DSS 2014 Case 2

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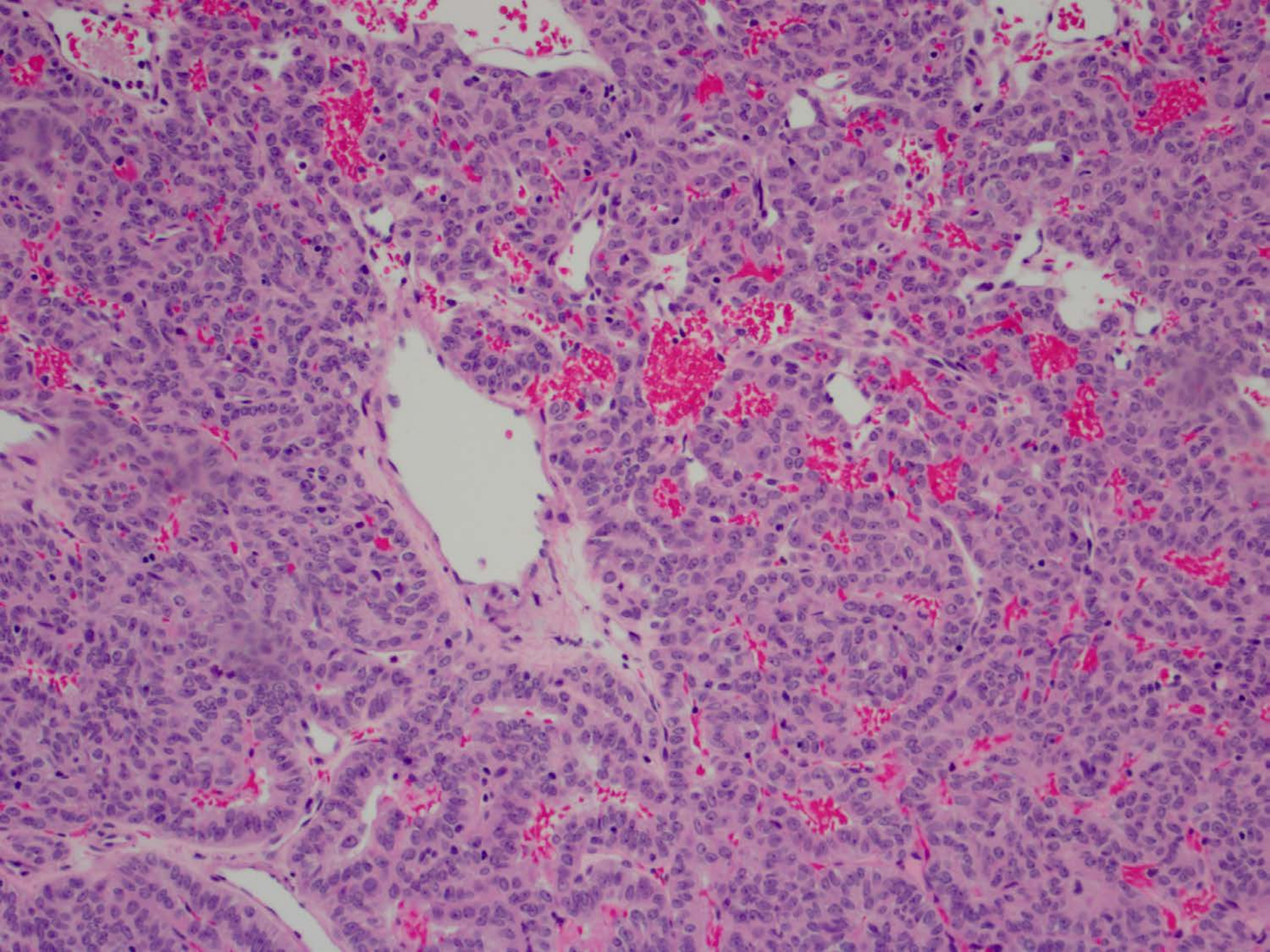
Financial Disclosures

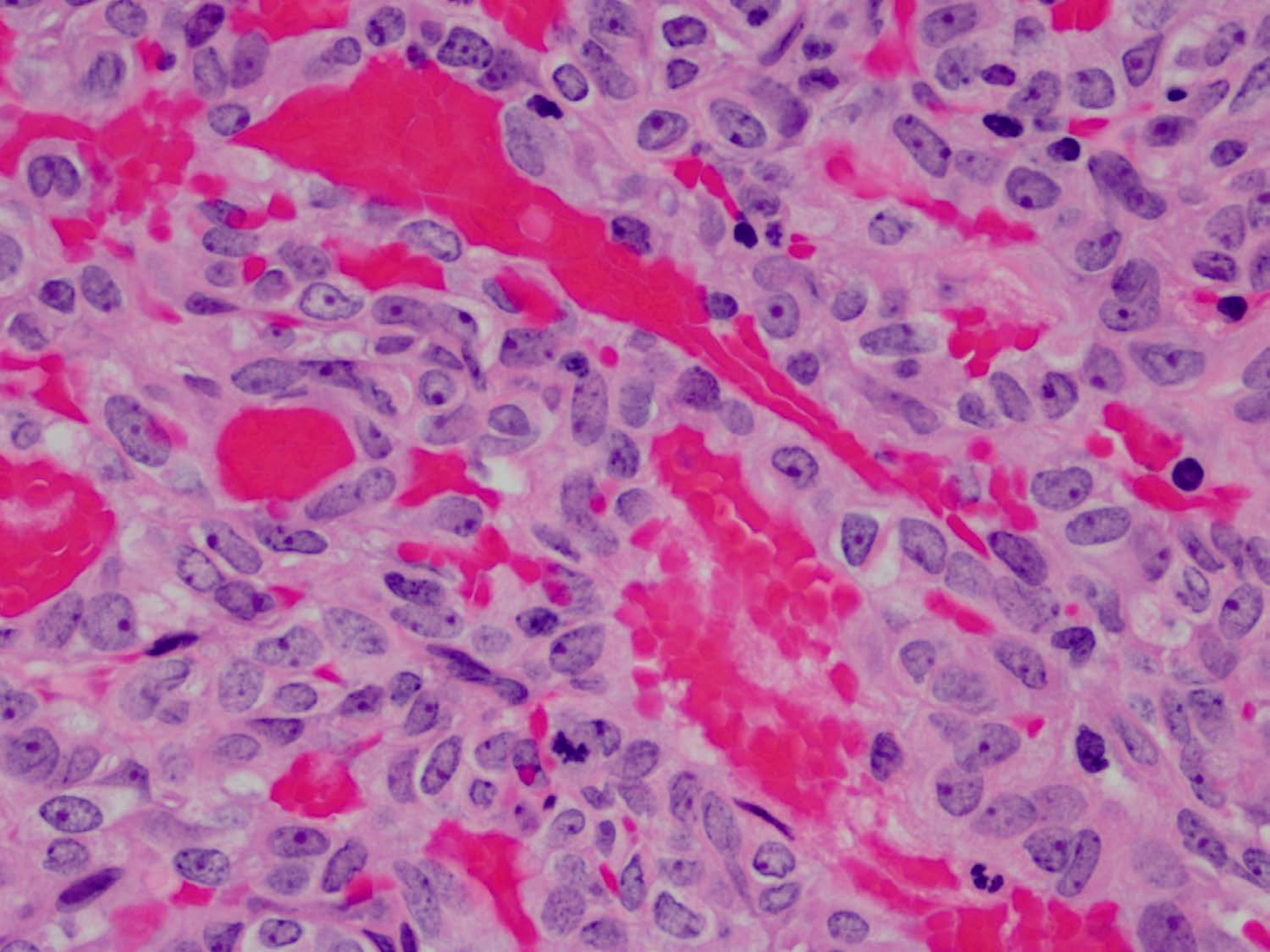
- None

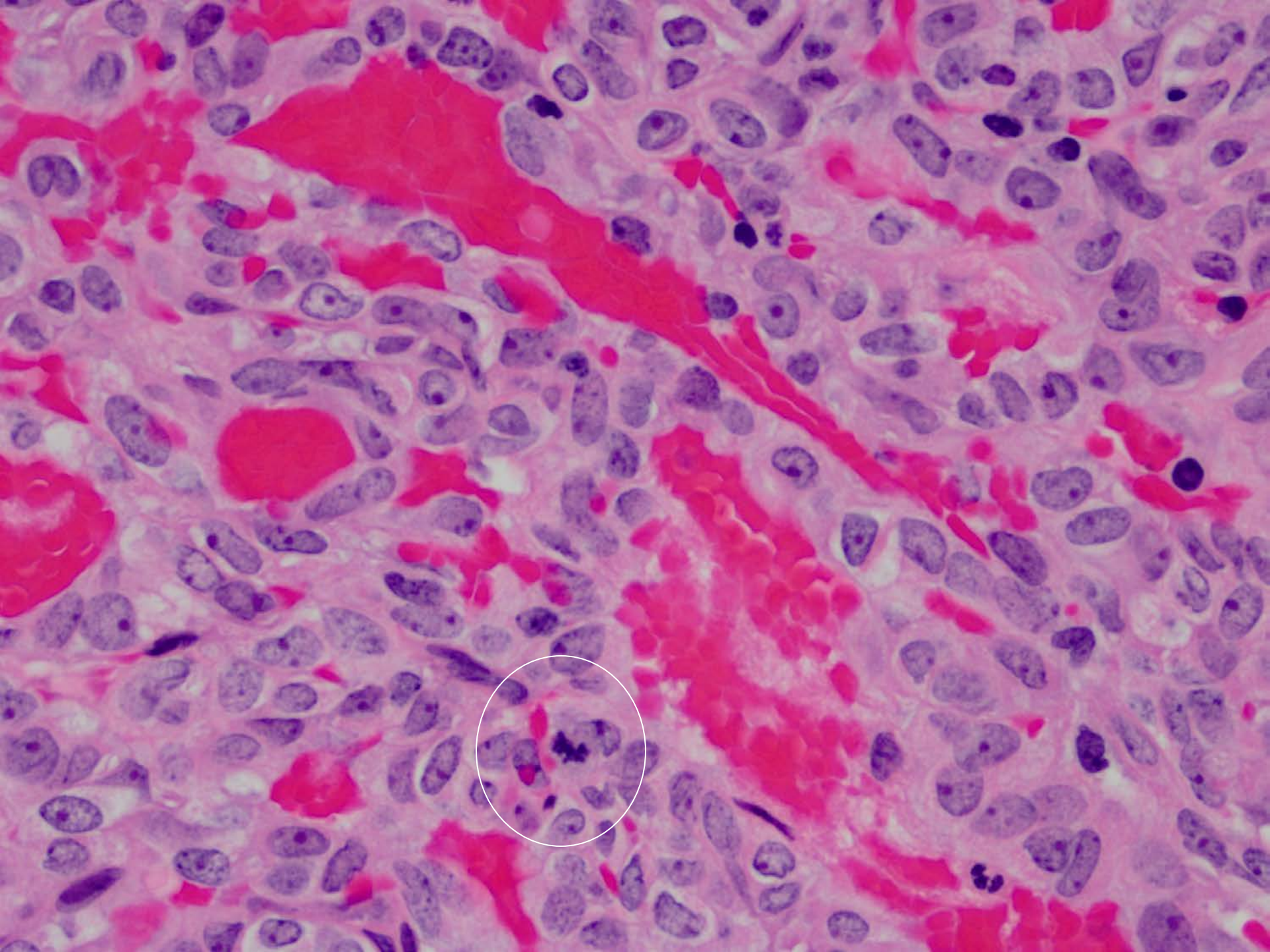
- 74 yo woman with skull based mass
- Underwent resection of reported pituitary adenoma 16 ya (1996), s/p radiation
- Received intermittent f/u, had done well until…
- Early 2013, mild bitemporal hemianopsia, right cheek numbness, chronic rhinosinusitis, deviated septum

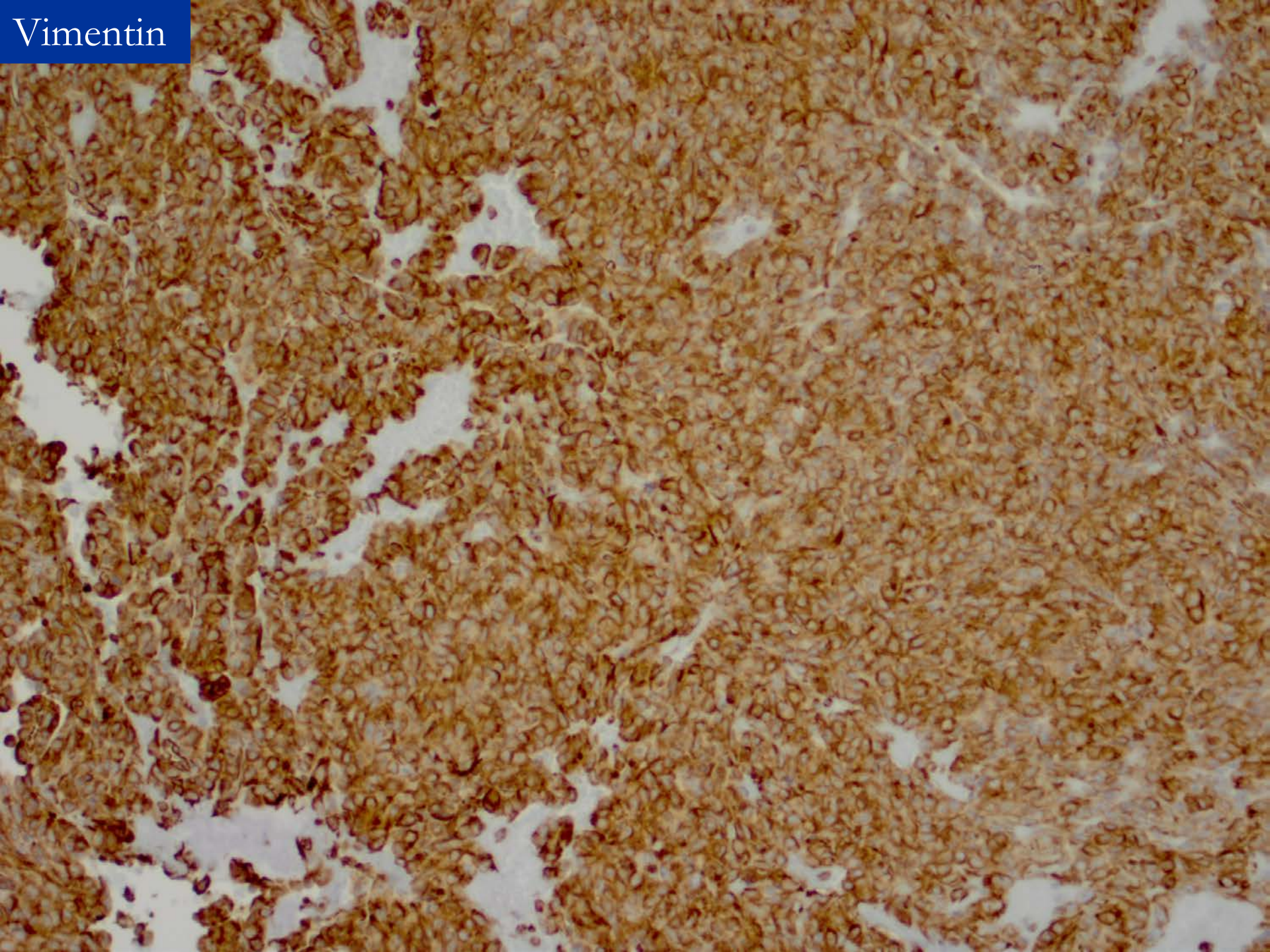
- Patient had pacemaker so could not have MRI, limited evaluation
- CT scan revealed 4.3 cm mass centered in sphenoid sinus, invading and extending beyond the sella, infiltrating muscle and the right carotid canal wall
- Current lesion was in previous radiation field
- However, relationship to previous lesion uncertain

- Mass was biopsied, diagnosis rendered

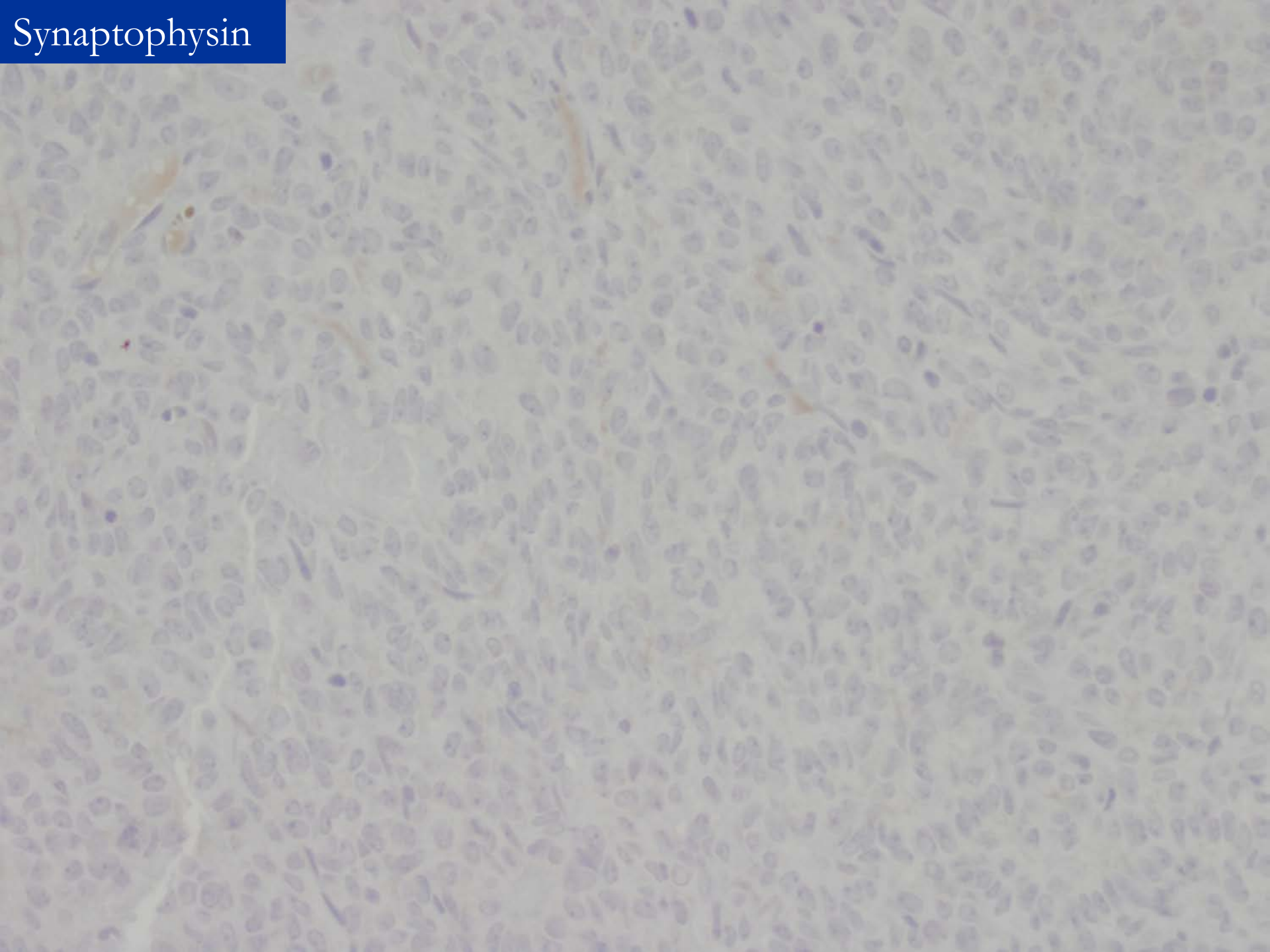







Vimentin

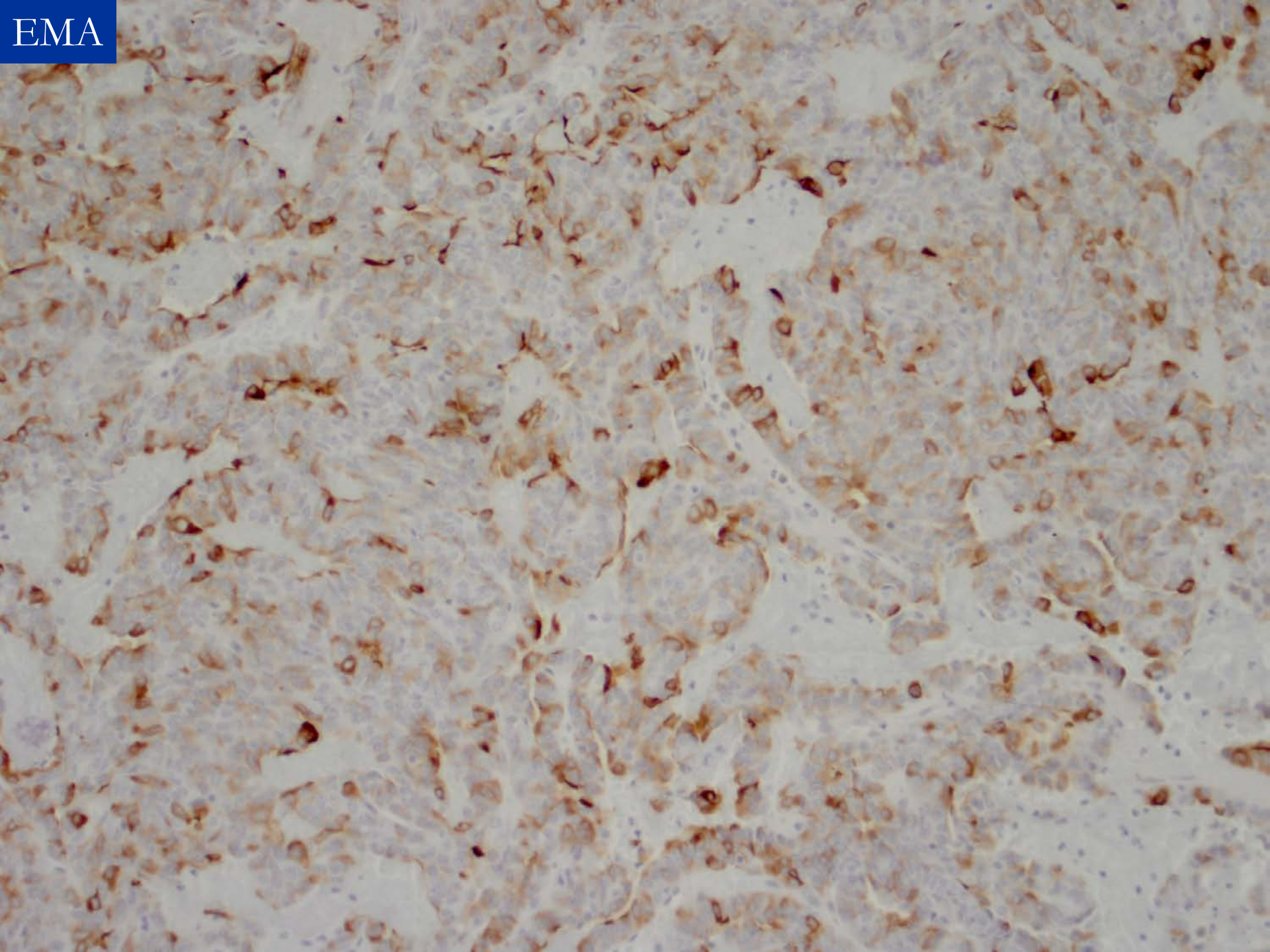
Synaptophysin

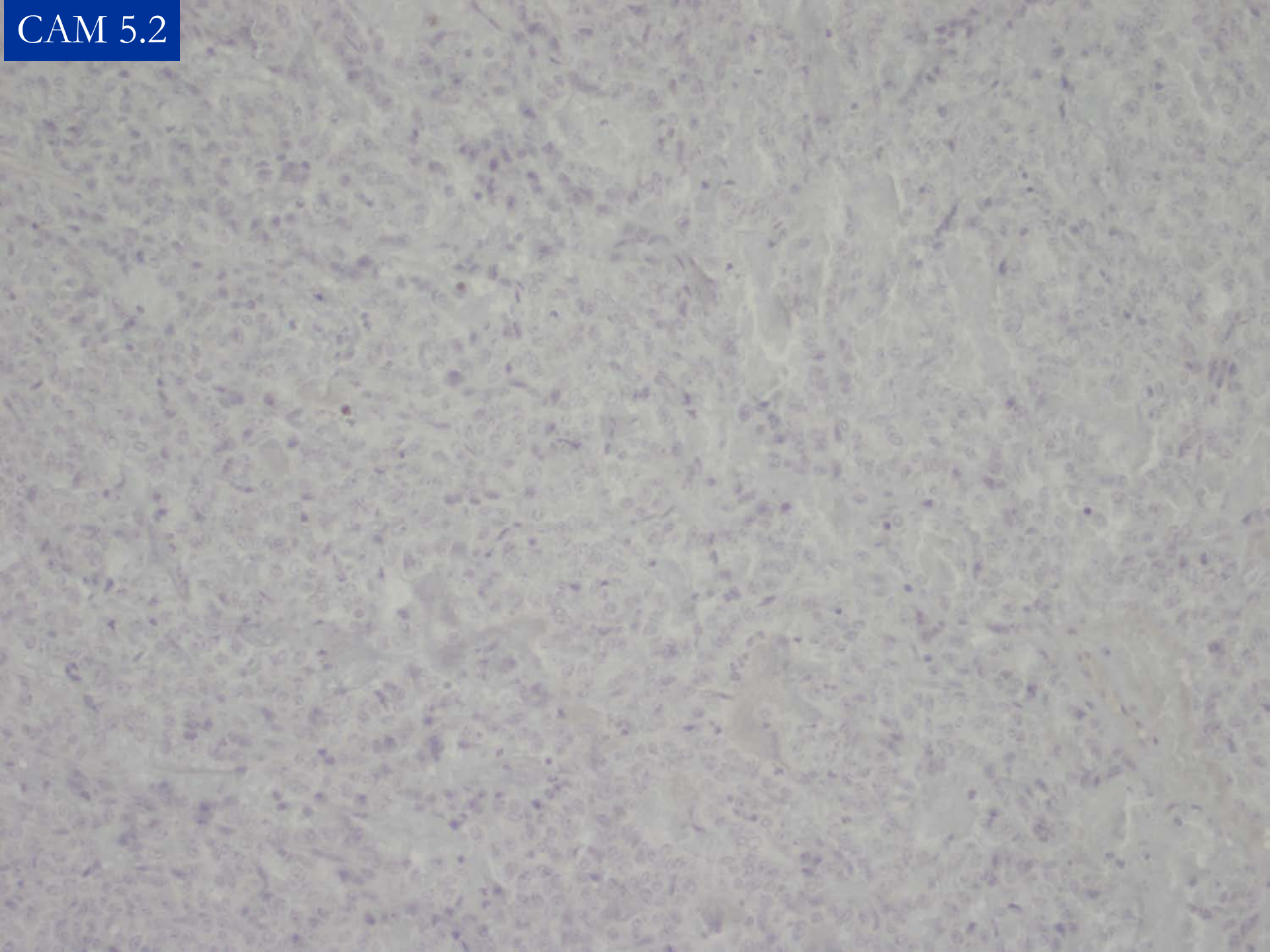


Histopathology Summary

- Neoplastic cells with oval nuclei, variable pleomorphism, prominent nucleoli
- Ki-67 15-20% positive nuclei, 8 mits/10 HPF
- Vimentin positive, S100 variably positive
- chromogranin, synaptophysin, HMB-45, MART-1, PAX-8, neurofilament, and GFAP negative

Discussion


EMA


CAM 5.2

- All keratins (CAM 5.2, CK19, CK20, AE1/AE3) negative except focal CK7
- TTF-1 positive
- CD99, thyroglobulin, PR, ER, EBER all negative

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- At this point thinking radiation induced meningioma, high grade, anaplastic or papillary

Got one more stain

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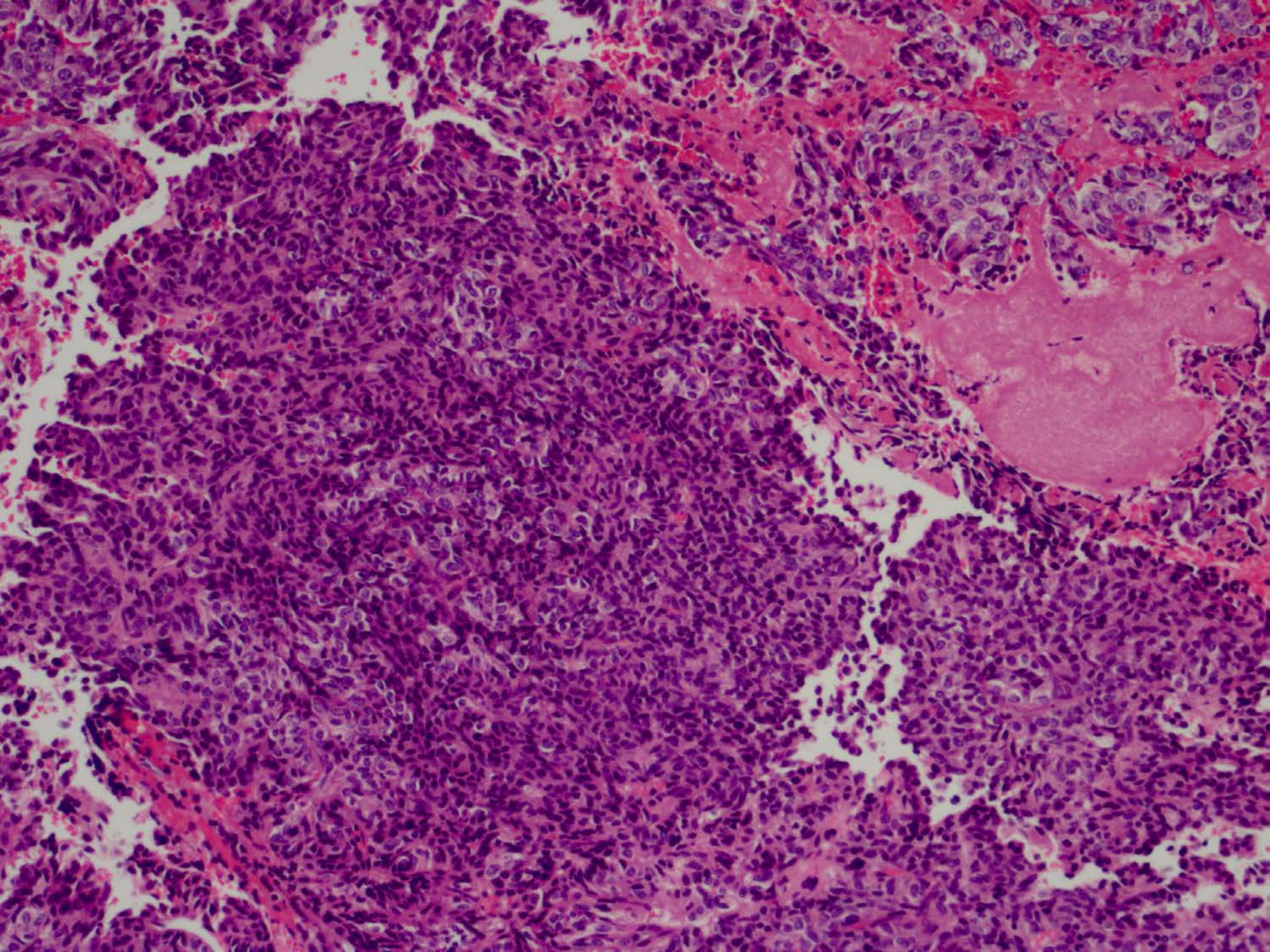
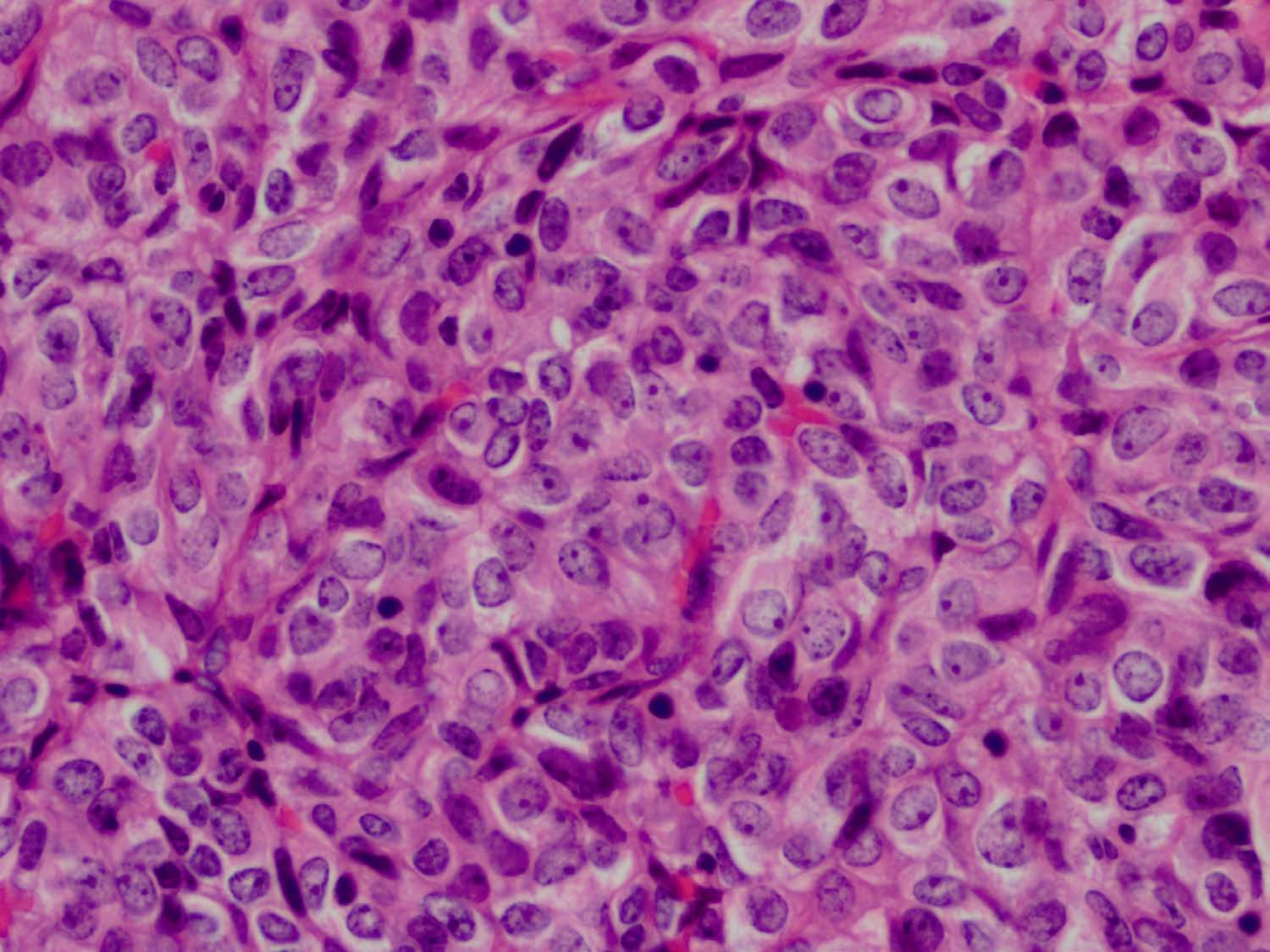
- A “Dr. Perry” stain

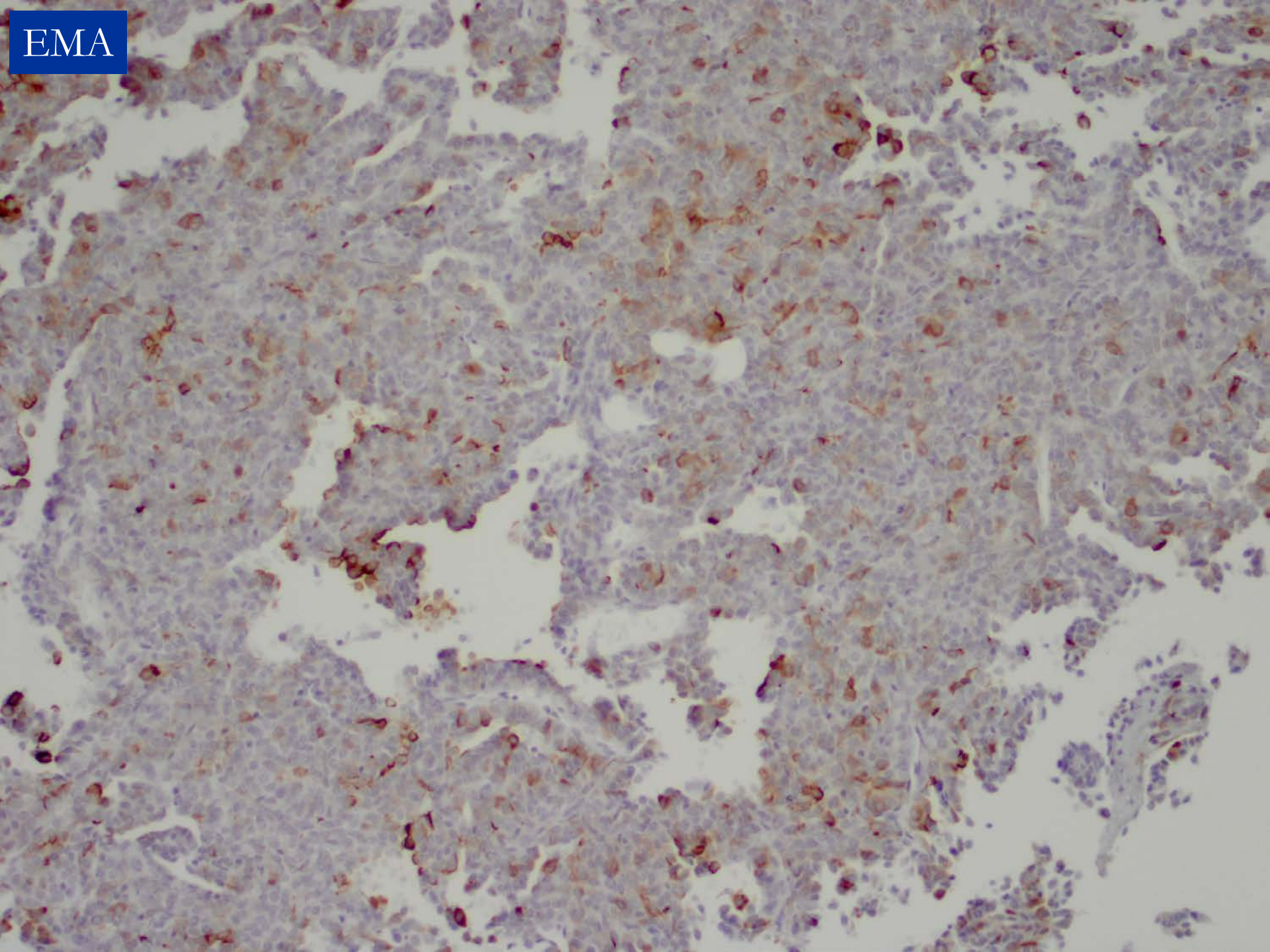
- Sent to Dr. Arie Perry at UCSF for consult

Diagnosis—Anaplastic Meningioma

- He agreed, calling biopsy material anaplastic meningioma
- However, while he was working it up for some FISH, I requested slides from 1996 “adenoma”
- H&E somewhat faded (so not shown) but they sent us the blocks
- Recuts from blocks stained well



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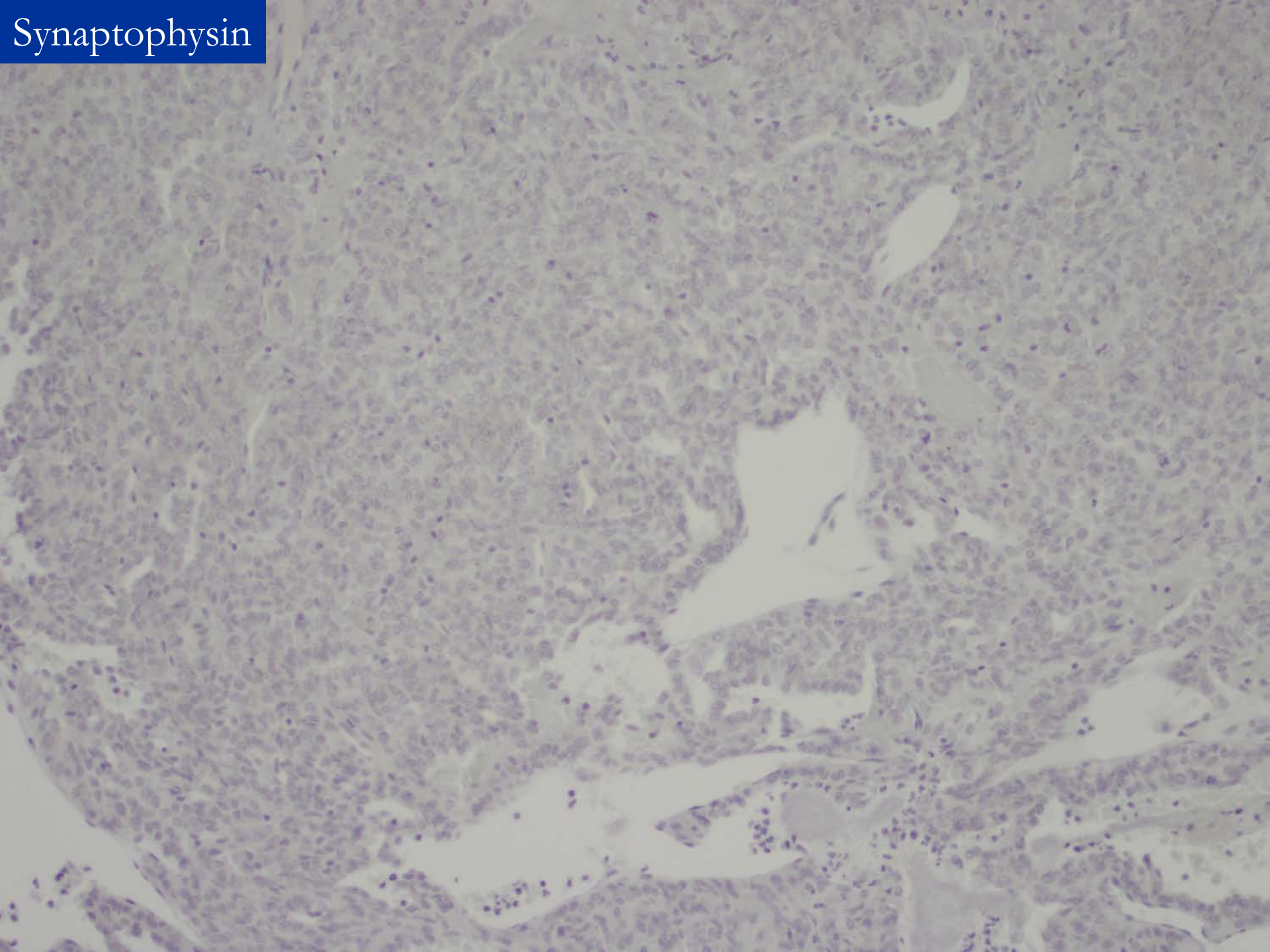
Synaptophysin



- EMA, vimentin, TTF-1 positive
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- Original had fewer mitotic figures, maybe not as cytologic malignant, but still atypical cytology
- Clearly not pituitary adenoma, probably atypical meningioma

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- [aside] current AP director at Upstate was at that hospital in 1996, she did NOT sign original out

- When lesion was resected, had some fresh tissue sent for cytogenetics
- Took weeks to grow, complex pattern that was not entirely specific, but involved chromosomes 1 and 14 so at least suggestive of meningioma
- Pt continues to be followed, returned from winter in Florida and imaging in April was negative

Anaplastic meningioma

- Greater than 20 mitotic figures in 10 HPF
- Not recognizable as meningioma, looks much more malignant (cellular anaplasia)
- Poor prognosis
- Perhaps this one has transformed
- Don't usually have loss of 22q, but often loss of 1p, 14q, others

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Thank You