

Diagnostic Slide Session Case #7

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- No financial interest to disclose

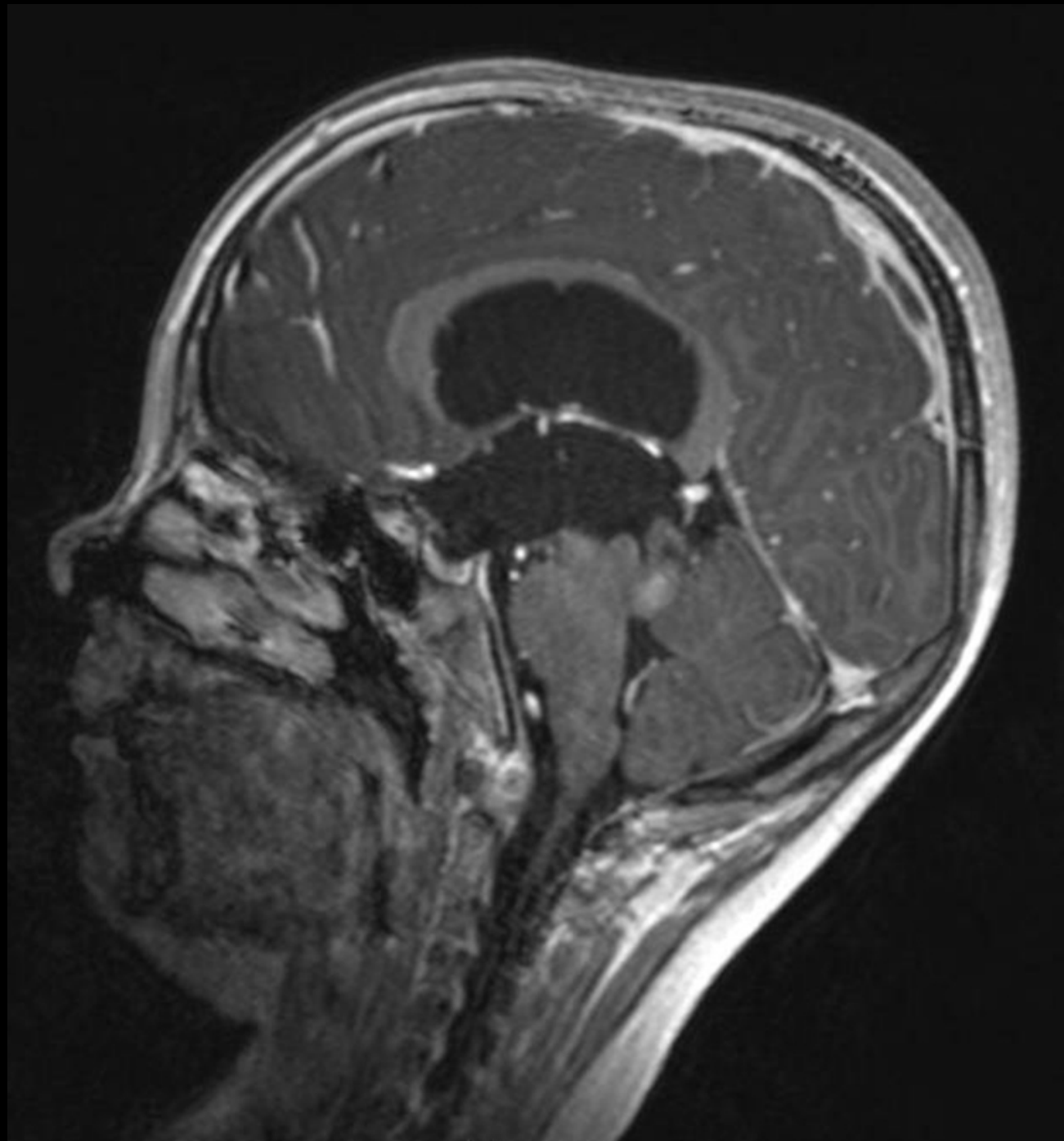
Clinical History

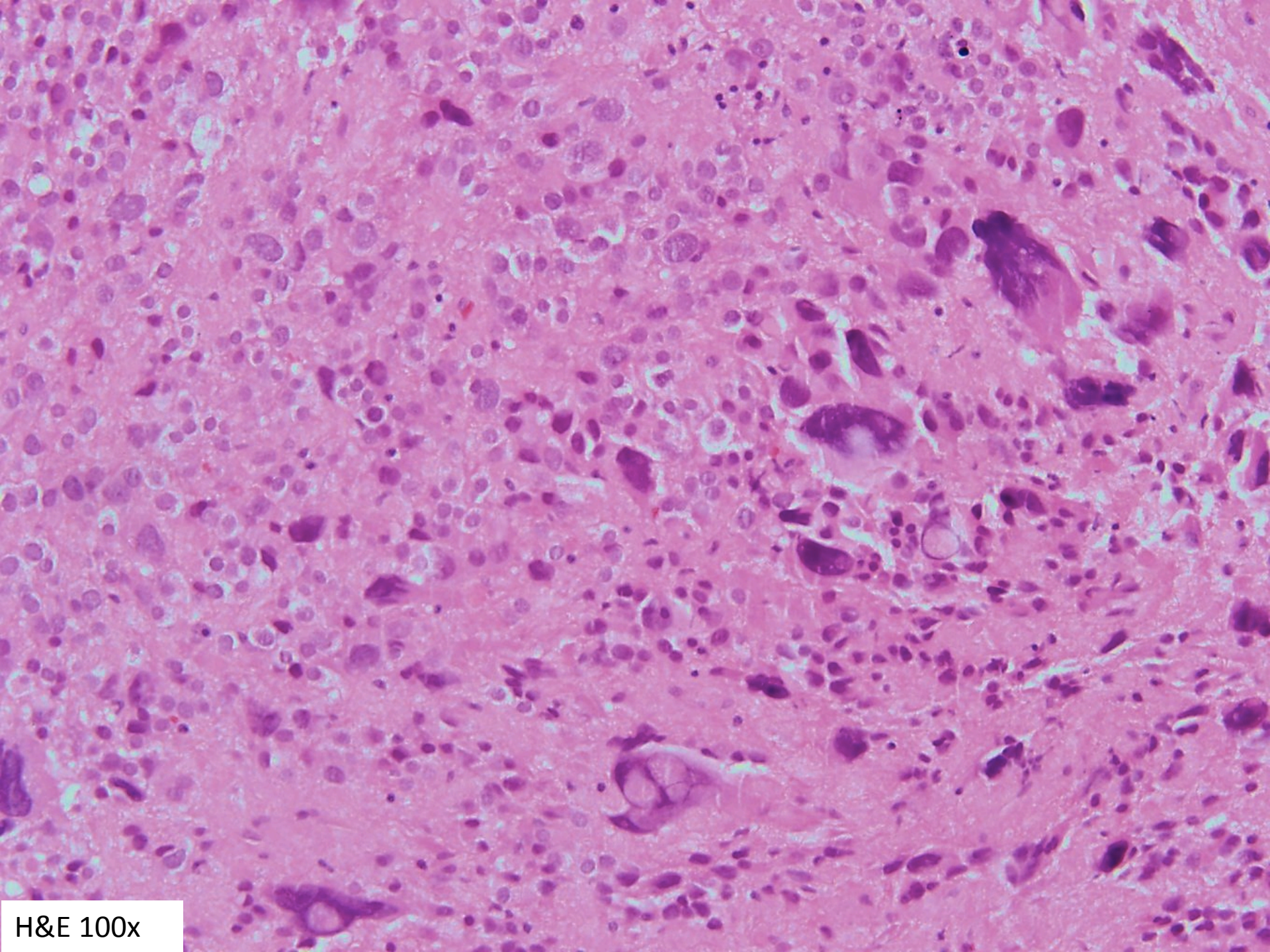
- 7-year-old girl with a medical history of headaches for the past two years
- Magnetic resonance imaging (MRI) – “likely tectal plate glioma” with accompanying hydrocephalus
- Biopsy and 3rd ventriculostomy

HA

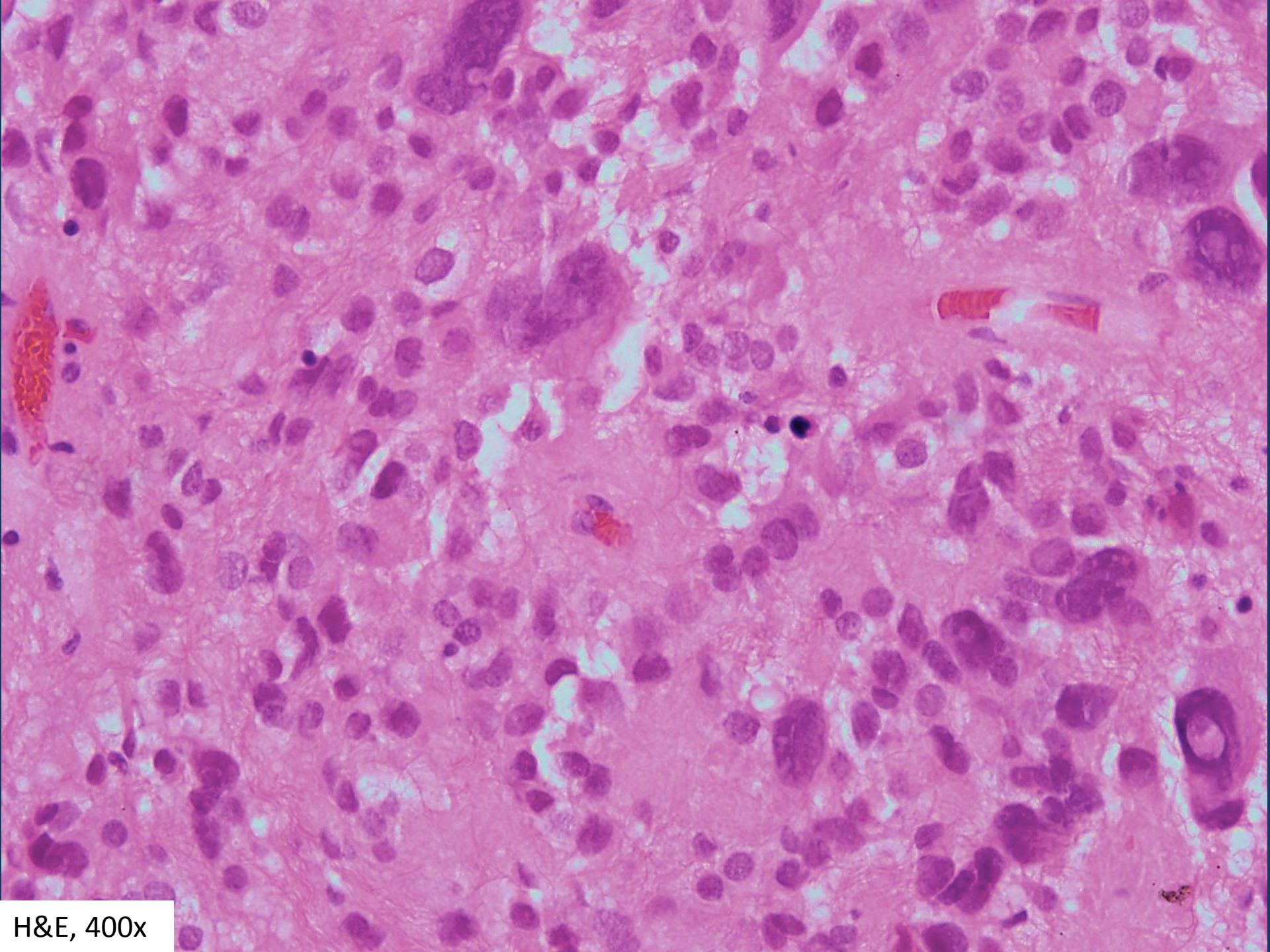


E3

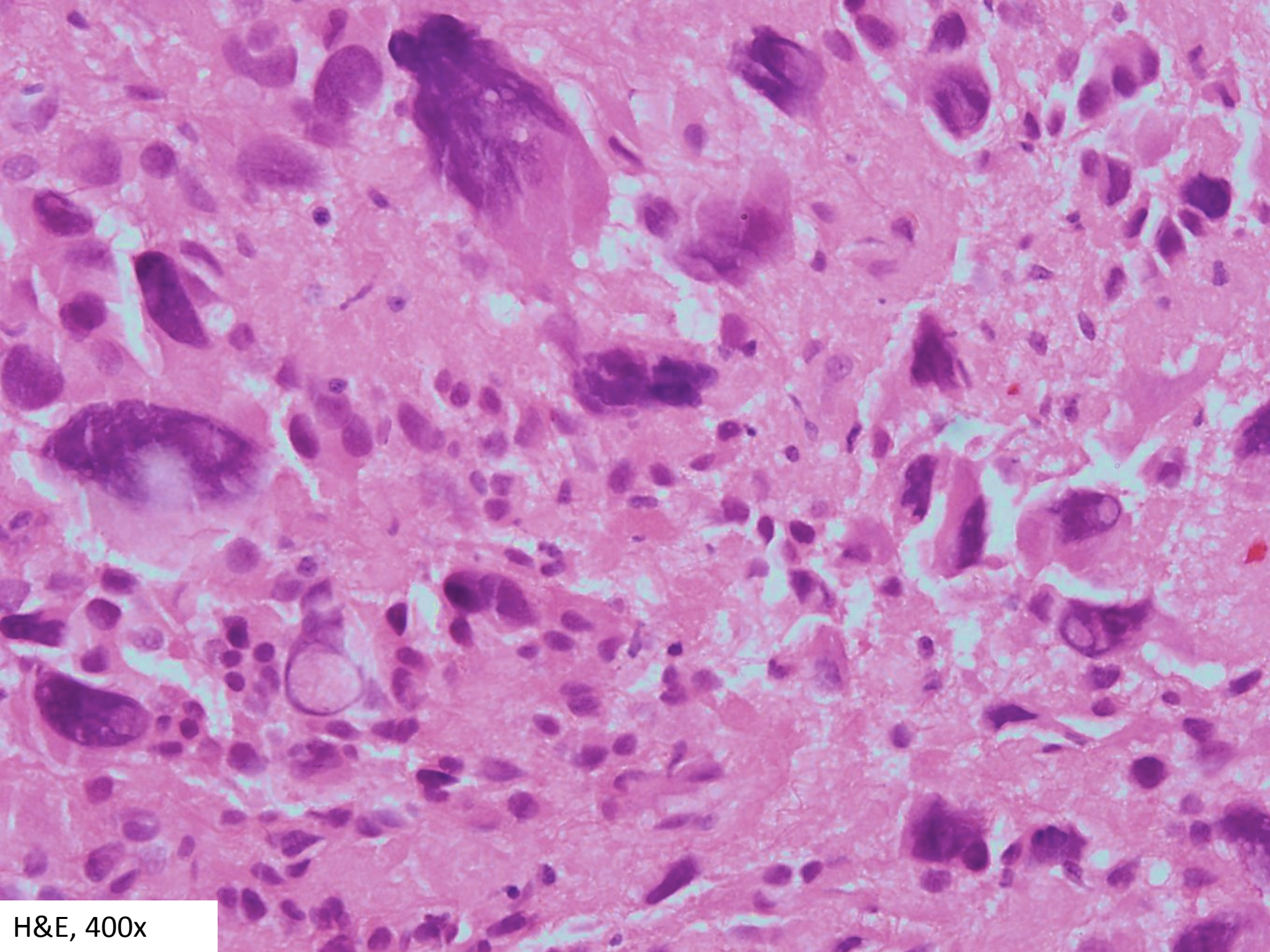




H&E 100x



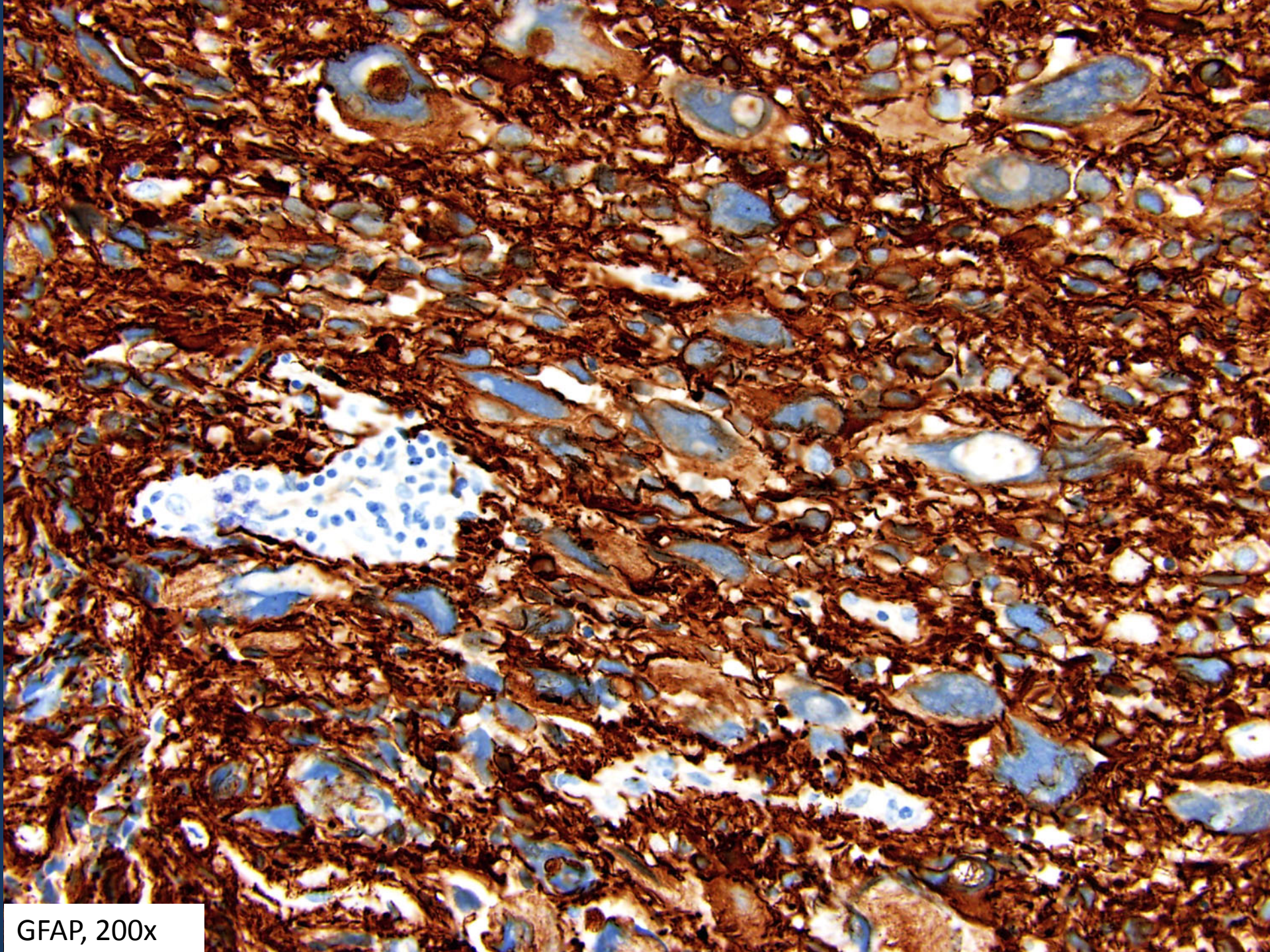
H&E, 400x



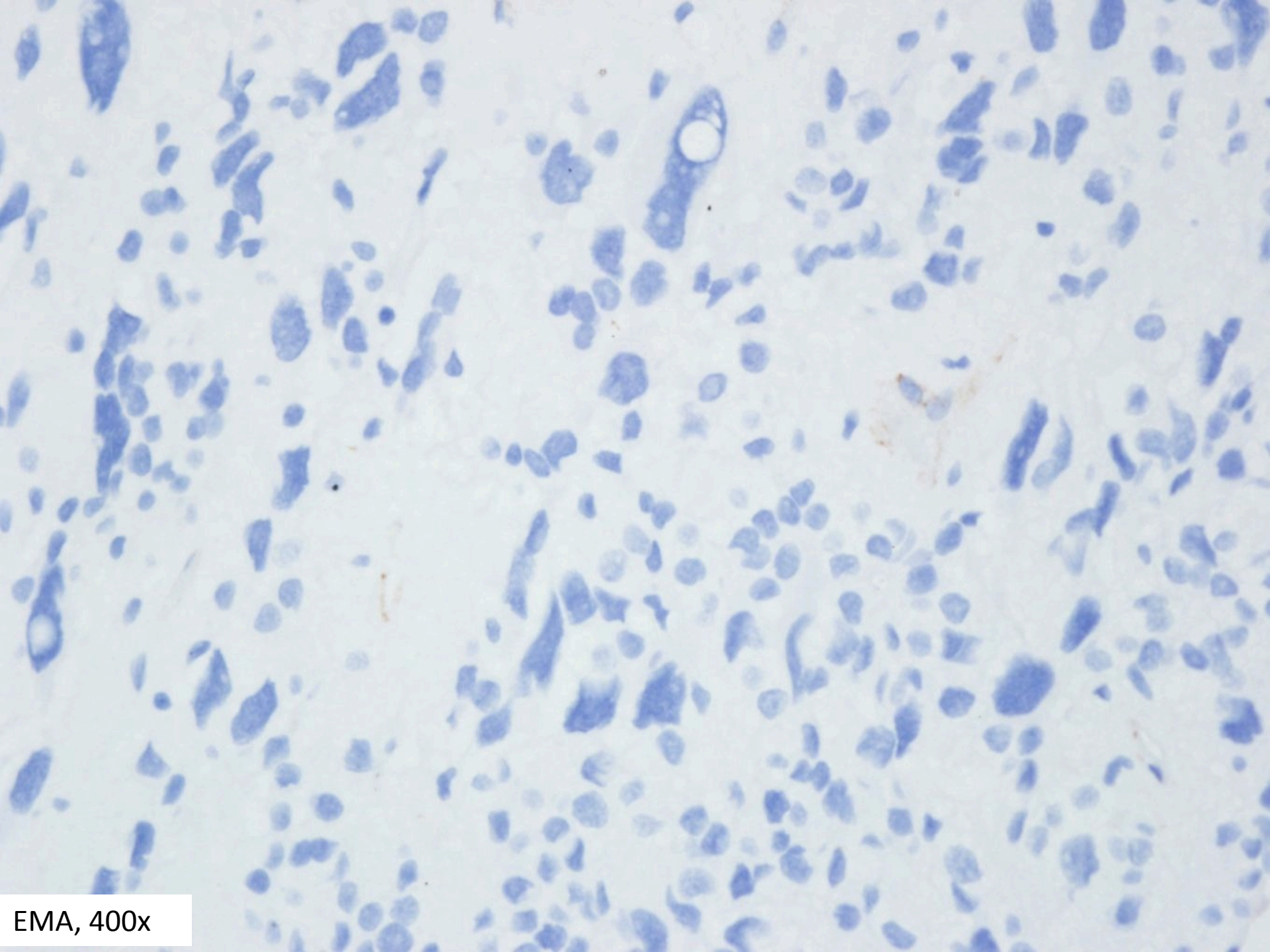
H&E, 400x

- Differential diagnosis? Final diagnosis?
- Helpful stains and other studies?

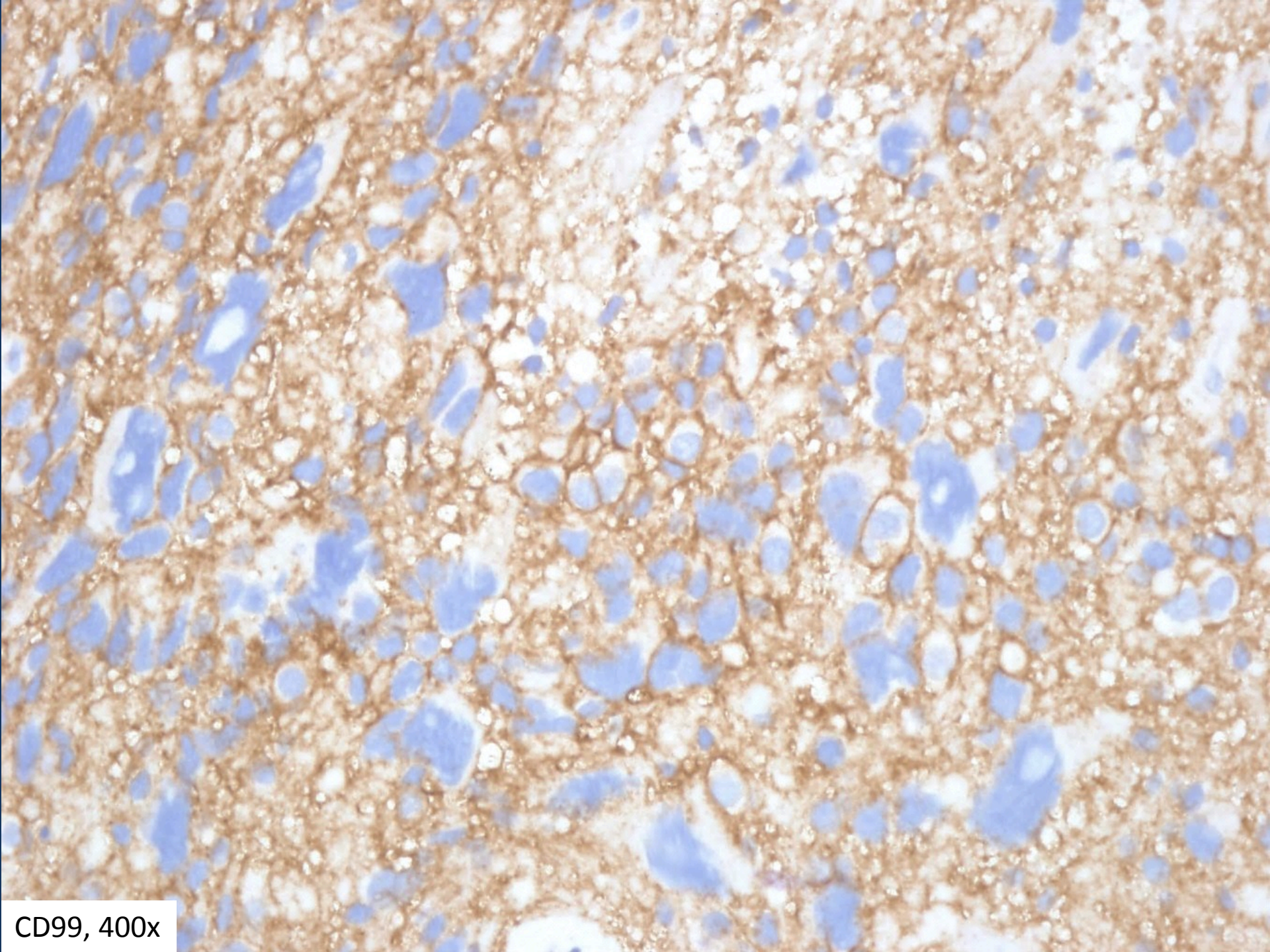
- Giant cell glioblastoma, WHO grade IV
- Ependymoma, giant cell variant, WHO grade II
- Pleomorphic xanthoastrocytoma, WHO grade II
- Subependymal giant cell astrocytoma, WHO grade I
- Ganglioglioma, WHO grade I



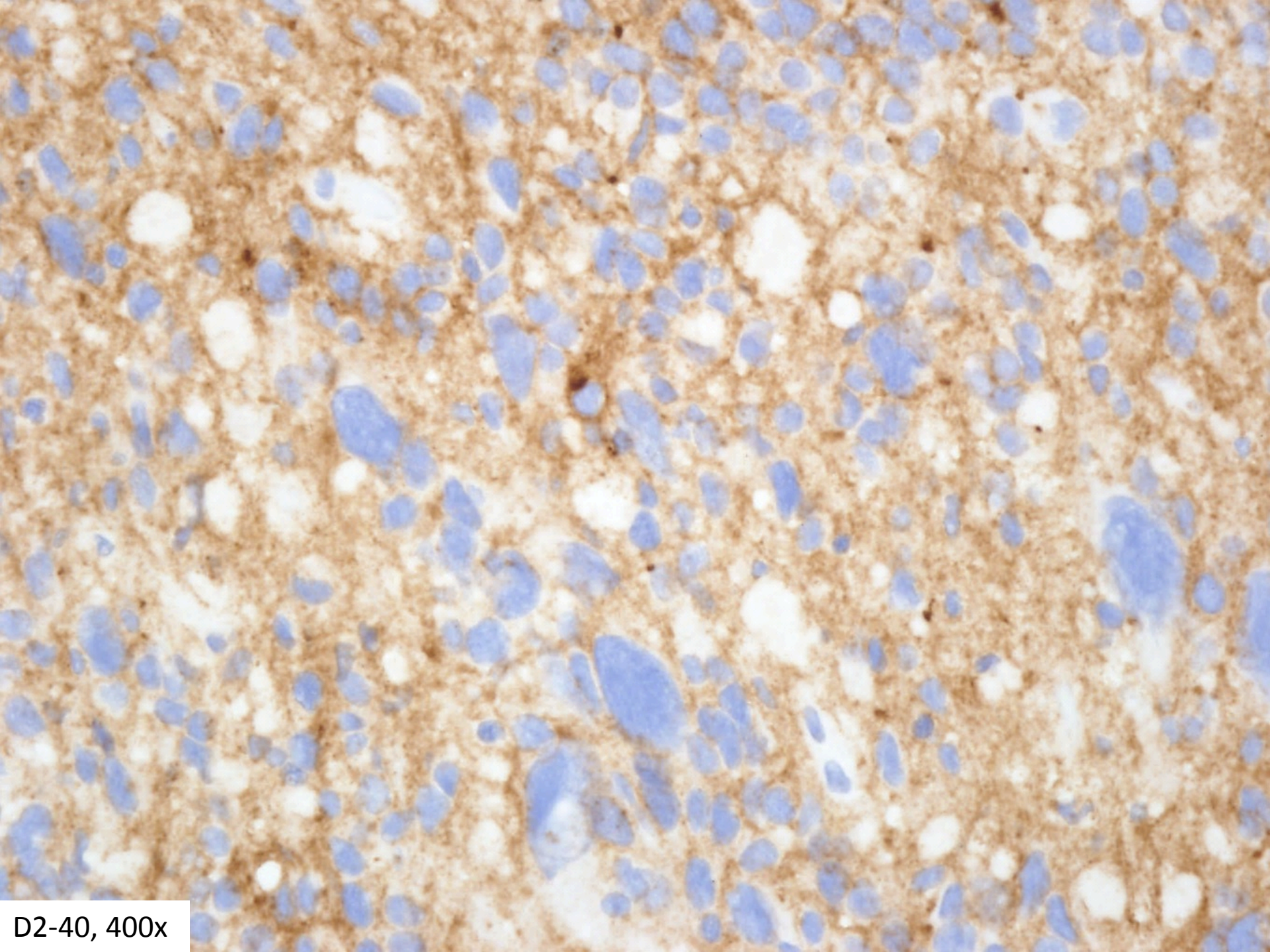
GFAP, 200x



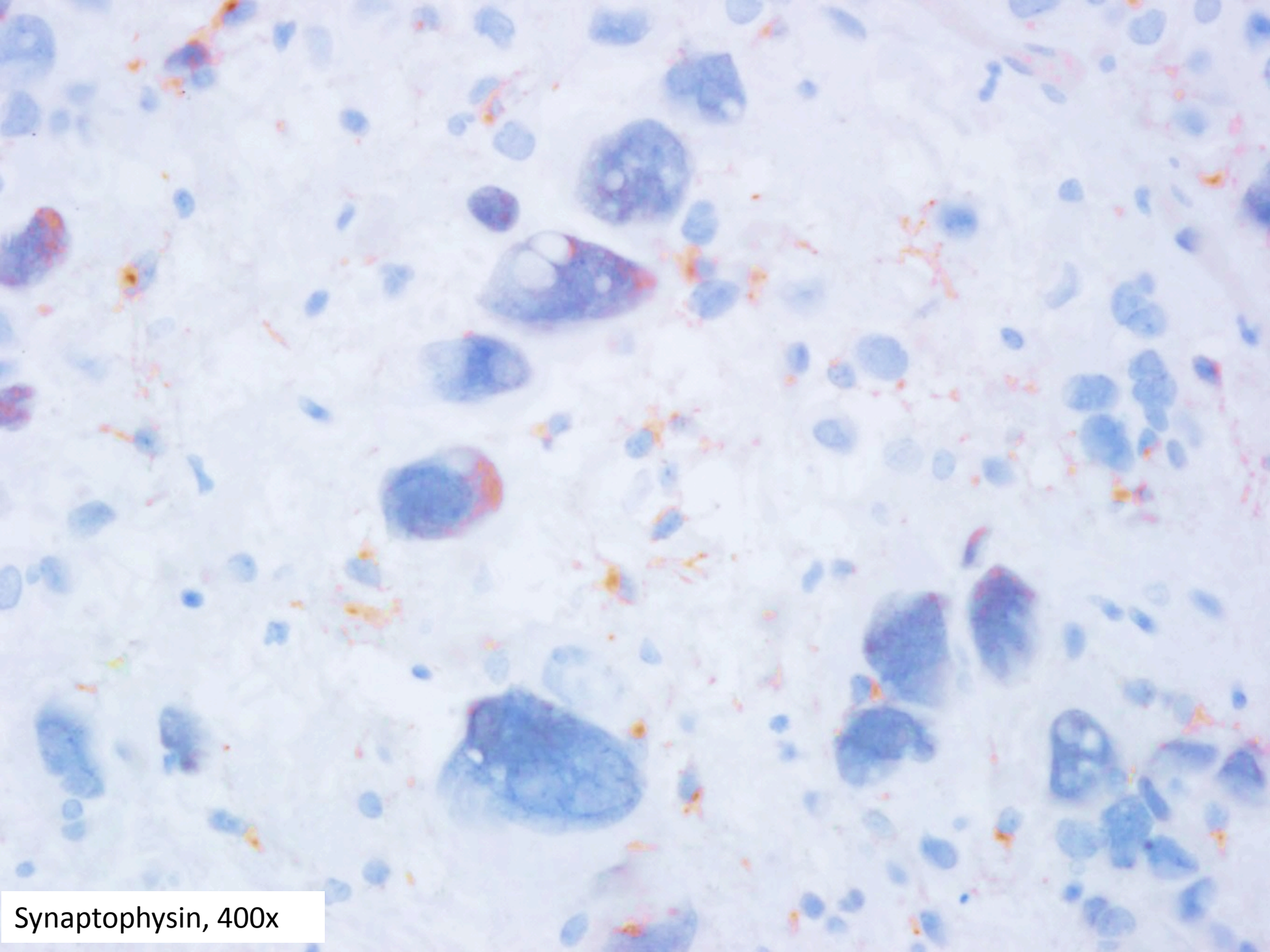
EMA, 400x



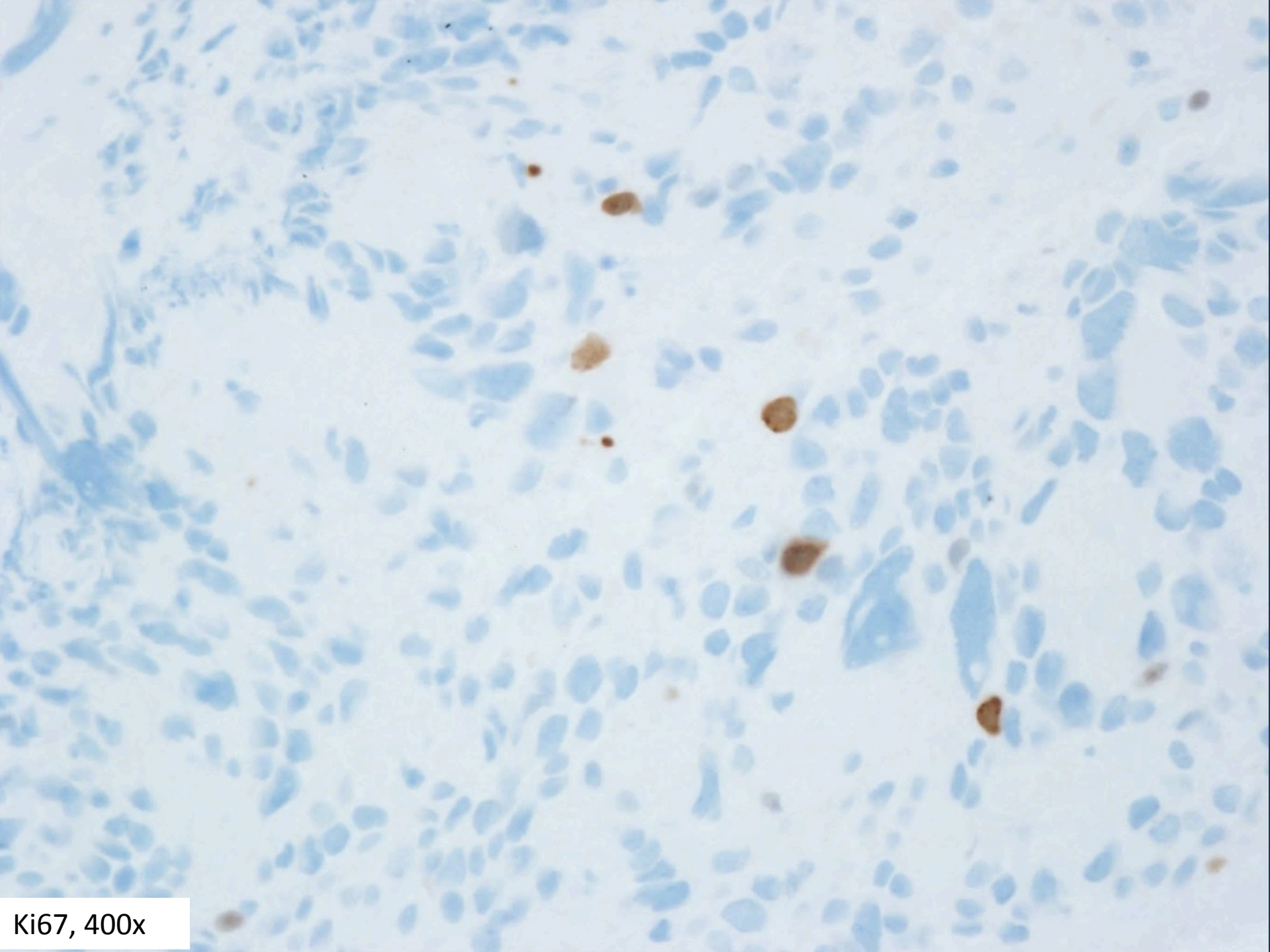
CD99, 400x



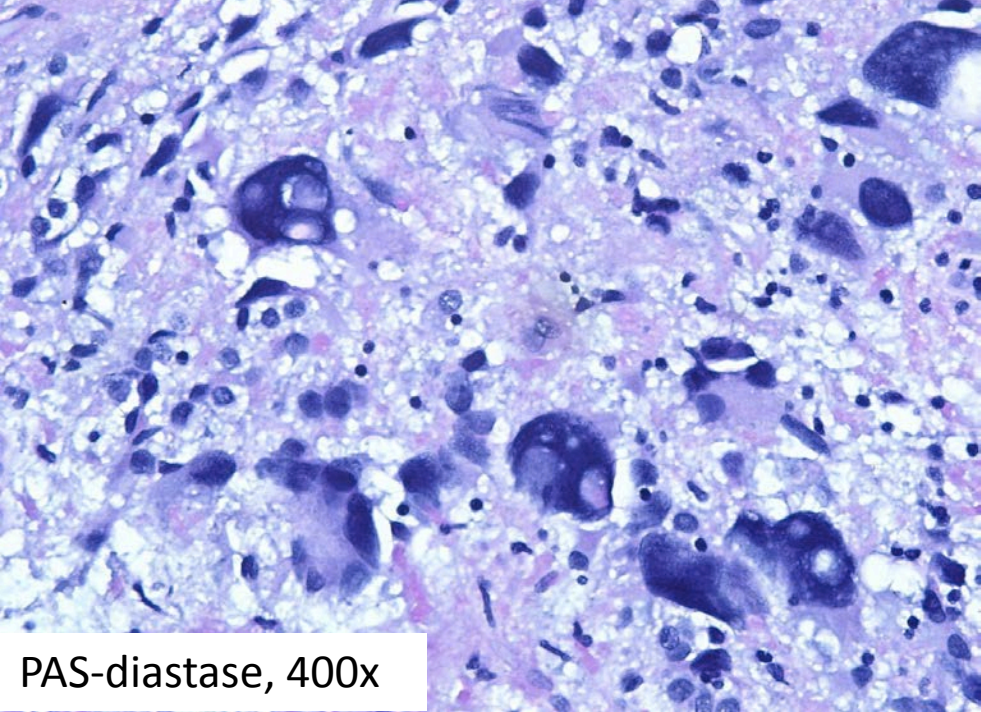
D2-40, 400x



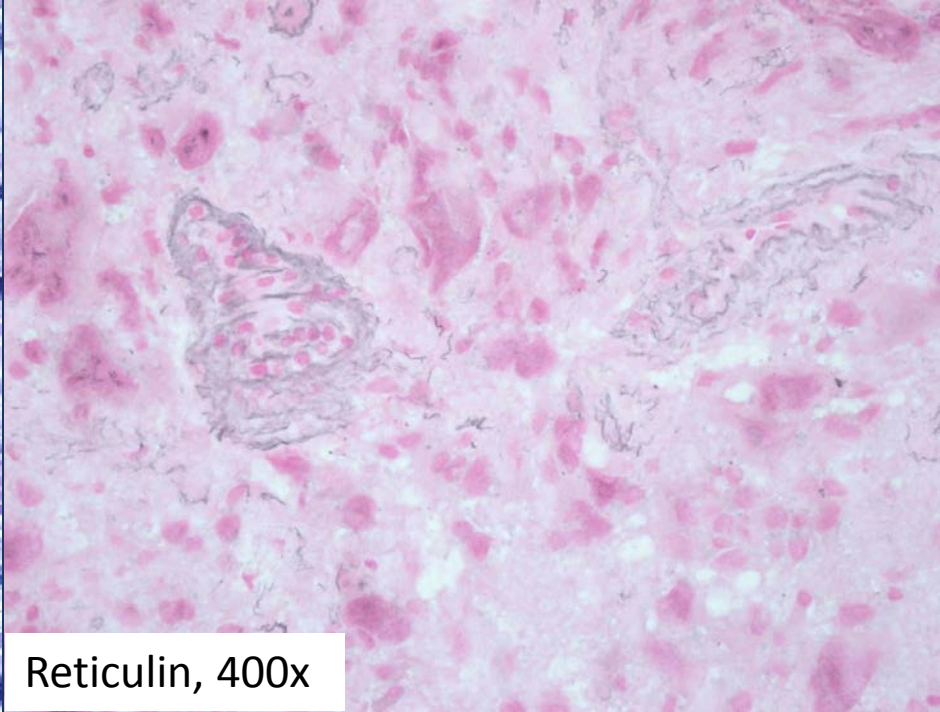
Synaptophysin, 400x



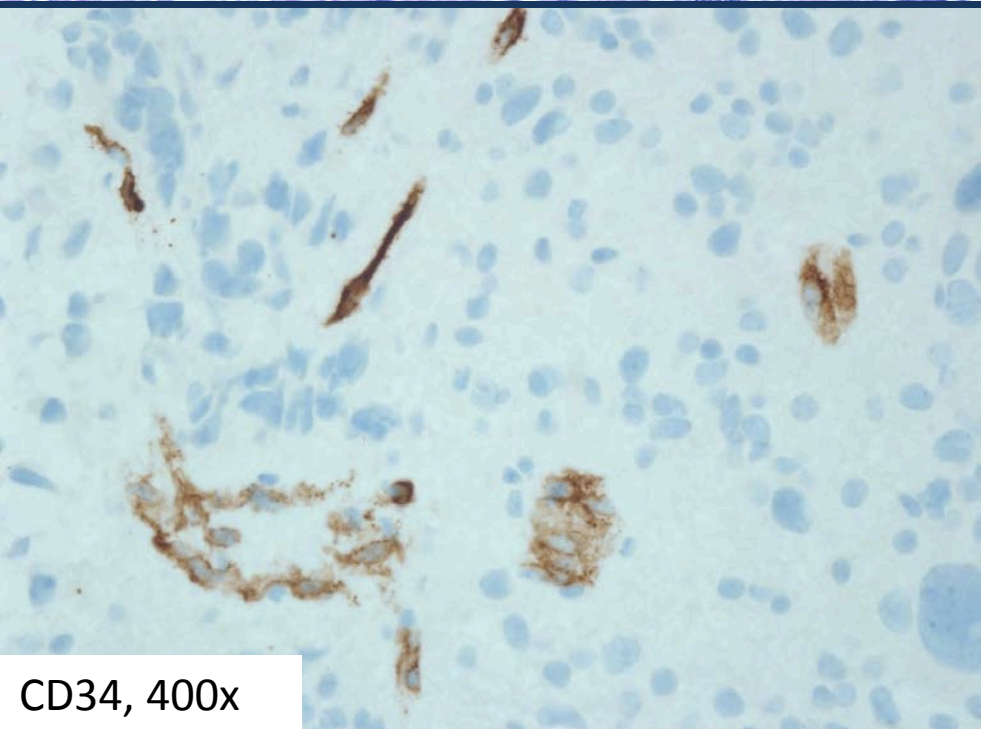
Ki67, 400x



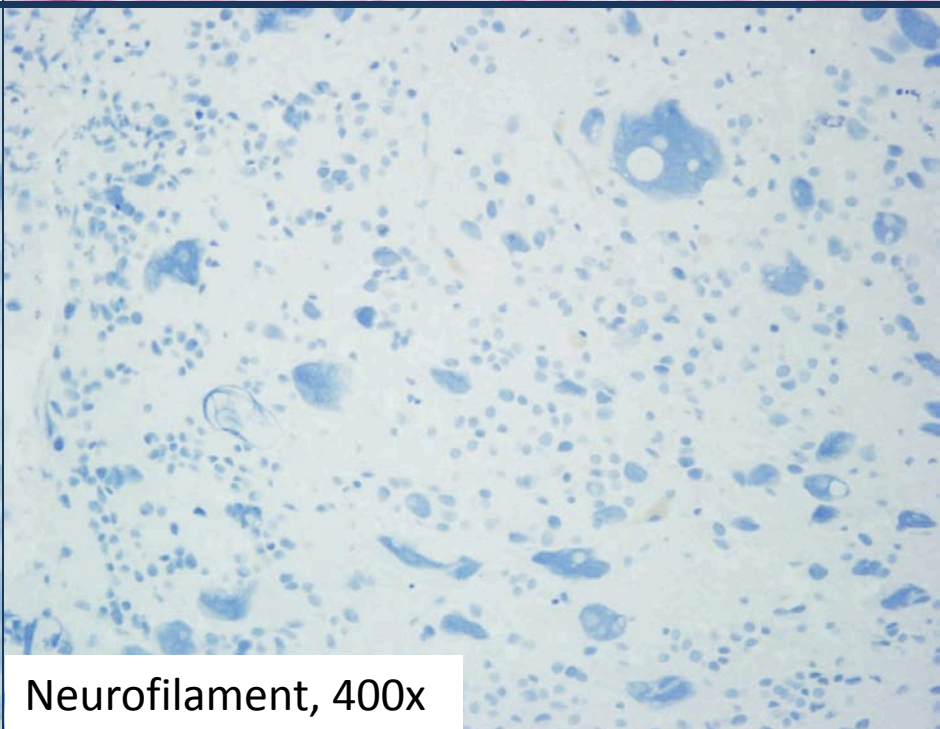
PAS-diastase, 400x



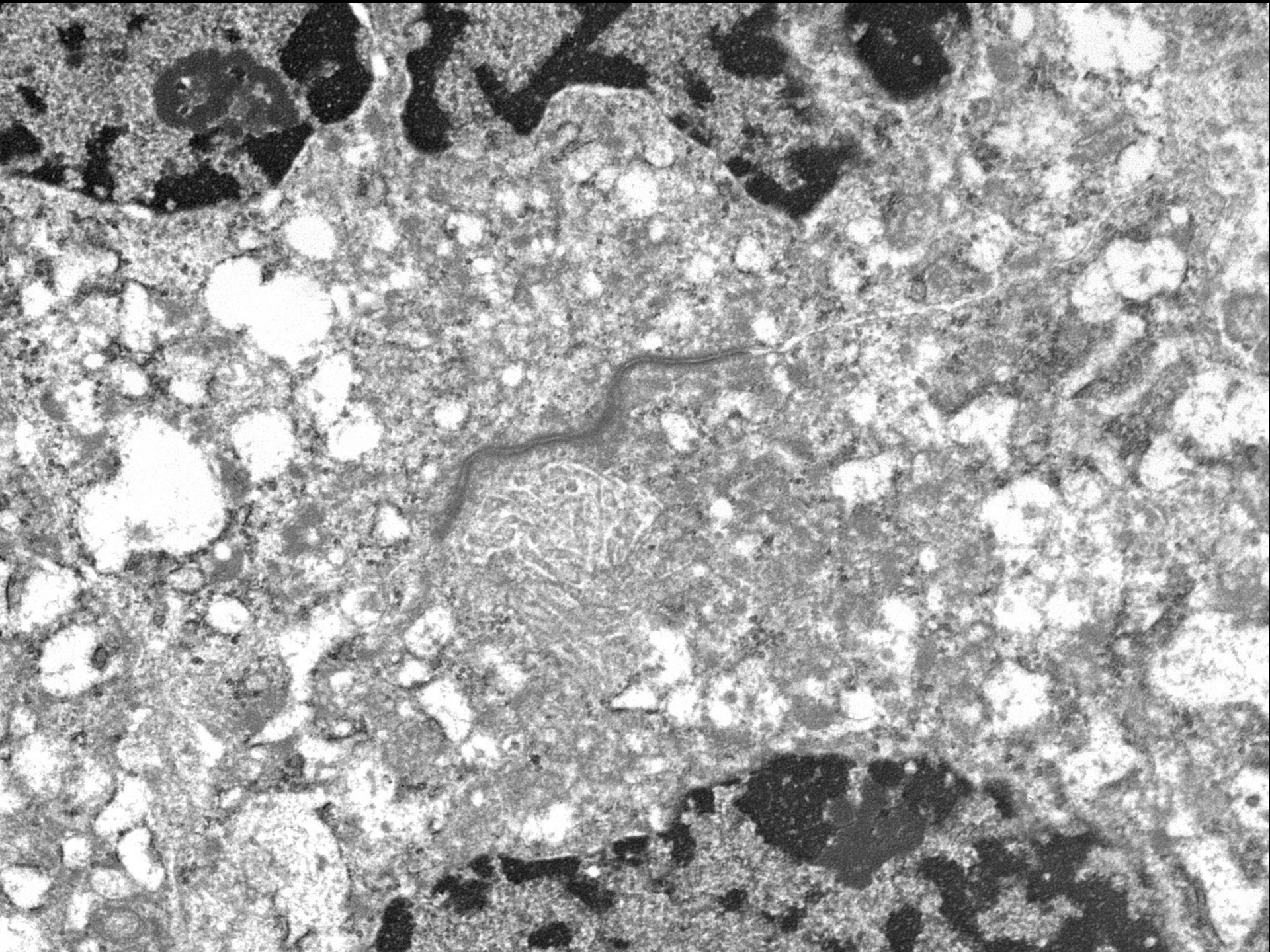
Reticulin, 400x

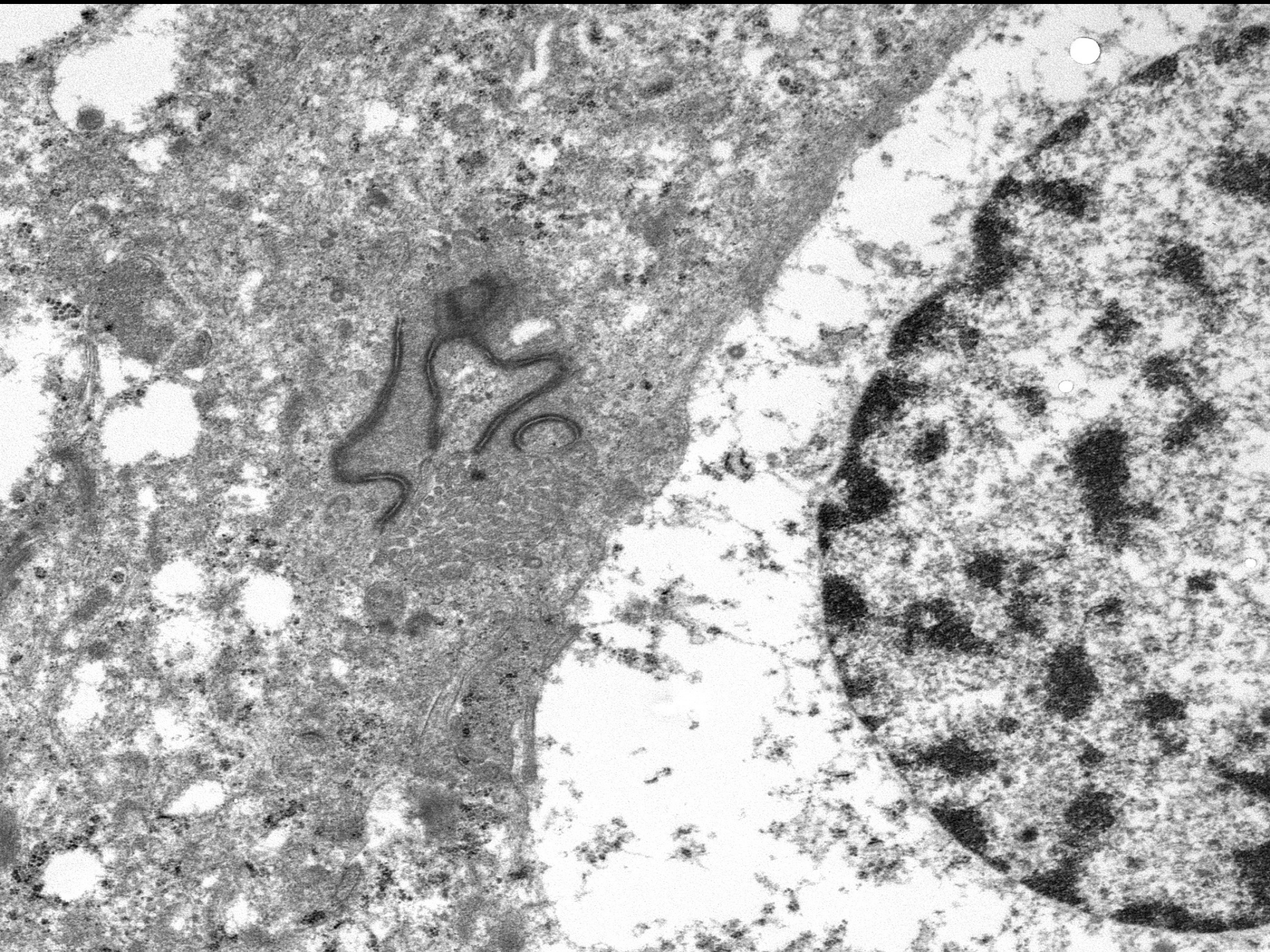


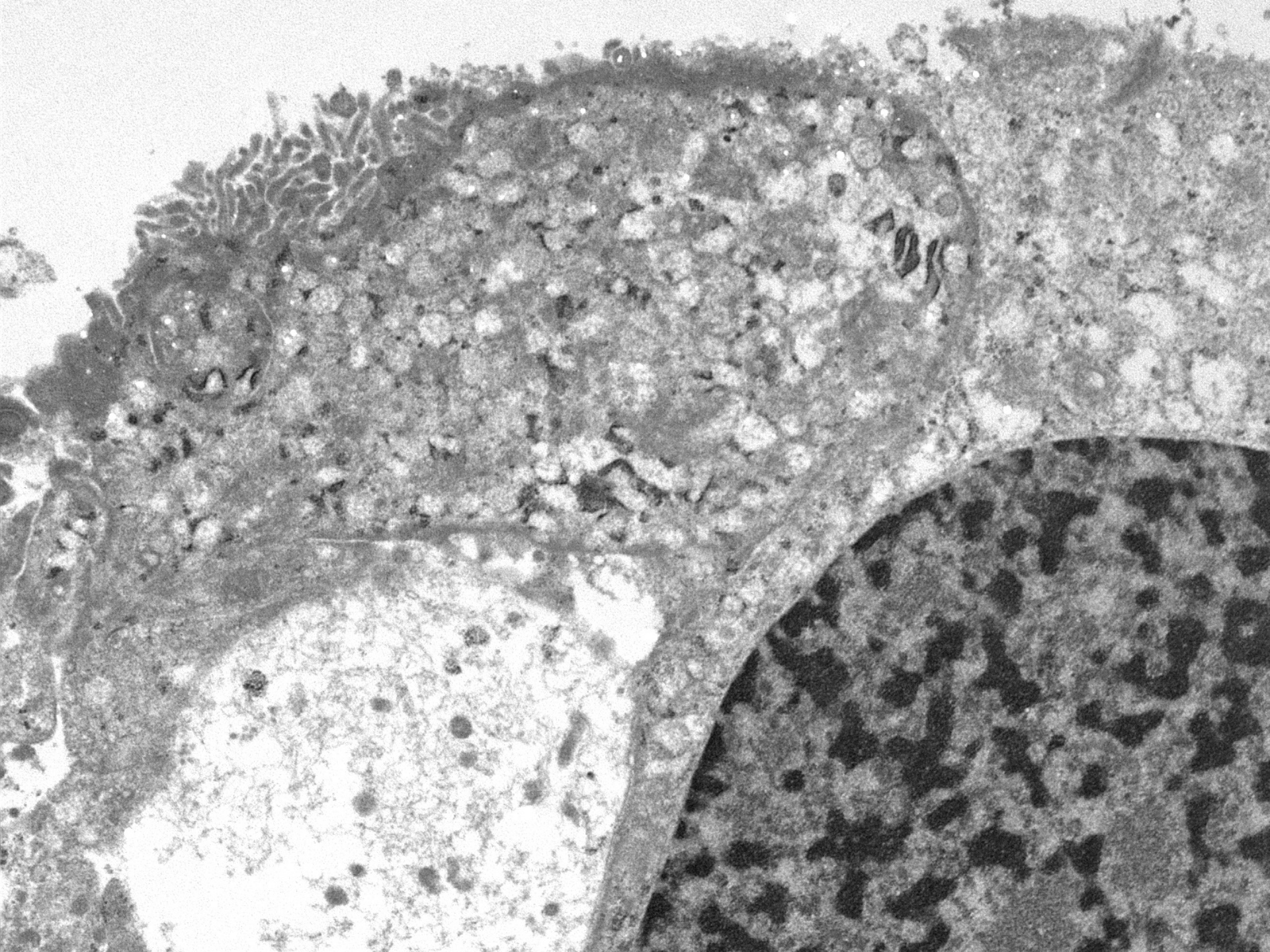
CD34, 400x



Neurofilament, 400x







Giant Cell Ependymoma, WHO grade II

Giant Cell Ependymoma

- Rare variant of ependymoma (22 cases reported)
- Male:Female – 1.1:1
- Most of the reported cases occurred in adults (17/22)
- Location:
 - Spinal cord (11 cases)
 - Supratentorial (7 cases)
 - Cerebellum (4 cases)
- The majority of the cases reported in the posterior fossa and supratentorial location are extraventricular
- 7/22 reported cases had anaplastic features (WHO grade III)

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Case Report

Giant cell ependymoma-report of three cases and review of the literature

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Giant Cell Ependymoma

- WHO grade: the same grading criteria as for ependymoma applies
- Histological features:
 - Perivascular pseudo-rosettes
 - Neuroepithelial-type cytology
 - Degenerative changes (giant cells with bizarre nuclei)
- Immunohistochemical features:
 - S100, EMA, GFAP, CD99, D2-40 expression

Prognosis of Giant Cell Ependymoma

- Similar to ependymoma:
 - Good – WHO grade II, gross total resection, adults, spinal cord location
 - Worse – WHO grade III, residual tumor, young children, supratentorial location

Follow-Up for the Case Presented

- Six months follow-up
- Gross total resection
- No tumor recurrence



Thank you

References

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