytoplasm in the lamina propria mucosae somewhat resembled signet ring cell carcinoma without destruction of the mucosal structure. The lack of nuclear atypia and the presence of brown-colored crystals in the cytoplasm should be the key signs of benignancy.

Ref.-1: Fujimoto D, et al. Early gastric cancer with lanthanum deposition mucosa by endoscopic submucosal dissection: a case report and literature review. Clin J Gastroenterol 2021; 14: 1344-1349. doi: 10.1007/s12328-021-01453-z

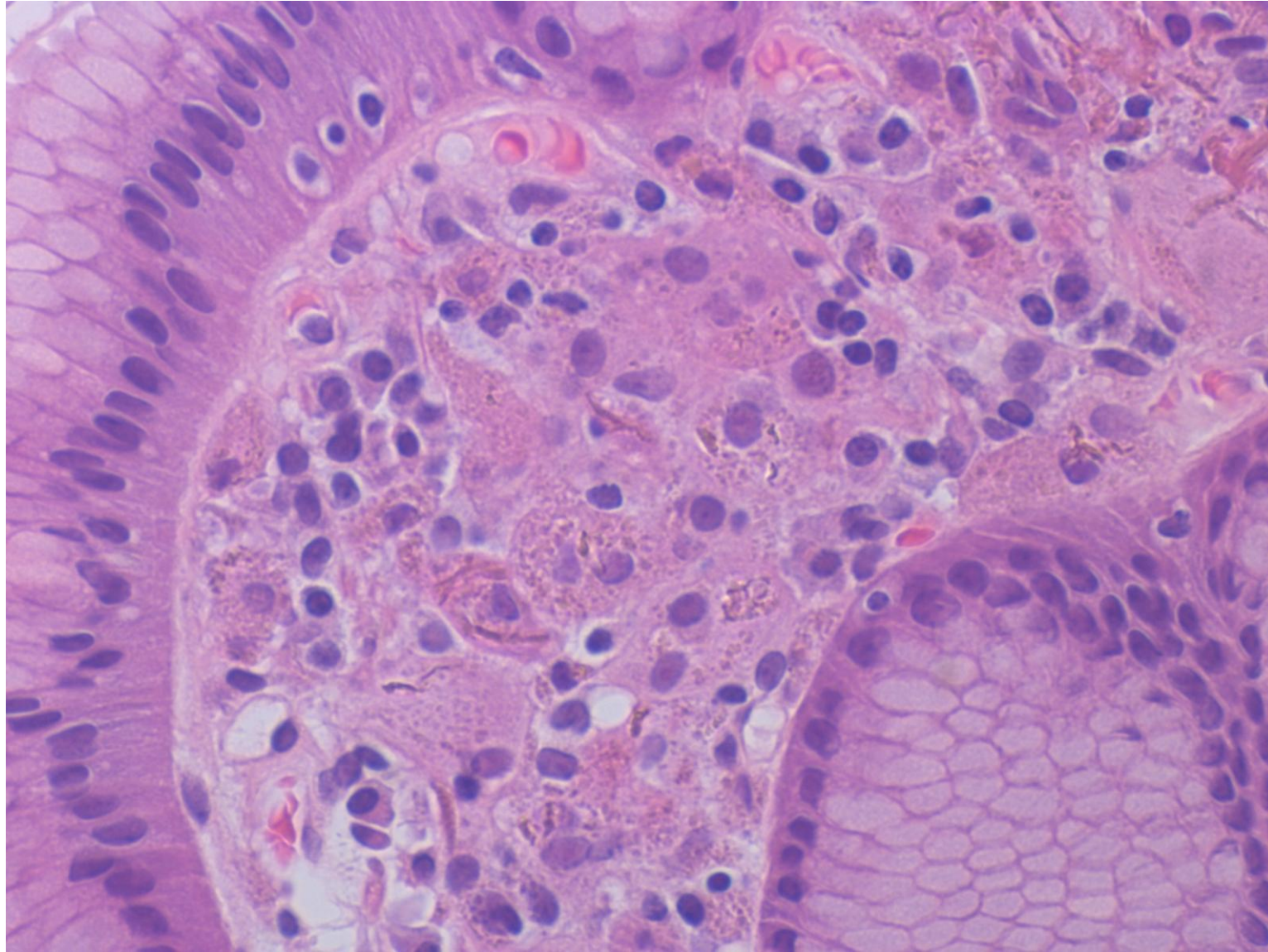
Ref.-2: Ogasawara Y, et al., A case of early gastric cancer in mucosa with Lanthanum deposition. Gastroenterol Endosc 2023; 65(10): 2187-2193, doi: 10.11280/gee.65.2187



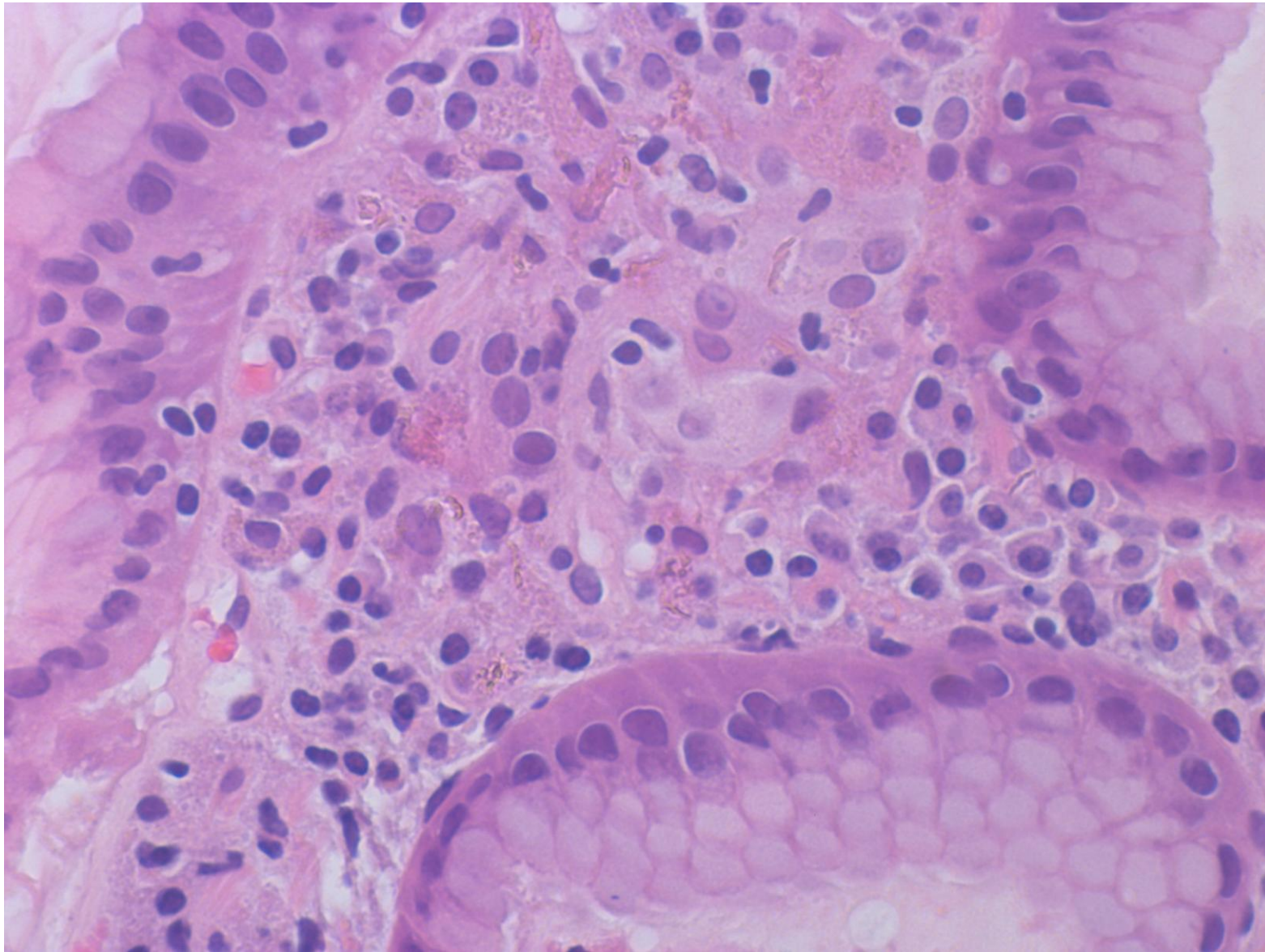
A 63 y-o male patient underwent gastric mucosal biopsy from the antral mucosa under the clinical suspicion of early gastric cancer of depressed type. The lamina propria mucosae is diffusely infiltrated by signet ring-like cells but without destruction of the mucosal structure (H&E-1).



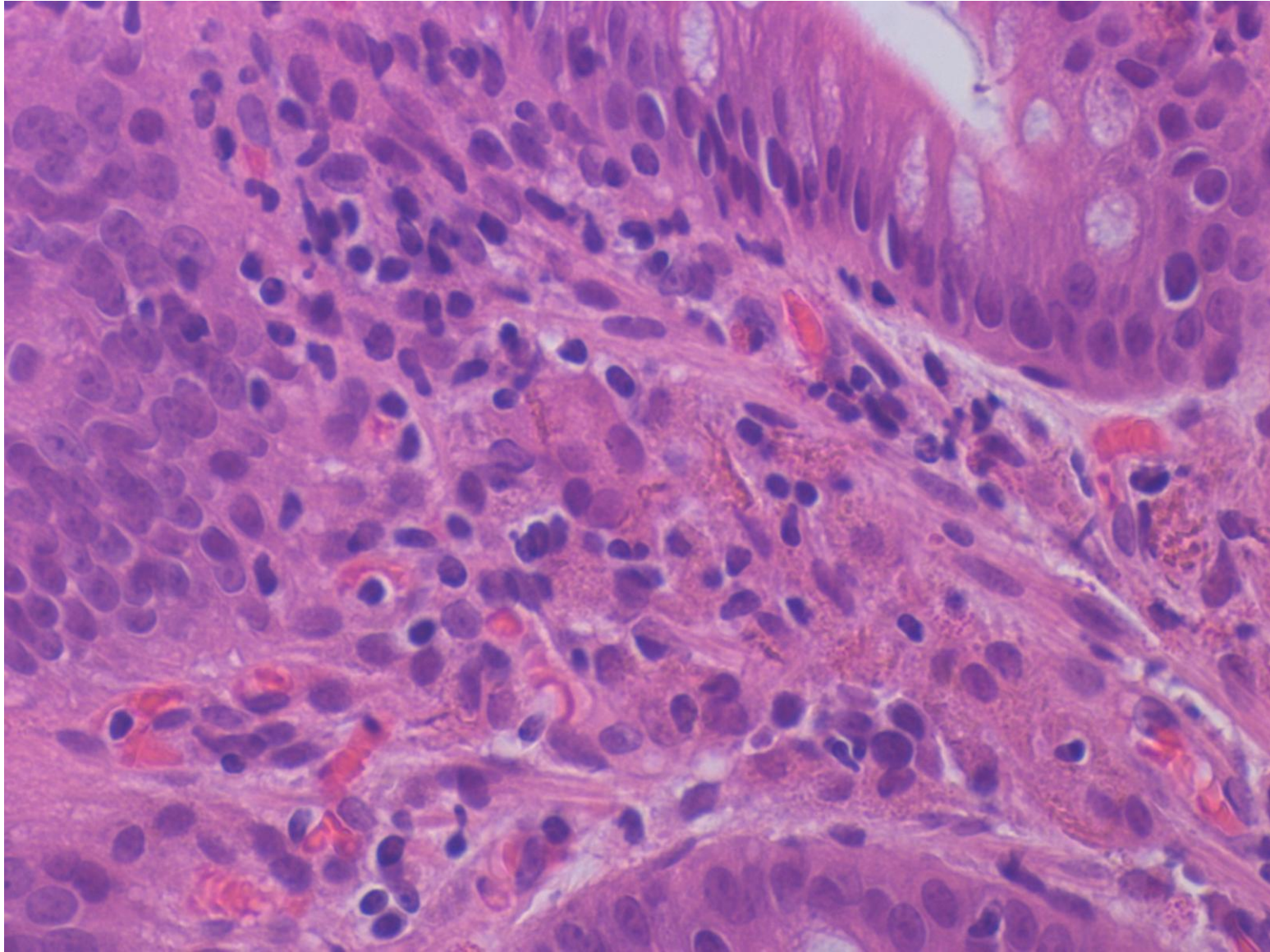
A 63 y-o male patient underwent gastric mucosal biopsy from the antral mucosa under the clinical suspicion of early gastric cancer of depressed type. The lamina propria mucosae is diffusely infiltrated by signet ring-like cells but without destruction of the mucosal structure (H&E-2).



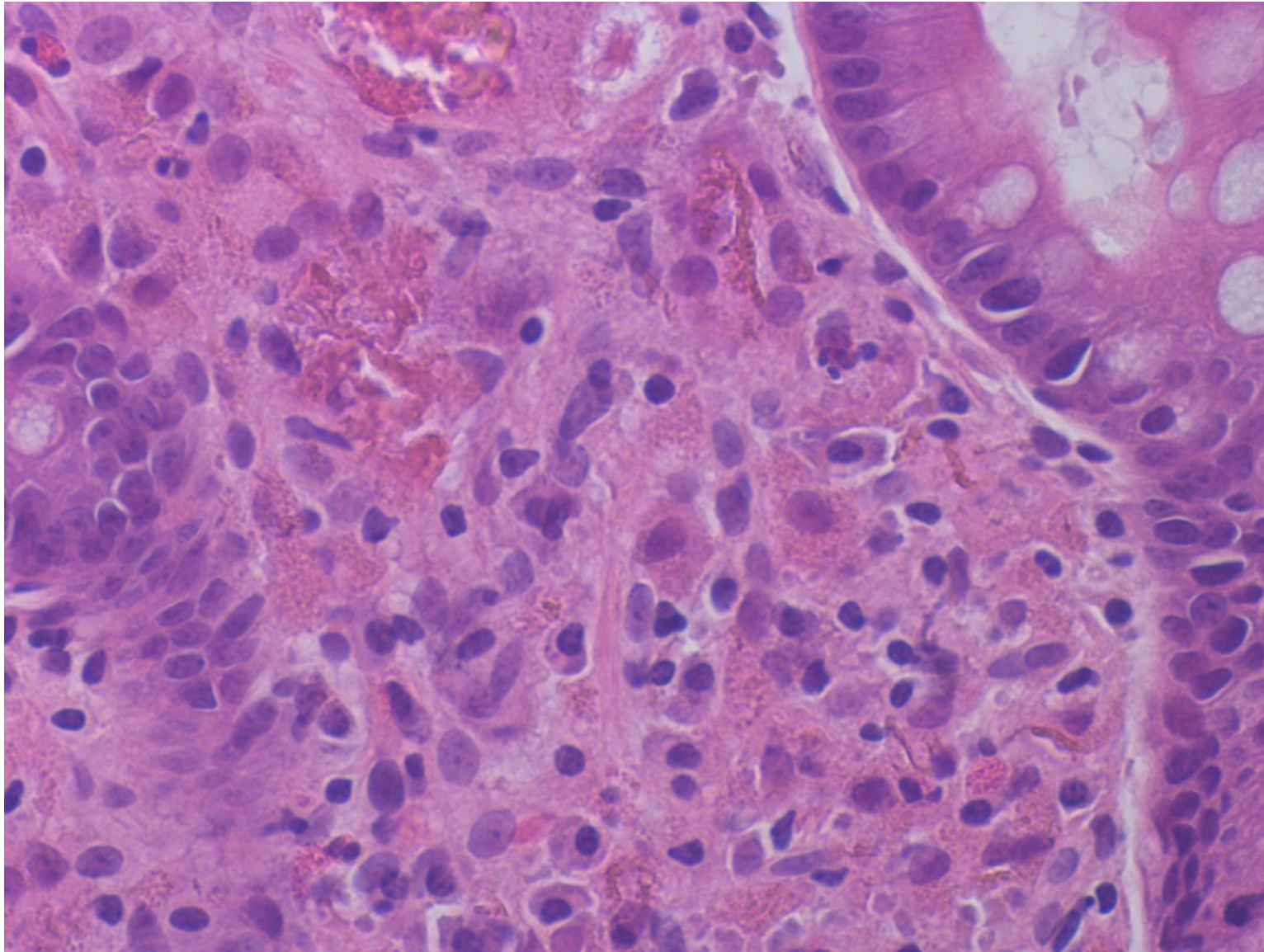
A 63 y-o male patient underwent gastric mucosal biopsy from the antral mucosa under the clinical suspicion of early gastric cancer of depressed type. The signet ring-like cells in the lamina propria mucosae lack nuclear atypia. Deposition of brown-colored crystals is seen in the cytoplasm (H&E-3).



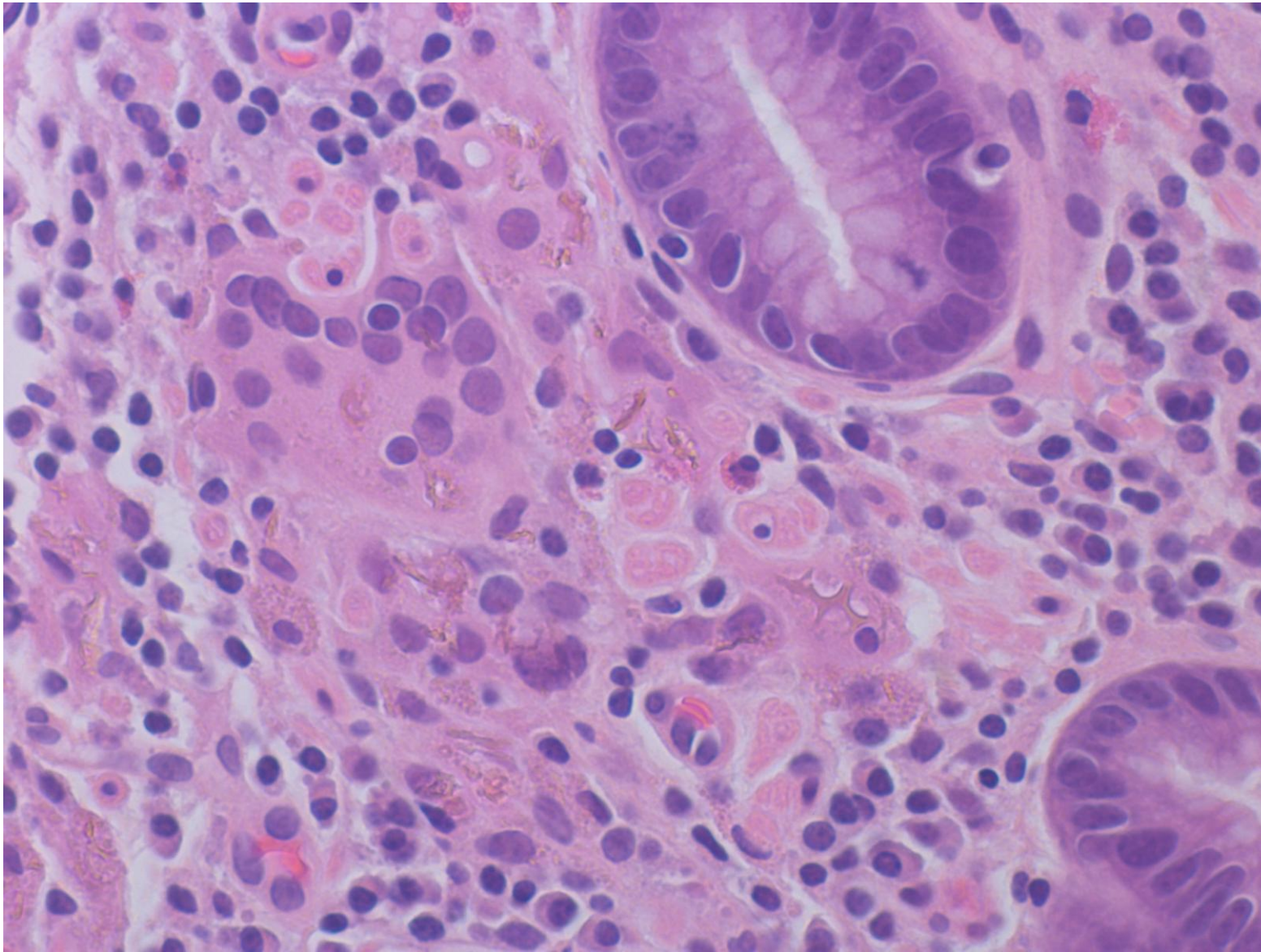
A 63 y-o male patient underwent gastric mucosal biopsy from the antral mucosa under the clinical suspicion of early gastric cancer of depressed type. The signet ring-like cells in the lamina propria mucosae lack nuclear atypia. Deposition of brown-colored crystals is seen in the cytoplasm (H&E-4).



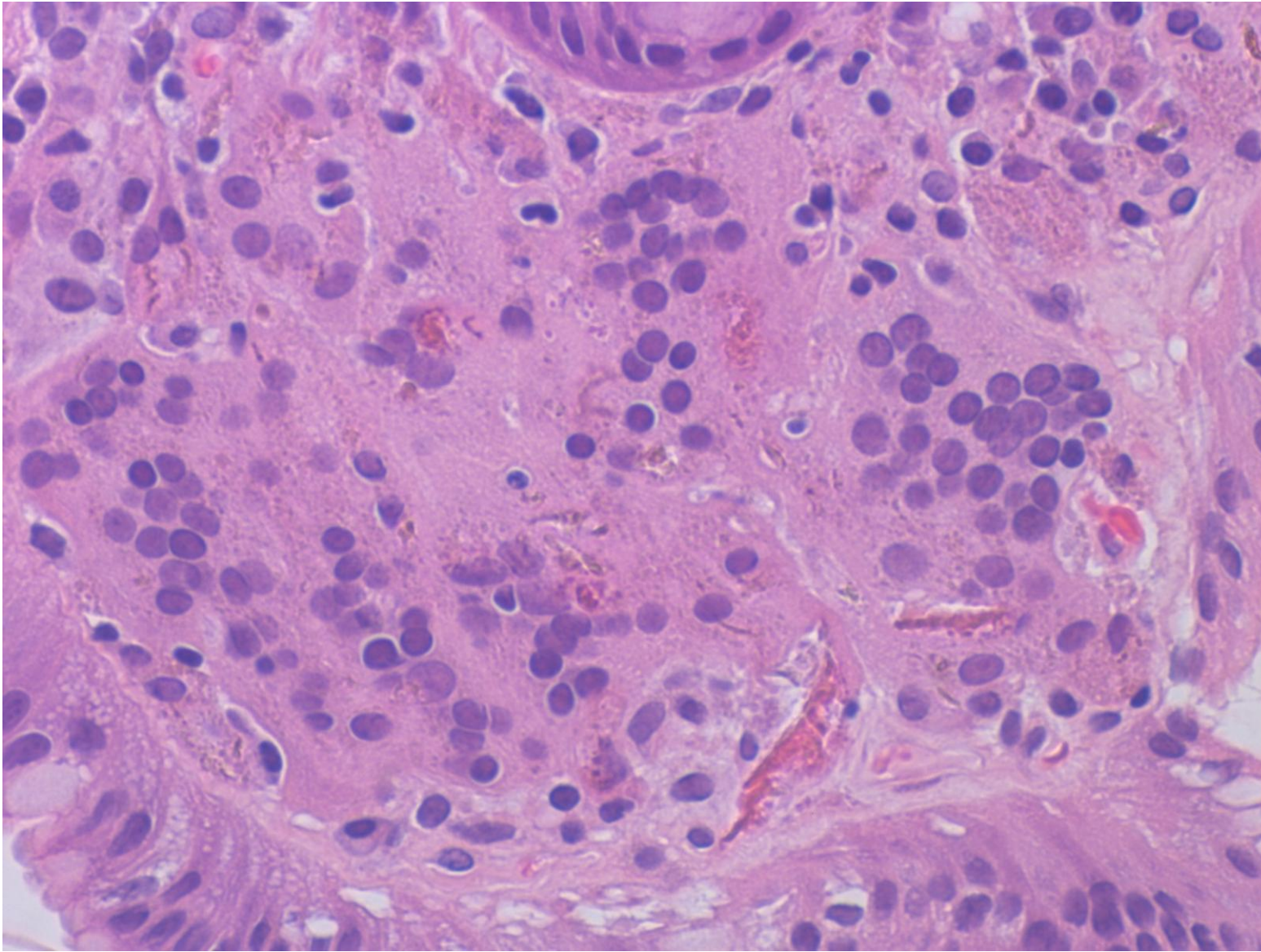
A 63 y-o male patient underwent gastric mucosal biopsy from the antral mucosa under the clinical suspicion of early gastric cancer of depressed type. The signet ring-like cells in the lamina propria mucosae lack nuclear atypia. Deposition of brown-colored crystals is seen in the cytoplasm (H&E-5).



A 63 y-o male patient underwent gastric mucosal biopsy from the antral mucosa under the clinical suspicion of early gastric cancer of depressed type. The deposition of brown-colored crystals is evident in the cytoplasm of signet ring-like macrophages (H&E-6).



A 63 y-o male patient underwent gastric mucosal biopsy from the antral mucosa under the clinical suspicion of early gastric cancer of depressed type. The brown-colored crystals-laden macrophages lack nuclear atypia and focal formation of multinucleation with lymphocytic emperipolesis (H&E-7).



A 63 y-o male patient underwent gastric mucosal biopsy from the antral mucosa under the clinical suspicion of early gastric cancer of depressed type. The brown-colored crystals-laden macrophages lack nuclear atypia and formation of multinucleation with lymphocytic emperipolesis (H&E-8).