

Diagnostic Slide Session 2015

Case 2015-1

Derek H. Oakley MD, PhD
E. Tessa Hedley-Whyte, MD

CS Kubik Laboratory for Neuropathology
Massachusetts General Hospital
Harvard Medical School,
Boston, MA.

Disclosures

- none

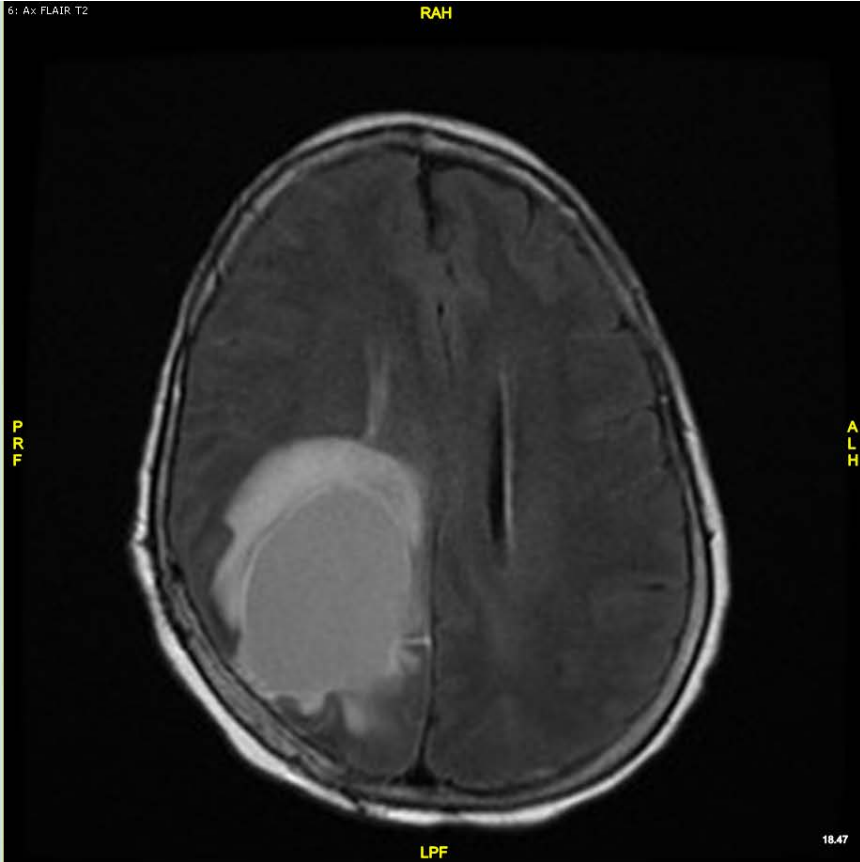
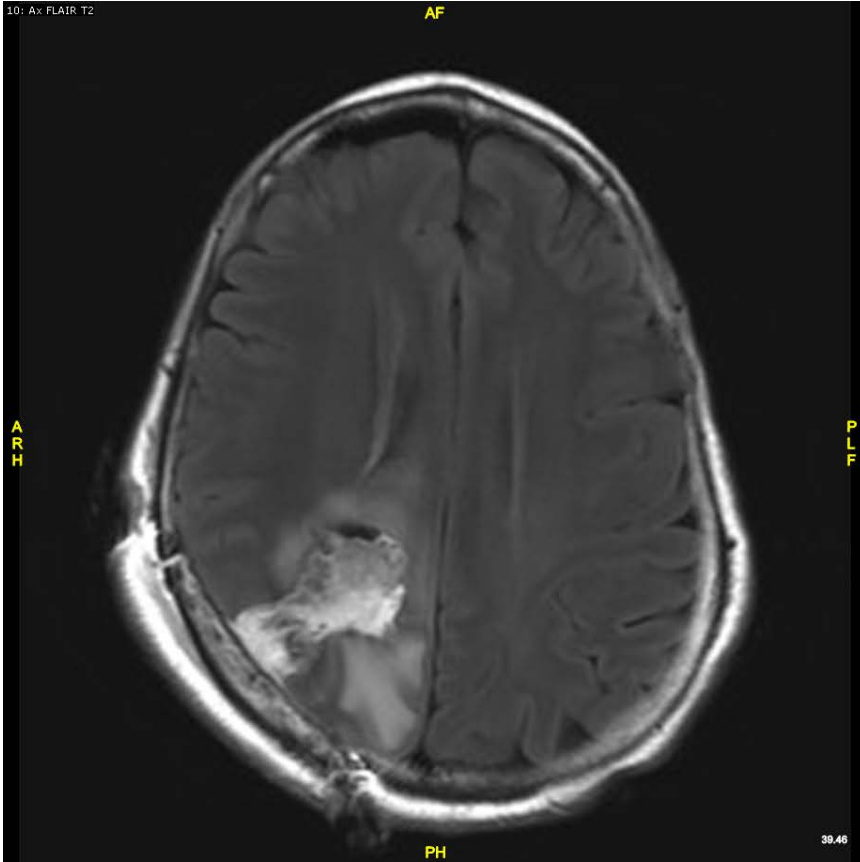
Clinical history

- 54 year-old right handed woman with right parieto-occipital enhancing lesion
- Glioblastoma at initial resection:
 - IDH1-wild-type, EGFR amplified, Met non-amplified, MGMT methylated, mutations in PTEN and TP53
- Re-presents 1 month after resection
 - Worsening cognition, headache, nausea, vomiting, gait difficulties

Increasing mass effect and enhancement

Immediate post-resection

One month following resection
(Prior to additional treatment)

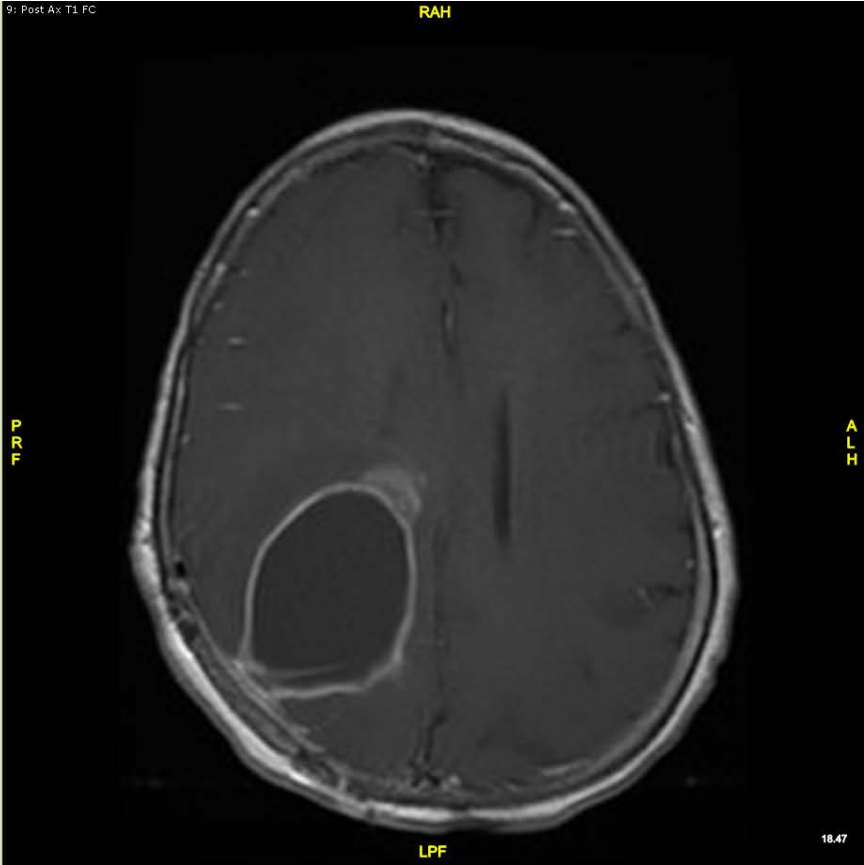
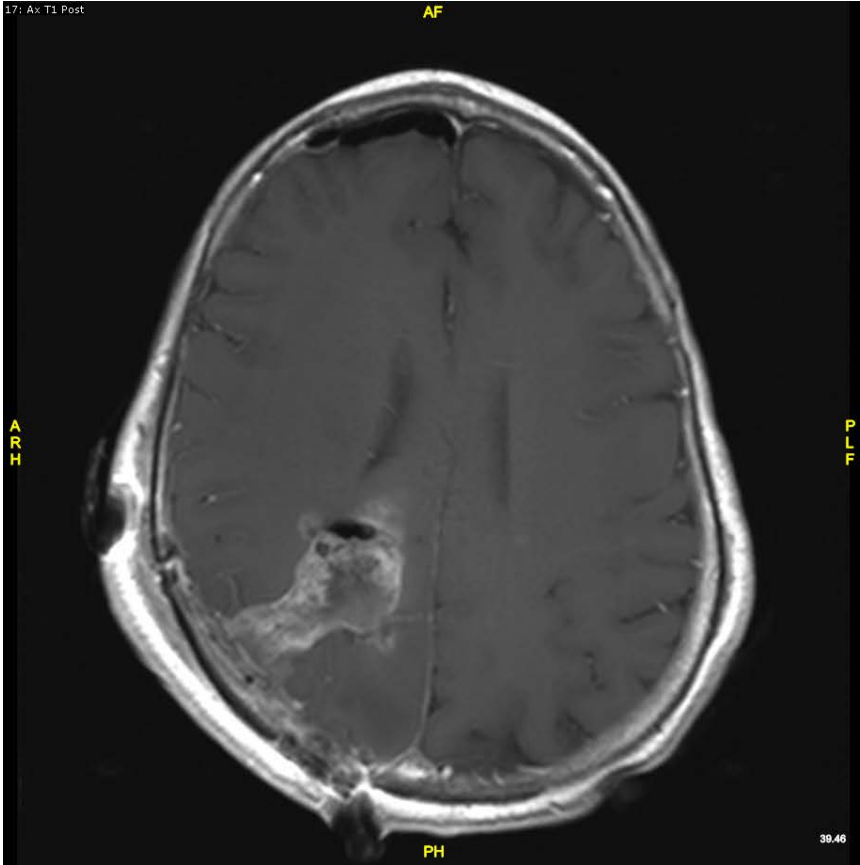


FLAIR T2

Increasing mass effect and enhancement

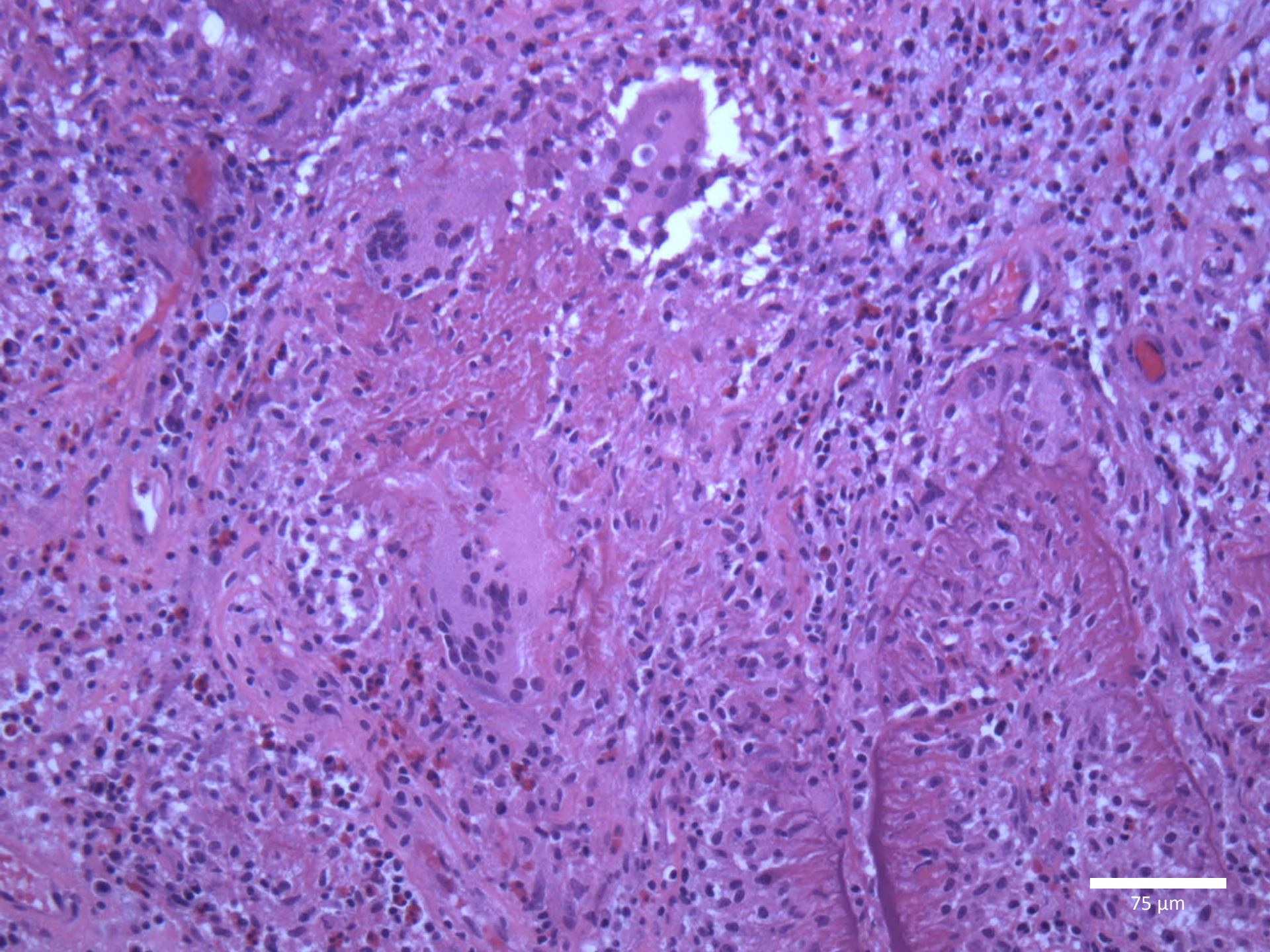
Immediate post-resection

One month following resection
(Prior to additional treatment)

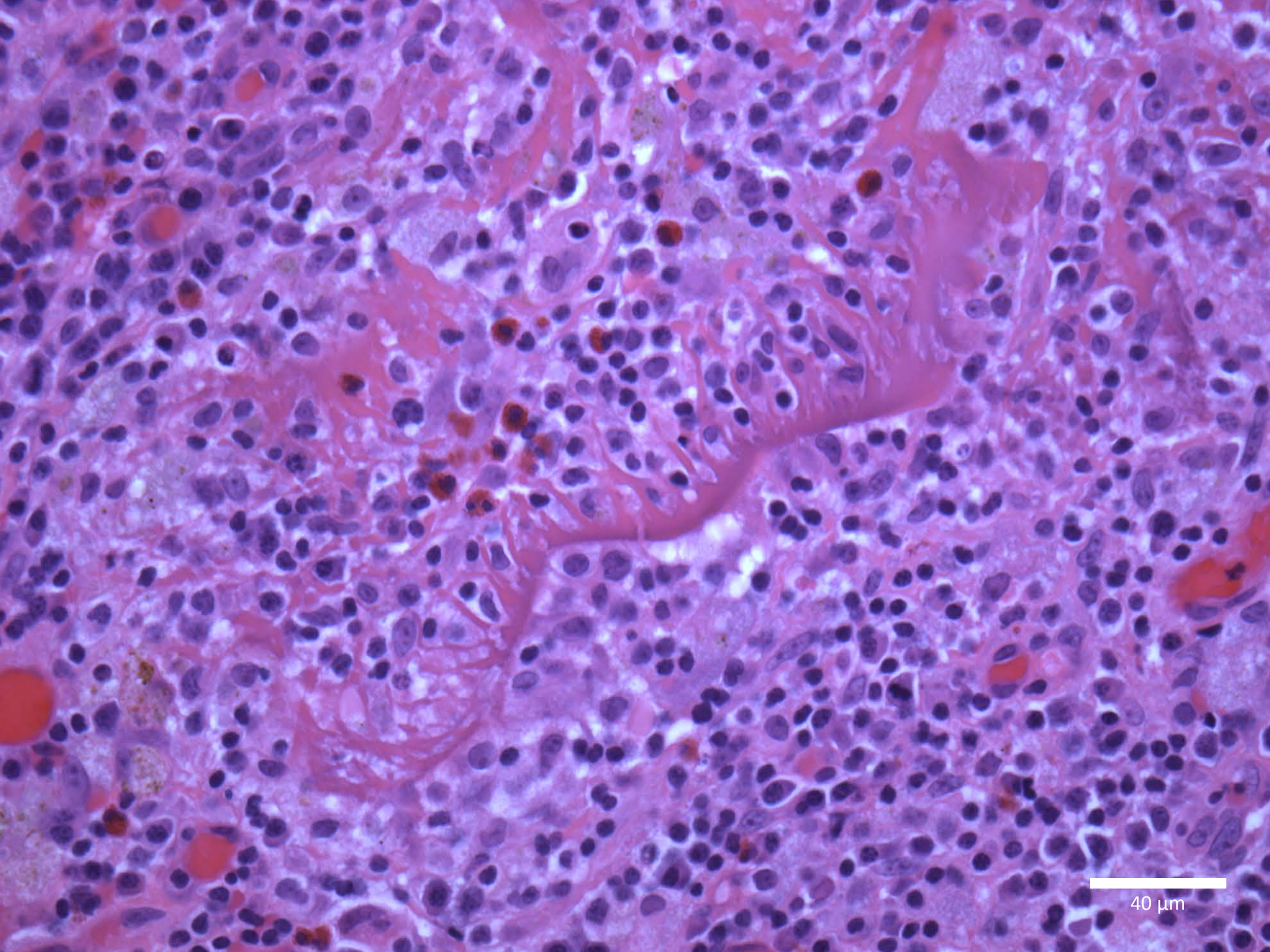


T1 Post Contrast

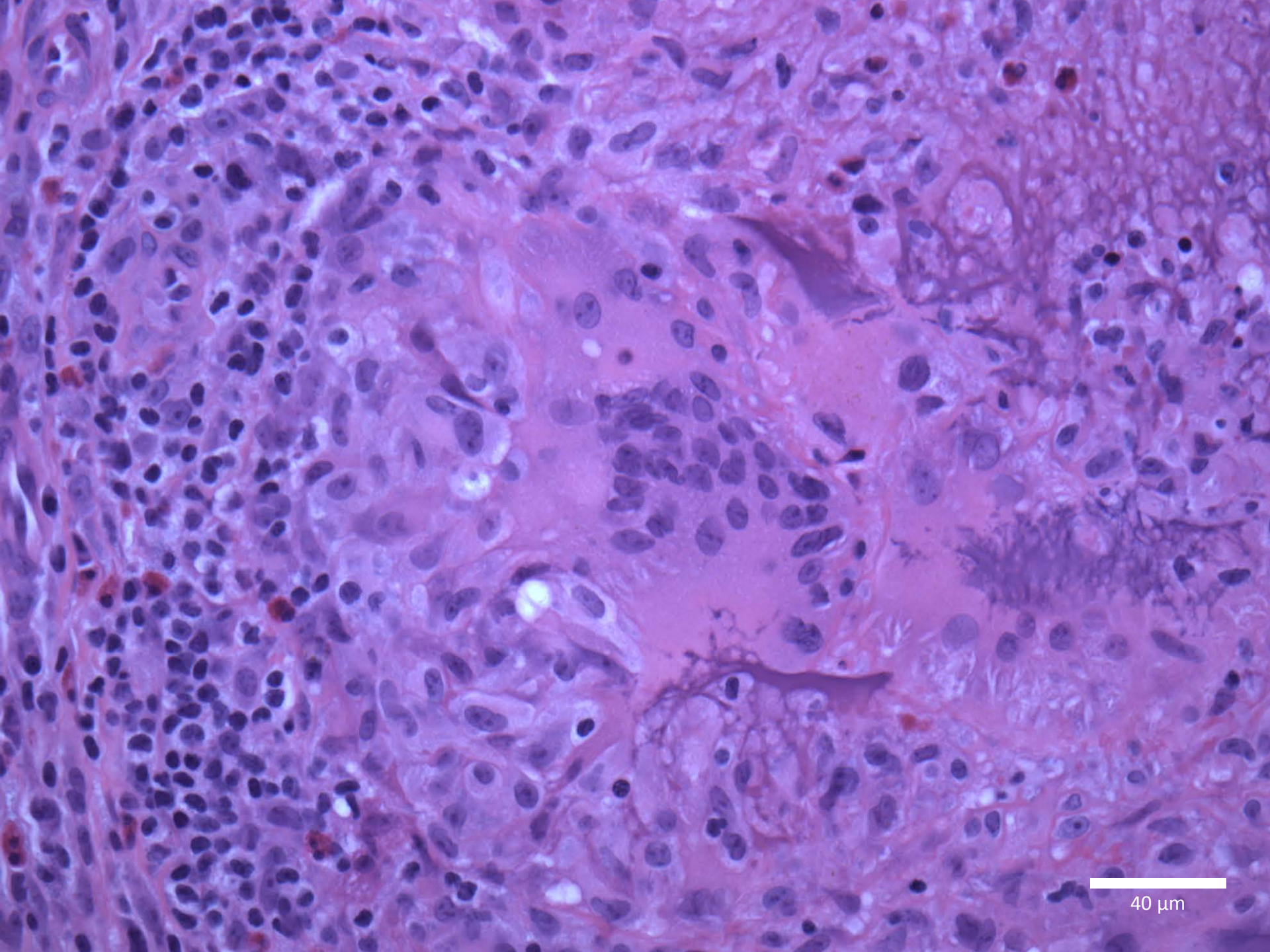
Nodular enhancement concerning for rapid recurrence → Re-resection



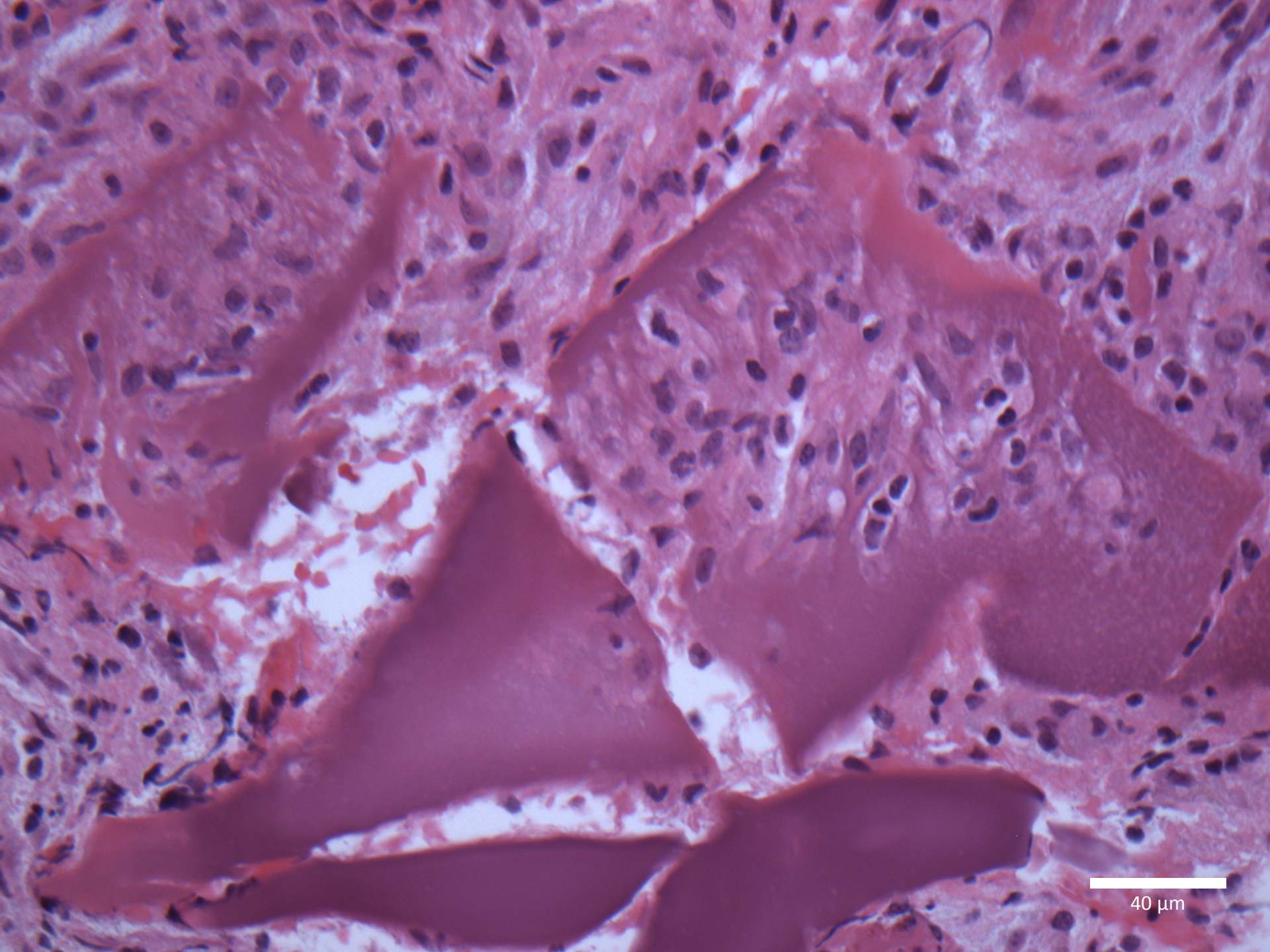
75 μ m



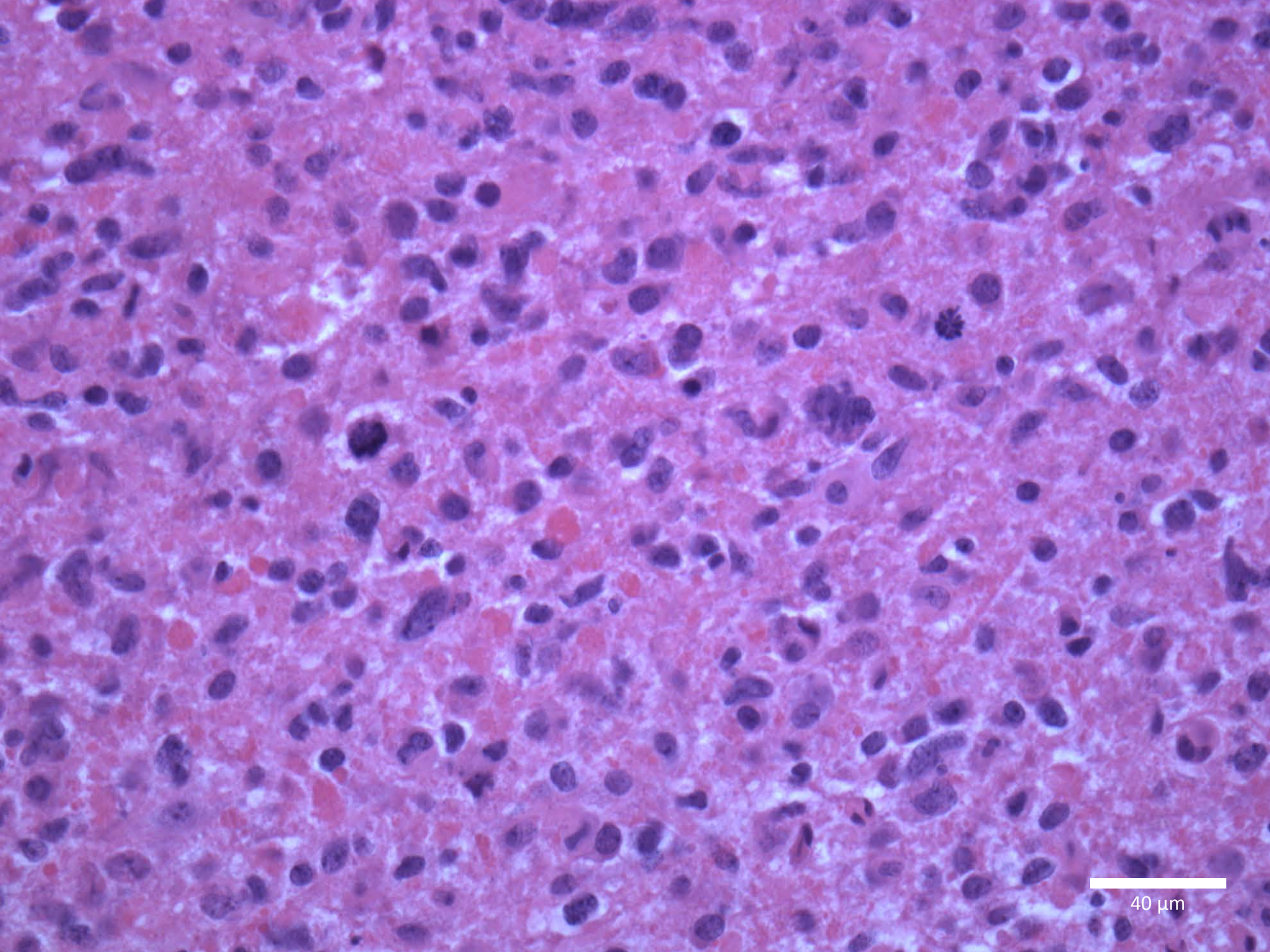
40 μ m



40 μ m

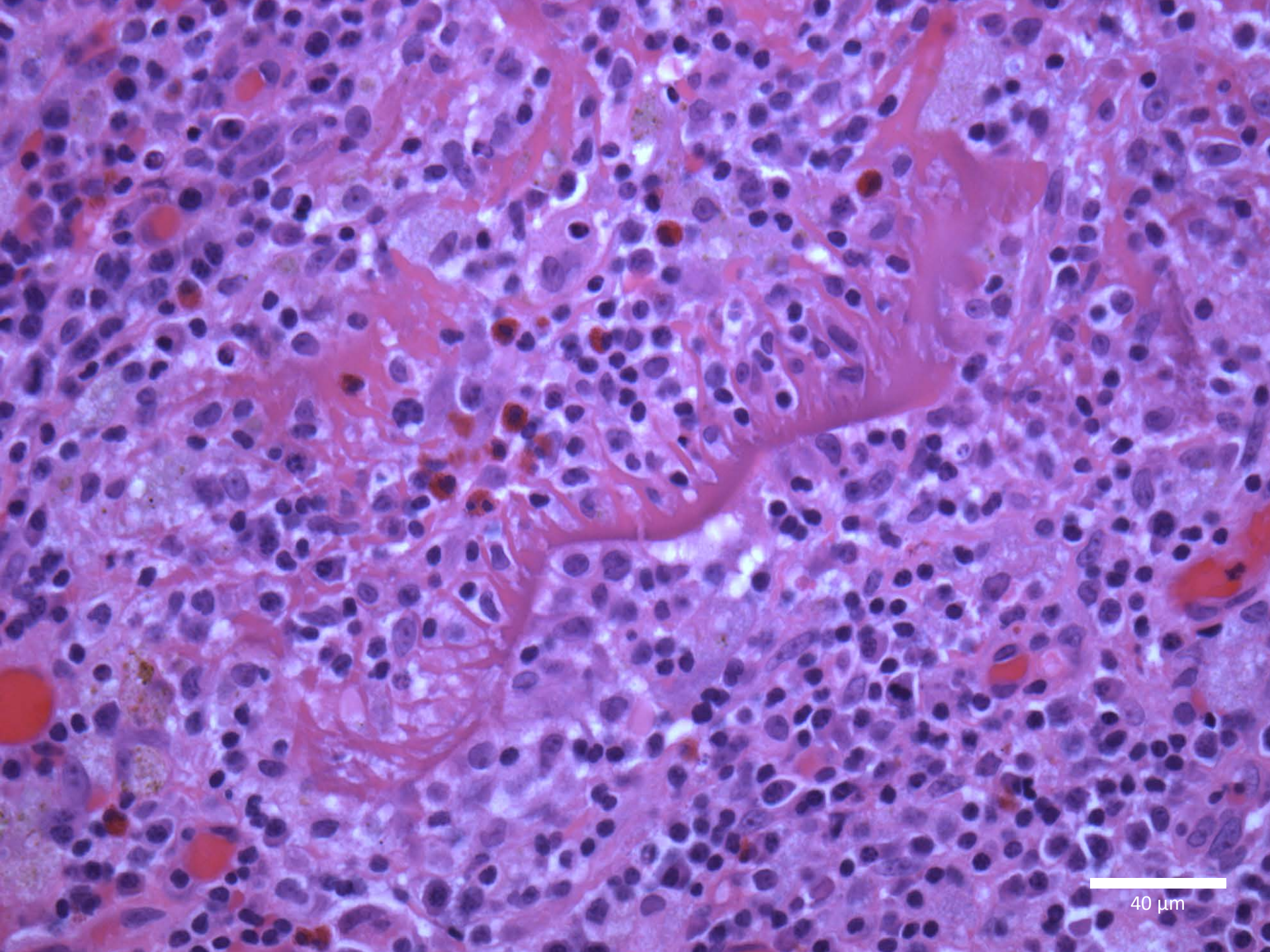


40 μ m

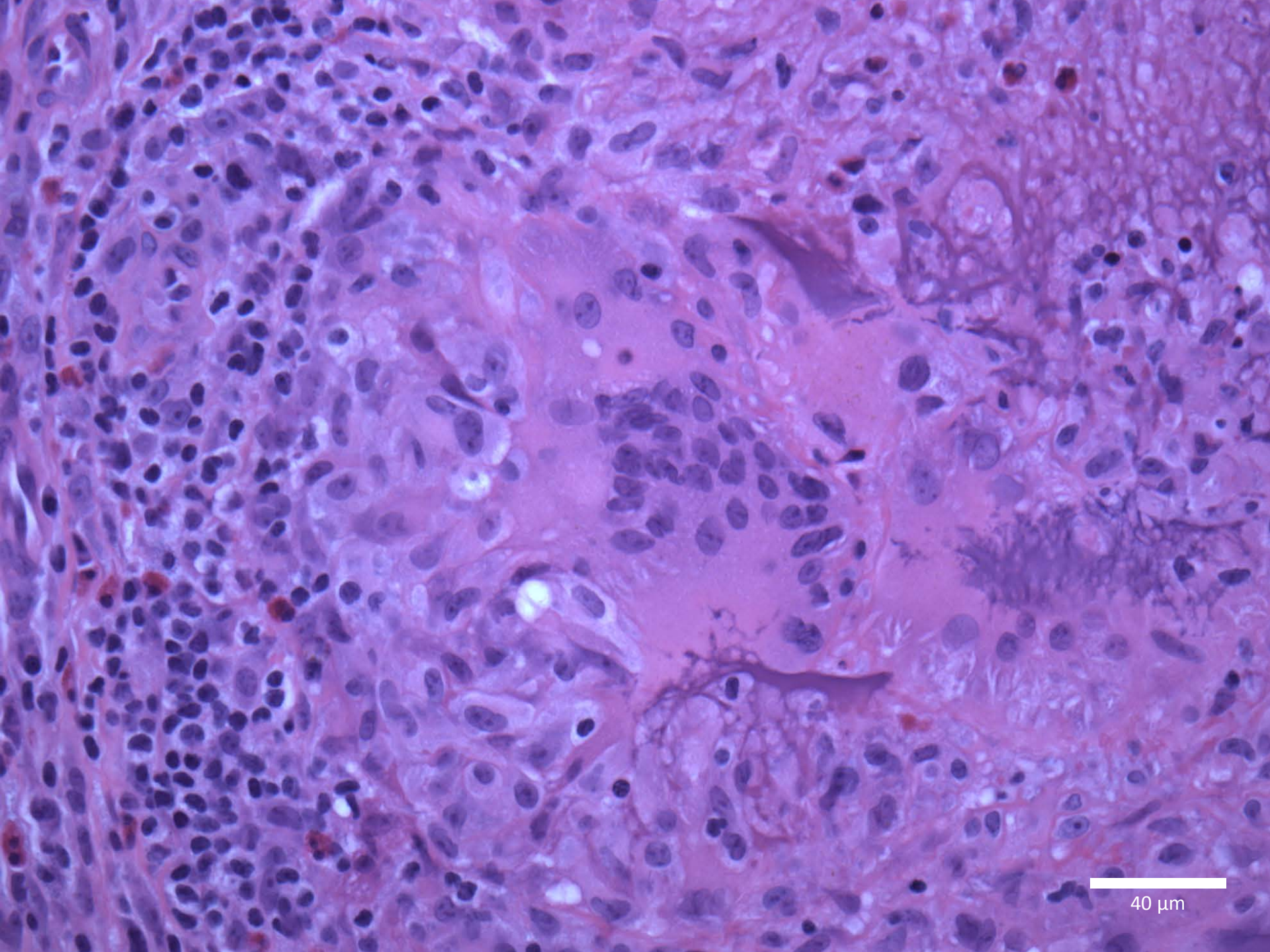


40 μ m

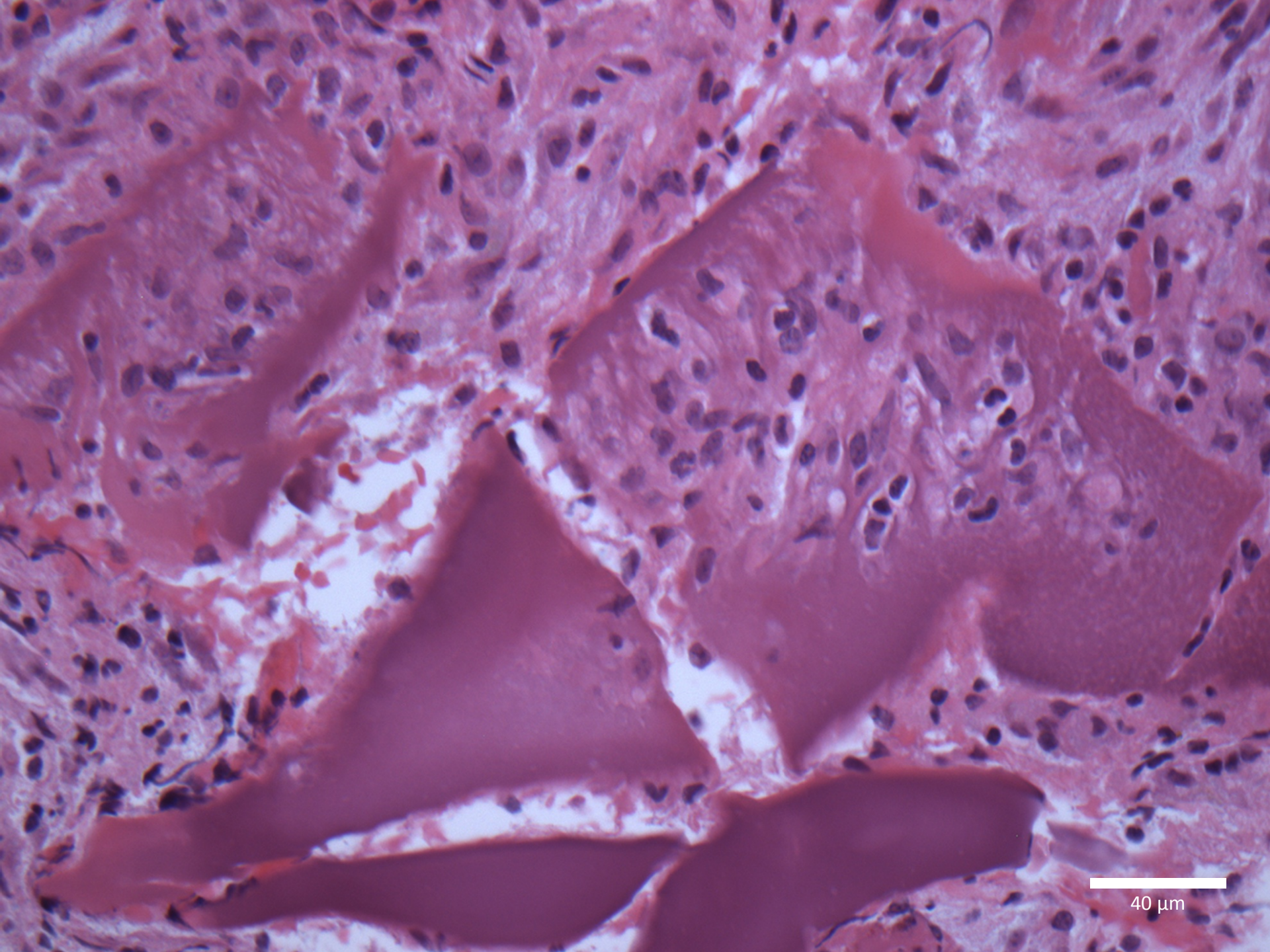
- **Audience Discussion**



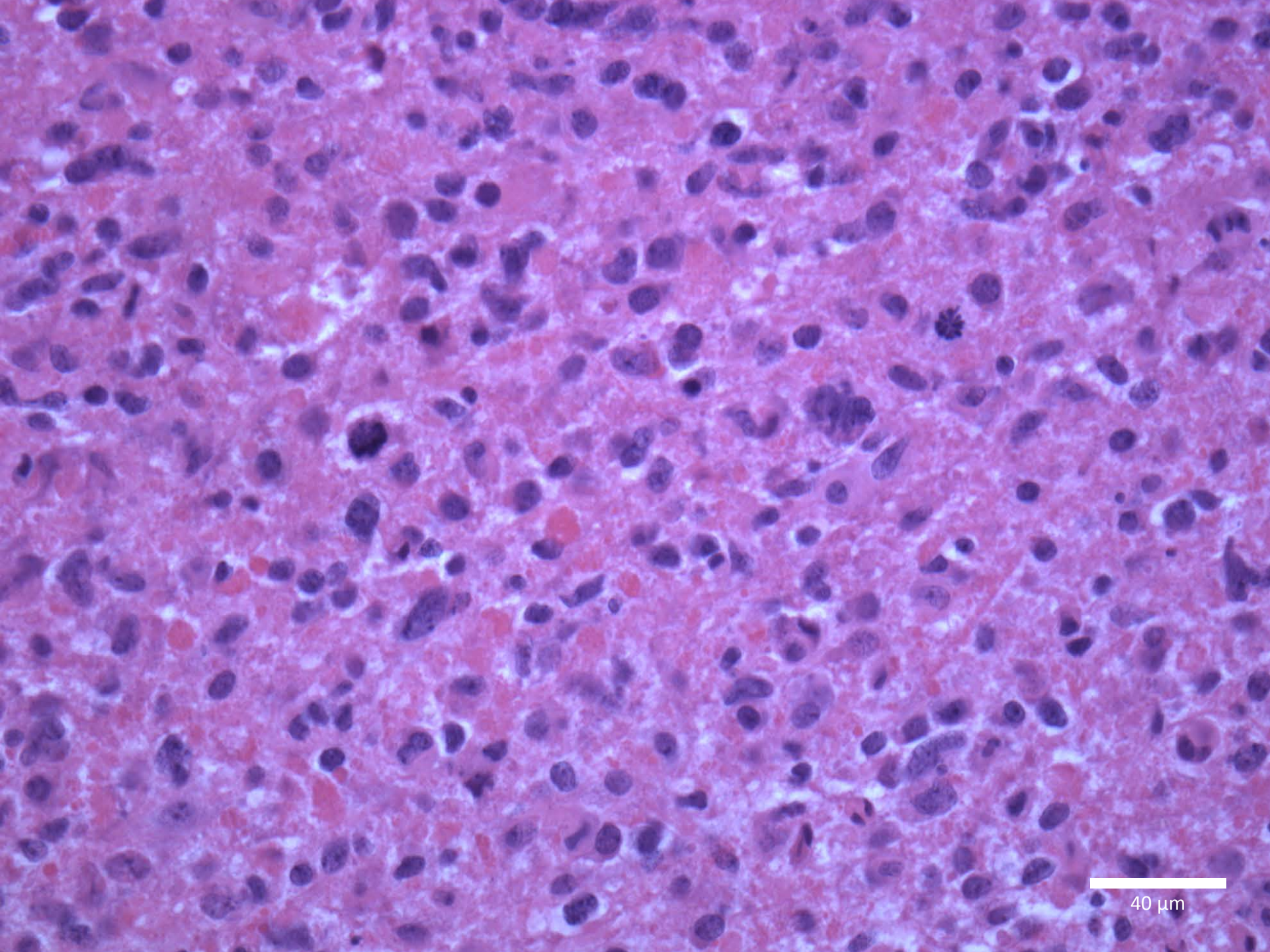
40 μ m



40 μ m



40 μm

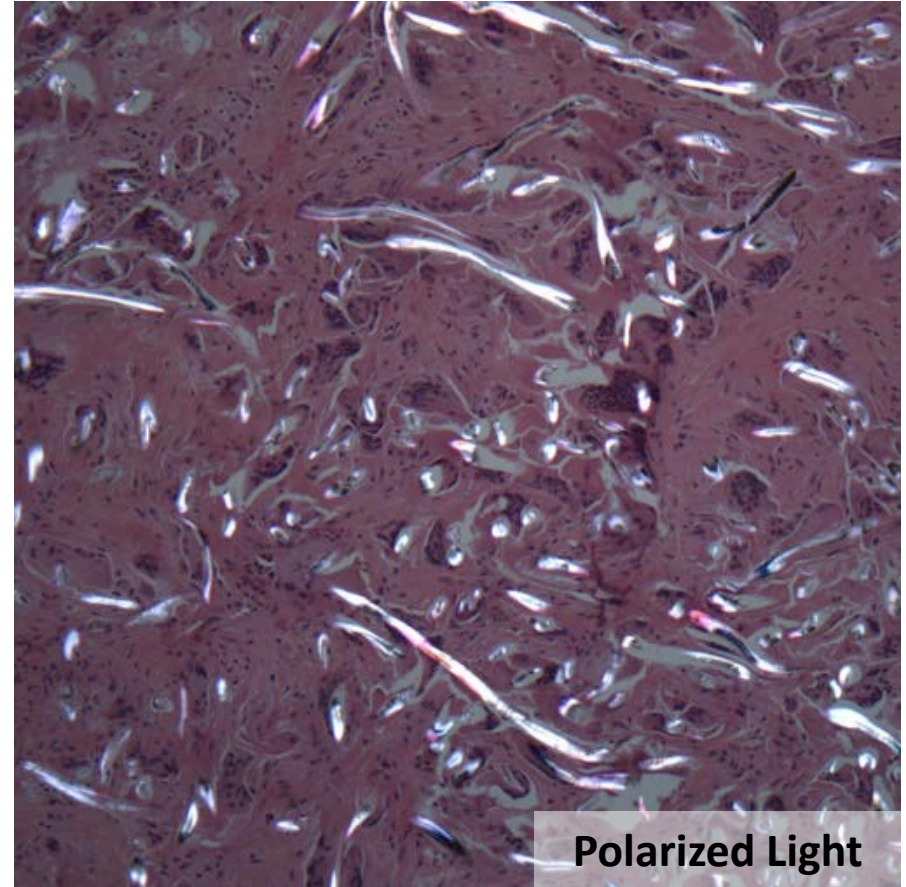
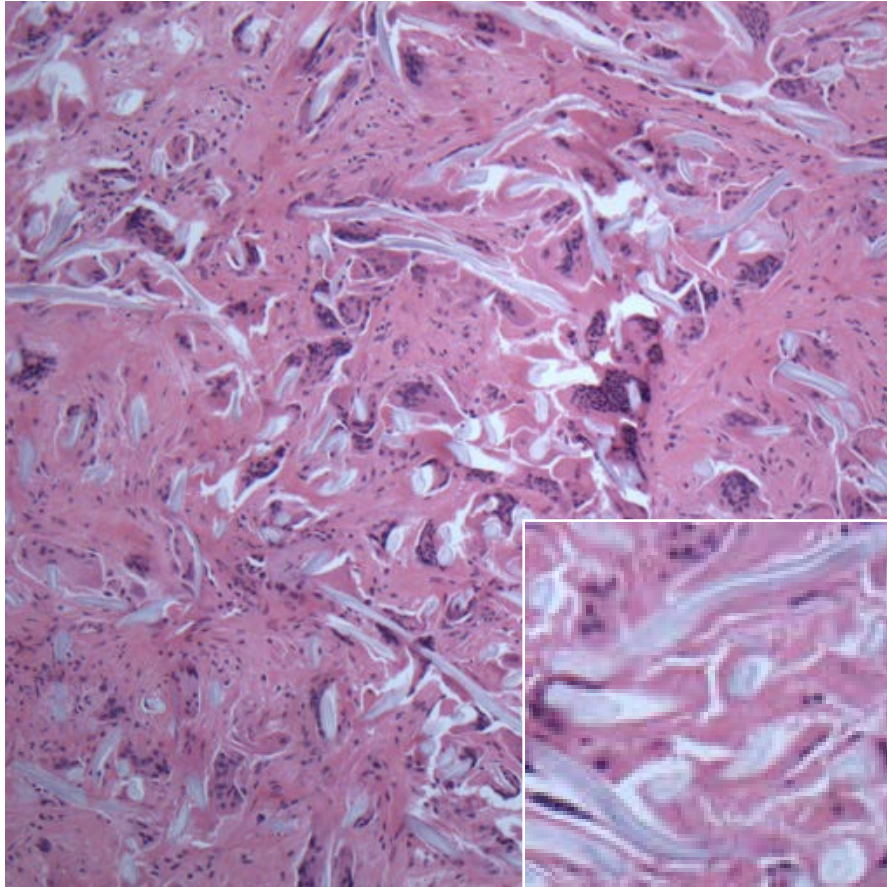


40 μm

Other studies

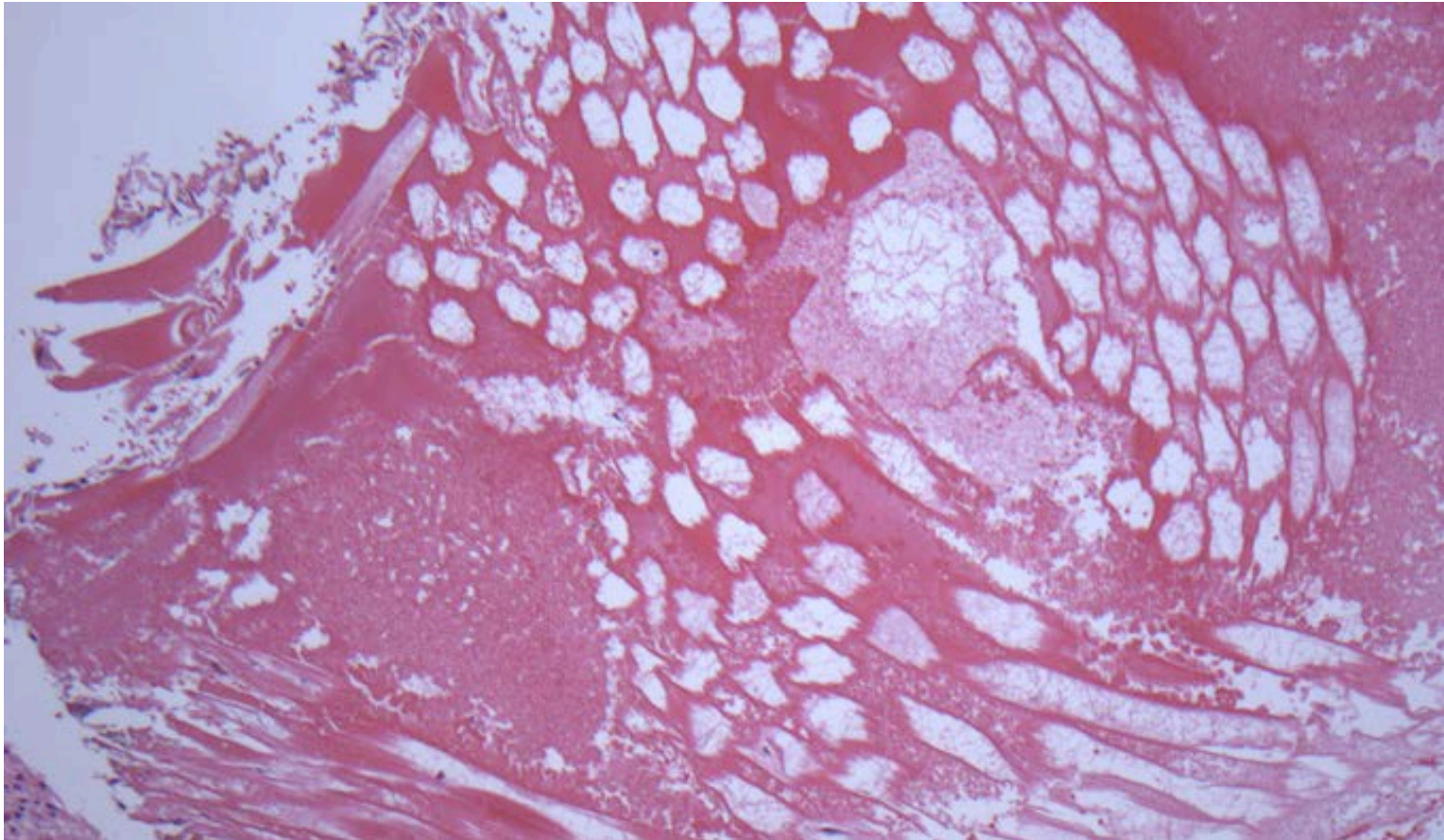
- GMS, AFB, PAS negative for organisms
- Amorphous non-polarizable material

Hemostatic materials causing foreign body giant cell reaction: Cotton



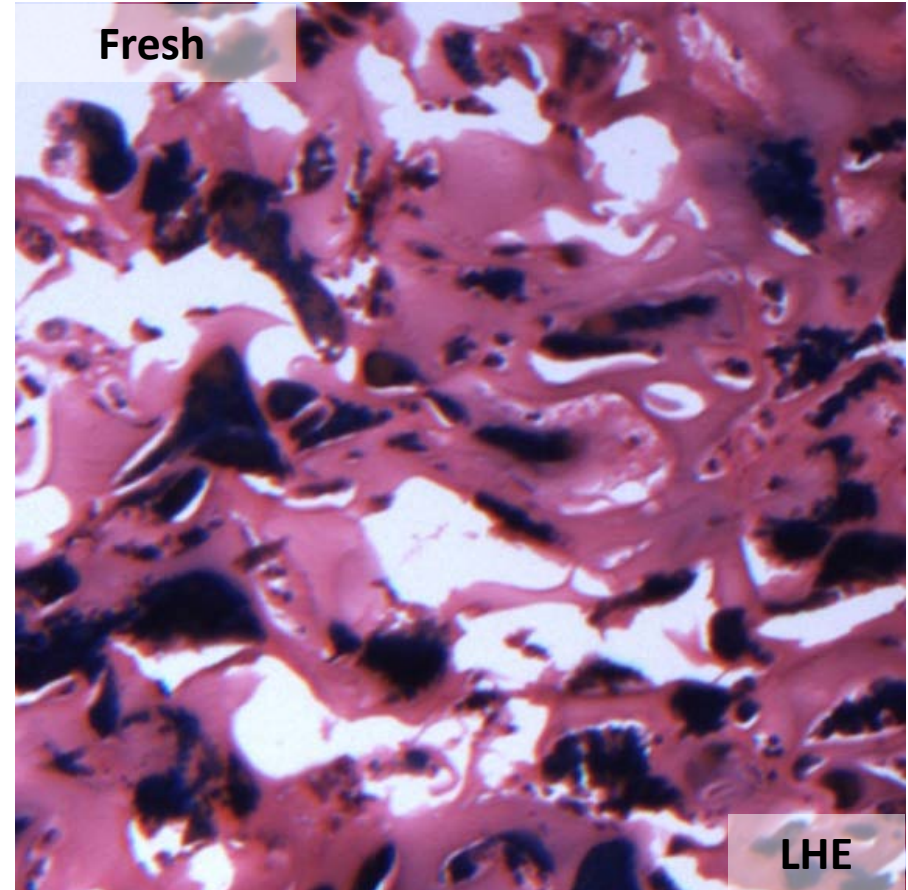
- Hollow fibers
- Gossypiboma/Textiloma

Hemostatic materials causing foreign body giant cell reaction: Cellulose (Surgical)



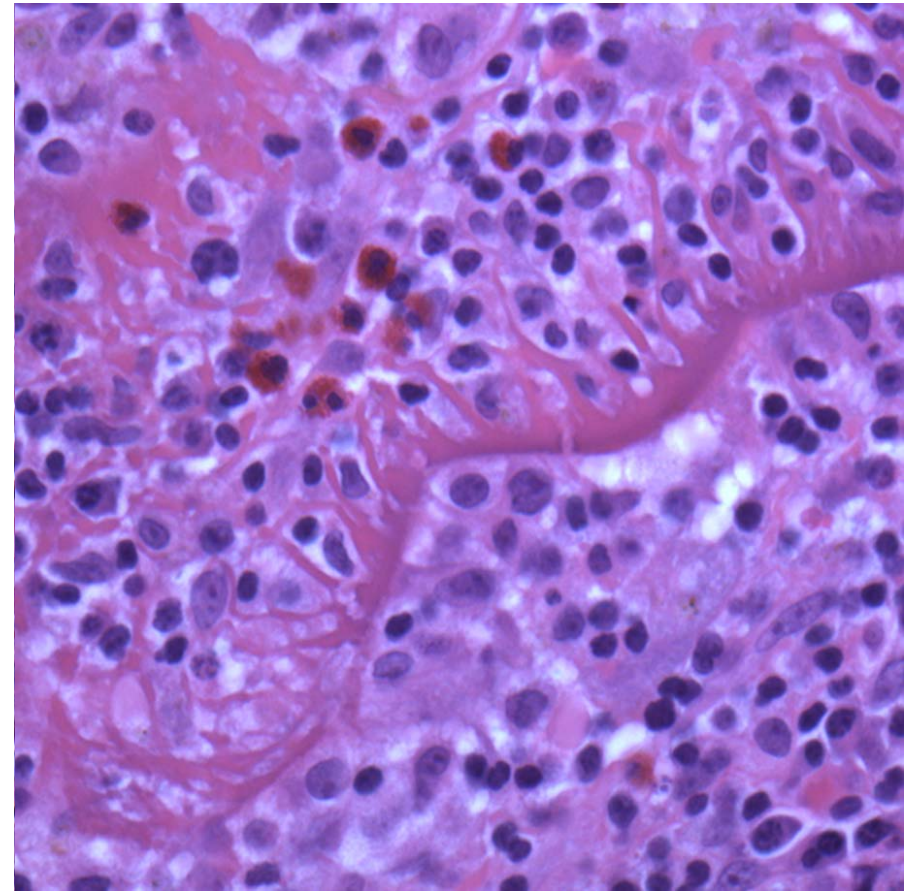
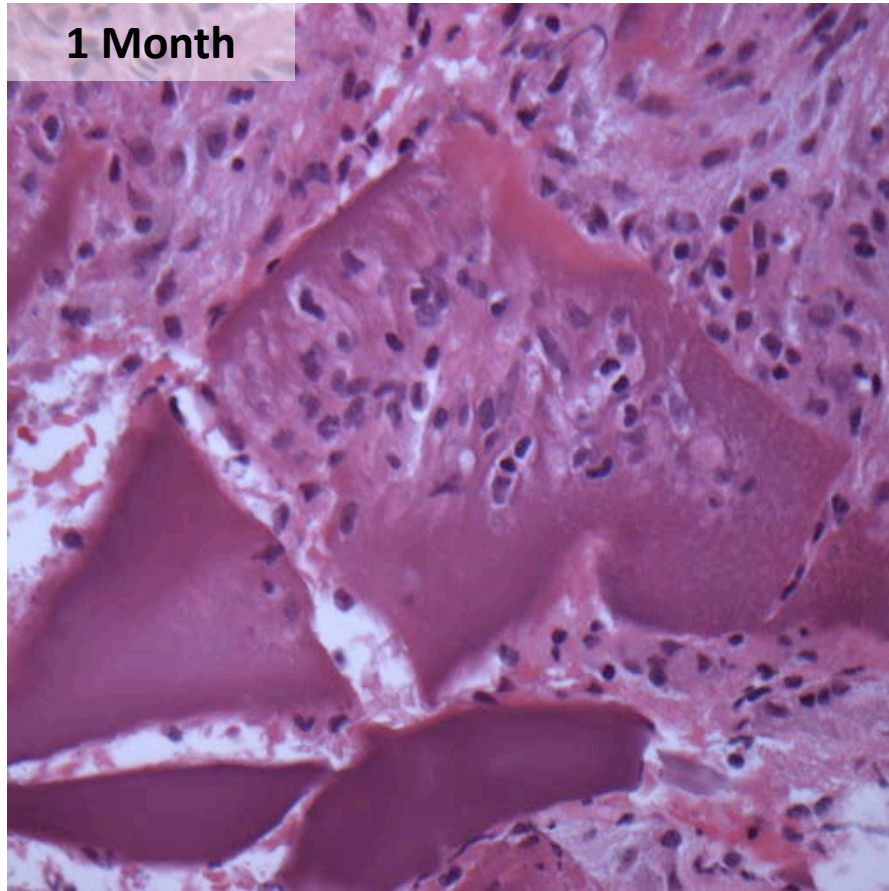
- Mesh-like appearance with ghost fibers
- Non-polarizable

Hemostatic materials causing foreign body giant cell reaction: Gelatin (Gelfoam)



- Non-polarizable
- Amorphous on EM (compared to collagen-derived agents)

Hemostatic materials causing foreign body giant cell reaction: Gelatin (Gelfoam)



- Non-polarizable
- Amorphous on EM (compared to collagen-derived agents)

Final diagnosis

- **Tumefactive granulomatous reaction to foreign material (Gelfoam)**

- **Residual glioblastoma**

Conclusions

- **Commonly used hemostatic agents are capable of causing foreign body giant cell reactions**
- **Reaction to foreign material is in the differential diagnosis of a rapidly recurring intraparenchymal tumor**

References

1. Ribalta T, McCutcheon IE, Neto AG, Gupta D, Kumar AJ, Biddle DA, Langford LA, Bruner JM, Leeds NE, Fuller GN. Textiloma (gossypiboma) mimicking recurrent intracranial tumor. Arch Pathol Lab Med. 2004 Jul;128(7):749-758.
2. Kothbauer KF, Jallo GI, Siffert J, Jimenez E, Allen JC, Epstein FJ. Foreign body reaction to hemostatic materials mimicking recurrent brain tumor. Report of three cases. J Neurosurg. 2001 Sep; 95(3):503-506.

