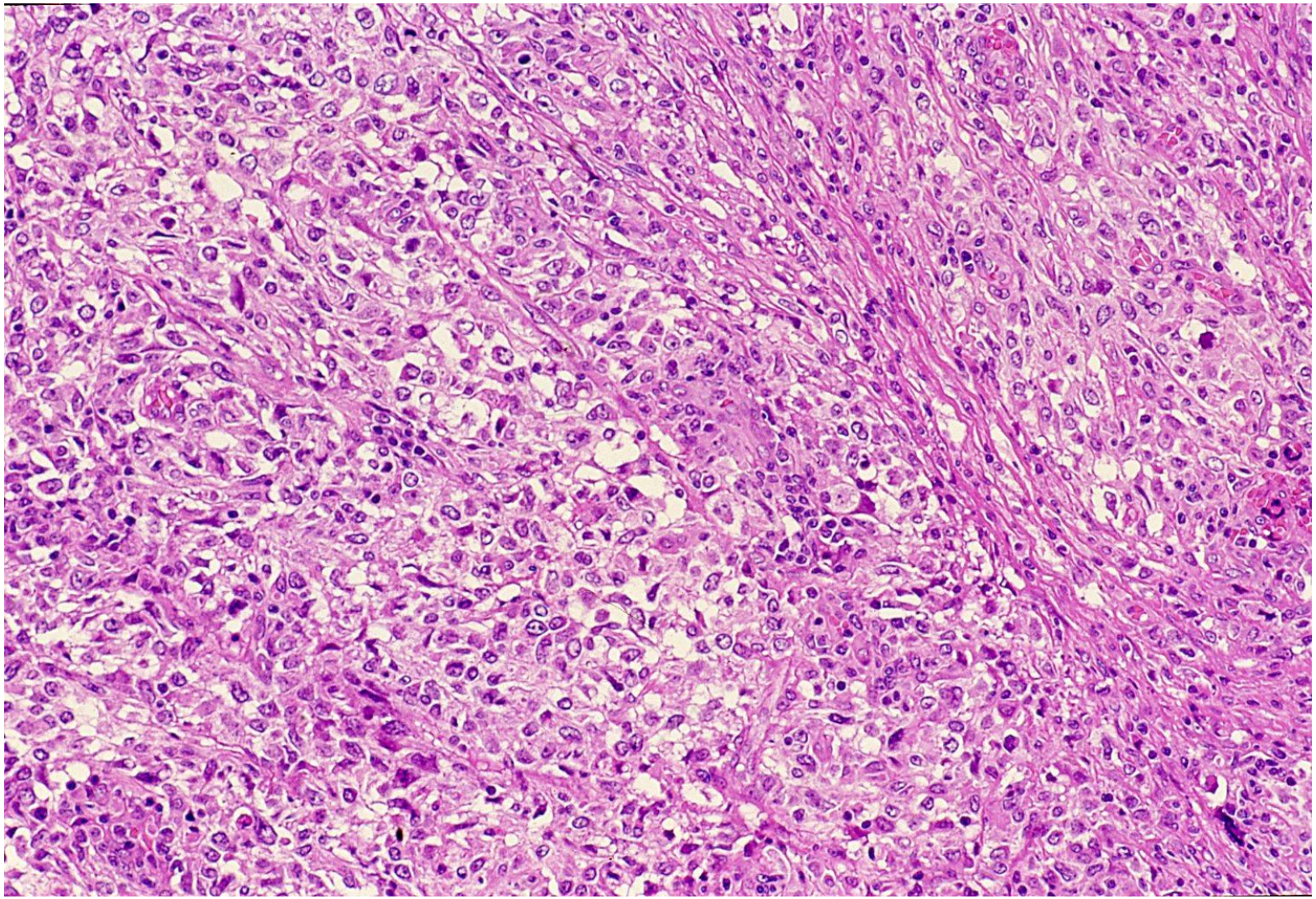
Intestinal Ki-1 lymphoma with microvillous ultrastructural features

Microvillous lymphoma is a large pleomorphic transformed cell lymphoma characterized by a cohesive sinus growth pattern and cytoplasmic processes at the ultrastructural level. Most microvillous lymphomas express B-cell antigens. CD56 is also often expressed. Anaplastic large cell Ki-1 lymphomas microscopically resemble microvillous lymphomas in having a pleomorphic infiltrate with a prominent sinus growth pattern. In fact, a small population of microvillous lymphoma is CD30-positive Ki-1 lymphoma. Here, a case of intestinal Ki-1 lymphoma with microvillous ultrastructural features is presented. The association of multivesicular bodies is characteristic.

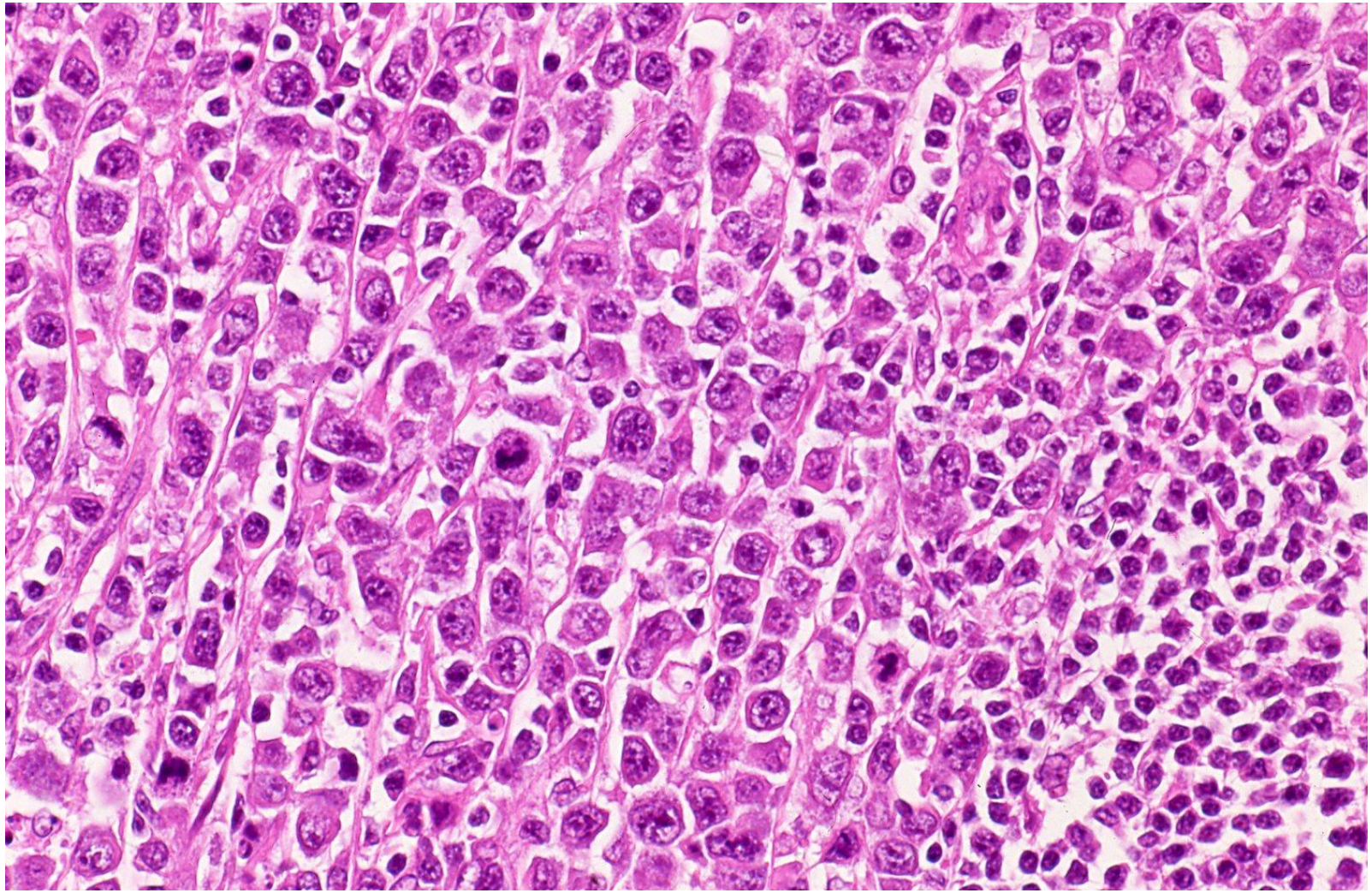
Ref.-1: Hammer RD, et al. Microvillous lymphomas are B-cell neoplasms that frequently express CD56. Mod Pathol 1998; 11(3): 239-246. PMID: 9521469

Ref.-2: Kinney MC, et al. Comparison of anaplastic large cell Ki-1 lymphomas and microvillous lymphomas in their immunologic and ultrastructural features. Am J Surg Pathol 1990; 14(11): 1047-1060. doi: 10.1097/00000478-199011000-00006

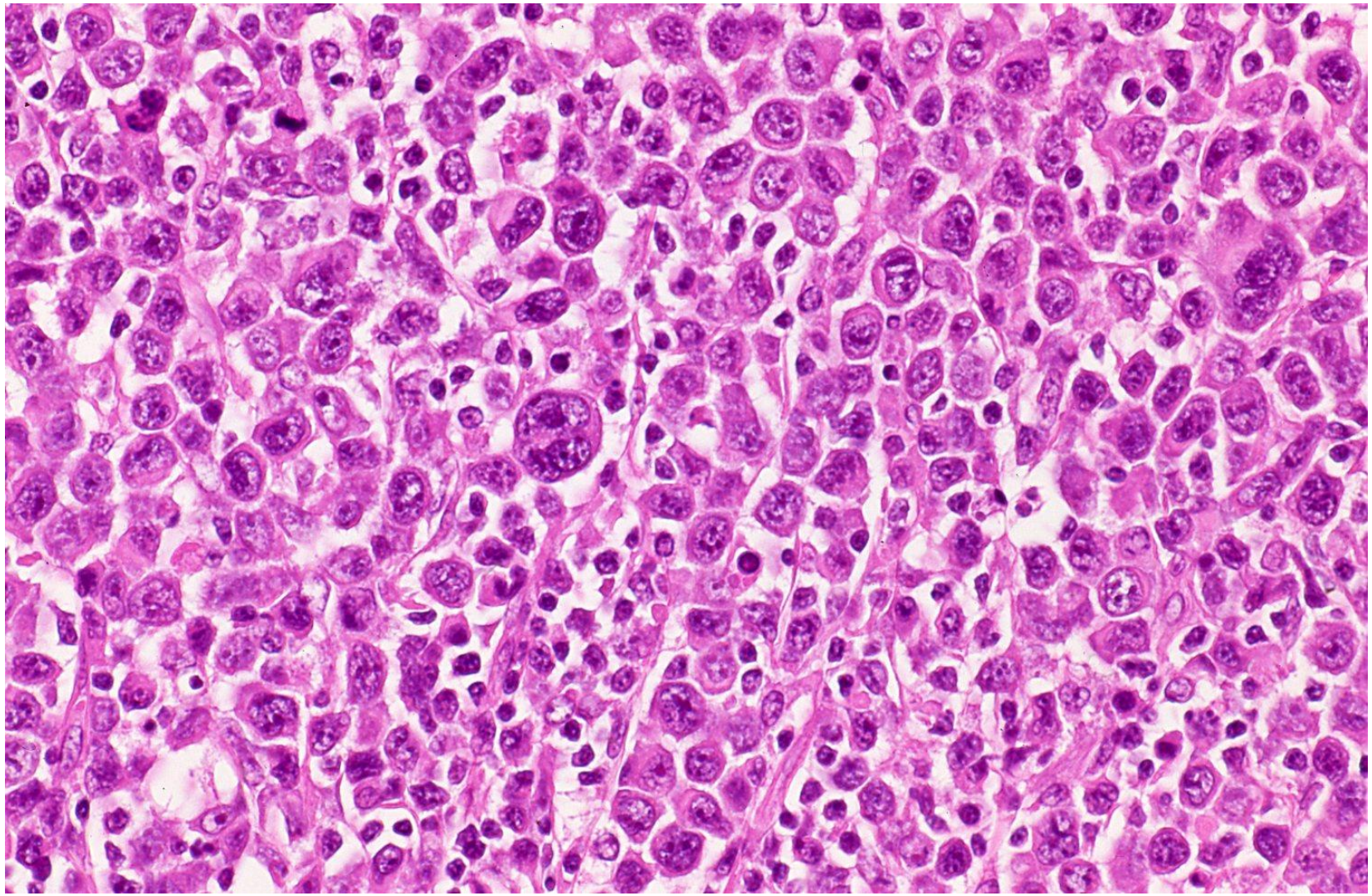
Ref.-3: Piper RC, Katzmann DJ. Biogenesis and function of multivesicular bodies. Annu Rev Cell Dev Biol 2007; 23: 519-547. doi: 10.1146/annurev.cellbio.23.090506.123319



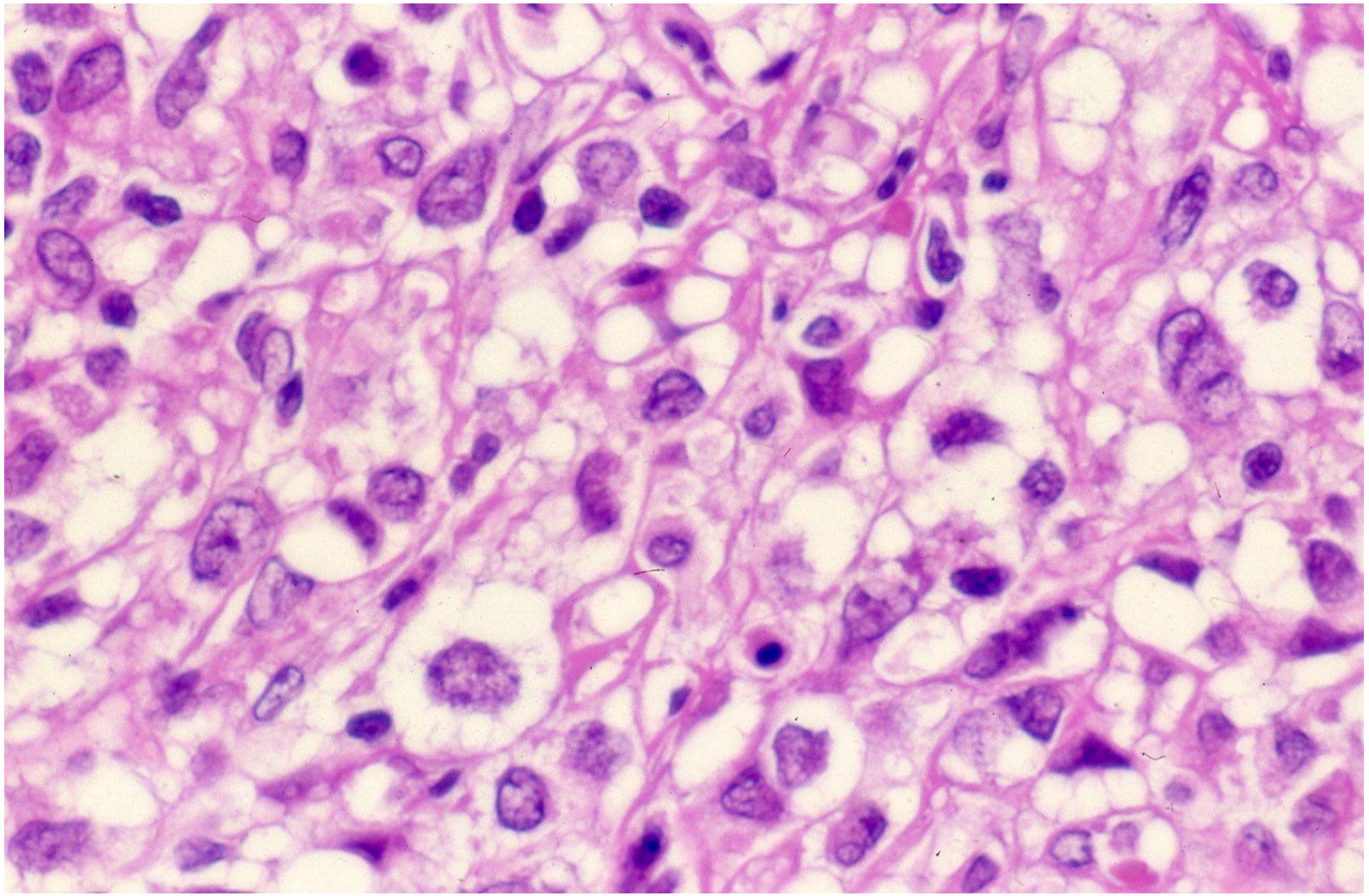
Small intestinal Ki-1 lymphoma in a 15-year-old boy, complicated by intussusception. A tonsillar lesion is also noted. Large-sized, somewhat cohesive lymphoma cells diffusely invade the gut wall. The lymphoma cells express CD30, CD45 and HLA-DR. H&E-1



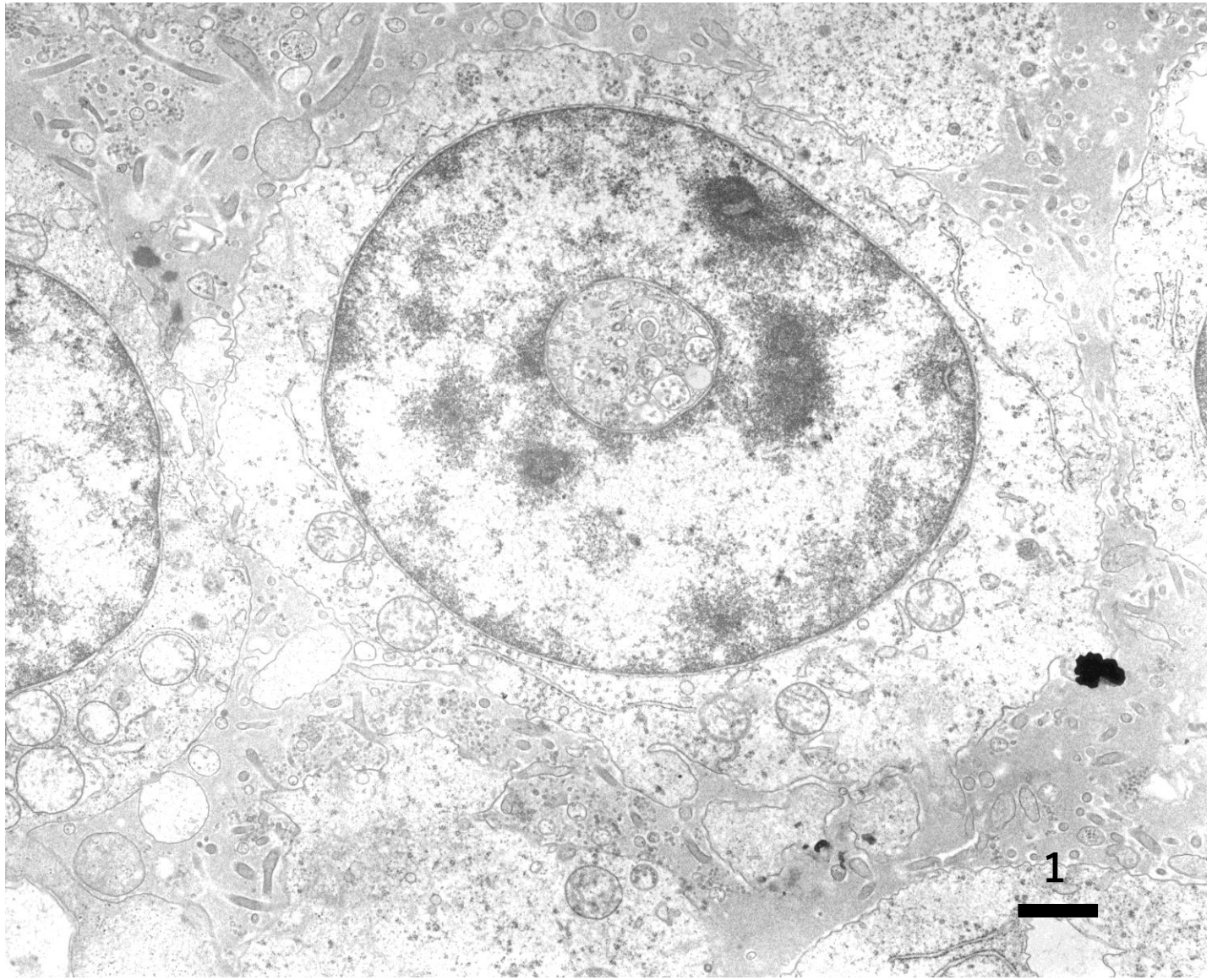
Small intestinal Ki-1 lymphoma in a 15-year-old boy, complicated by intussusception. A tonsillar lesion is also noted. The gut wall is diffusely invaded by large-sized, pleomorphic lymphoma cells, expressing CD30, CD45 and HLA-DR. H&E-2



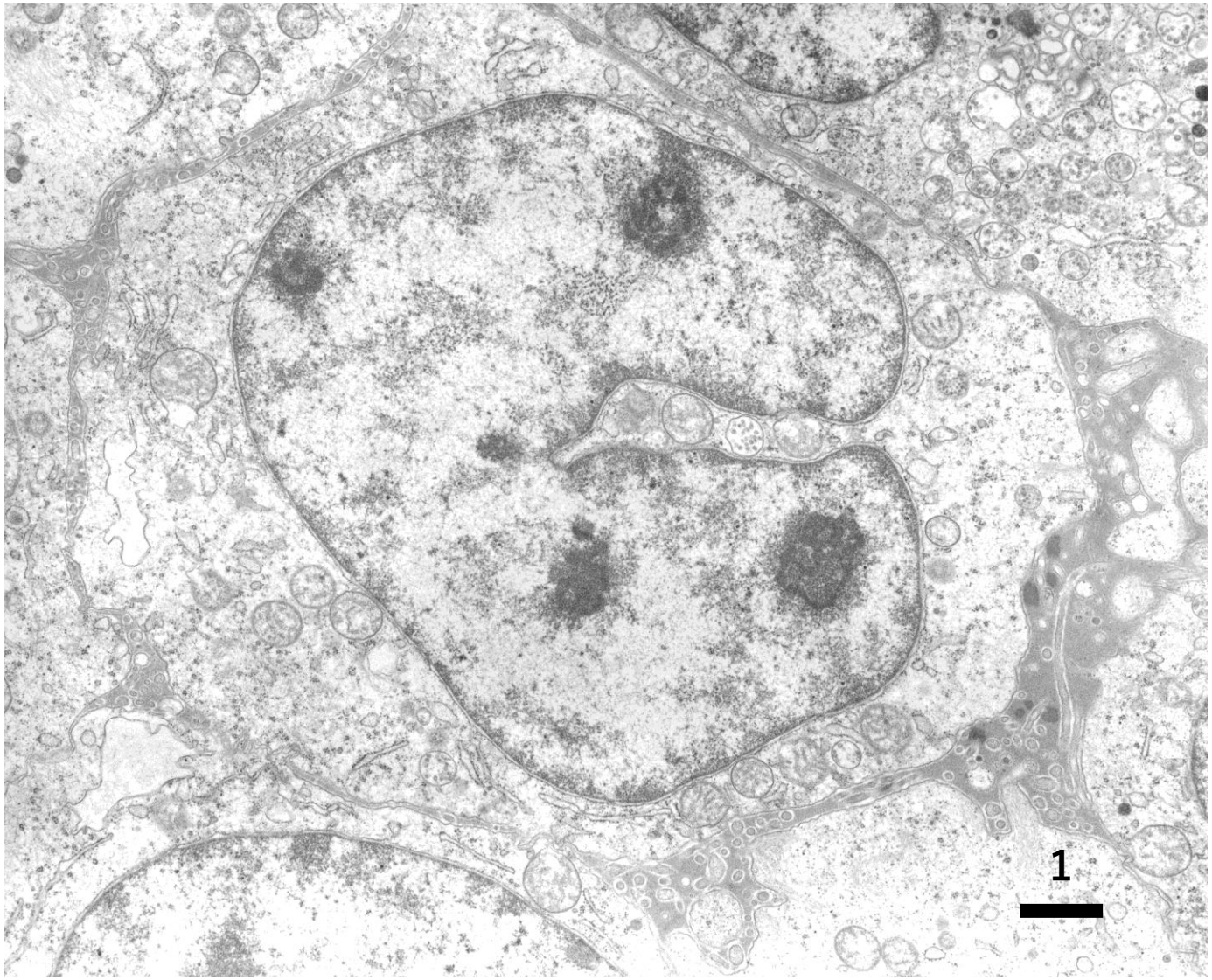
Small intestinal Ki-1 lymphoma in a 15-year-old boy, complicated by intussusception. A tonsillar lesion is also noted. The gut wall is diffusely invaded by large-sized, pleomorphic lymphoma cells, expressing CD30, CD45 and HLA-DR. H&E-3



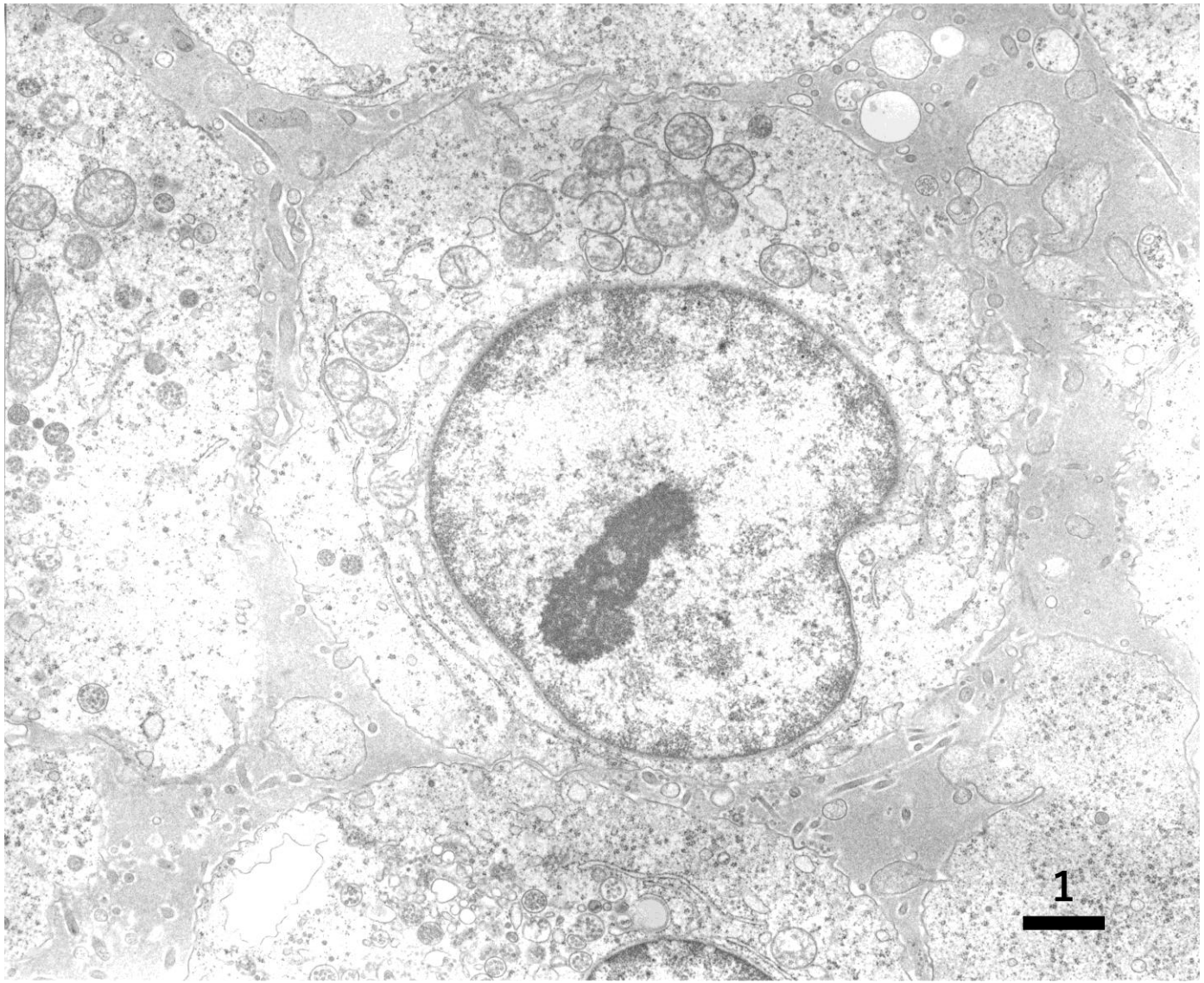
Small intestinal Ki-1 lymphoma in a 15-year-old boy, complicated by intussusception. A tonsillar lesion is also noted. The gut wall is diffusely invaded by large-sized, pleomorphic lymphoma cells, expressing CD30, CD45 and HLA-DR. H&E-4



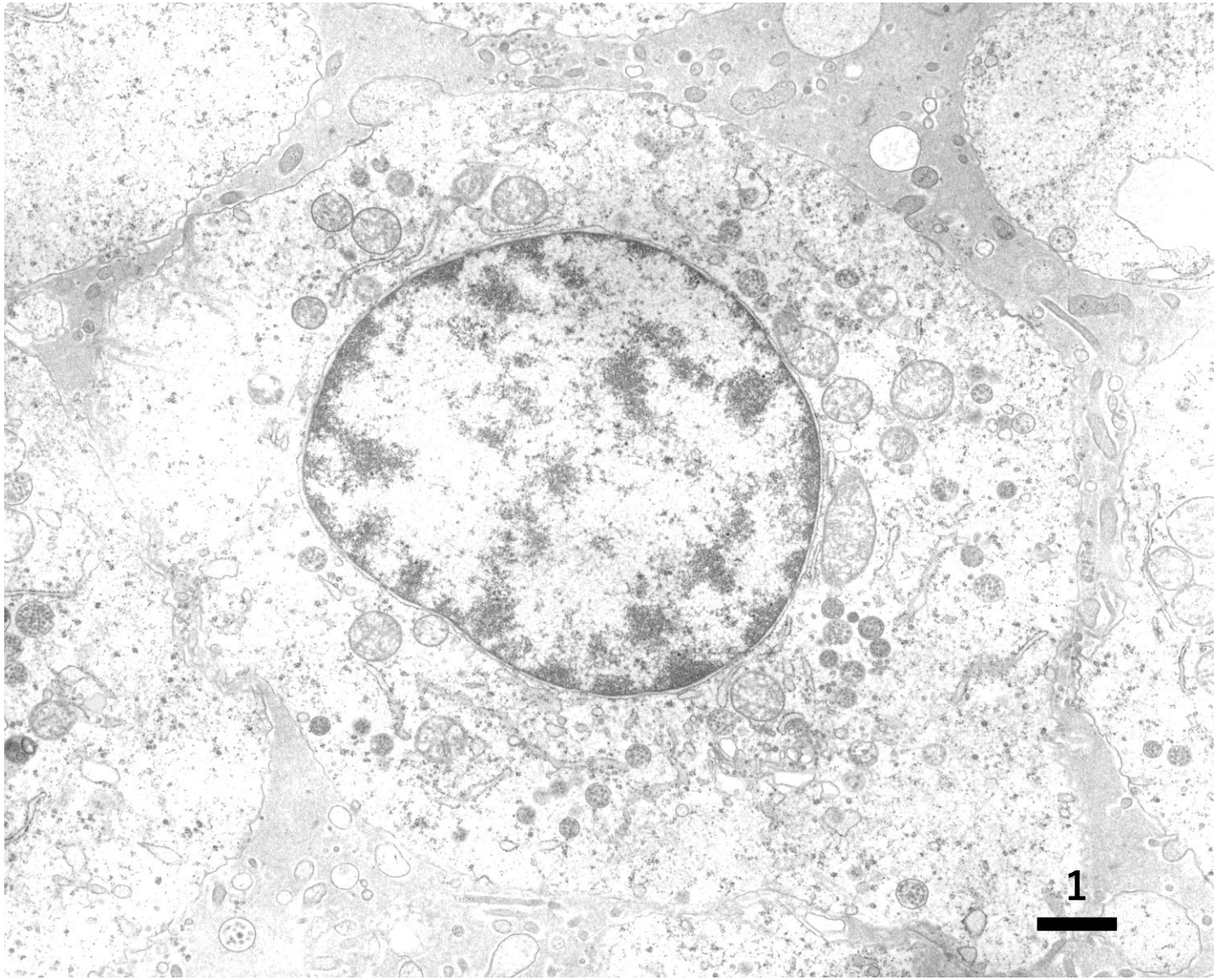
Ultrastructure of small intestinal Ki-1 lymphoma in a 15-year-old boy, complicated by intussusception. The large lymphoma cells possess intranuclear cytoplasmic inclusion and prominent nucleoli. Microvillous cell surface is observed. EM-1



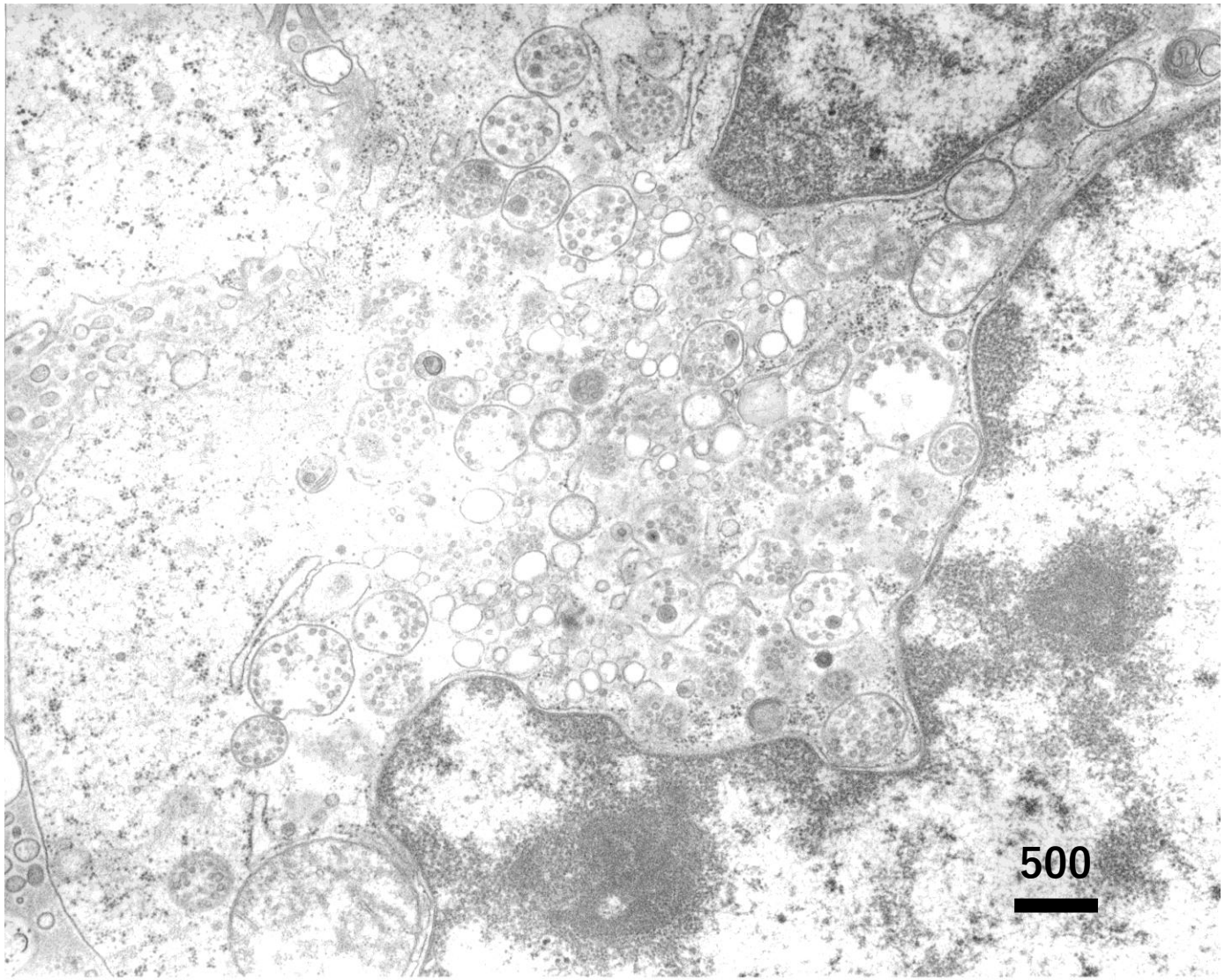
Ultrastructure of small intestinal Ki-1 lymphoma in a 15-year-old boy, complicated by intussusception. The large lymphoma cells possess an indented nucleus and prominent nucleoli. Microvillous cell surface is observed. EM-2



Ultrastructure of small intestinal Ki-1 lymphoma in a 15-year-old boy, complicated by intussusception. The large lymphoma cells possess a mildly indented nucleus and prominent nucleolus. Microvillous cell surface is observed. EM-3



Ultrastructure of small intestinal Ki-1 lymphoma in a 15-year-old boy, complicated by intussusception. In the cytoplasm of the large lymphoma cells, multivesicular bodies are dispersed: their size is smaller than mitochondria. Microvillous cell surface is observed. EM-4



Ultrastructure of small intestinal Ki-1 lymphoma in a 15-year-old boy, complicated by intussusception. In the cytoplasm of the large lymphoma cells, multivesicular bodies are clustered: their size is smaller than mitochondria. EM-5