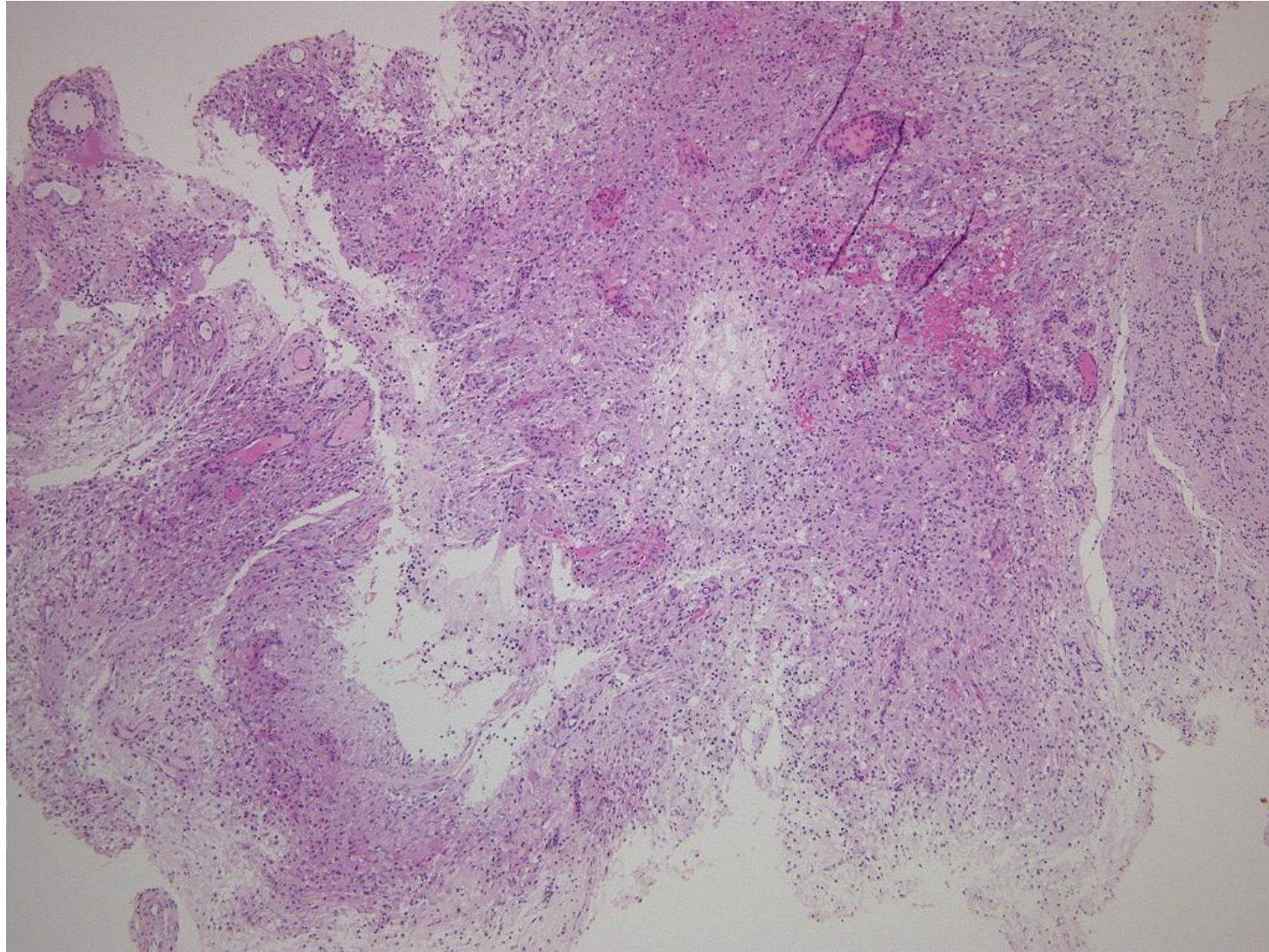


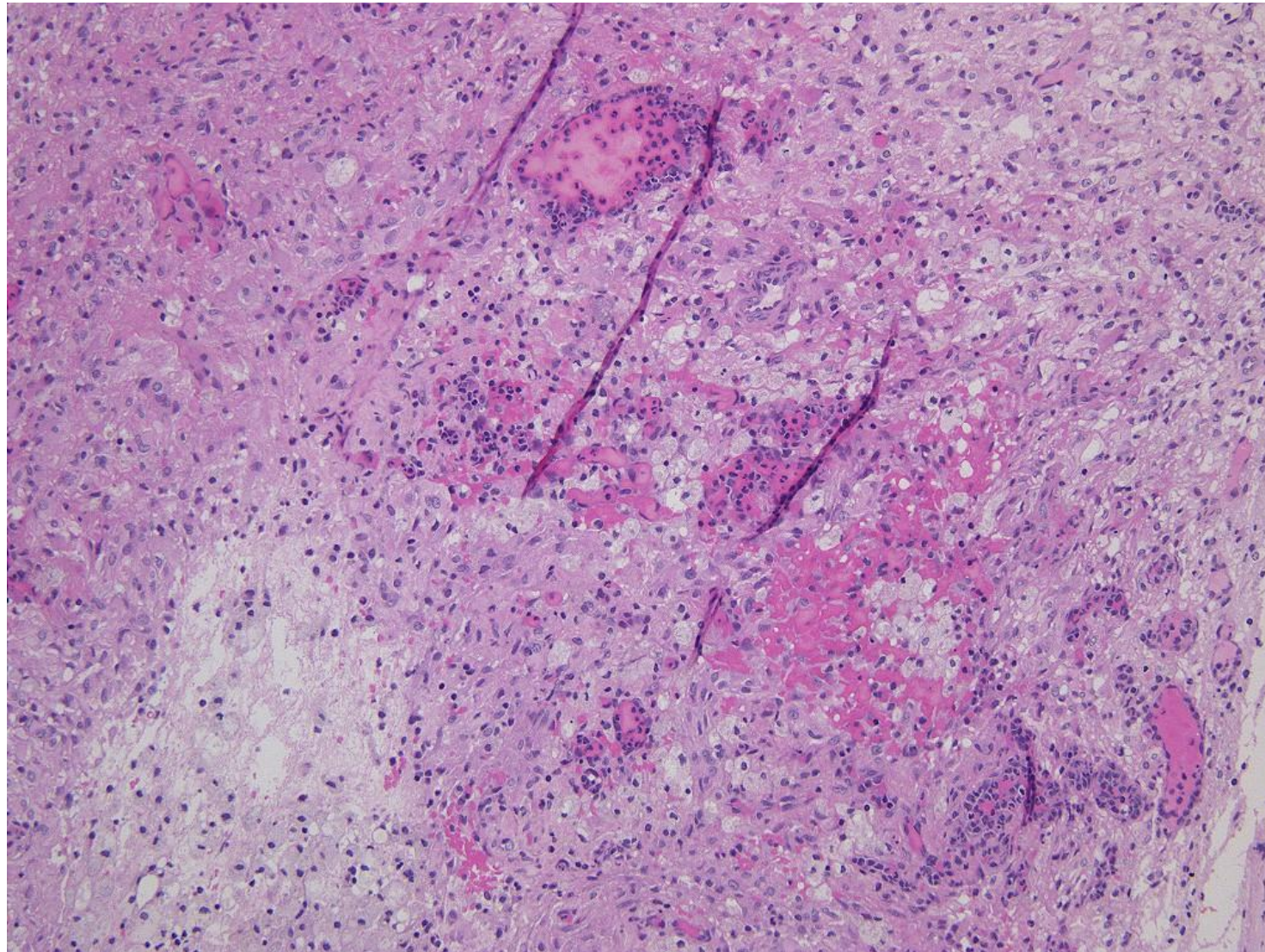
EBV-related NK/T-cell lymphoproliferative disorder of the spinal cord

EBV-associated extranodal NK/T cell lymphoproliferative disorders may happen anywhere in the body. Spinal cord involvement is a very rare occasion.

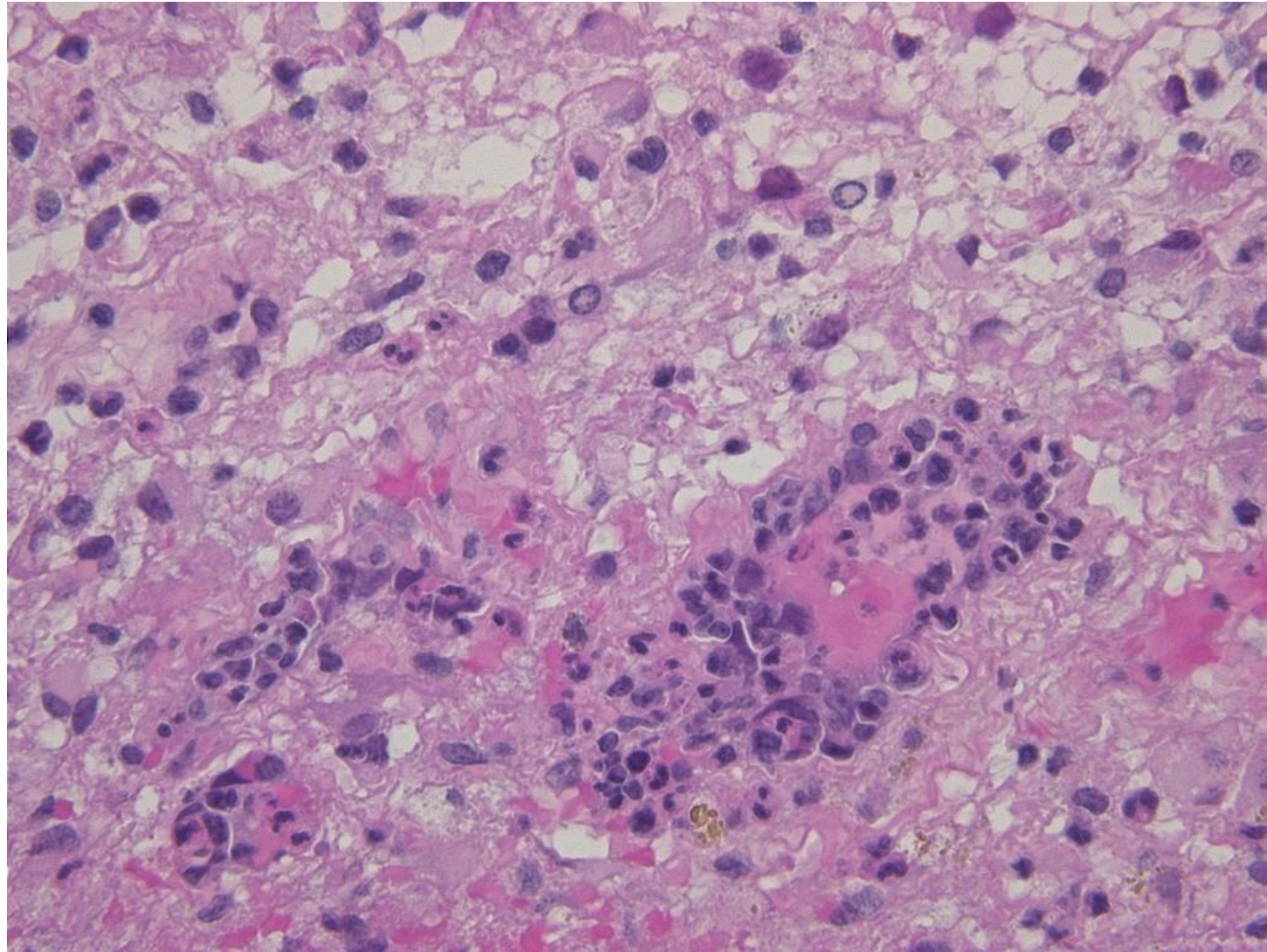
A 13-year-old boy complained of backpain and gait disturbance. Paraplegia and perceptual disappearance below the level Th5 followed. Under the clinical diagnosis of myelitis, administration of high-dose steroid was temporarily effective. Laminoplasty and biopsy for C3-6 lesions was performed 2 months later. Pathologically, astrocytoma was suspected, and radiation therapy was given to the whole spinal cord. 14 month after the onset, he died of spinal and cerebral dissemination of the lesion. Autopsy was not performed. Re-evaluation of the biopsy sample finally disclosed the diagnosis of EBV-related NK/T-cell LPD.



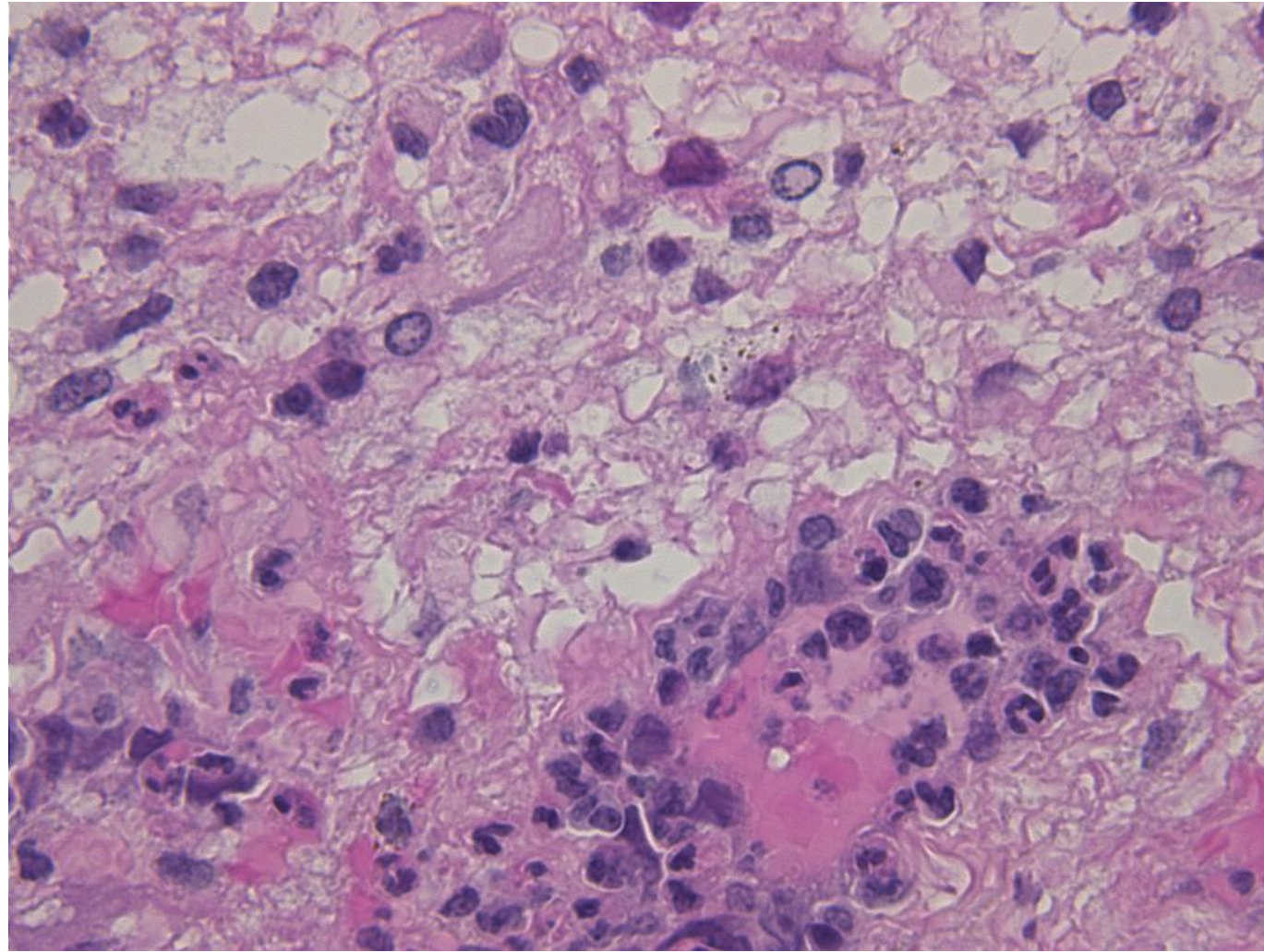
Low-powered view of the biopsied spinal cord lesion of a 13-year-old boy. Hypercellularity and perivascular accumulation of the cells with hemorrhage are observed. H&E-1



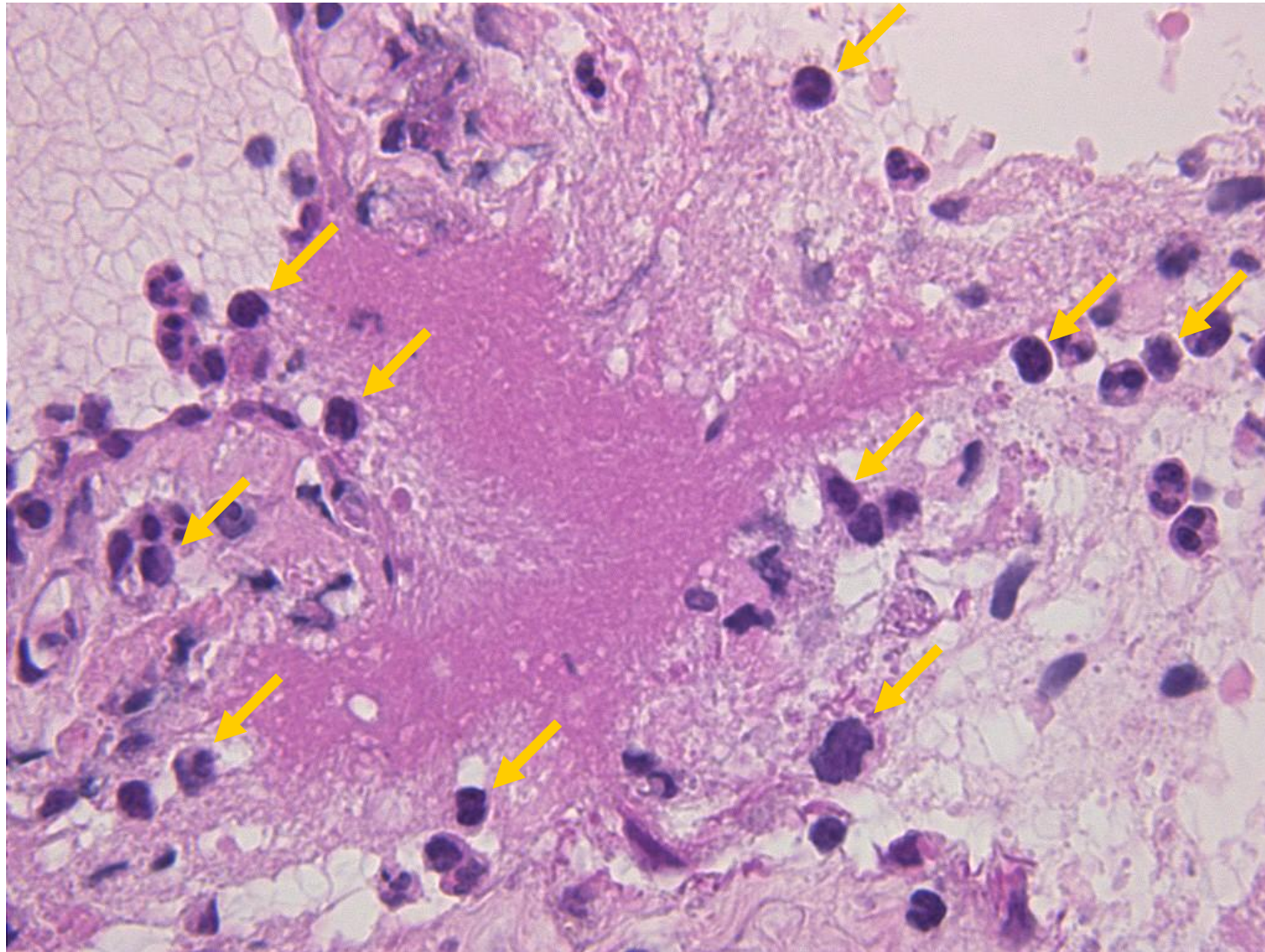
The biopsied spinal cord lesion of a 13-year-old boy. Perivascular accumulation of mononuclear cells and foamy macrophages with hemorrhage are observed. H&E-2



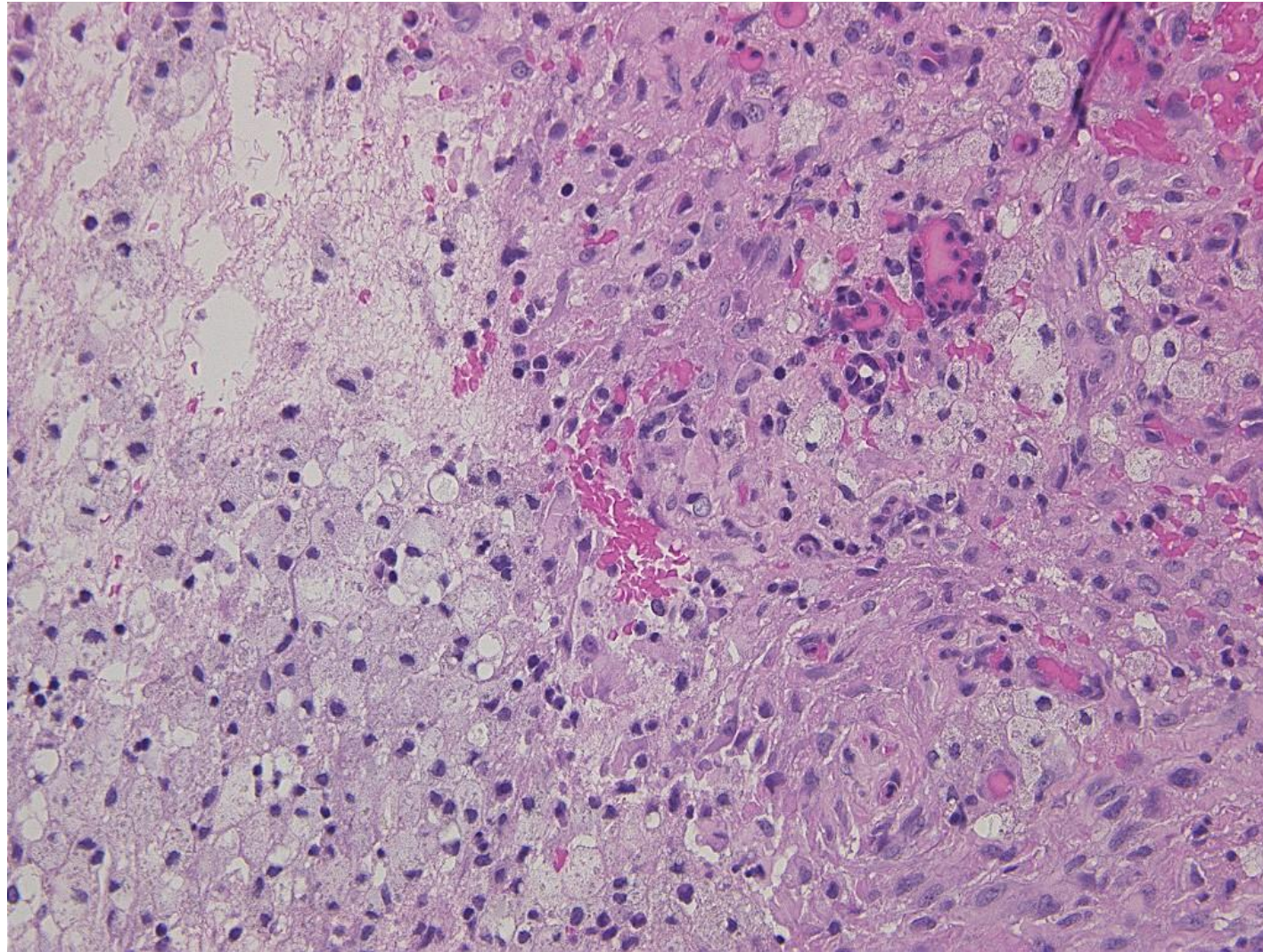
The biopsied spinal cord lesion of a 13-year-old boy. Perivascular accumulation of atypical mononuclear cells and foamy macrophages are observed. H&E-3



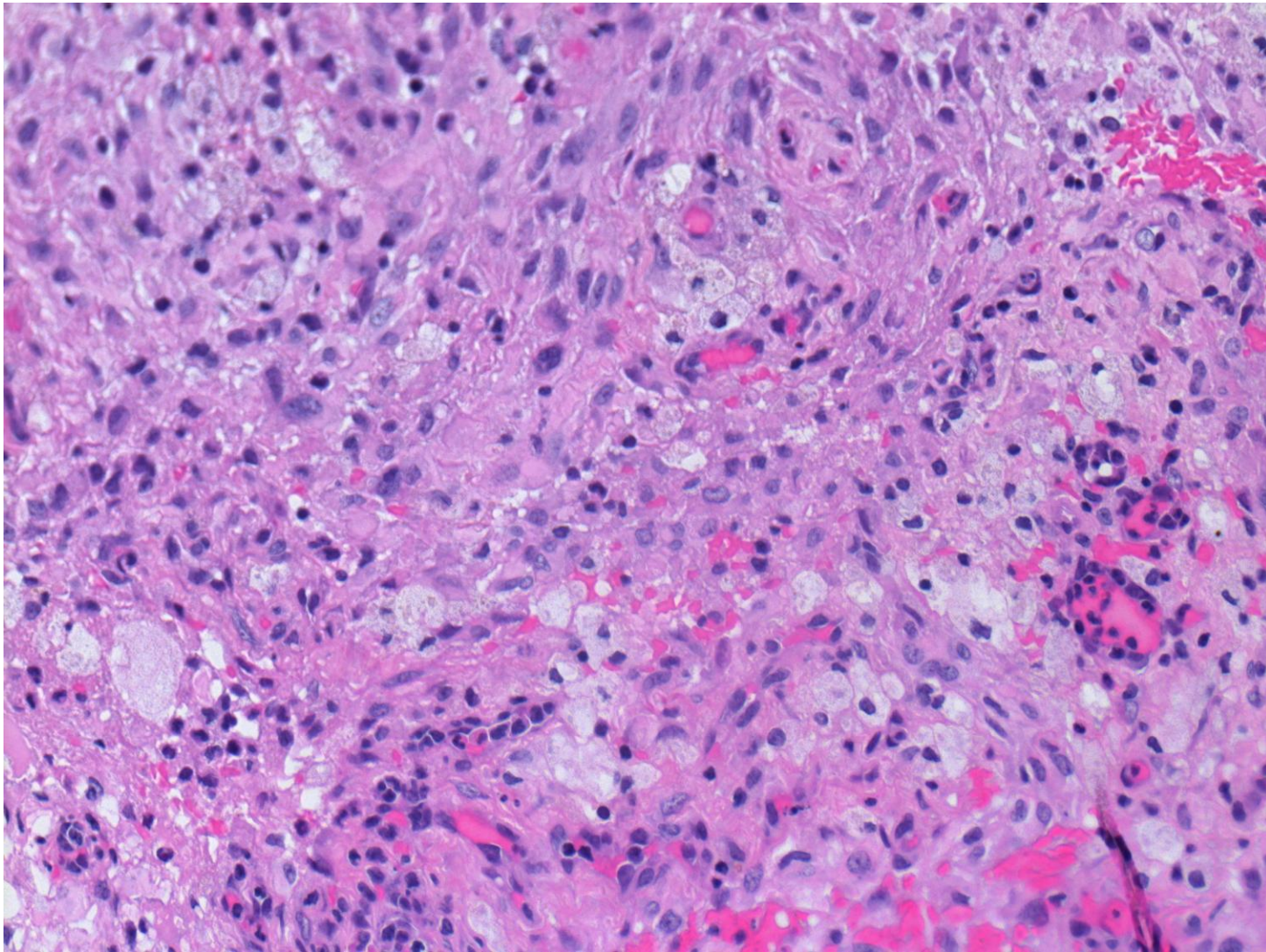
The biopsied spinal cord lesion of a 13-year-old boy. Perivascular accumulation of atypical mononuclear cells and foamy macrophages are observed. The atypical lymphoid cells reveal hyperchromasia and nuclear indentations. H&E-4



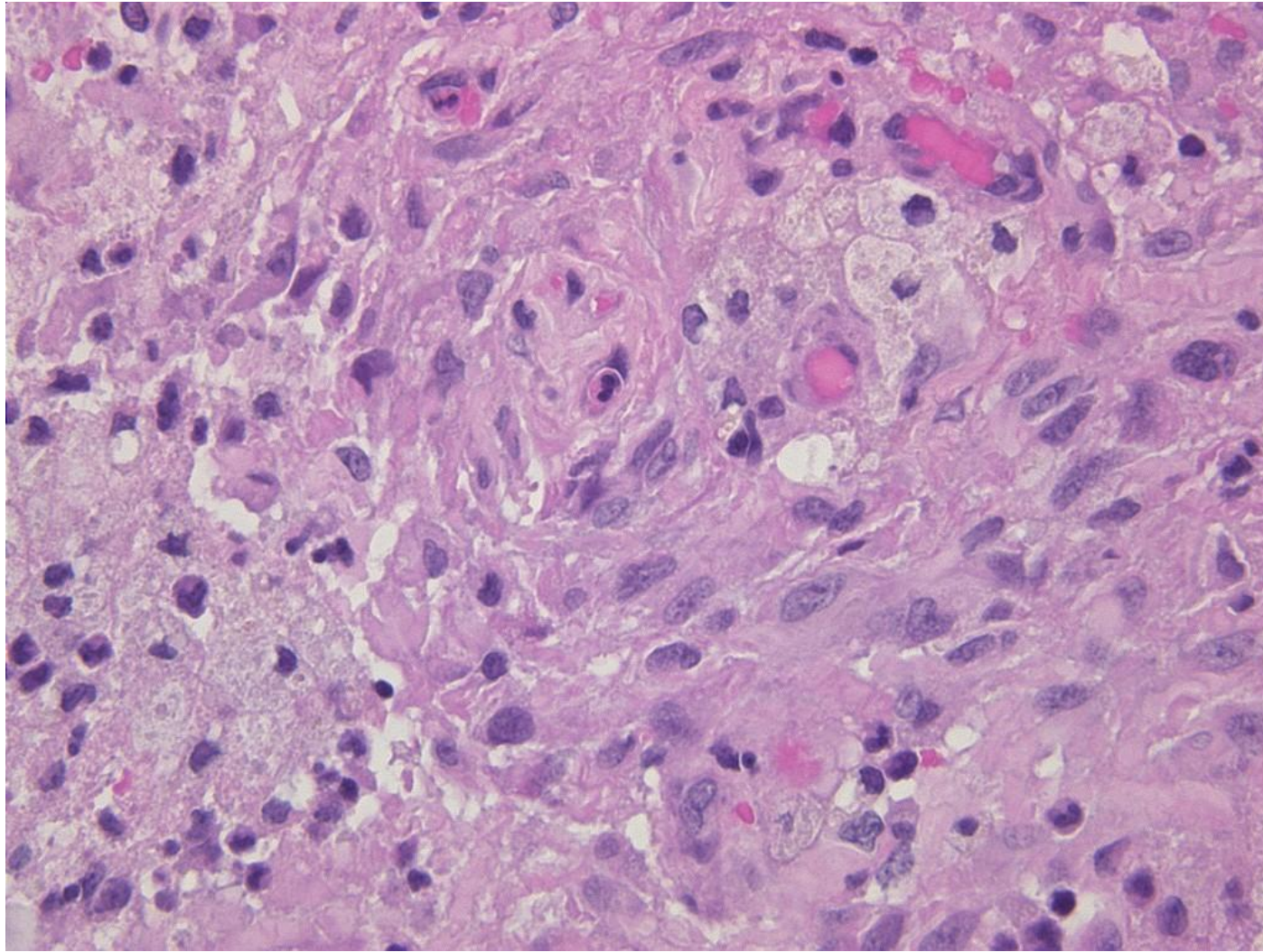
The biopsied spinal cord lesion of a 13-year-old boy. Fibrinous exudation around a vessel and accumulation of atypical mononuclear cells (arrows) are observed. Nuclear atypia is noted in the mononuclear cells. H&E-5



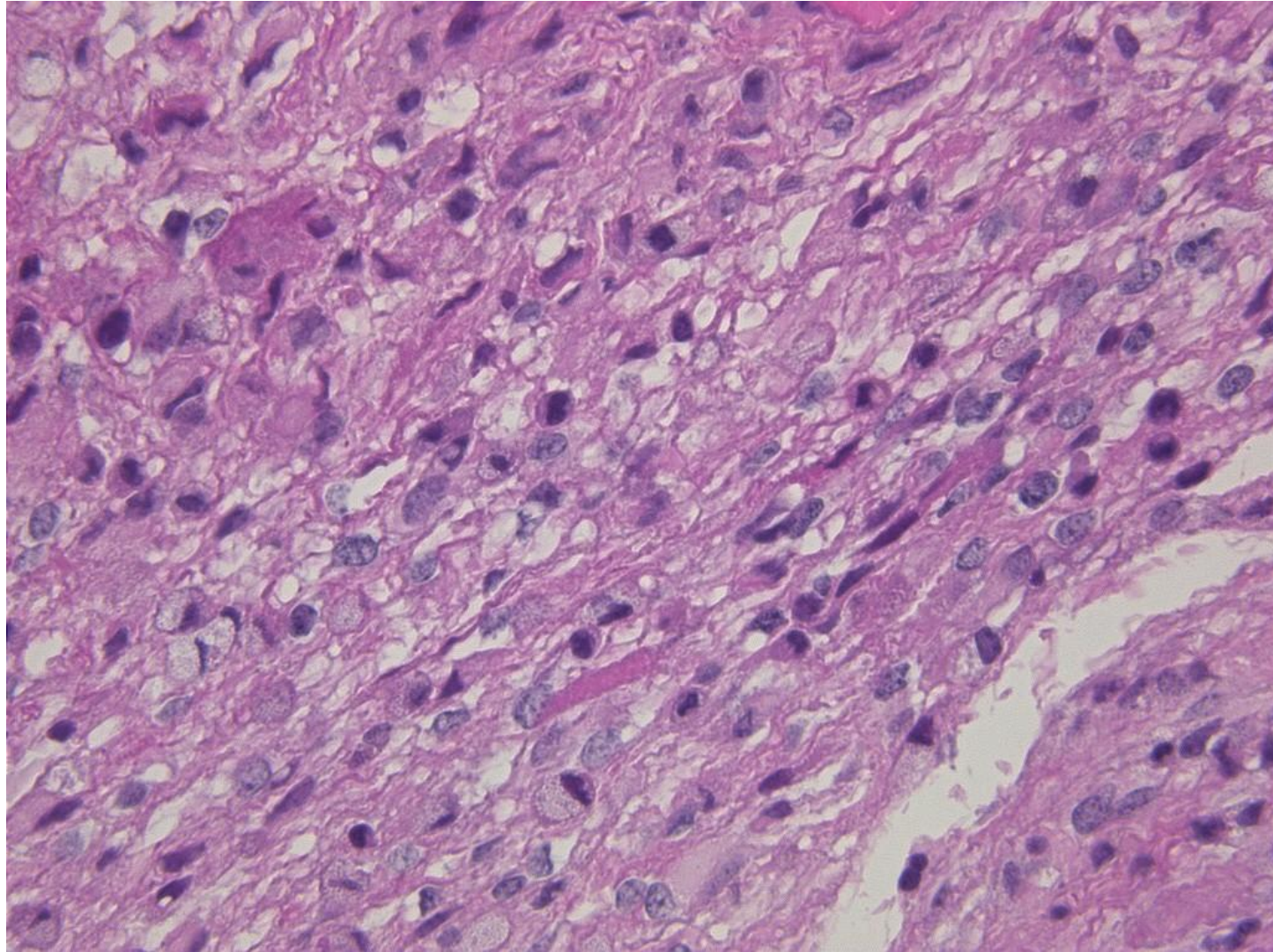
The biopsied spinal cord lesion of a 13-year-old boy. Perivascular accumulation of foamy macrophages and reactive gliosis are observed. H&E-6



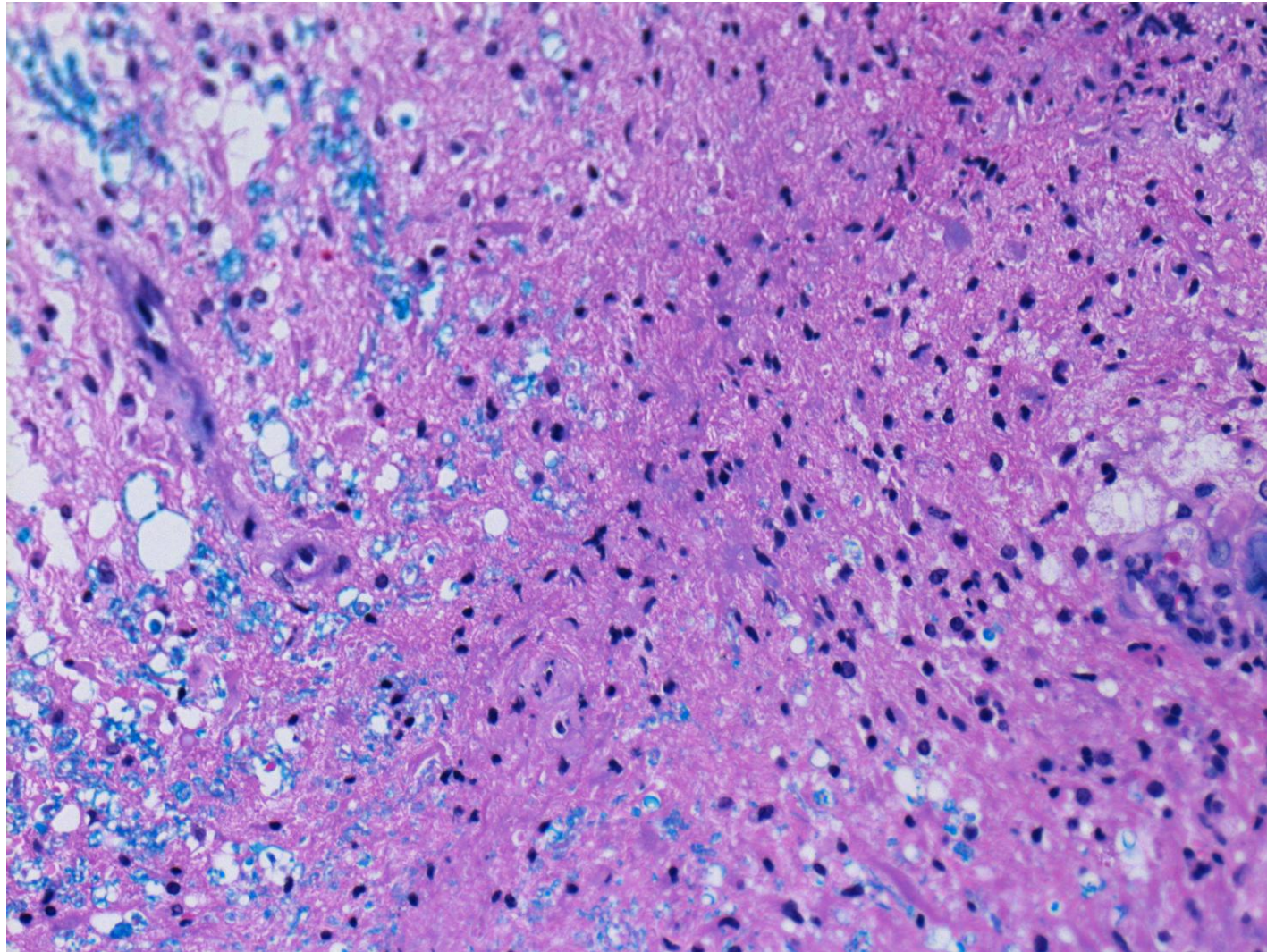
The biopsied spinal cord lesion of a 13-year-old boy. Perivascular accumulation of atypical mononuclear cells and foamy macrophages is observed. Reactive gliosis is associated. H&E-7



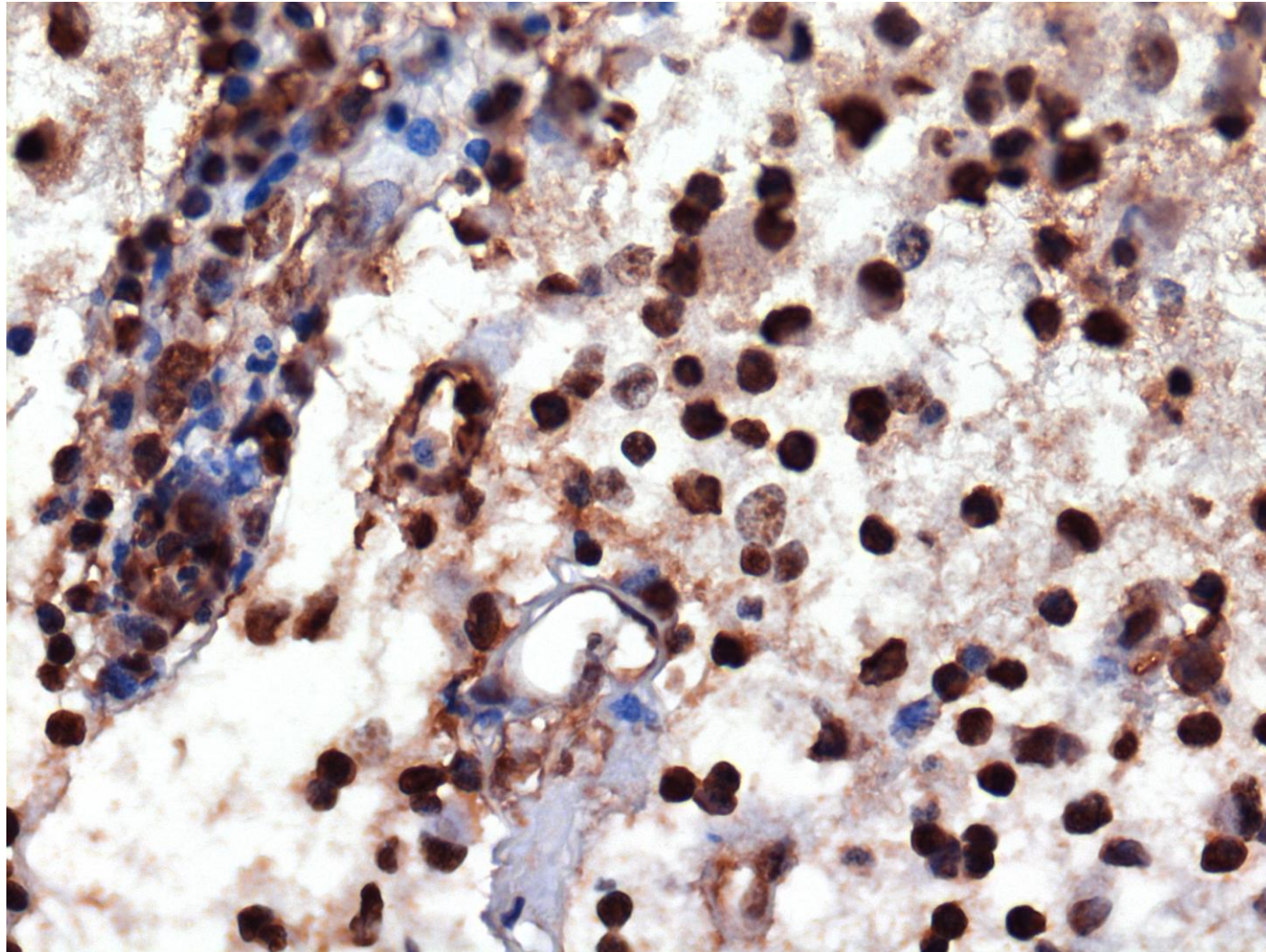
The biopsied spinal cord lesion of a 13-year-old boy. Atypical mononuclear cells are scattered, and reactive gliosis is associated. H&E-8



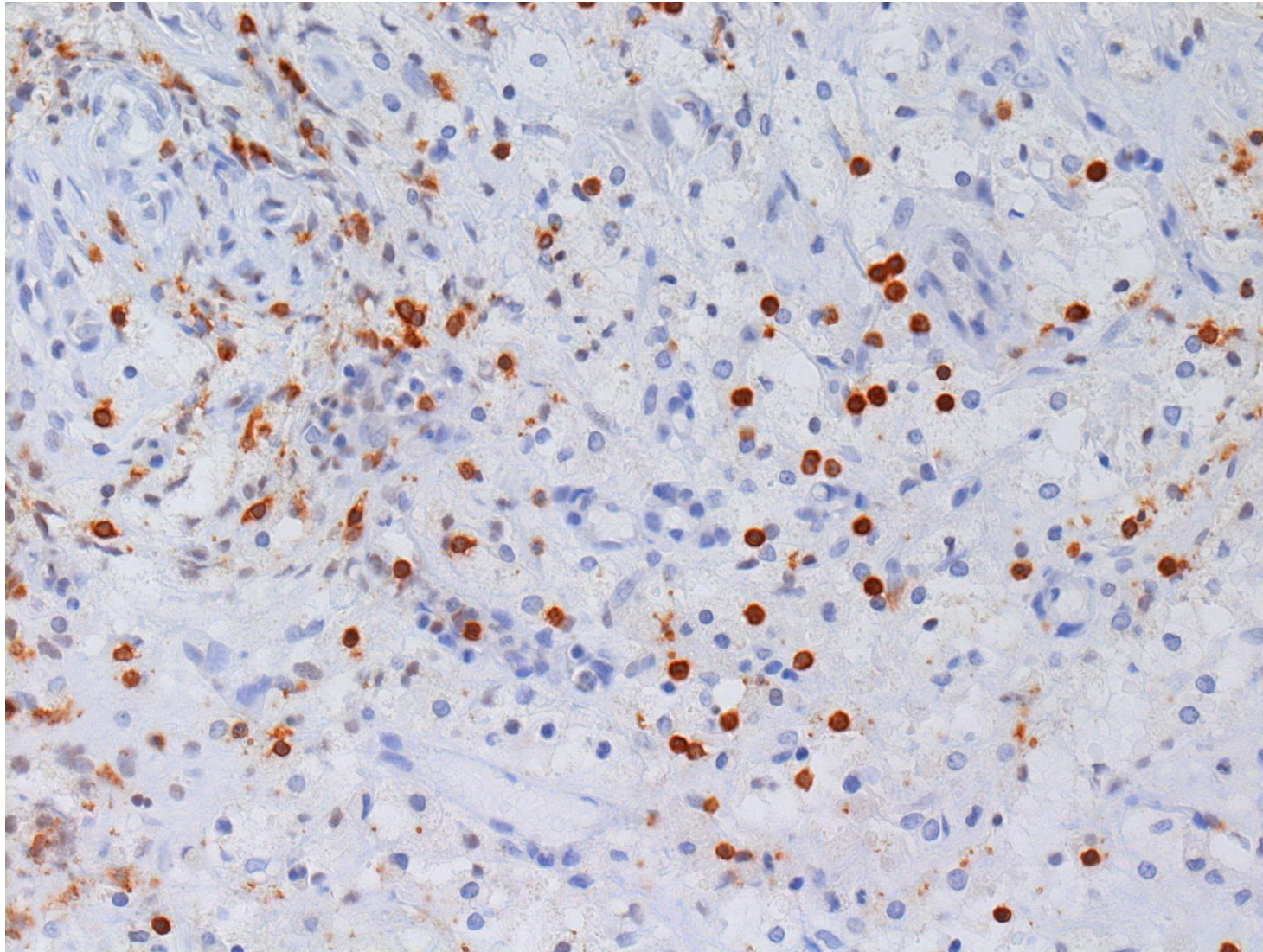
The biopsied spinal cord lesion of a 13-year-old boy. Atypical mononuclear cells are scattered, and reactive gliosis is associated. H&E-9



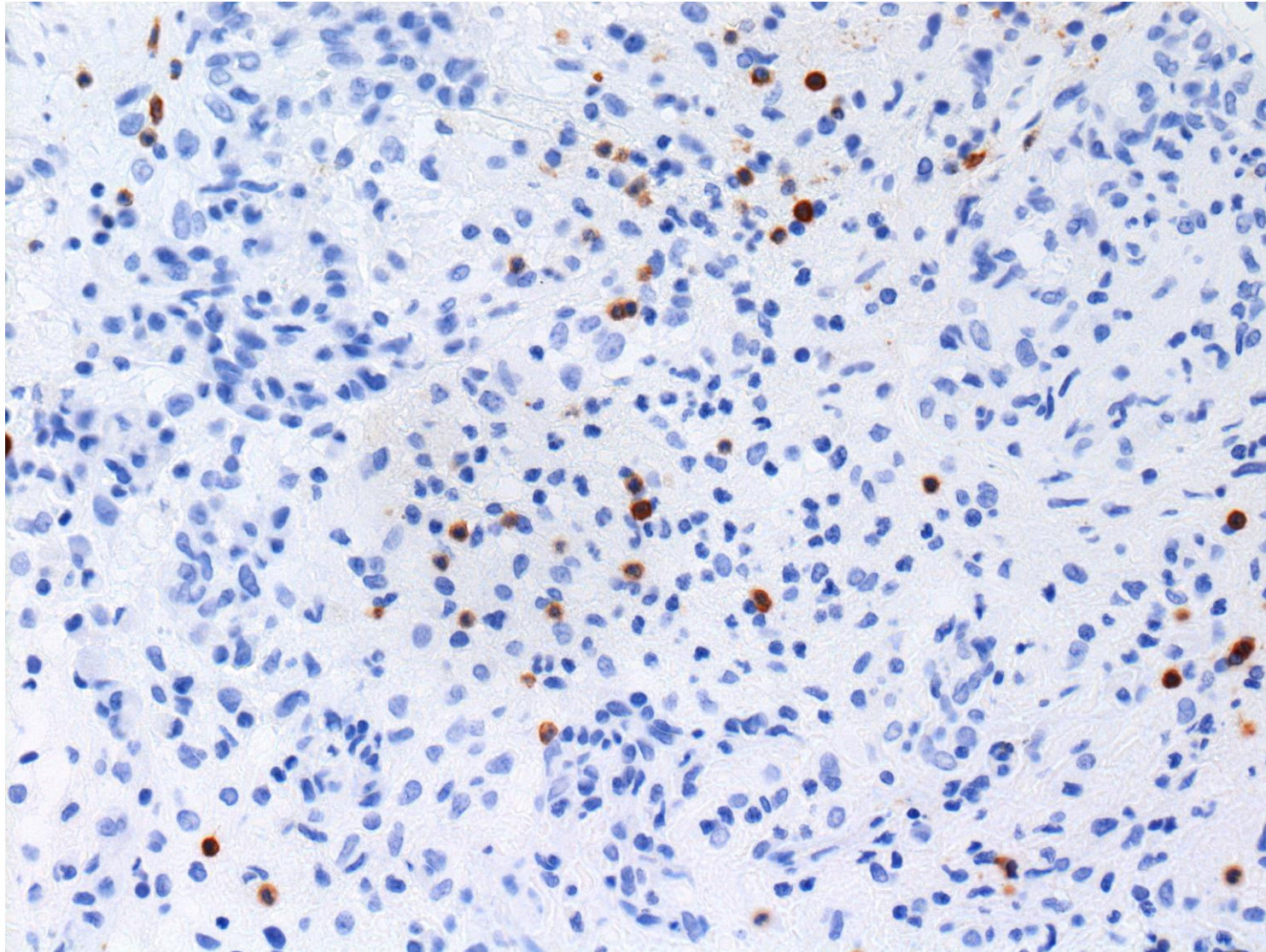
The biopsied spinal cord lesion of a 13-year-old boy. Accumulation of atypical mononuclear cells are observed. The spinal cord parenchyma is destroyed. The same microscopic field was immunostained, as follows. LFB-HE



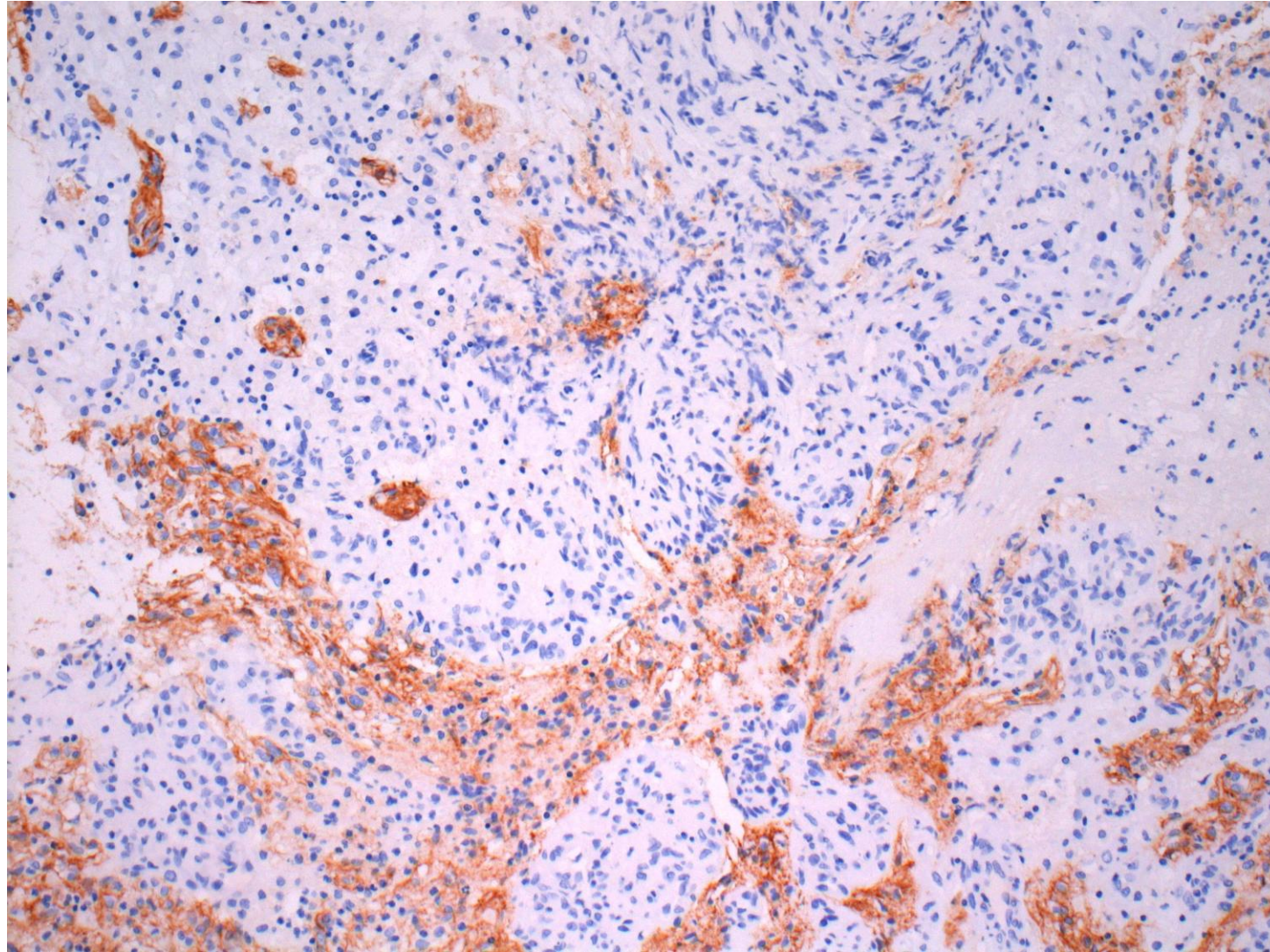
The biopsied spinal cord lesion of a 13-year-old boy. The atypical mononuclear cells are labeled for EBER. *In situ* hybridization for EBER



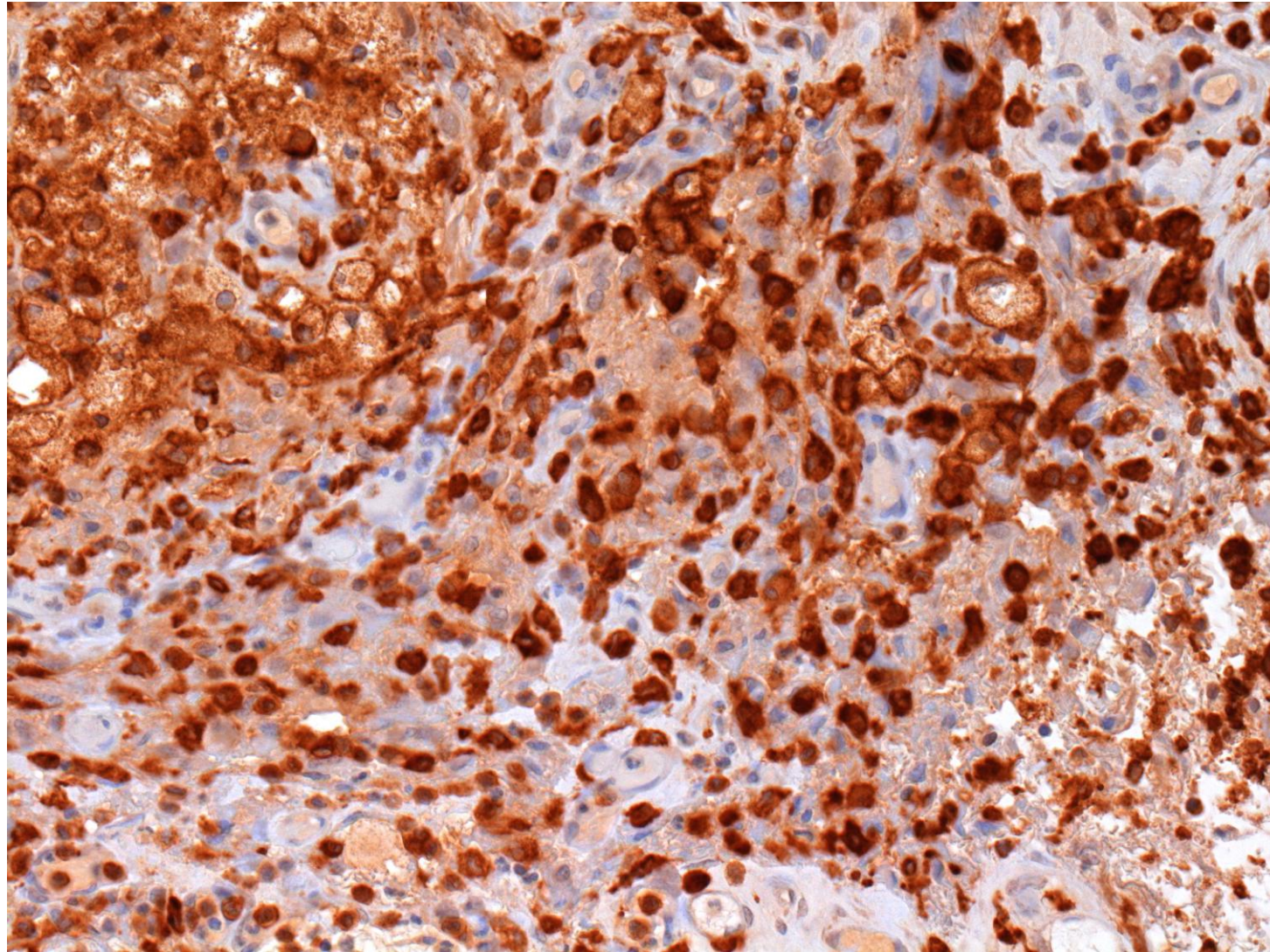
The biopsied spinal cord lesion of a 13-year-old boy. The atypical mononuclear cells are labeled for cytoplasmic CD3. Immunostaining for CD3



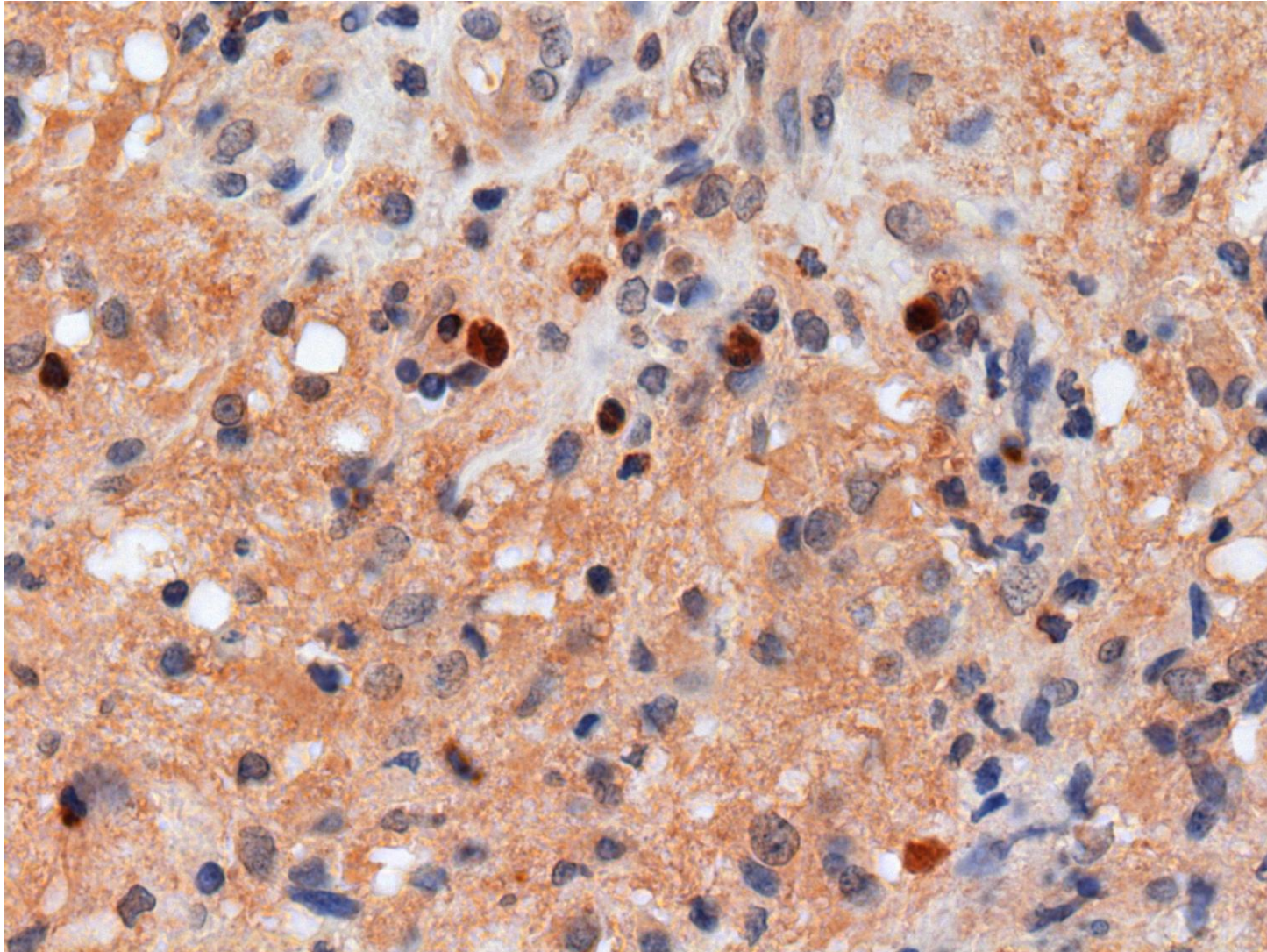
The biopsied spinal cord lesion of a 13-year-old boy.
Fewer lymphoid cells in the lesion are labeled for CD5.
Immunostaining for CD5



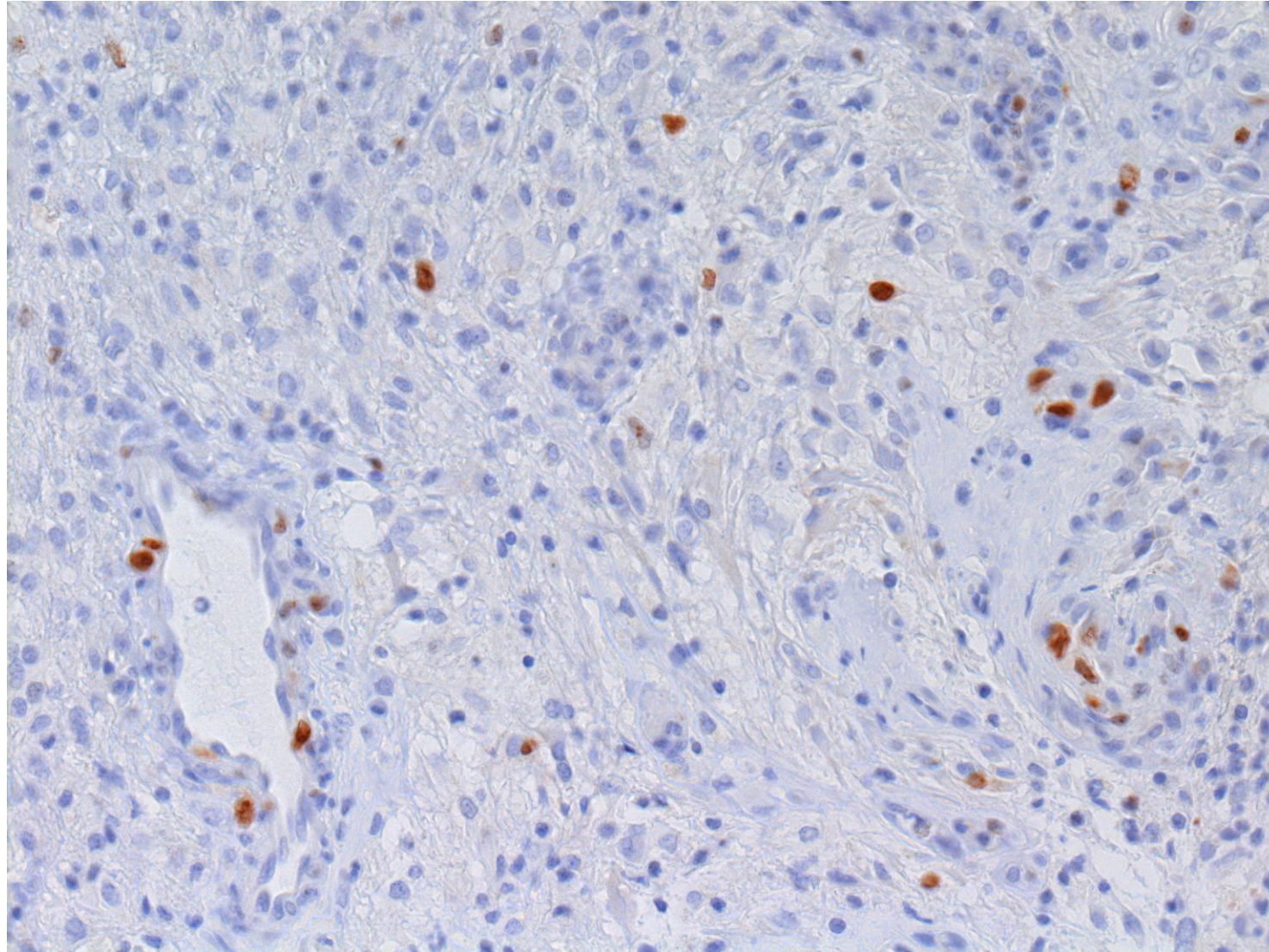
The biopsied spinal cord lesion of a 13-year-old boy. The atypical mononuclear cells are negative for cytoplasmic CD56. Nerve fibers are stained for CD56. Immunostaining for CD56



The biopsied spinal cord lesion of a 13-year-old boy. Clustered foamy macrophages are labeled for CD163. Immunostaining for CD168



The biopsied spinal cord lesion of a 13-year-old boy. The atypical mononuclear cells are partly labeled for TIA-1.
Immunostaining for TIA-1



The biopsied spinal cord lesion of a 13-year-old boy. Ki-67 labeling index of the atypical mononuclear cells is not so high (around 15%). Immunostaining for Ki-67