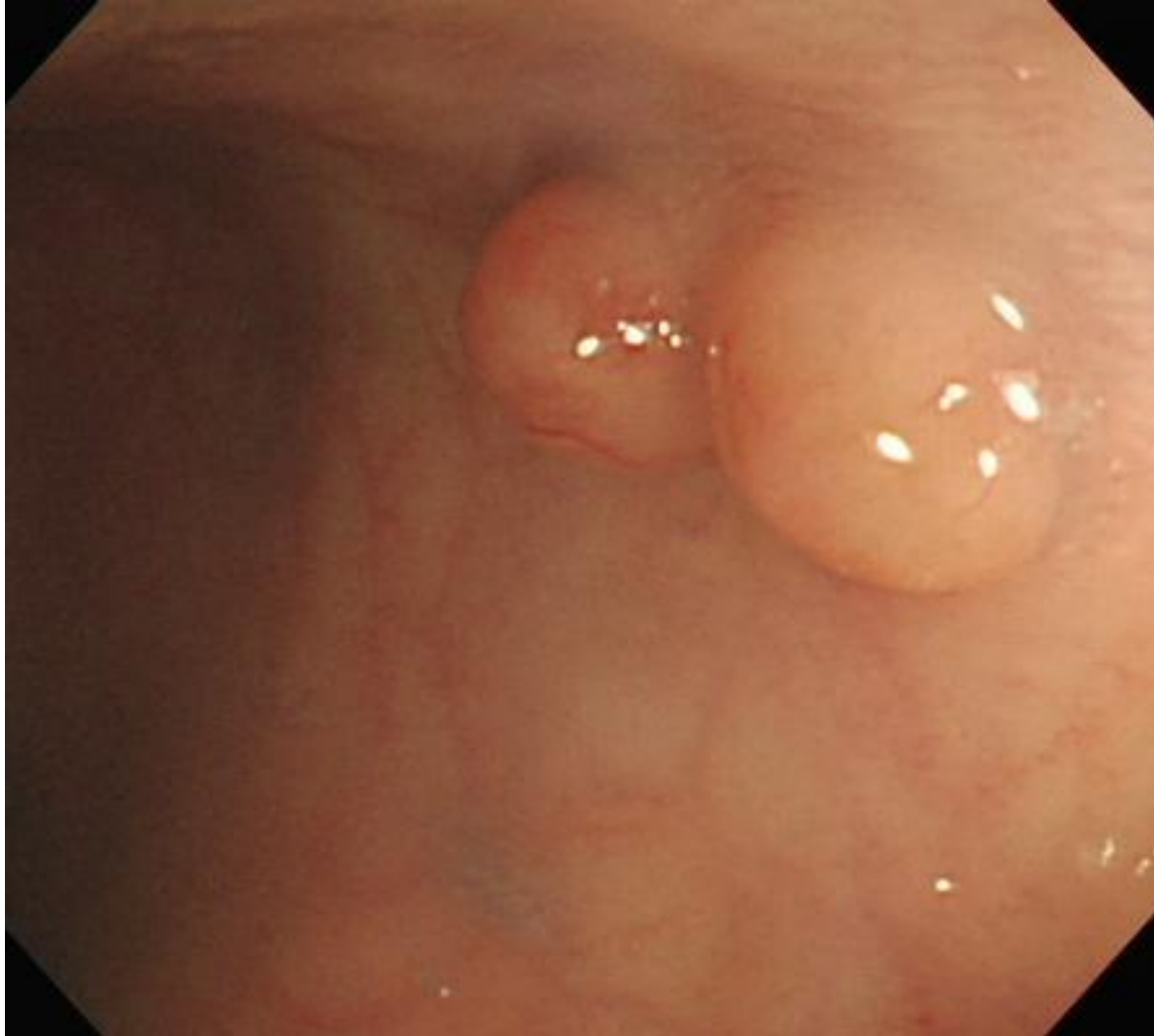


Rectal tonsil

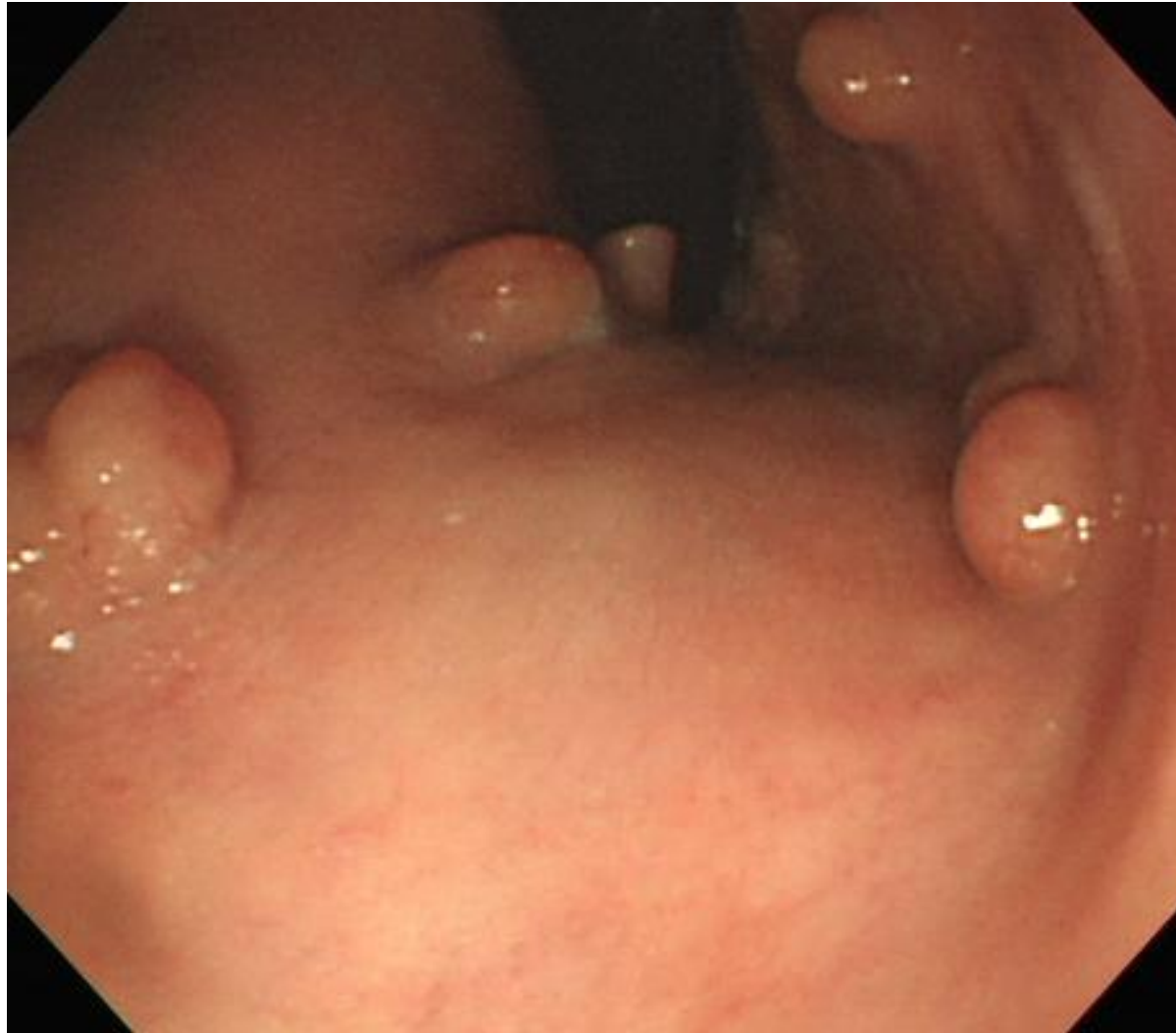
Rectal tonsil is a benign polypoid lesion composed of nodular lymphoid hyperplasia or lymphoid aggregate measuring 2-10 mm, predominantly located in the posterior wall of the rectum. Rectal tonsil is asymptomatic and incidental. It represents localized hyperplasia of B-lymphocytes, namely hyperplasia of gut-associated lymphoid tissue (GALT). The non-neoplastic lymphoid follicles develop enlarged germinal centers. As is so in the pharyngeal tonsil, the covering columnar cells are infiltrated by small B-lymphocytes. Rectal tonsil resembles the bursa of Fabricius in the cloaca of birds (particularly of young birds). The bursa, consisting of both epithelial and lymphoid tissue (forming lymphoid follicles with germinal centers), is essential for B-cell development in birds.

Ref.-1: Hong JB, et al. Rectal tonsil: a case report and literature review. *World J Gastroenterol* 2015; 21(8): 2563-2567. doi: 10.3748/wjg.v21.i8.2563

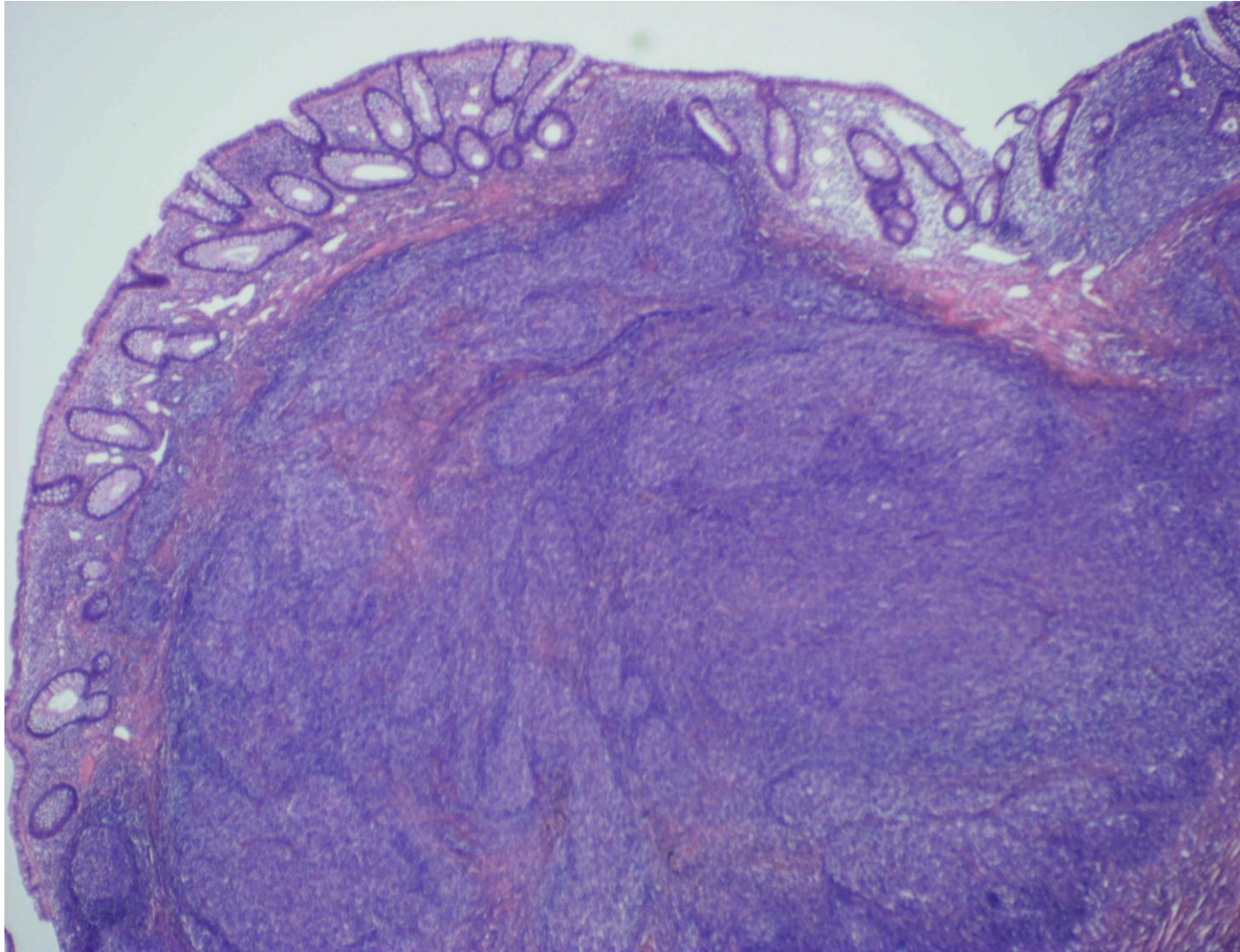
Ref.-2: Madej JP, et al. New insight into the structure, development, functions and popular disorders of bursa Fabricii. *Anat Histol Embryol* 2013; 42(5): 321-331. doi: 10.1111/ahe.12026



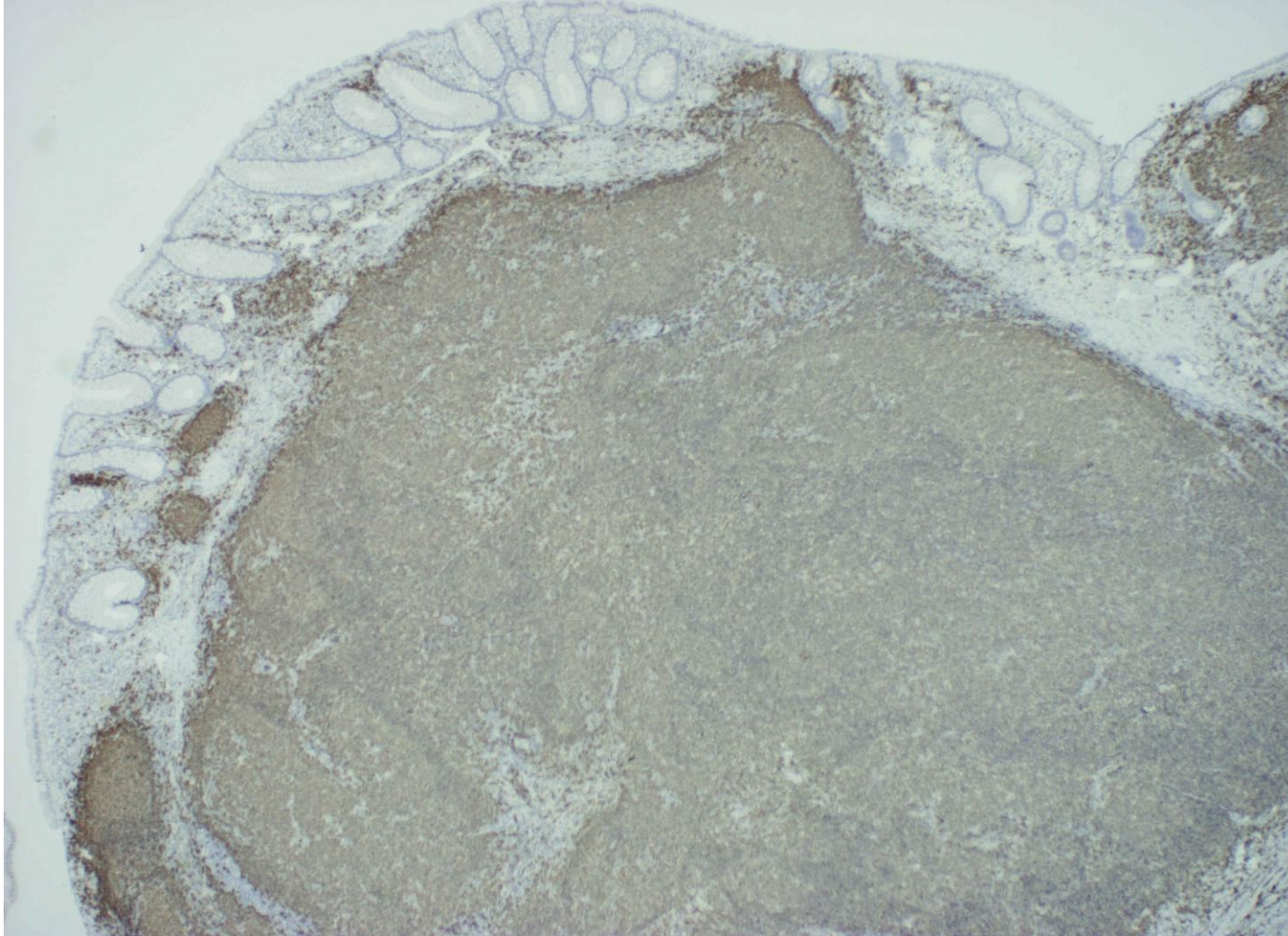
Rectal tonsil seen in a 39-year-old female patient. Endoscopically, polypoid lesions are seen in the posterior wall of the rectum.



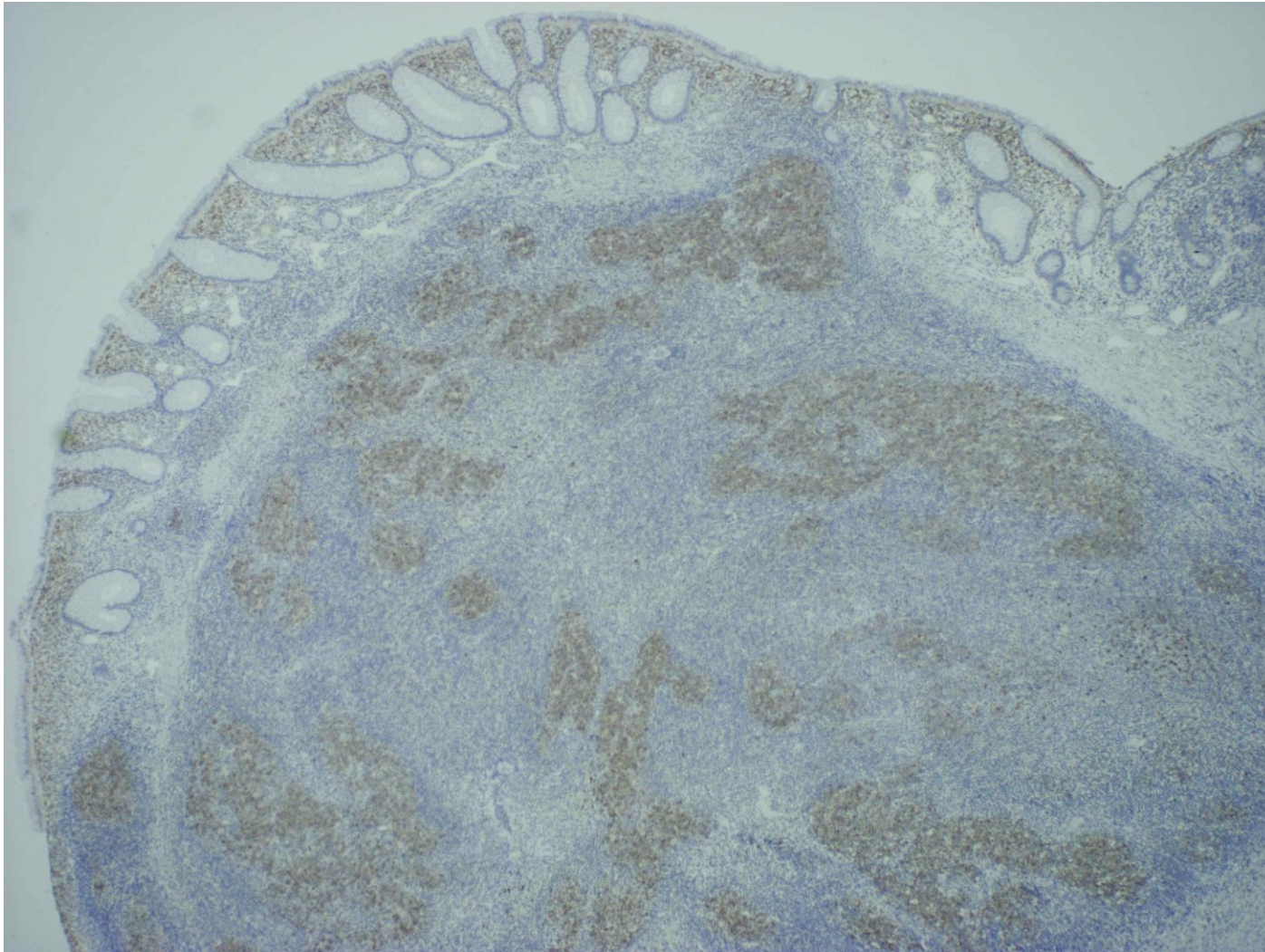
Rectal tonsil seen in a 39-year-old female patient. Endoscopically, multiple polypoid lesions are seen mainly in the posterior wall of the rectum.



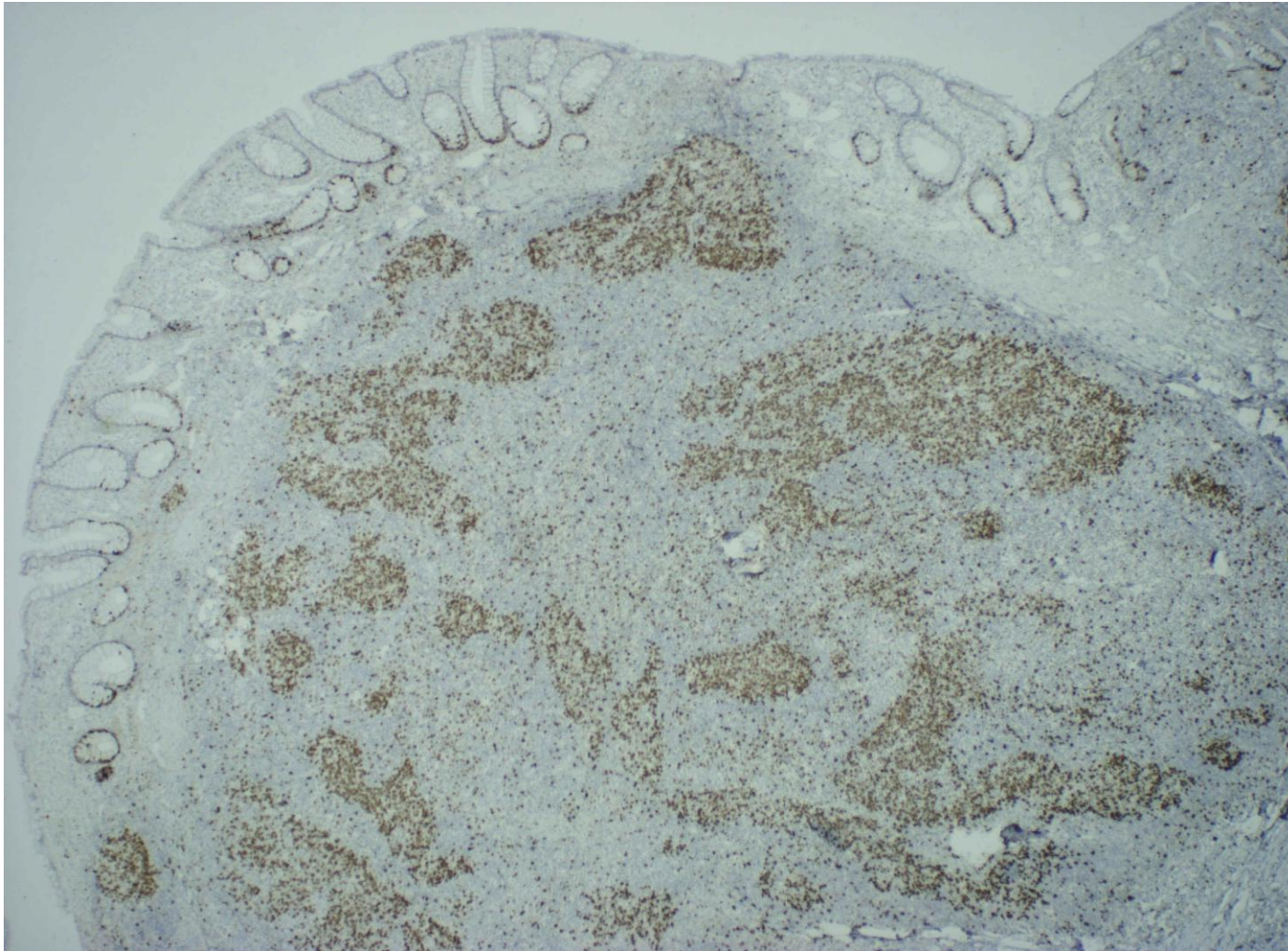
Rectal tonsil seen in a 39-year-old female patient. Microscopically, lymphoid hyperplasia with prominent germinal center formation is observed mainly in the submucosa of the rectum. Intramucosal involvement is associated. H&E (1)



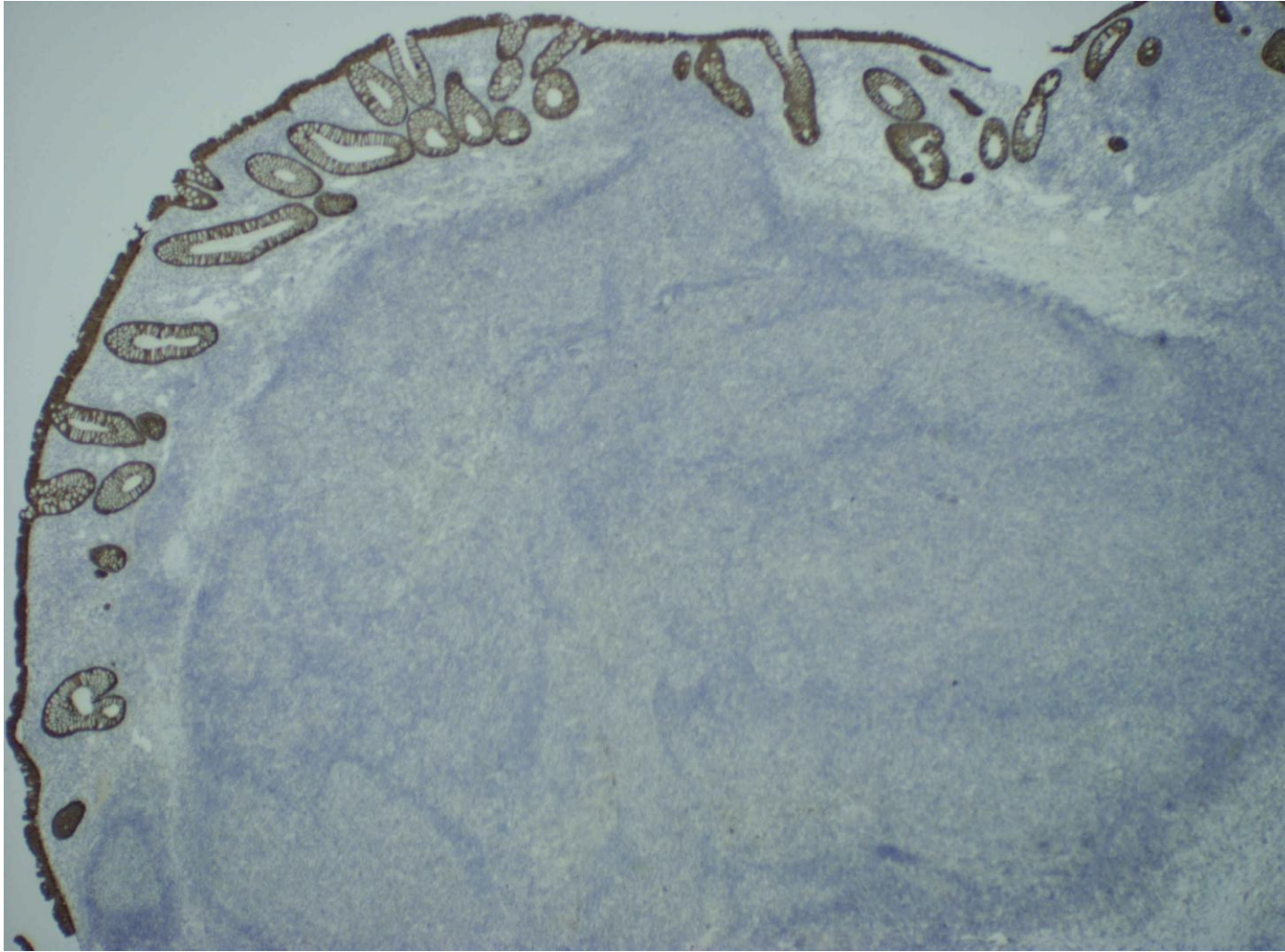
Rectal tonsil seen in a 39-year-old female patient. Lymphoid hyperplasia with prominent germinal center formation predominantly consists of CD20-positive B-cells. Immunostaining for CD20 (1)



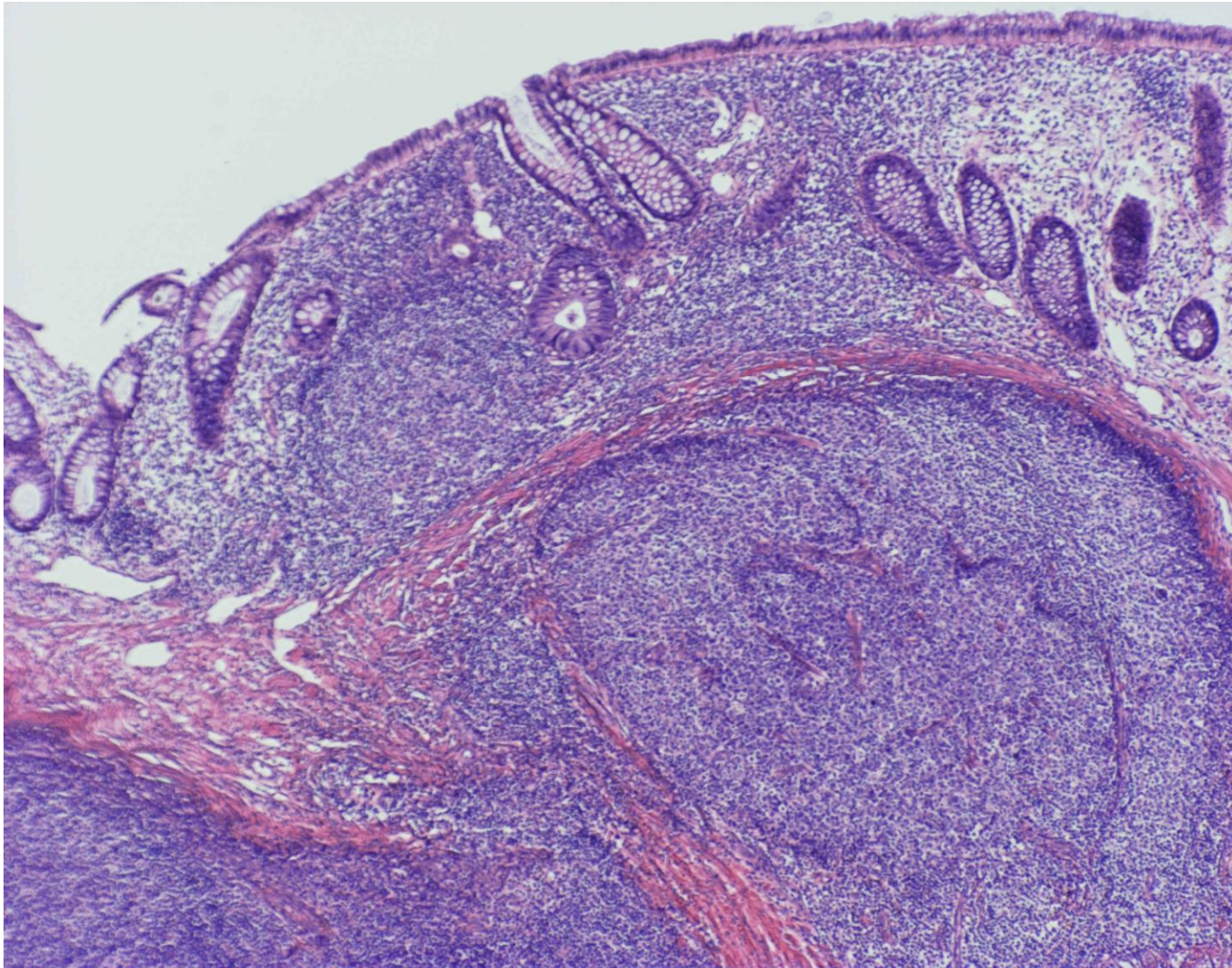
Rectal tonsil seen in a 39-year-old female patient. Lymphoid hyperplasia with prominent germinal center formation. CD10 is expressed in the germinal center B-cells. Immunostaining for CD10 (1)



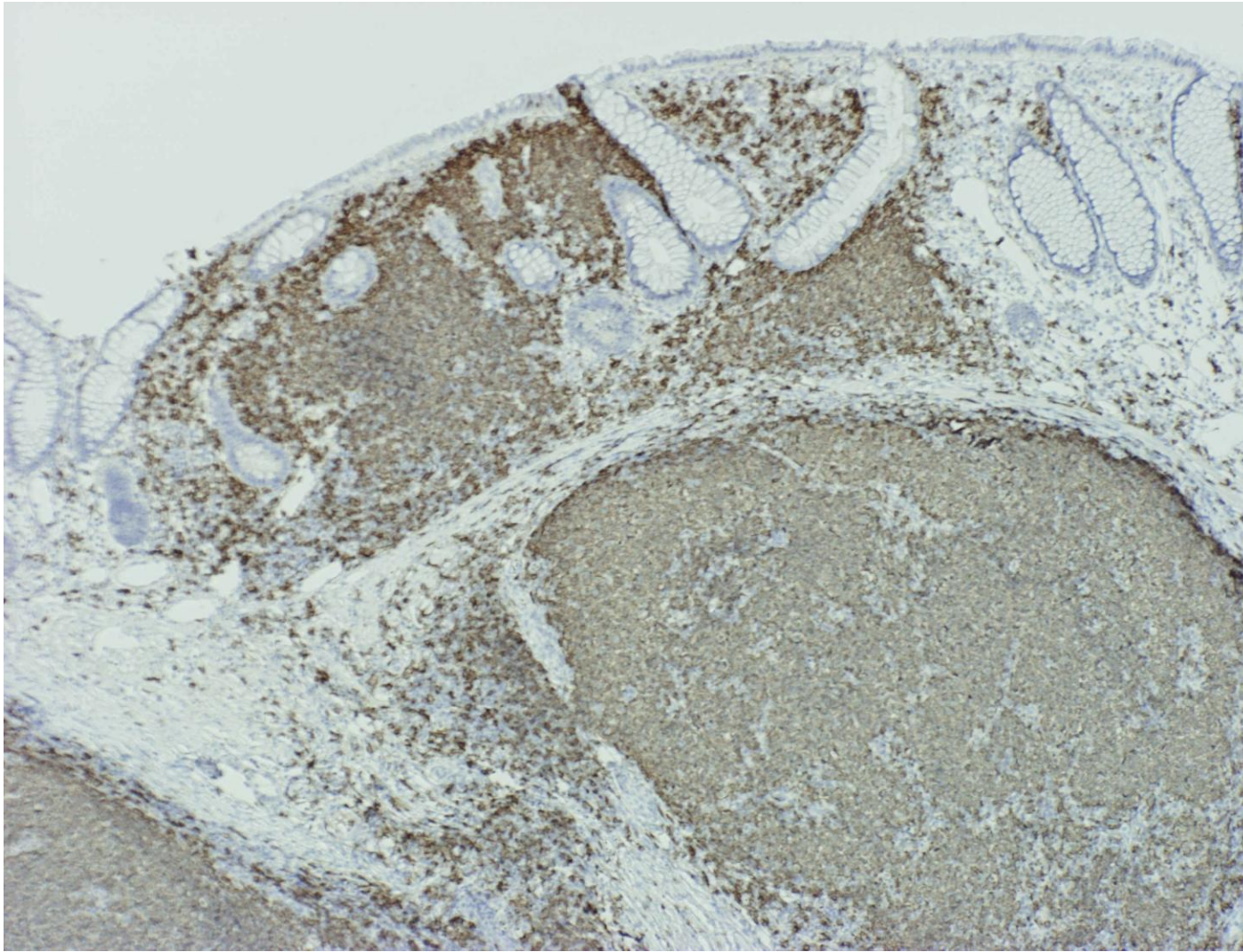
Rectal tonsil seen in a 39-year-old female patient. Lymphoid hyperplasia with prominent germinal center formation. Ki-67-positive proliferative cells are mainly localized in the germinal center B-cells. Immunostaining for Ki-67



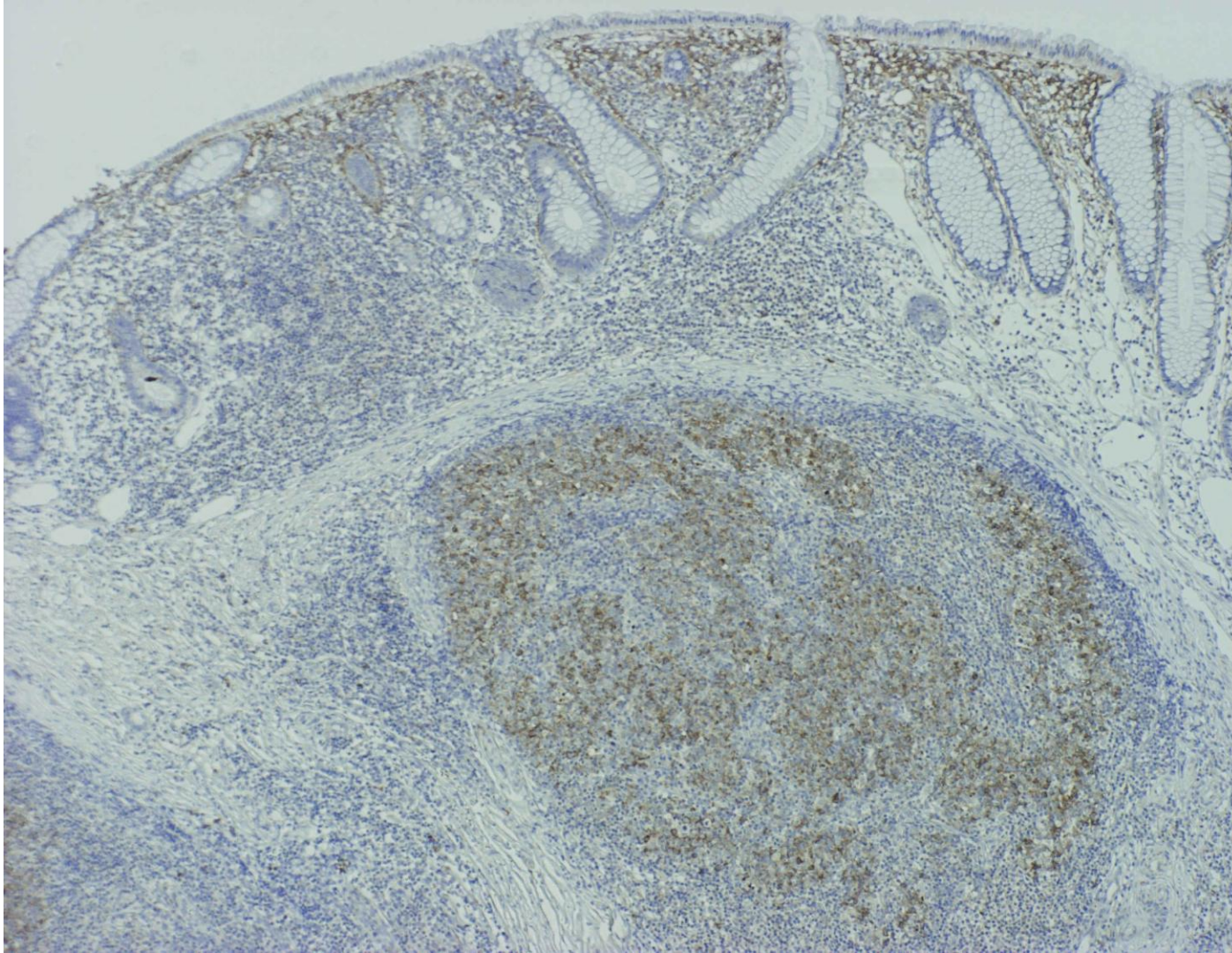
Rectal tonsil seen in a 39-year-old female patient. CK18 is expressed in the mucosal epithelial cells but not in the hyperplastic lymphoid cells. Immunostaining for CK18



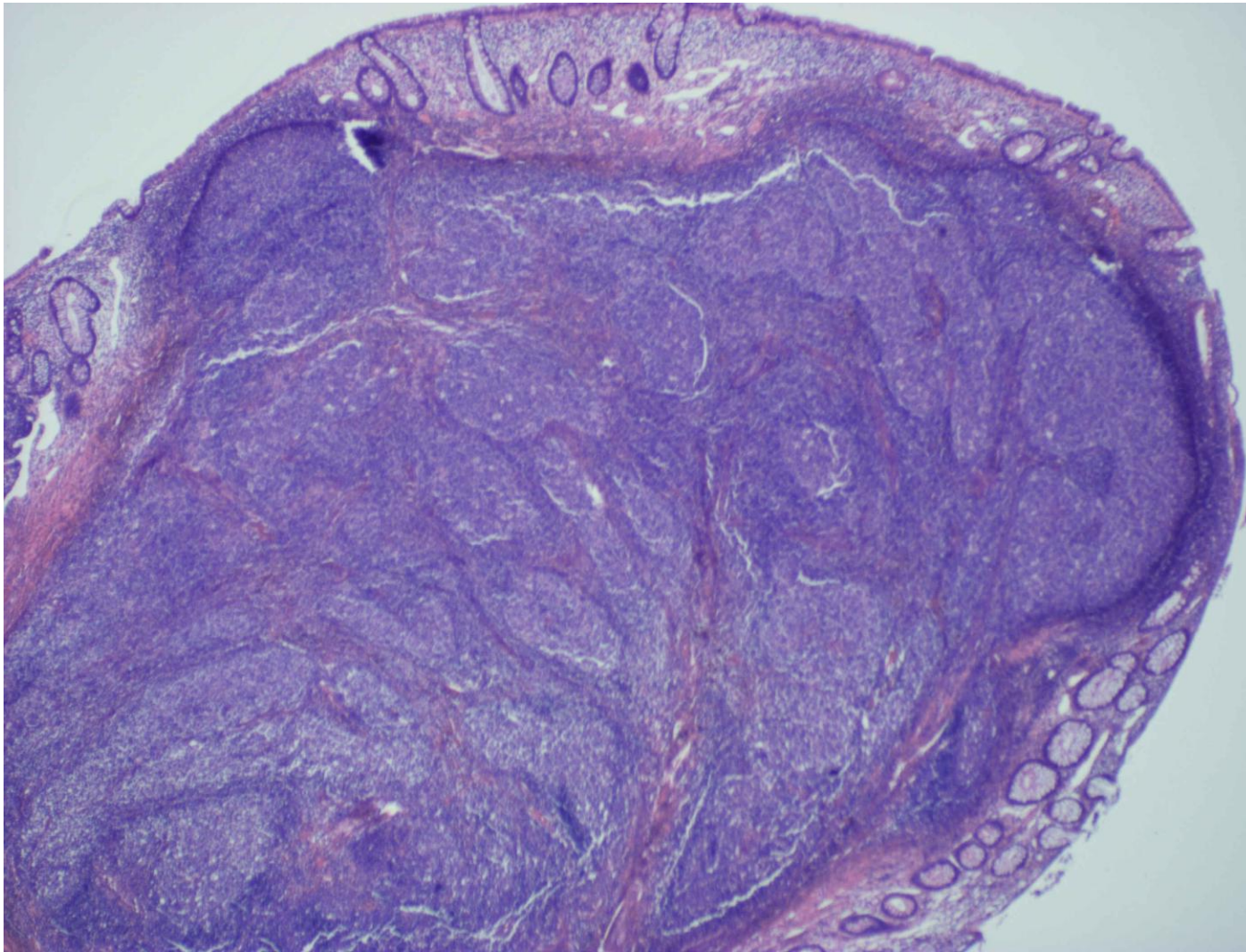
Rectal tonsil seen in a 39-year-old female patient. Microscopically, lymphoid hyperplasia with prominent germinal center formation is observed mainly in the submucosa of the rectum. Intramucosal involvement is associated. H&E (2)



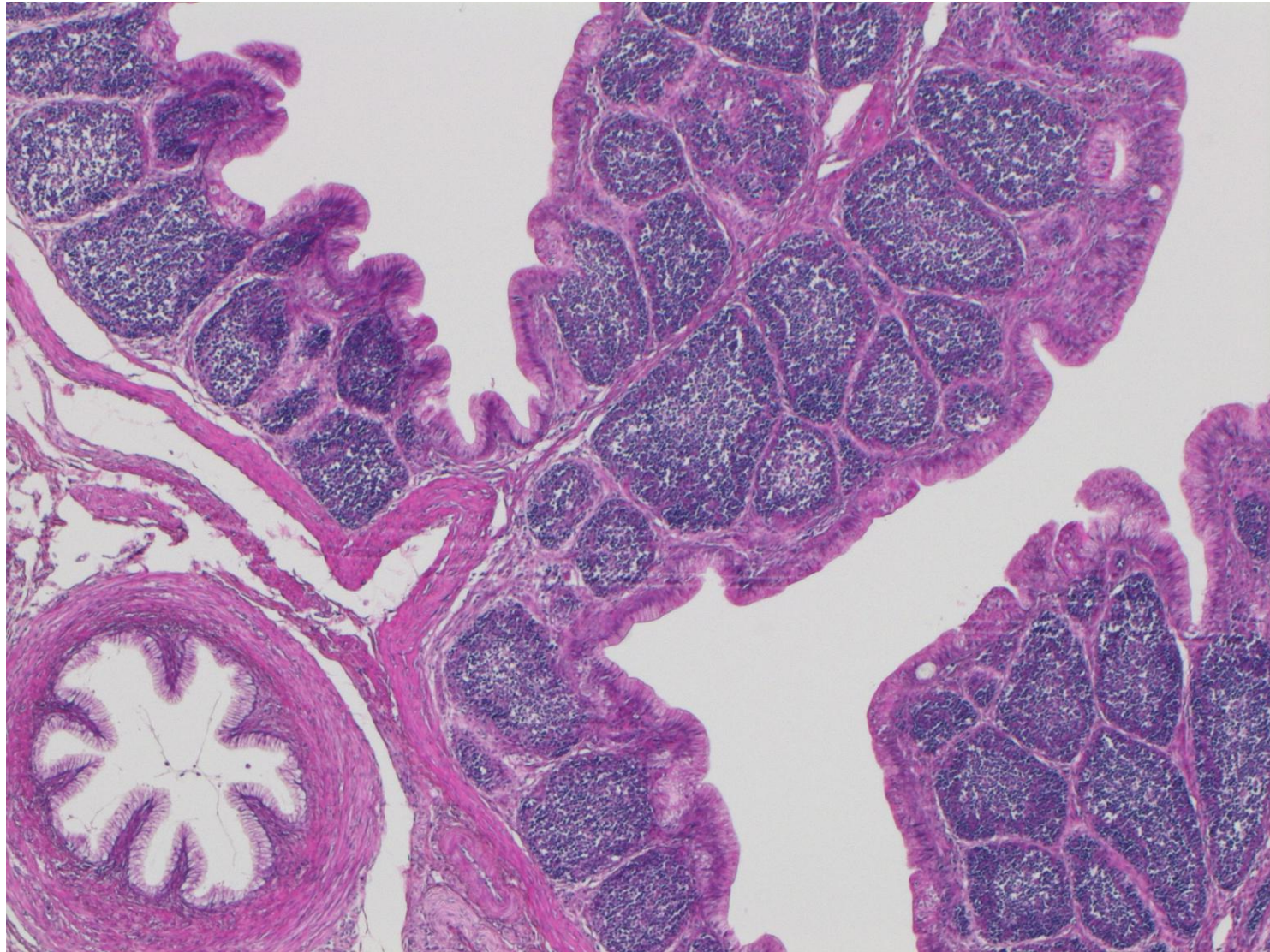
Rectal tonsil seen in a 39-year-old female patient. Lymphoid hyperplasia with prominent germinal center formation predominantly consists of CD20-positive B-cells. Immunostaining for CD20 (2)



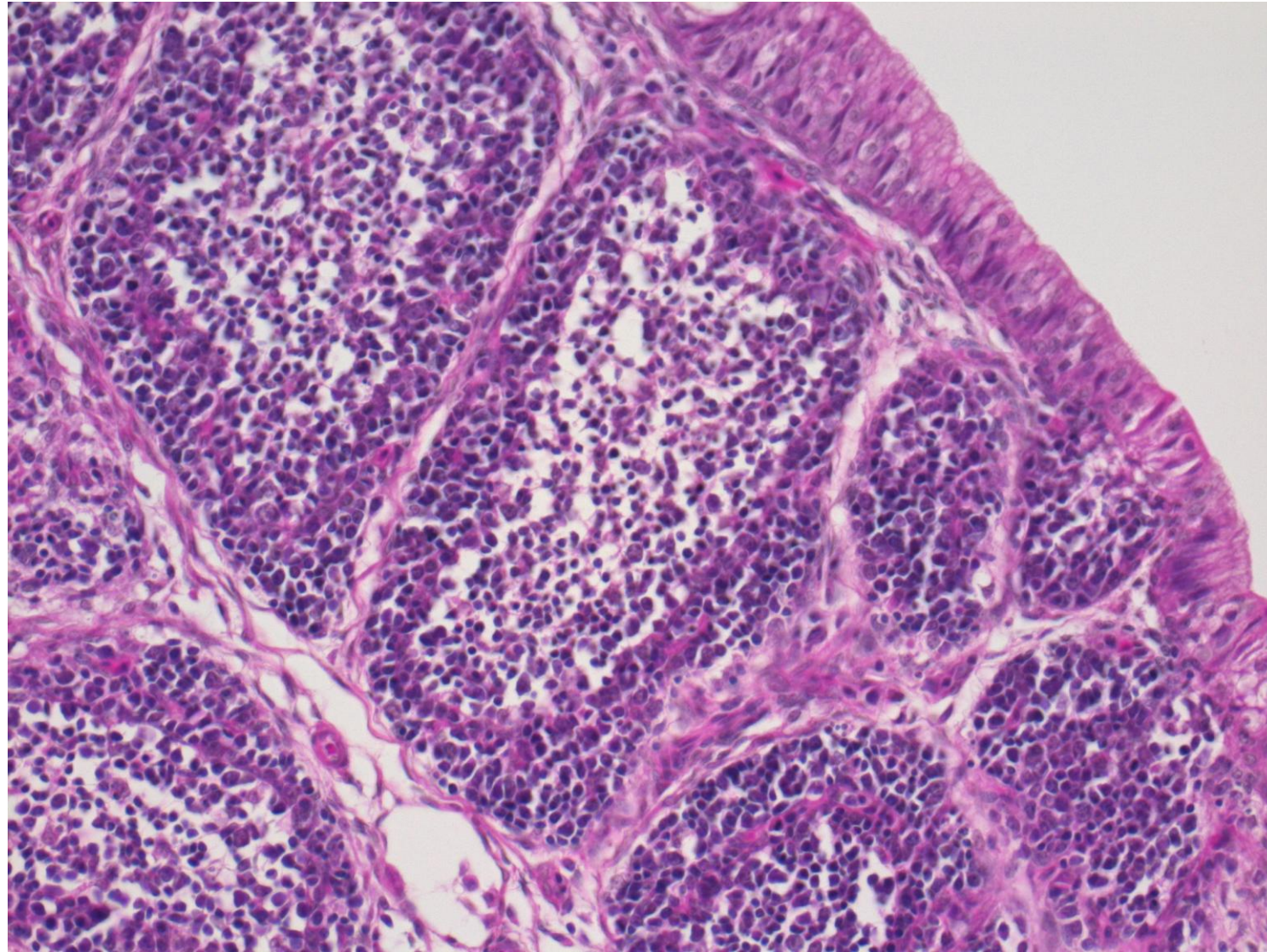
Rectal tonsil seen in a 39-year-old female patient. Lymphoid hyperplasia with prominent germinal center formation. CD10 is expressed in the germinal center B-cells. Immunostaining for CD10 (2)



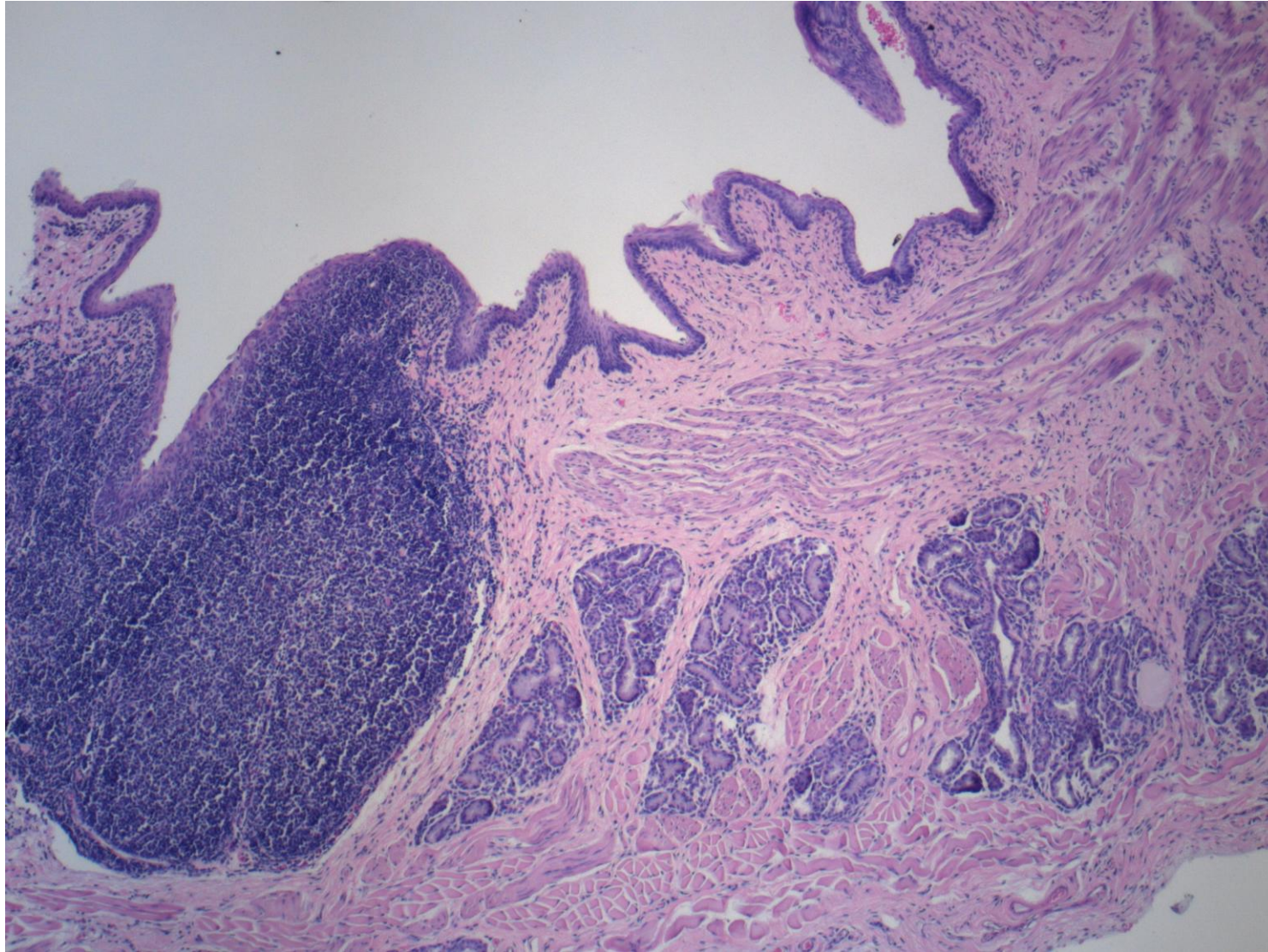
Rectal tonsil seen in a 39-year-old female patient. Microscopically, lymphoid hyperplasia with prominent germinal center formation is observed mainly in the submucosa of the rectum. Intramucosal involvement is associated. H&E (3)



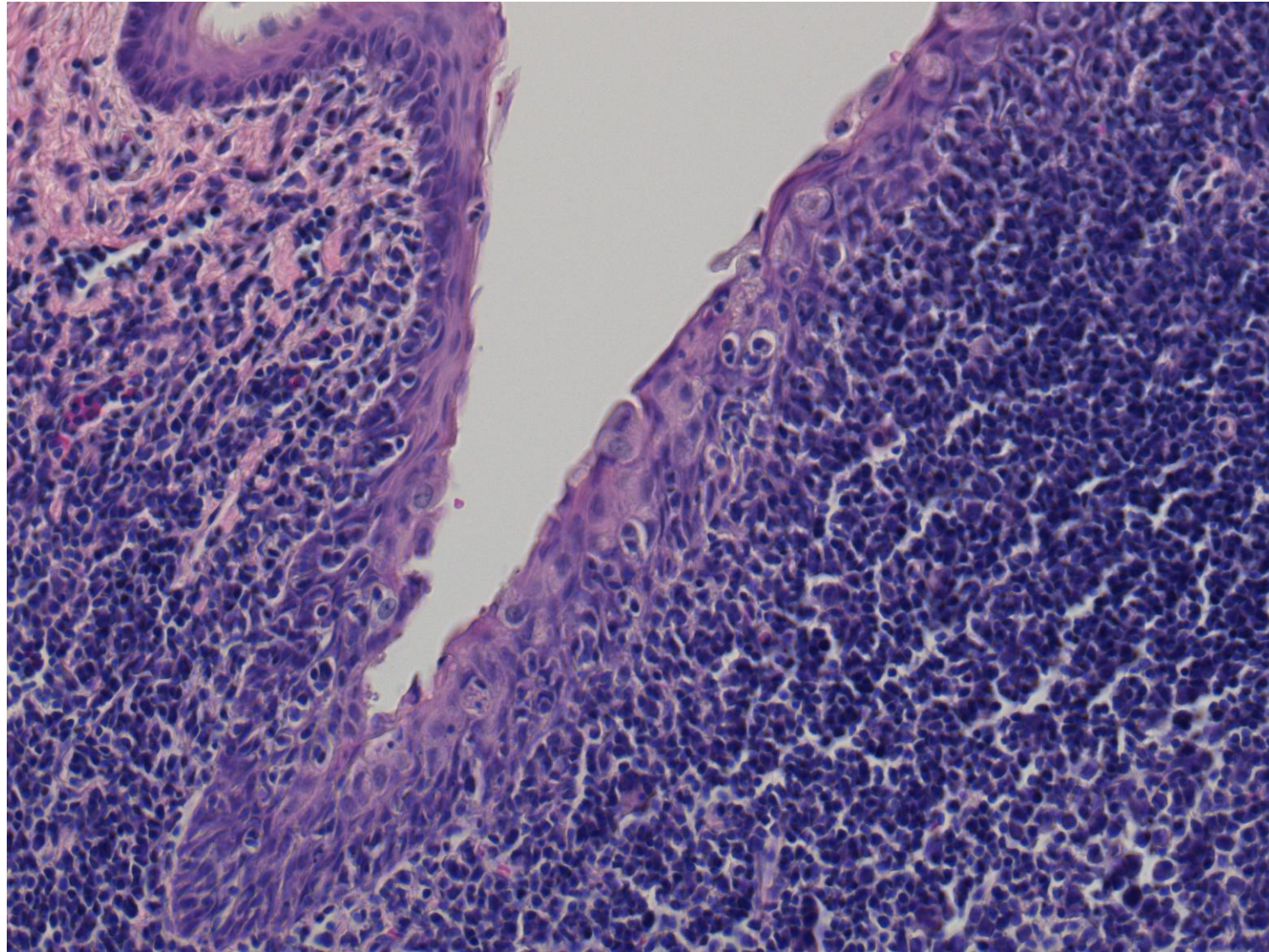
The bursa of Fabricius in the cloaca of young birds. The bursa consists of both columnar epithelial and lymphoid tissue forming lymphoid follicles with germinal centers. The bursa is essential for B-cell development in birds. H&E-a



The bursa of Fabricius in the cloaca of young birds. The bursa consists of both columnar epithelial and lymphoid tissue forming lymphoid follicles with germinal centers. The bursa is essential for B-cell development in birds. H&E-b



The laboratory shrew, *Suncus murinus*, lacks gut-associated lymphoid tissue in the vermiform appendix and Peyer's plates, but possess a pair of “anal tonsils” at the end of the rectum. H&E (1). Ref.: Sakai K, et al. Developmental study of the anal tonsil in the laboratory shrew, *Suncus murinus*. Arch Histol Cytol 2002; 65(1): 97-108. doi: 10.1679/aohc.65.97



The laboratory shrew, *Suncus murinus*, lacks gut-associated lymphoid tissue in the vermiform appendix and Peyer's plates, but possess a pair of “anal tonsils” at the end of the rectum. H&E (2). Ref.: Sakai K, et al. Developmental study of the anal tonsil in the laboratory shrew, *Suncus murinus*. Arch Histol Cytol 2002; 65(1): 97-108. doi: 10.1679/aohc.65.97