

# Mucinous cystadenocarcinoma of the vermiform appendix in Crohn's disease

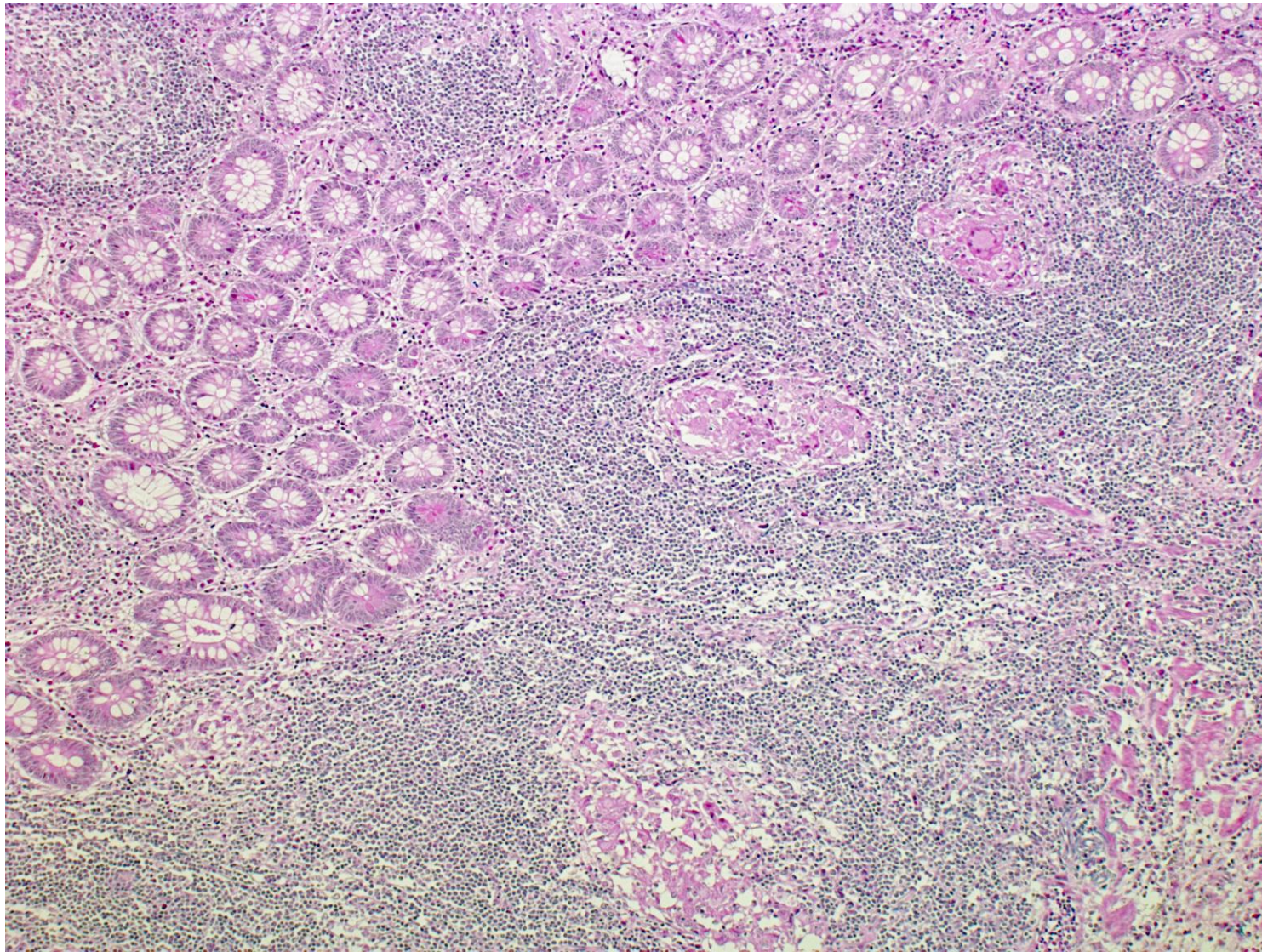
Mucinous adenocarcinomas of the appendix can be cystic or not. The term “mucinous cystadenocarcinoma” is used for well-differentiated mucinous adenocarcinoma macroscopically with cystic structures. The distinction between cystadenocarcinoma and non-cystic adenocarcinoma has no biologic significance. The recurrence rate is high when an appendiceal neoplasm is associated with pseudomyxoma peritonei. It should be noted that appendiceal mucinous neoplasms may occur in patients with inflammatory bowel disease. Patients with long-standing inflammatory bowel disease should be routinely screened, not only for colorectal cancer but also for appendiceal mucinous neoplasm.

Ref.-1: Svrcek M. Mucinous cystadenocarcinoma, appendix. In: Carneiro F, Chaves P, Ensari A (eds) Pathology of the Gastrointestinal Tract. Encyclopedia of Pathology. Springer, Cham. 2017. doi: 10.1007/978-3-319-40560-5\_1512

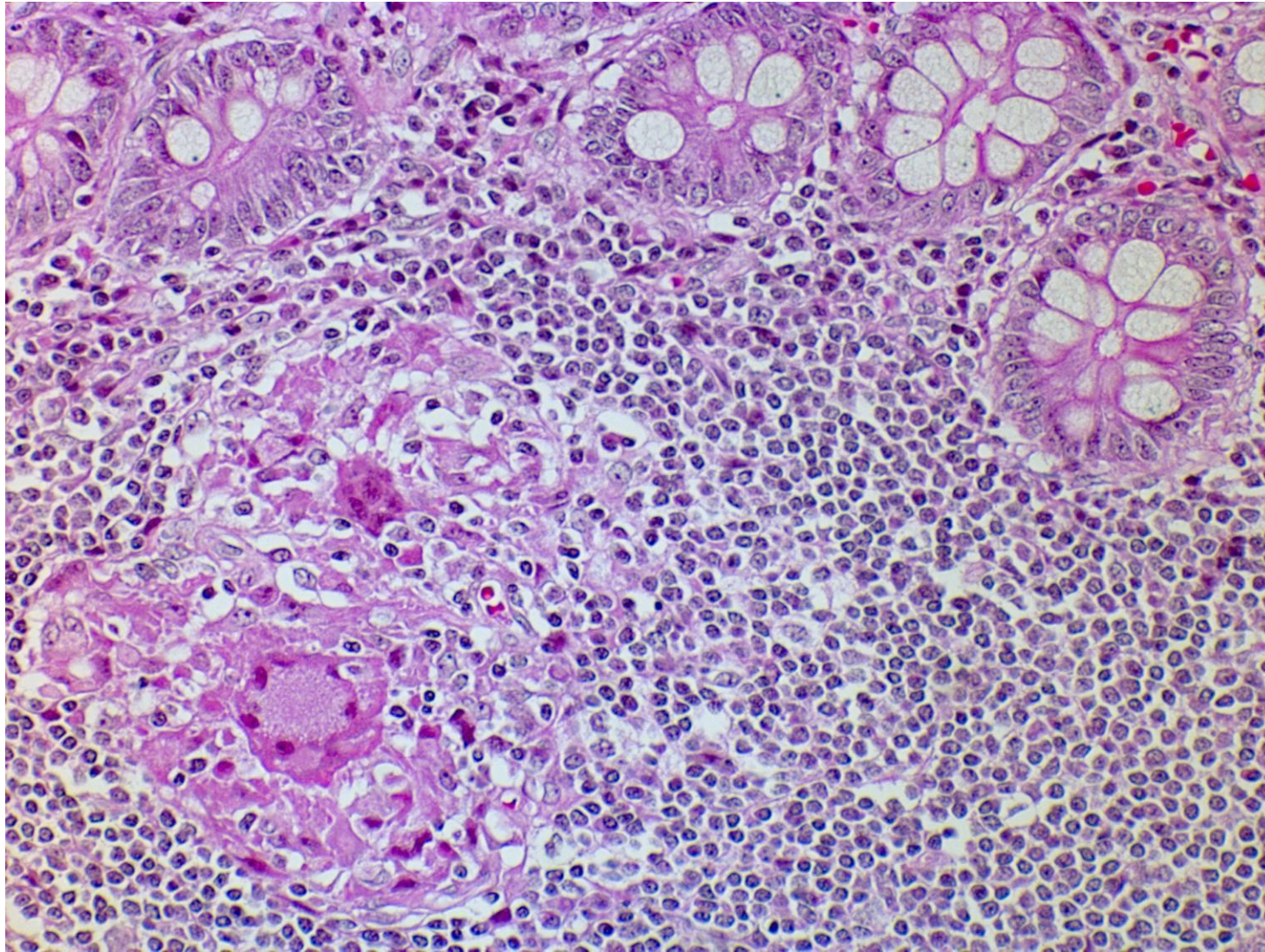
Ref.-2: Bonomi AM, et al. Appendiceal mucinous neoplasms and inflammatory bowel disease: systematic review of the literature. J Clin Med 2023; 13(1): 191. doi: 10.3390/jcm13010191



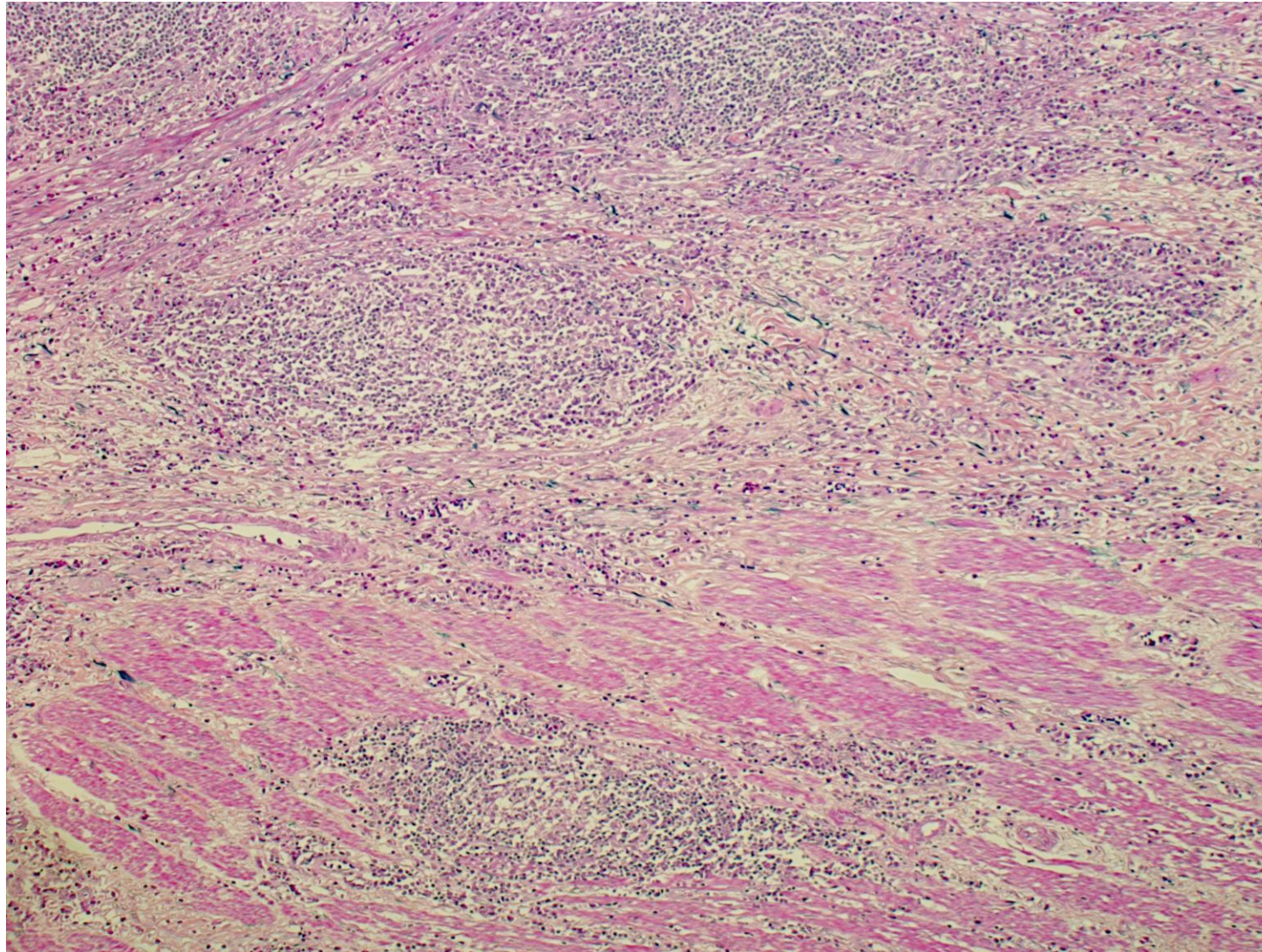
Mucinous cystadenocarcinoma of the vermiform appendix in Crohn's disease. A cut surface of the right hemicolectomized appendiceal tumor after formalin fixation. The tumor is occupied in the para-appendiceal cystic space. Diffuse transmural invasion of mucinous malignancy is noted.



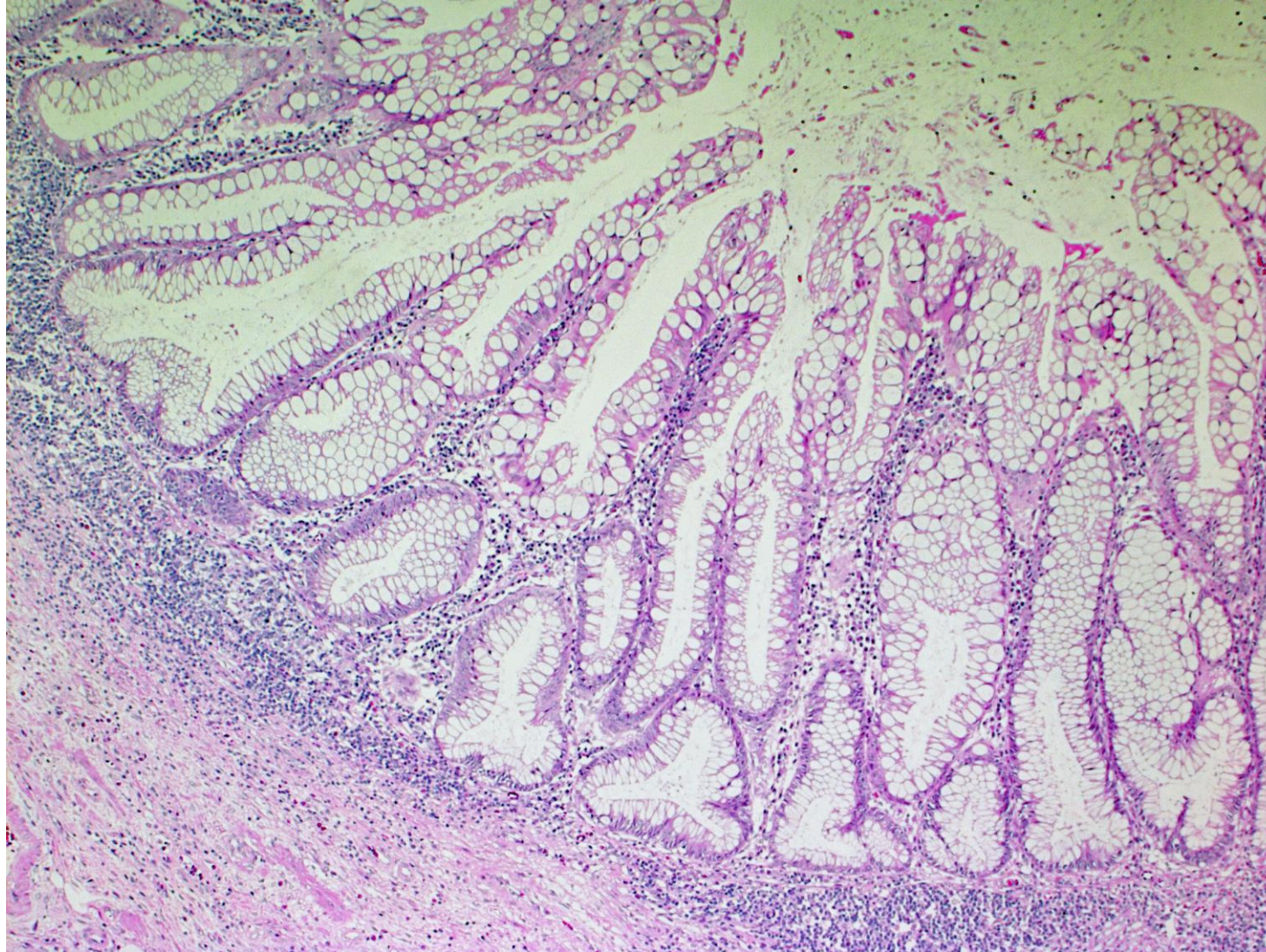
Mucinous cystadenocarcinoma of the vermiform appendix in Crohn's disease. The appendiceal mucosa and submucosa reveal well-developed lymphoid tissue. Non-caseous epithelioid granulomas with multinucleated giant cells are scattered in the lymphoid infiltrates, being consistent with the underlying association of Crohn's disease (H&E-1).



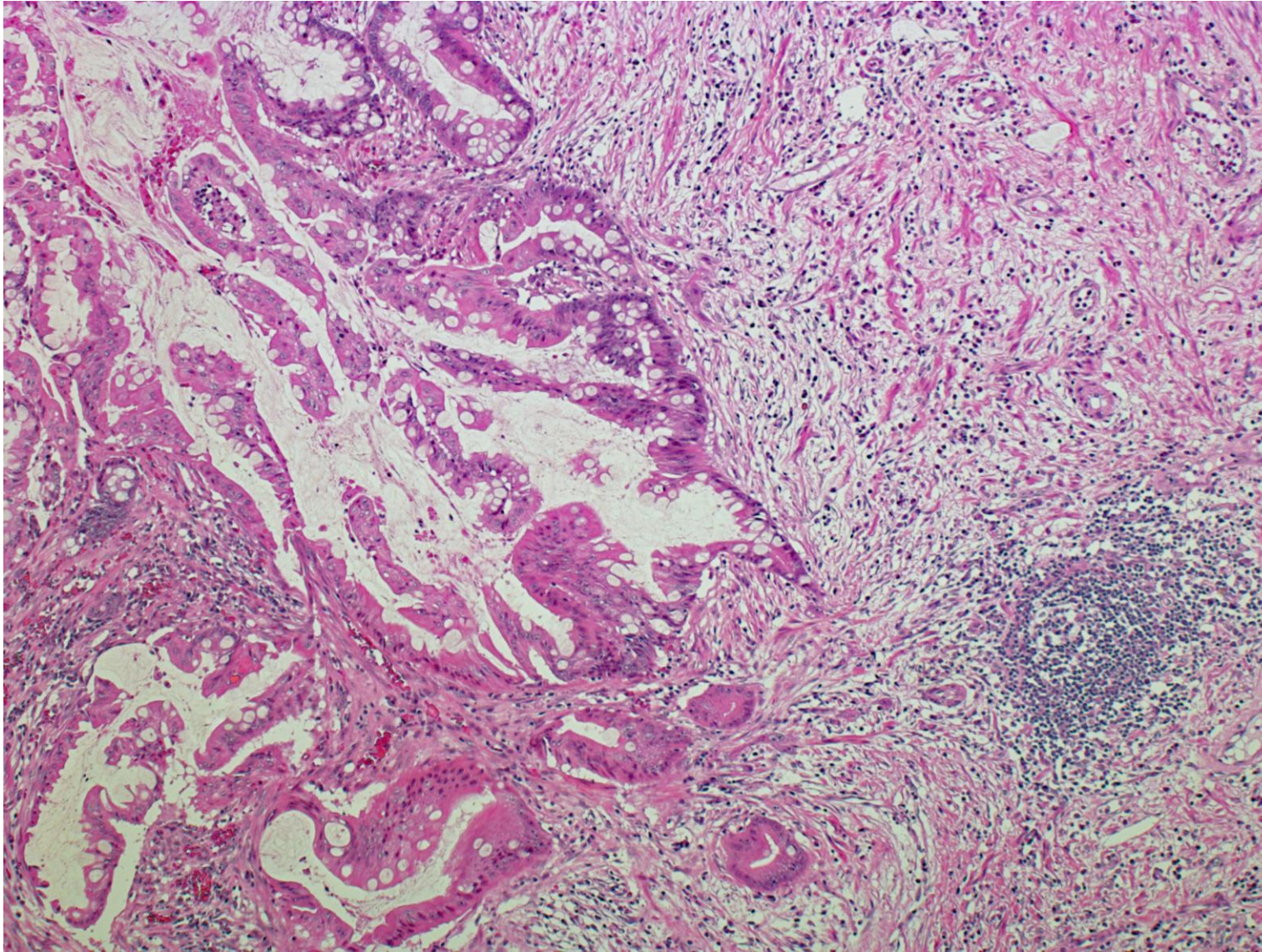
Mucinous cystadenocarcinoma of the vermiform appendix in Crohn's disease. The appendiceal mucosa and submucosa reveal well-developed lymphoid tissue. Non-caseous epithelioid granulomas with multinucleated giant cells are scattered in the lymphoid infiltrates, being consistent with the underlying association of Crohn's disease (H&E-2).



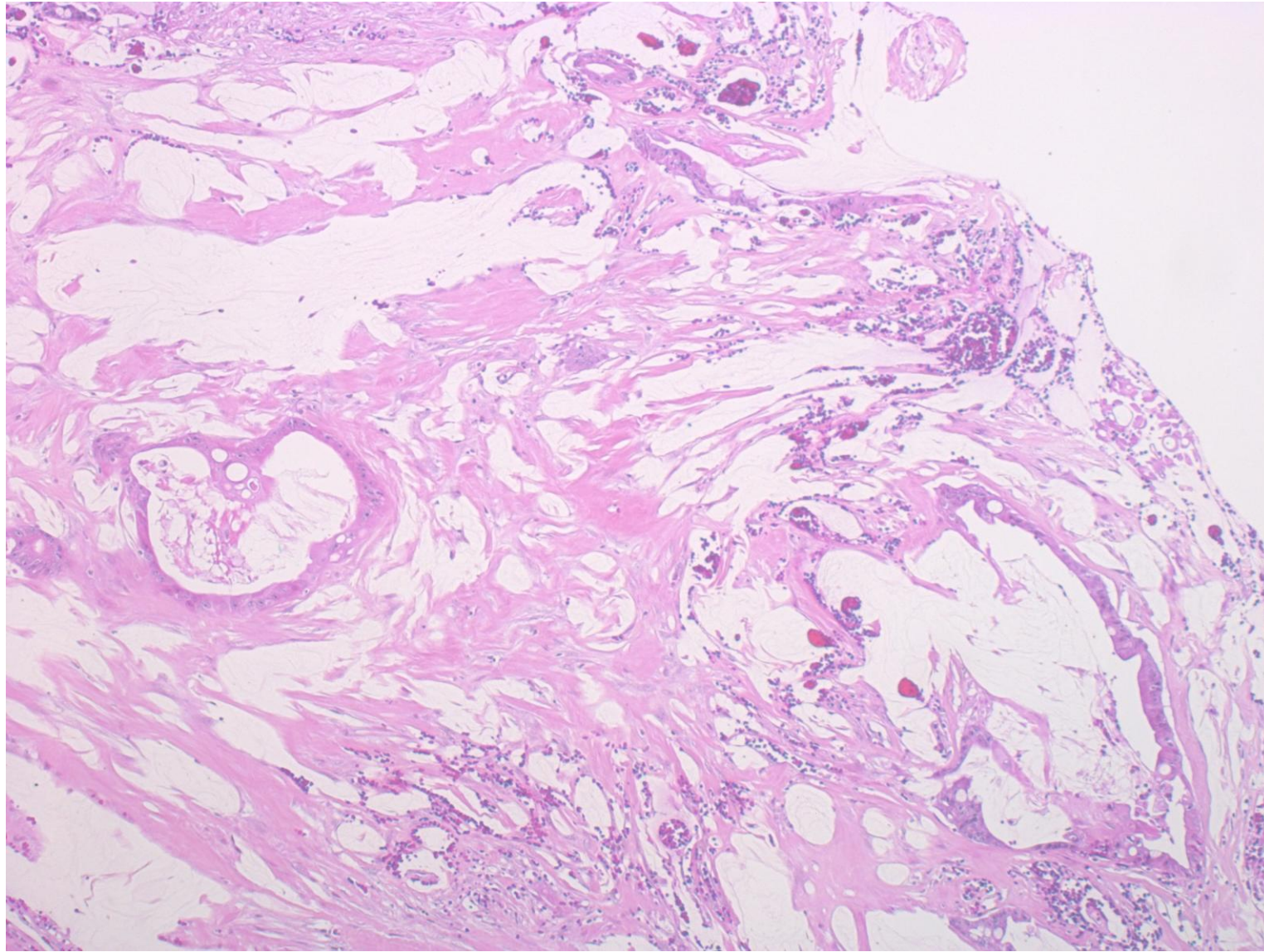
Mucinous cystadenocarcinoma of the vermiform appendix in Crohn's disease. Lymphoid follicles are scattered in the surrounding appendiceal wall, particularly among the proper muscle layer, being consistent with the underlying association of Crohn's disease (H&E-3).



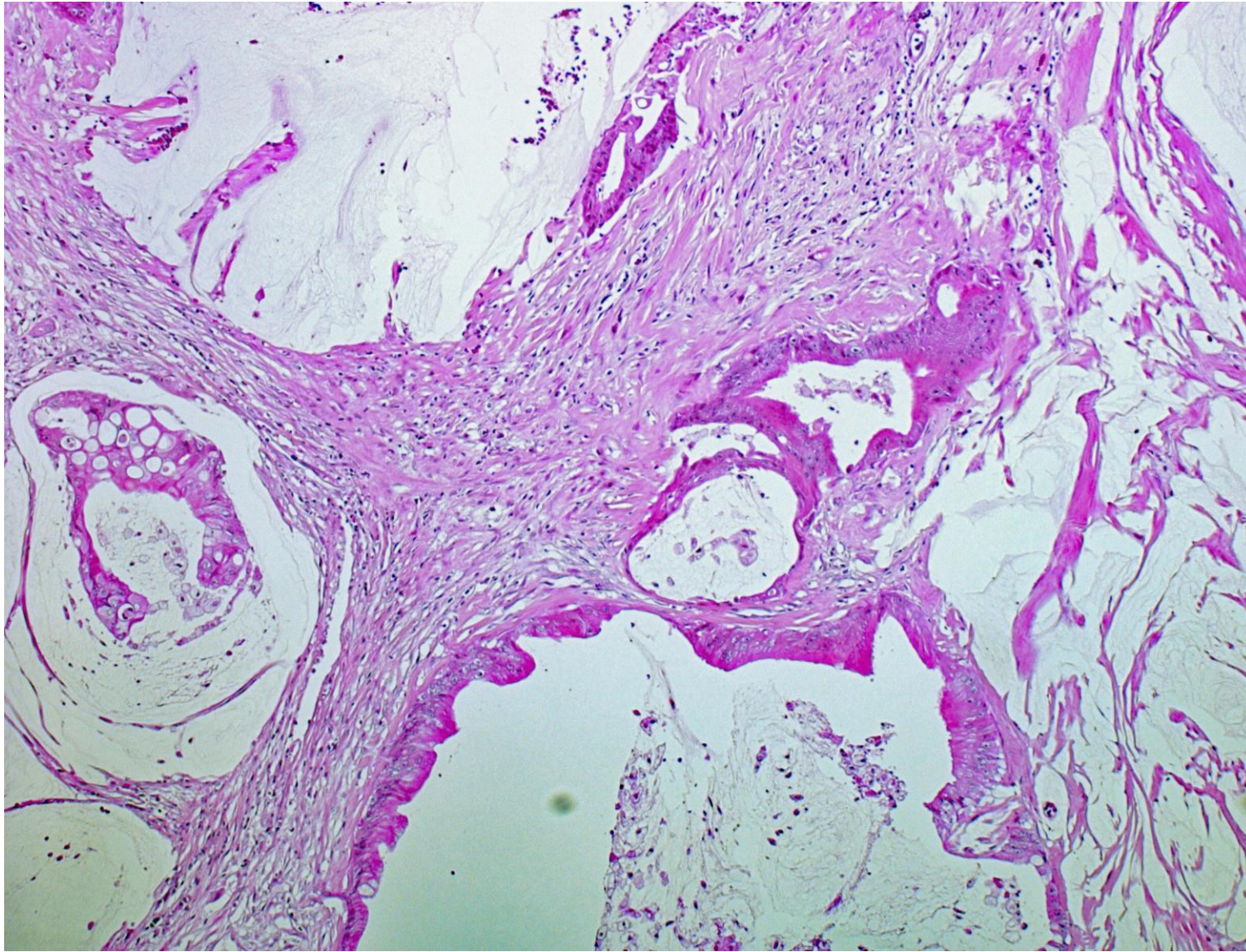
Mucinous cystadenocarcinoma of the vermiform appendix in Crohn's disease.  
The non-cancerous appendiceal mucosa reveals goblet cell hyperplasia (H&E-4).



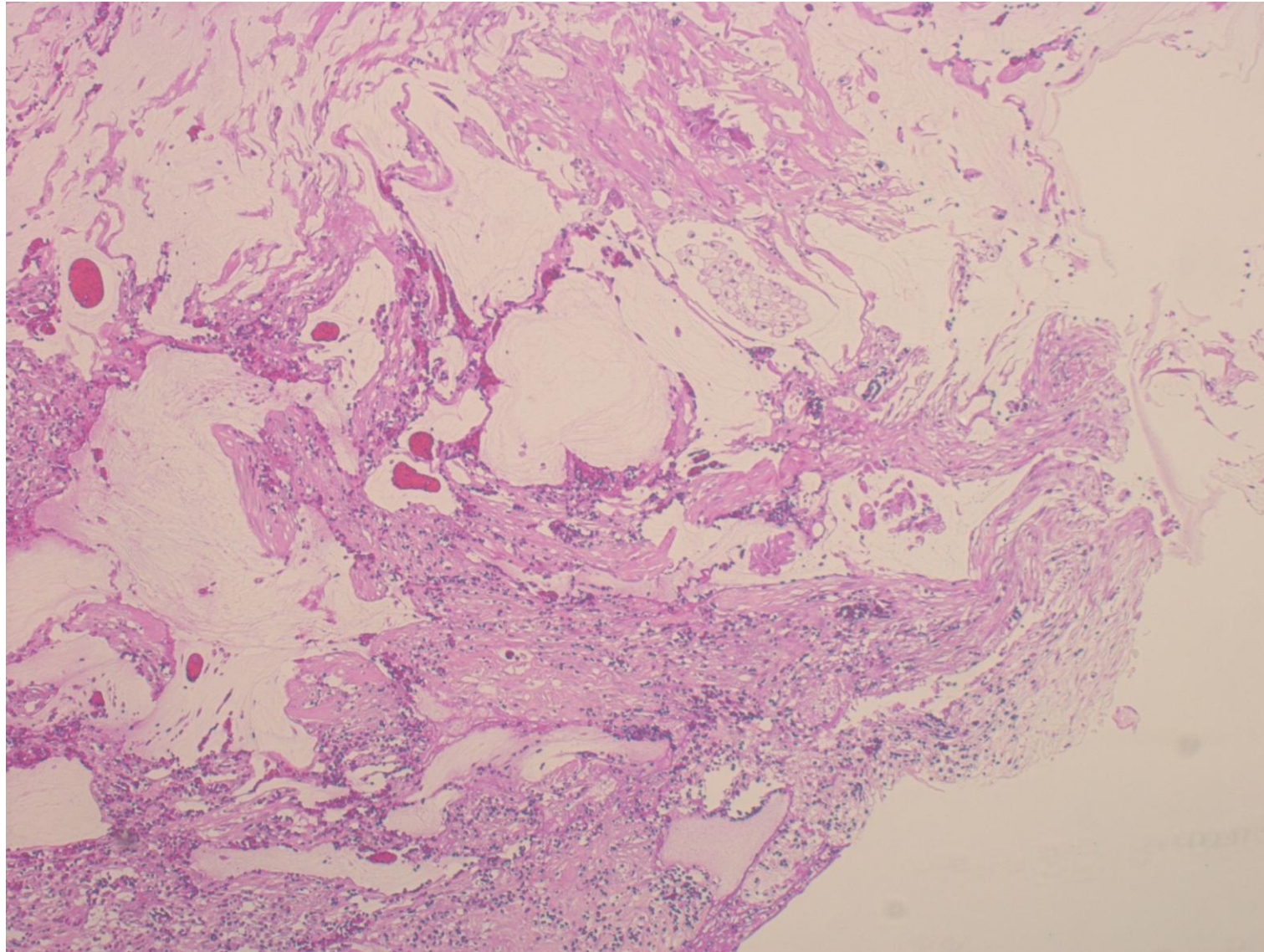
Mucinous cystadenocarcinoma of the vermiform appendix in Crohn's disease. The appendiceal mucosa is replaced by atypical mucinous cells with a papillary arrangement. Lymphoid follicle formation is associated (H&E-5).



Mucinous cystadenocarcinoma of the vermiform appendix in Crohn's disease. The appendiceal mucosa is replaced by atypical mucinous cells with mucin lake formation. Mural invasion is evident (H&E-6).



Mucinous cystadenocarcinoma of the vermiform appendix in Crohn's disease. Transmural invasion of cancerous mucinous cells with mucin lake formation is noted (H&E-6).



Mucinous cystadenocarcinoma of the vermiform appendix in Crohn's disease. Transmurular invasion of cancerous mucinous cells reaches the subserosal layer to indicate the association of peritoneal dissemination (H&E-7).