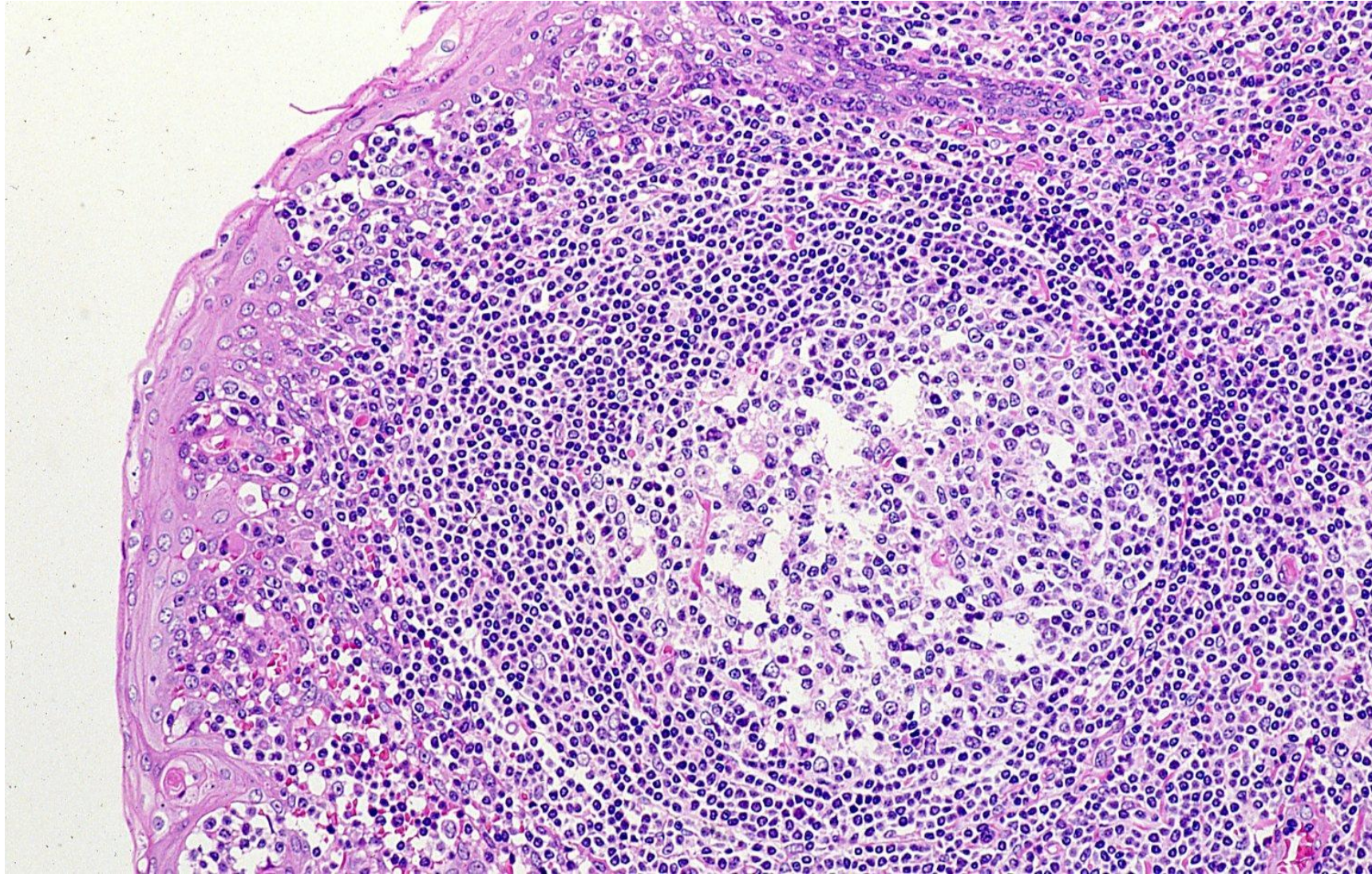


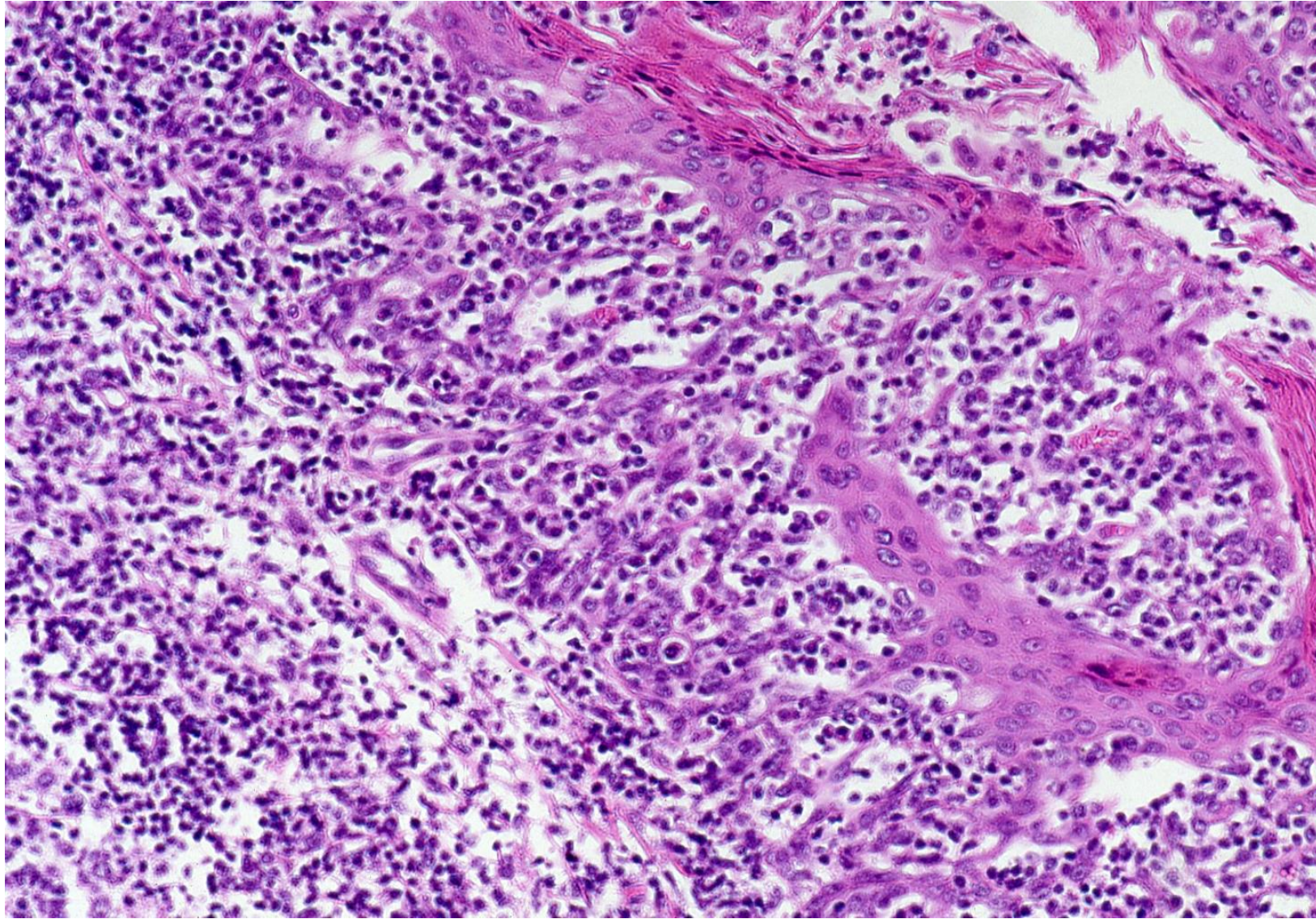
Unique structure of the palatine tonsil

Human palatine tonsil is microscopically characterized by the reticular epithelial network. The reticular epithelial cells express cytokeratins and HLA-DR, and epithelial cells near the crypt lumen are positive for lysozyme. Secretory component is negative. Intramucosal small lymphocytes mainly express B-cell phenotype. Some intramucosal B-cells express mantle zone phenotypes, but cells of germinocyte phenotype are sparse. A good number of intramucosal lymphoid cells were labeled for CD11b, a phenotype of so-called B-1 cells. Of note is that plasma cells are clustered within the basal half of the reticular mucosa. IgG was their major immunoglobulin class, followed by IgA, IgM and IgD classes. A smaller number of T cells (CD4>CD8) were identified among the epithelium. Macrophages, dendritic histiocytes and natural killer cells are also dispersed. Another unique feature of this lymphoepithelial complex is the existence of intramucosal microvasculature, where lymphocyte recirculation was suggested. Proliferating cell nature is commonly seen in the epithelial cells, but rarely in the lymphoid cells. The morphologic similarities to the thymic medulla are indicated.

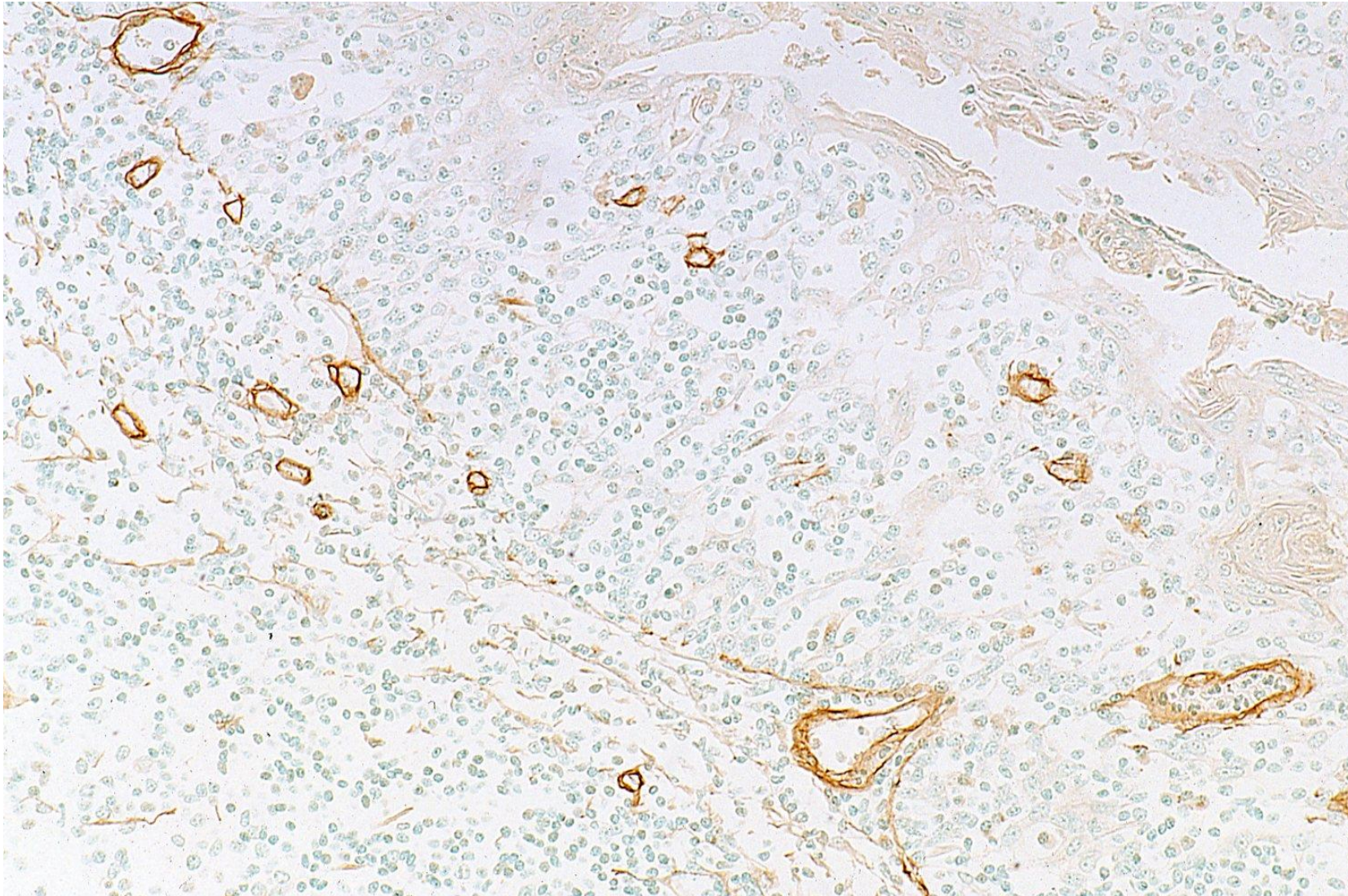
Ref.: Tang X, Hori S, Osamura RY, Tsutsumi Y. Reticular crypt epithelium and intra-epithelial lymphoid cells in the hyperplastic human palatine tonsil: an immunohistochemical analysis. *Pathol Int* 1995; 45: 34-44. PMID: 7704242



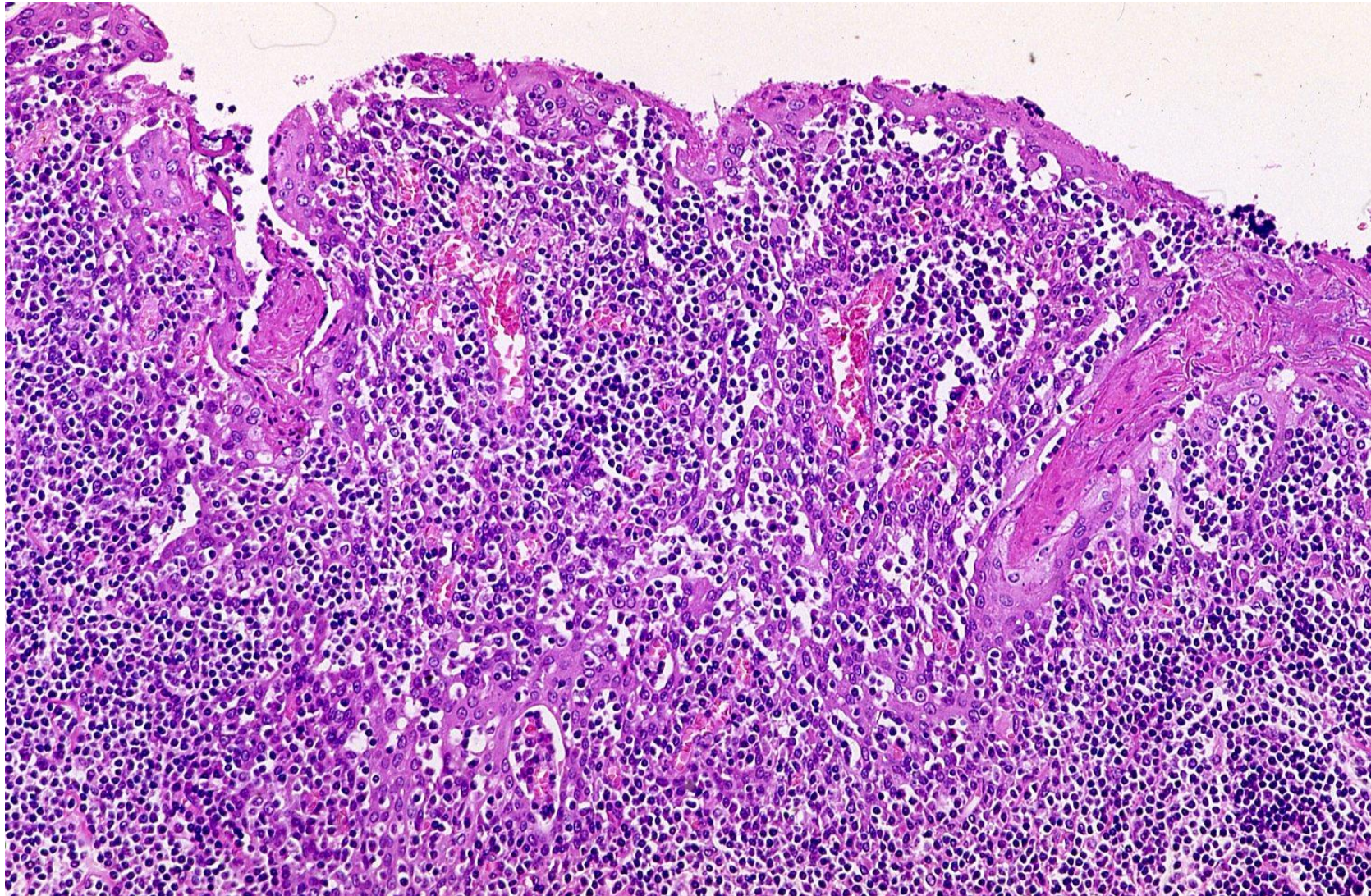
The palatine tonsil is characterized by the lymphoid follicle with enlarged germinal center and the covering reticular mucosa rich in lymphoid cells. H&E



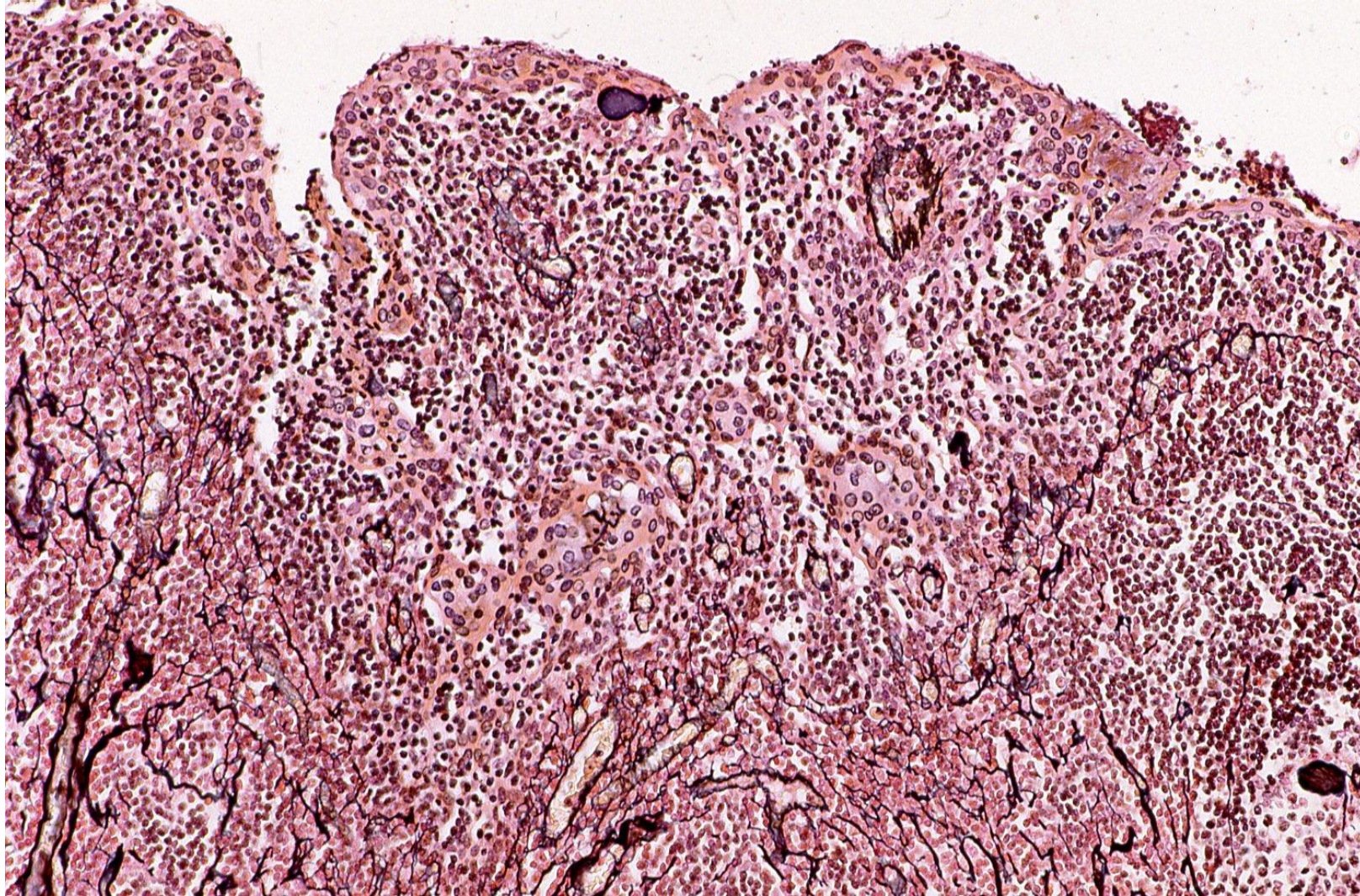
The reticular mucosa of the palatine tonsil. Dense infiltration of lymphoid cells and parakeratosis on the surface are noted. H&E-a



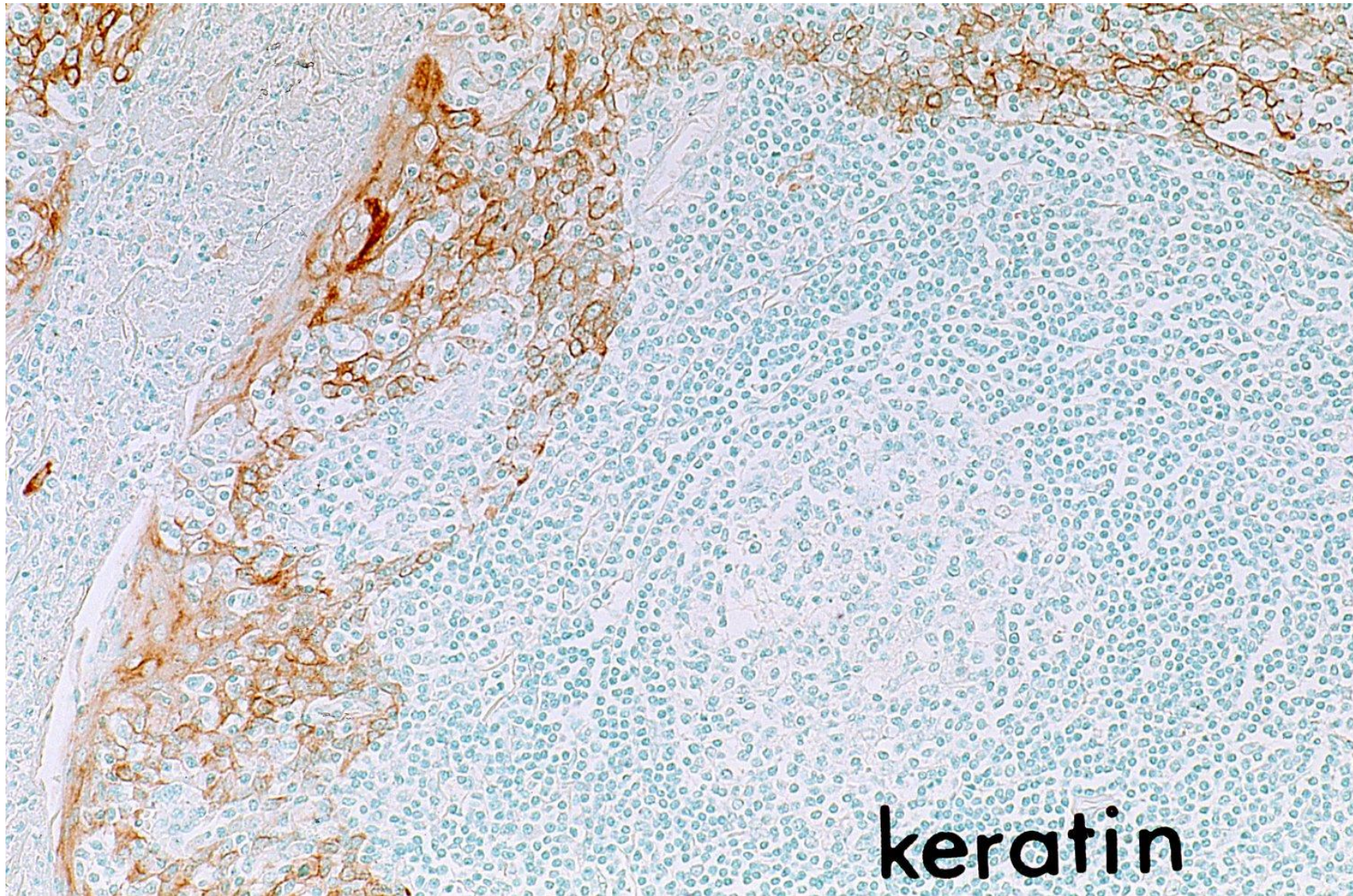
The reticular mucosa of the palatine tonsil. Immunostaining for type 4 collagen demonstrates the basement membrane of the reticular mucosa and intramucosal capillary vessels. Immunostaining for type 4 collagen



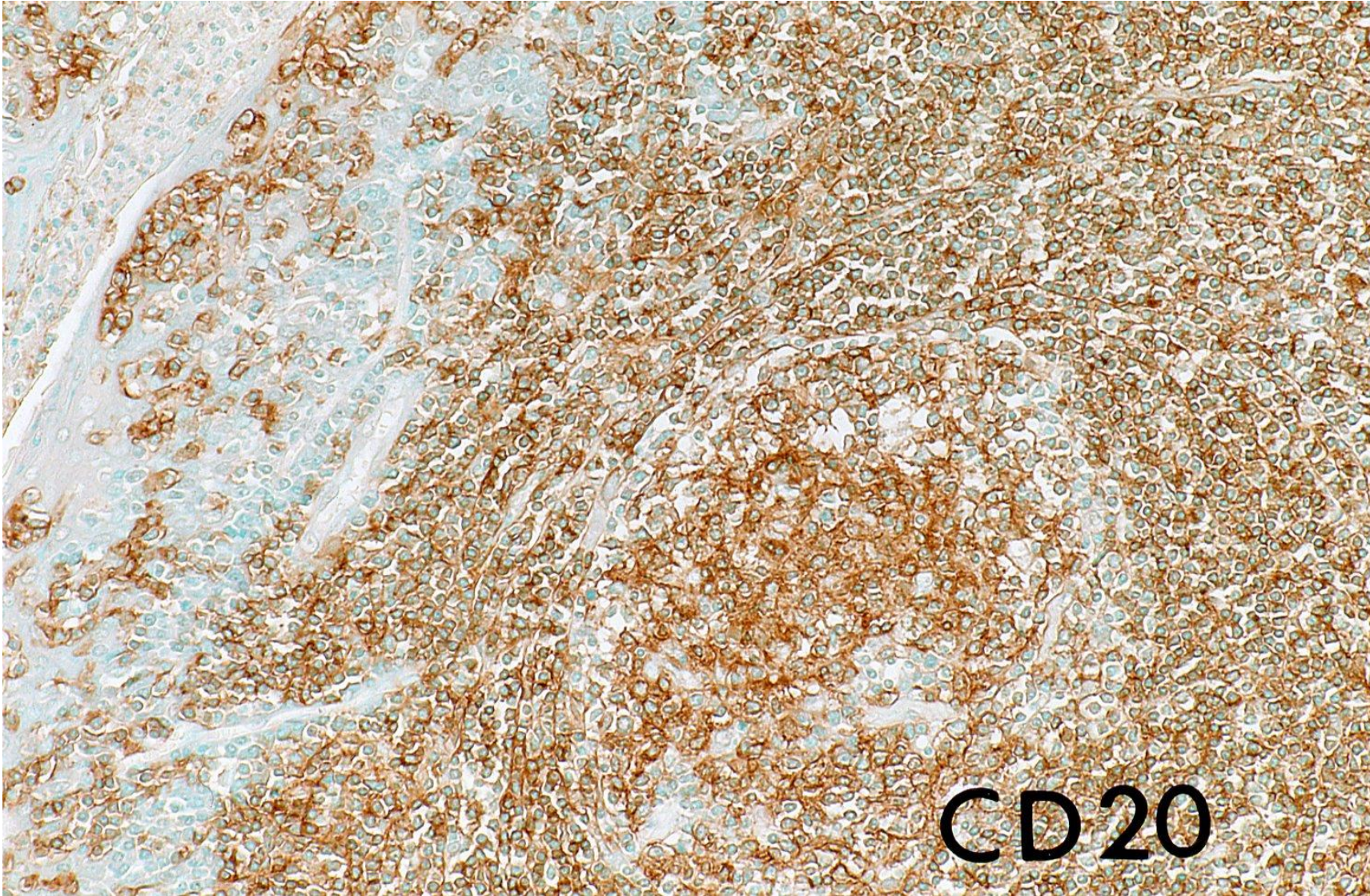
The reticular mucosa of the palatine tonsil. Dense infiltration of lymphoid cells and parakeratosis on the surface are noted. H&E-b



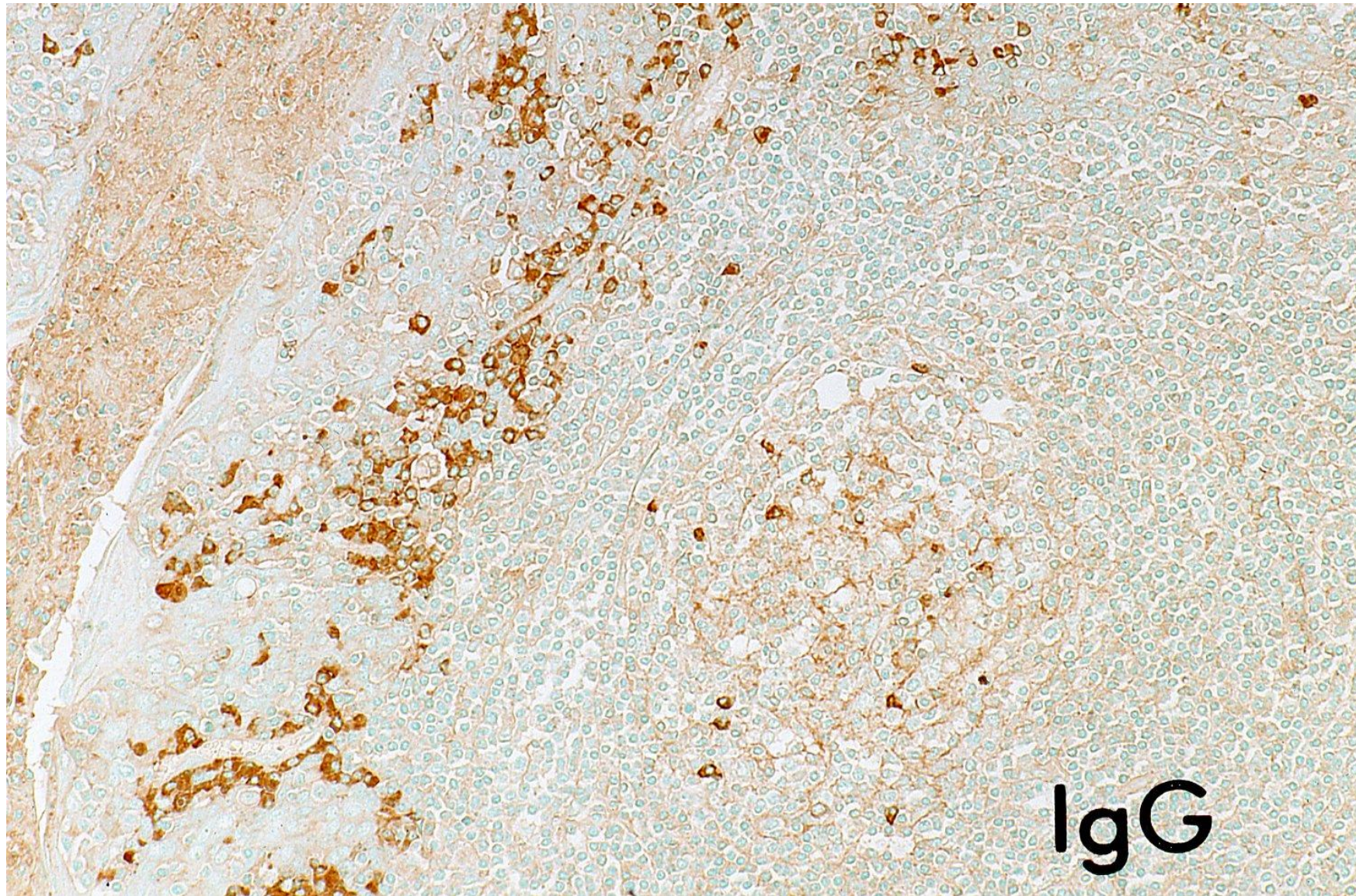
The reticular mucosa of the palatine tonsil. Silver impregnation demonstrates the basement membrane of the reticular mucosa and intramucosal capillary vessels. Watanabe's silver impregnation



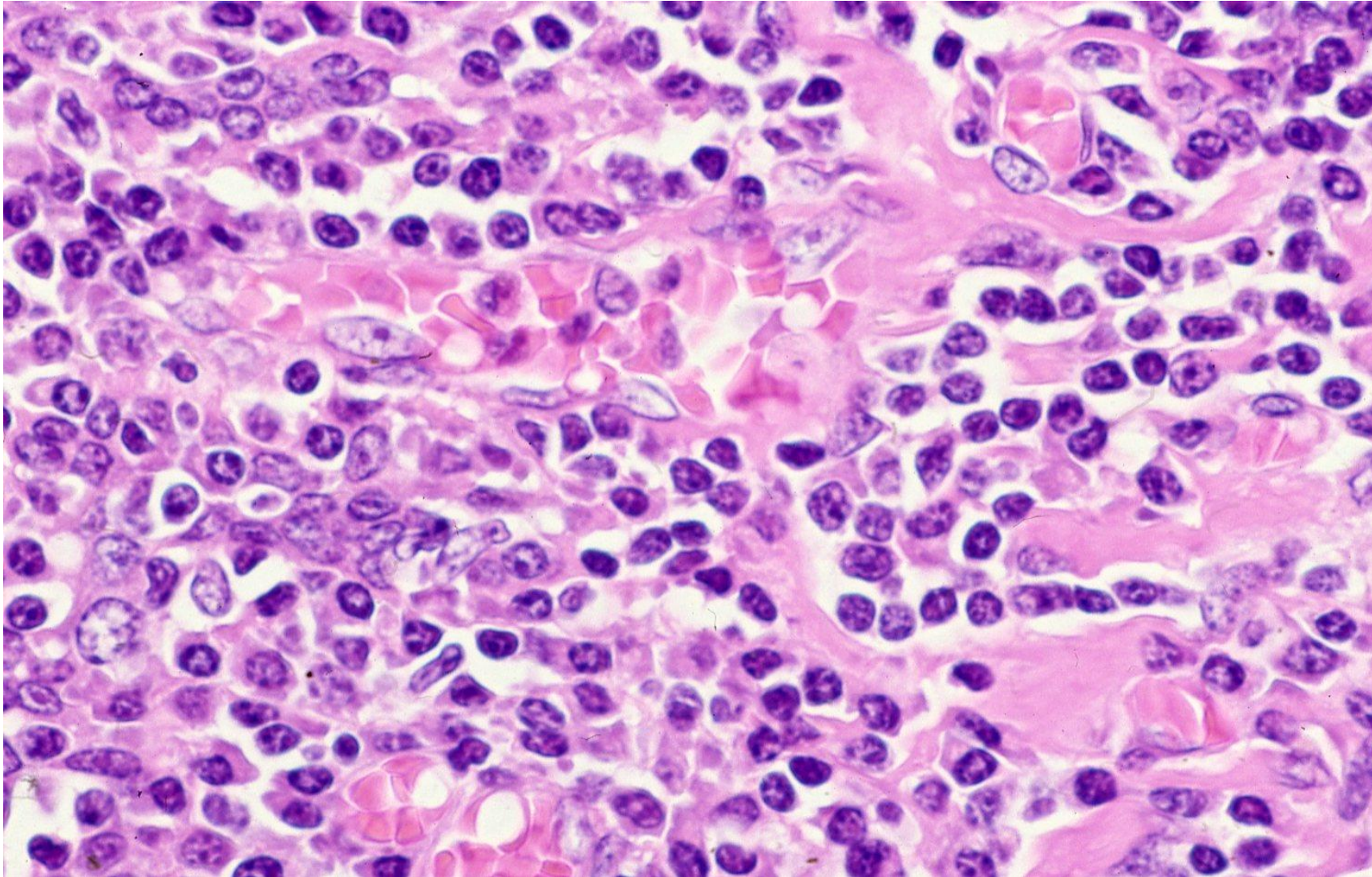
The palatine tonsil is covered with reticular mucosa immunostained for cytokeratins. Immunostaining for cytokeratins (using antiserum)



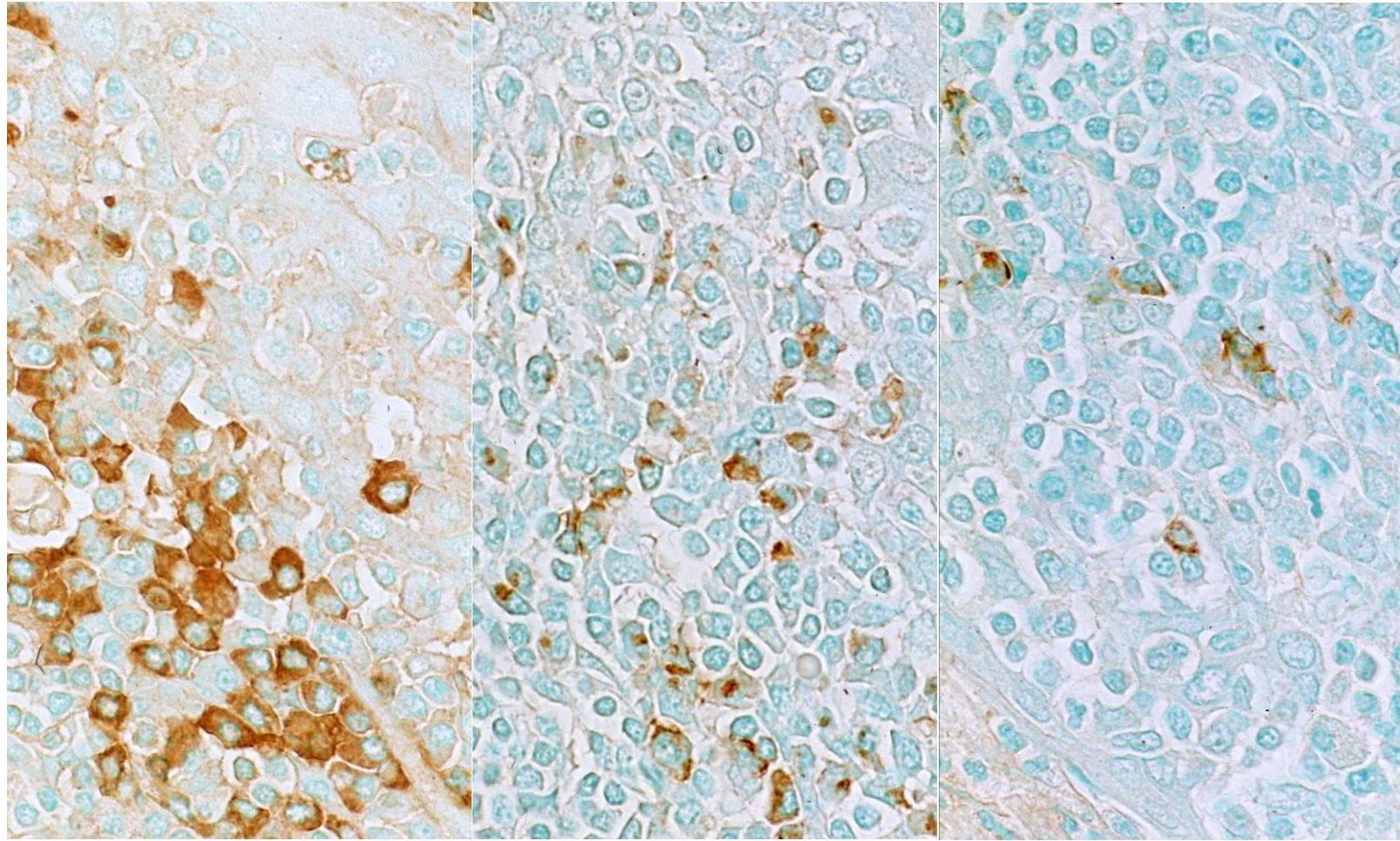
Immunostaining for CD20. In addition to lymphoid follicles, the reticular mucosa contains numbers of CD20-positive B-lymphocytes. Immunostaining for CD20



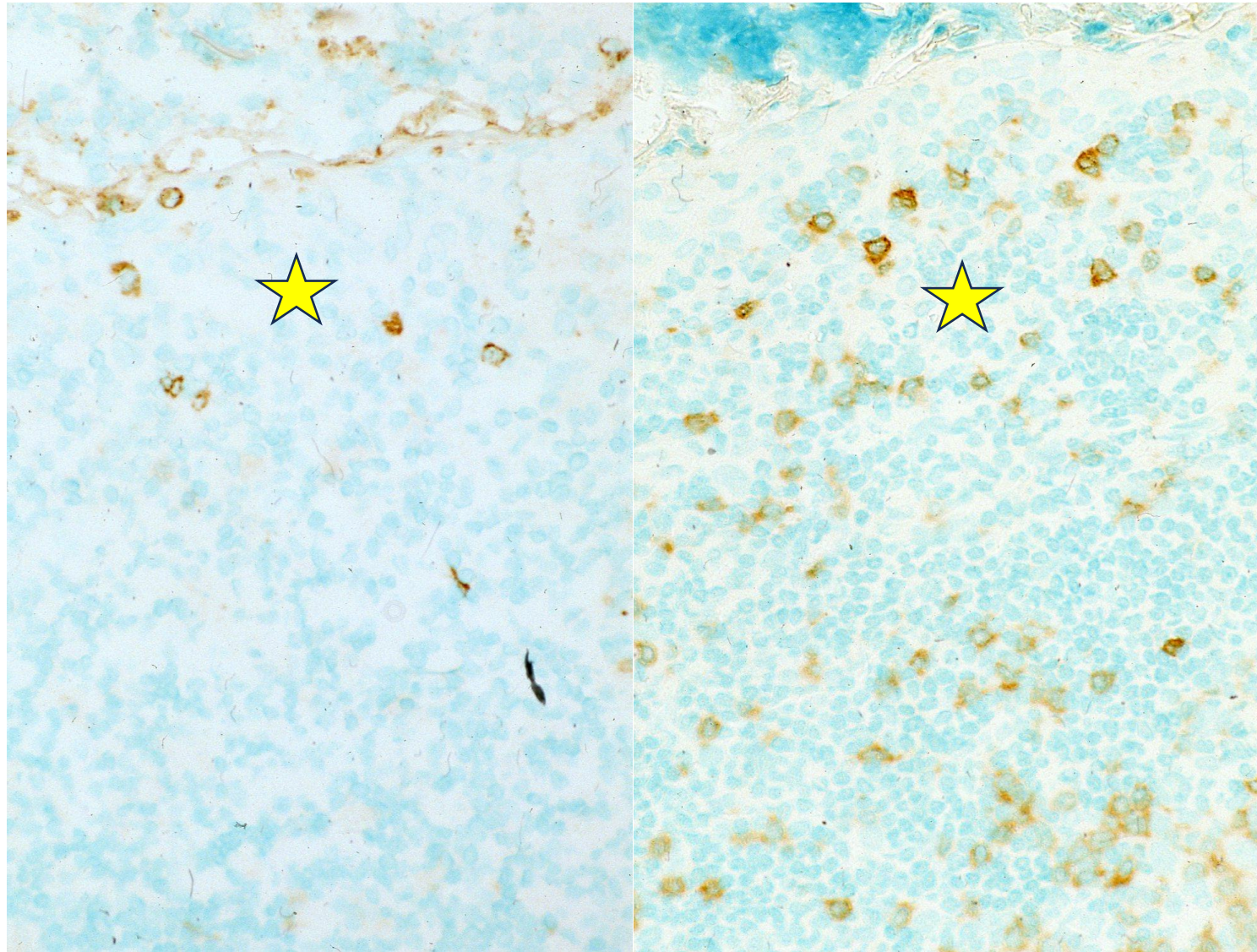
IgG-positive plasma cells are richly distributed within the reticular mucosa. The germinal center also possesses a few IgG-positive cells. Immunostaining for IgG



The reticular mucosa of the palatine tonsil contains a number of mature plasma cells among the epithelial cells. H&E



Immunoglobulin classes of plasma cells in the reticular mucosa (left: IgG, center: IgA, right: IgM). IgG plasma cells are most rich, followed by IgA plasma cells and IgM plasma cells. Immunostaining for IgG, IgA and IgM



Distribution of CD11b-positive B-1 lymphocytes (left) and CD56-positive NK cells (right) in the palatine tonsil. Both B-1 cells and NK-cells are seen in the reticular mucosa. Asterisks=reticular mucosa