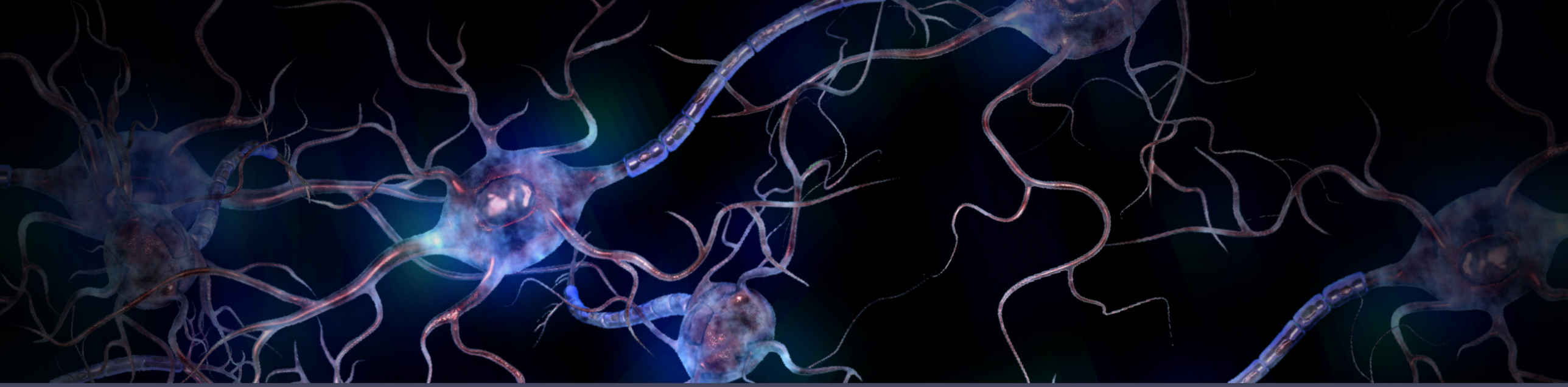


YU - Medicine

Passion Academic Team

Sheet# 1 - Pathology Lab

Lec. Title : Pathology Lab

Written By : Yousef Alfaris

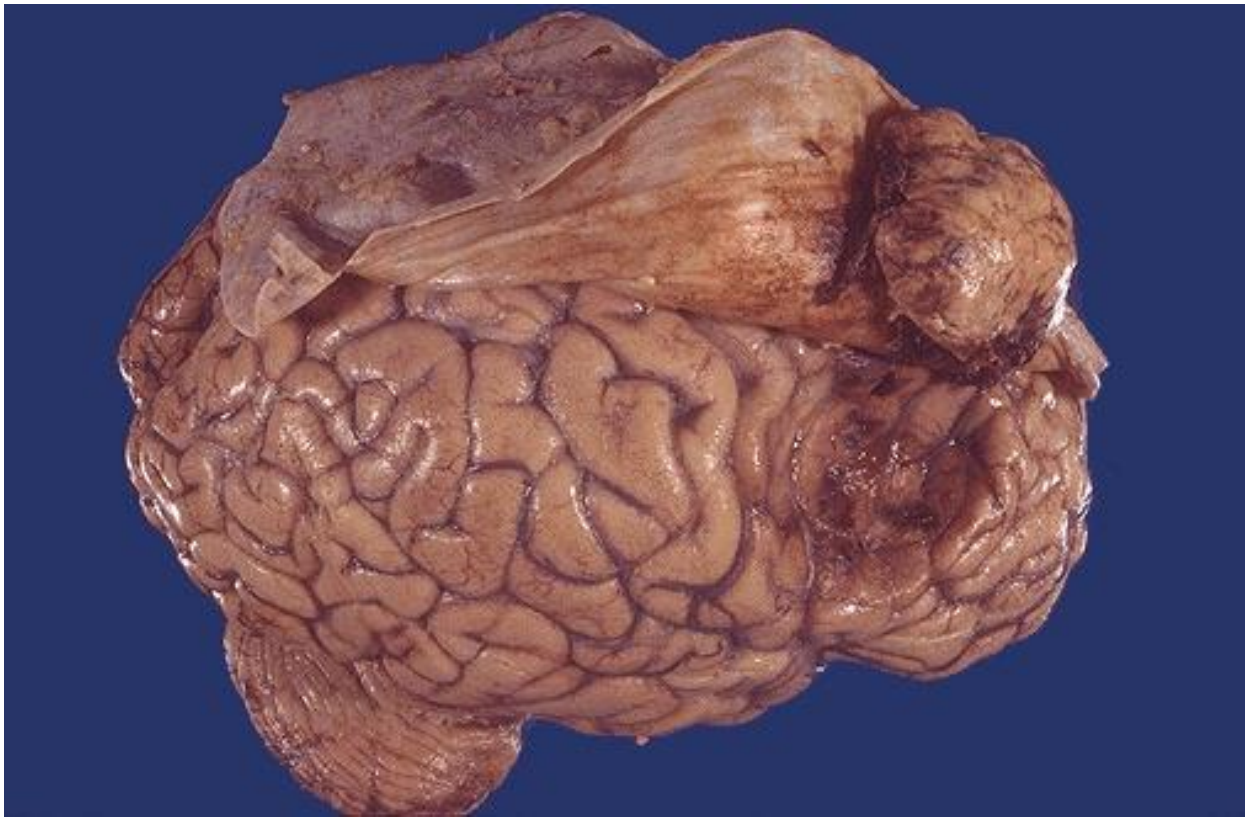
PERIPHERAL NERVOUS SYSTEM

If you come by any mistake , please kindly report it to shaghafbatch@gmail.com

Neuroscience2
Pathology lab

Dr. Nesreen Bataineh

MD, FRCPath



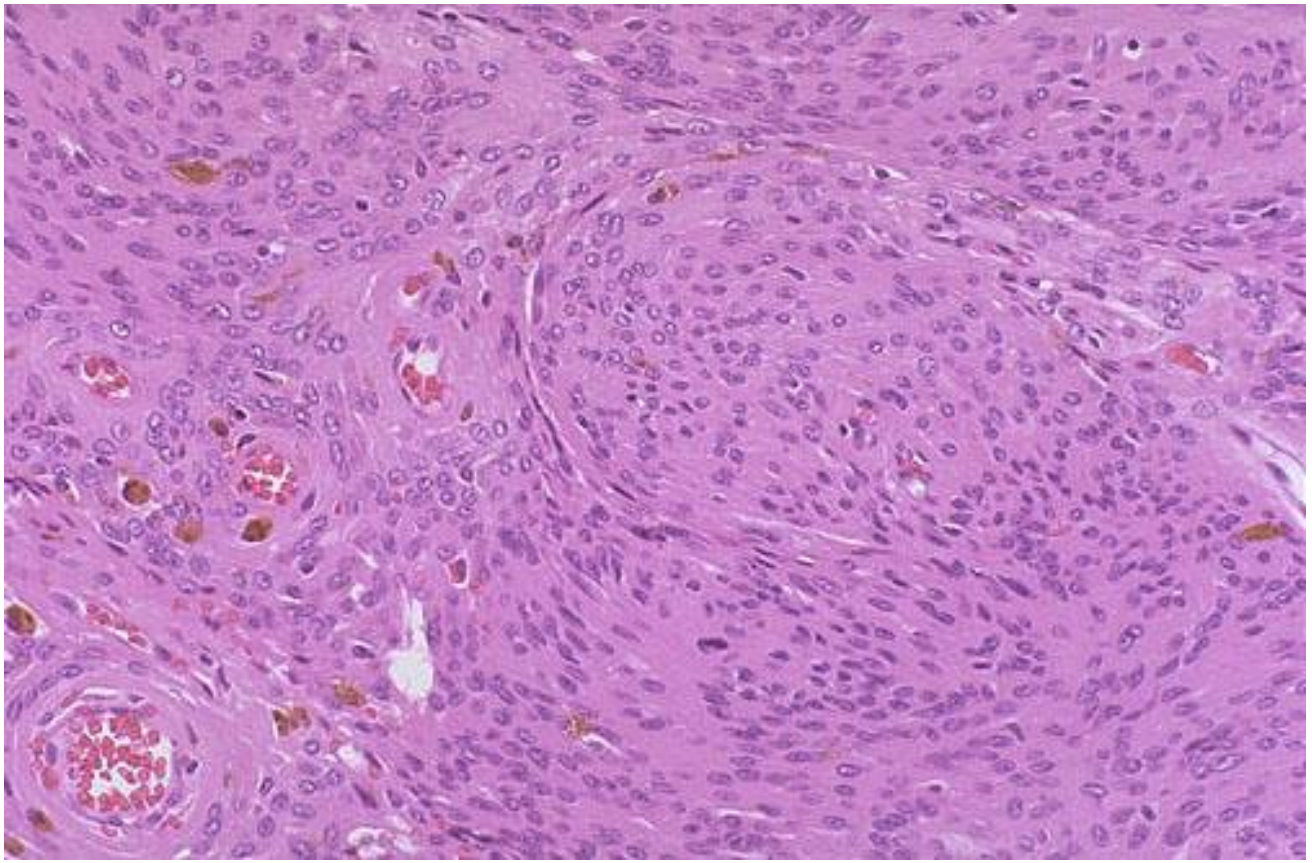
True or false?

This tumor remains localized and it never invades the bone or the brain.

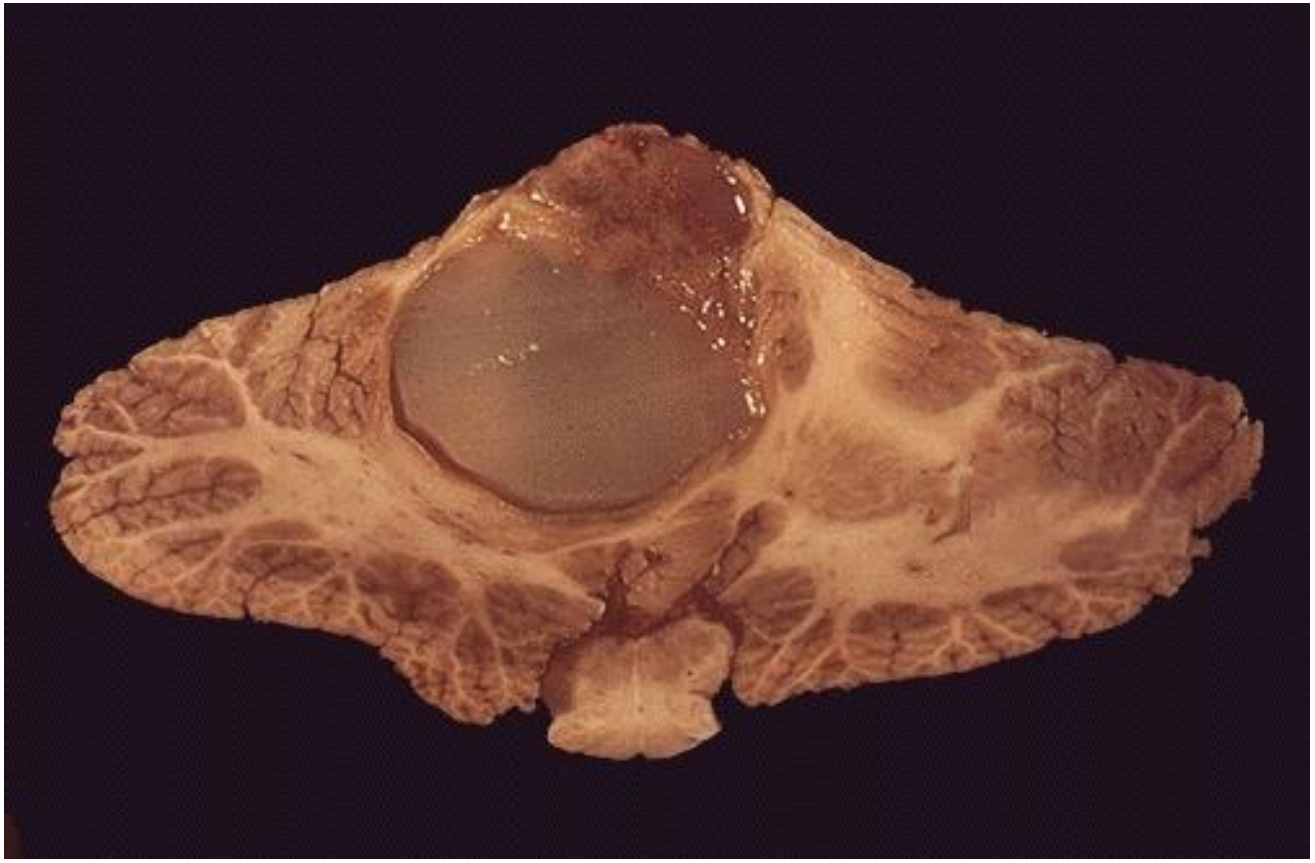
It is meningioma >> invades the brain, the bone and the venous sinuses

Important prognosis >> brain invasion

So it false

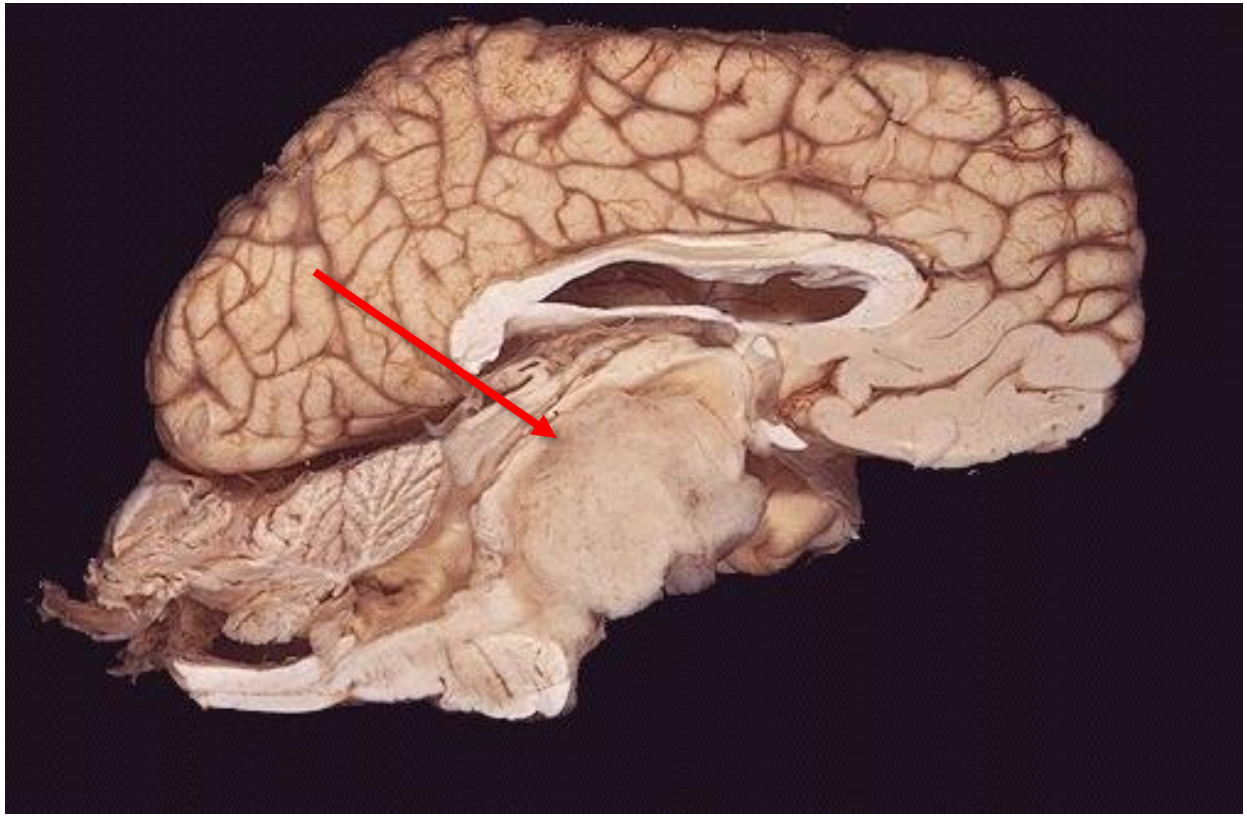


At medium power, this meningioma is composed of whorled nests of cells. A variety of patterns are possible.

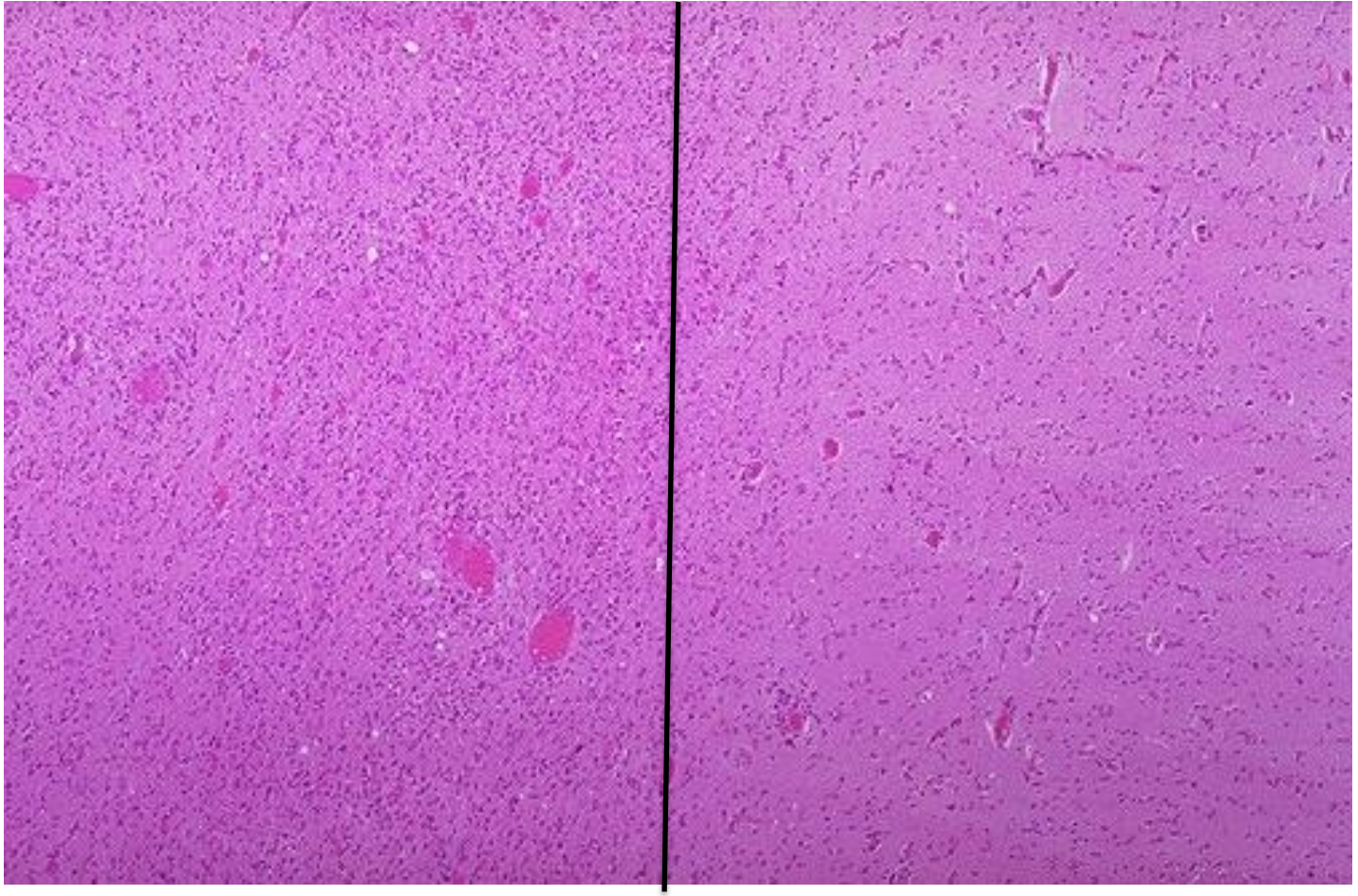


What is the WHO grade of this tumor?

Pilocytic astrocytoma … grade one often cystic with mural nodule (fluid)



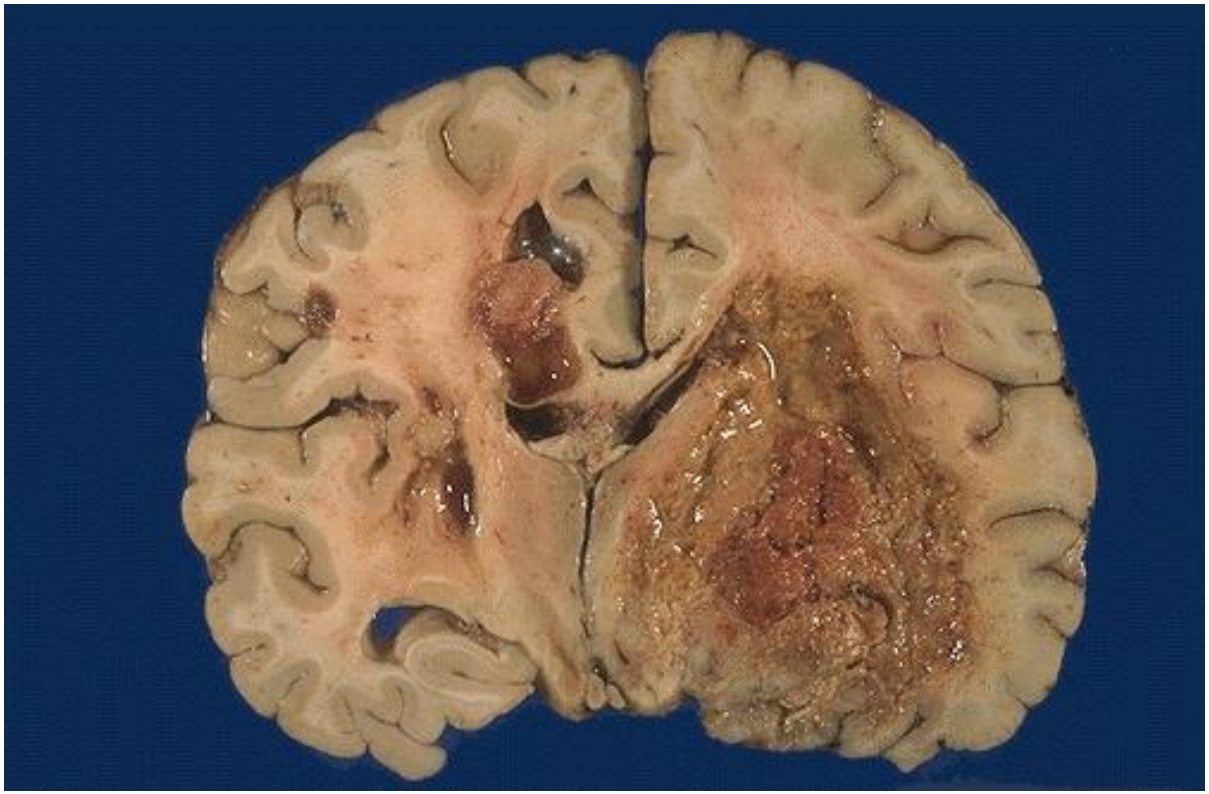
This sagittal section of brain demonstrates a large brainstem glioma. Most gliomas are astrocytomas.



At low power, a glioma at the left shows greater cellularity and pleomorphism than adjacent brain at the right, but the margin is not distinct.

Left: low grade gliomas and right: normal brain

At the left there are no or minimal pleomorphism and no necrosis or mitosis or vascular proliferation, only we see high cellularity

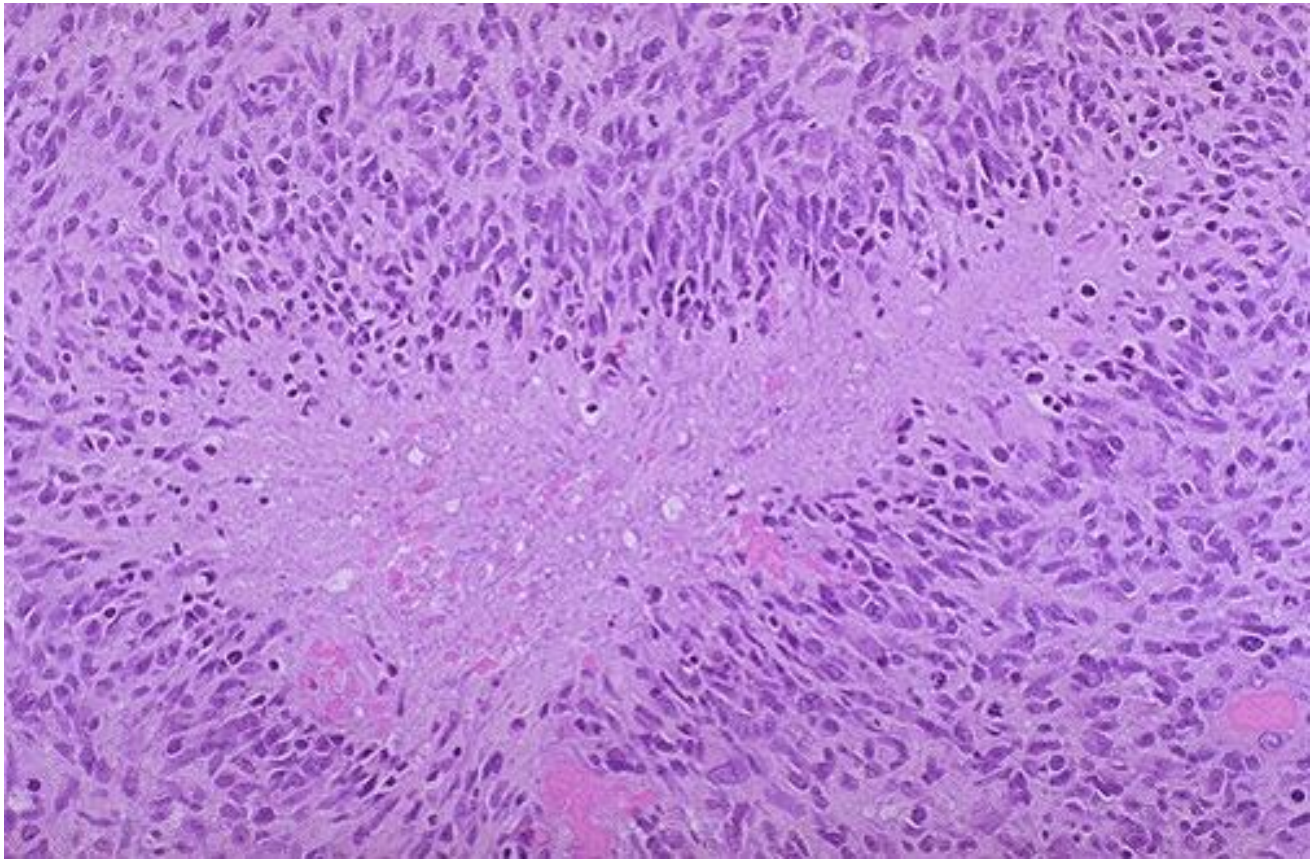


Describe what you see

What is your most likely diagnosis?

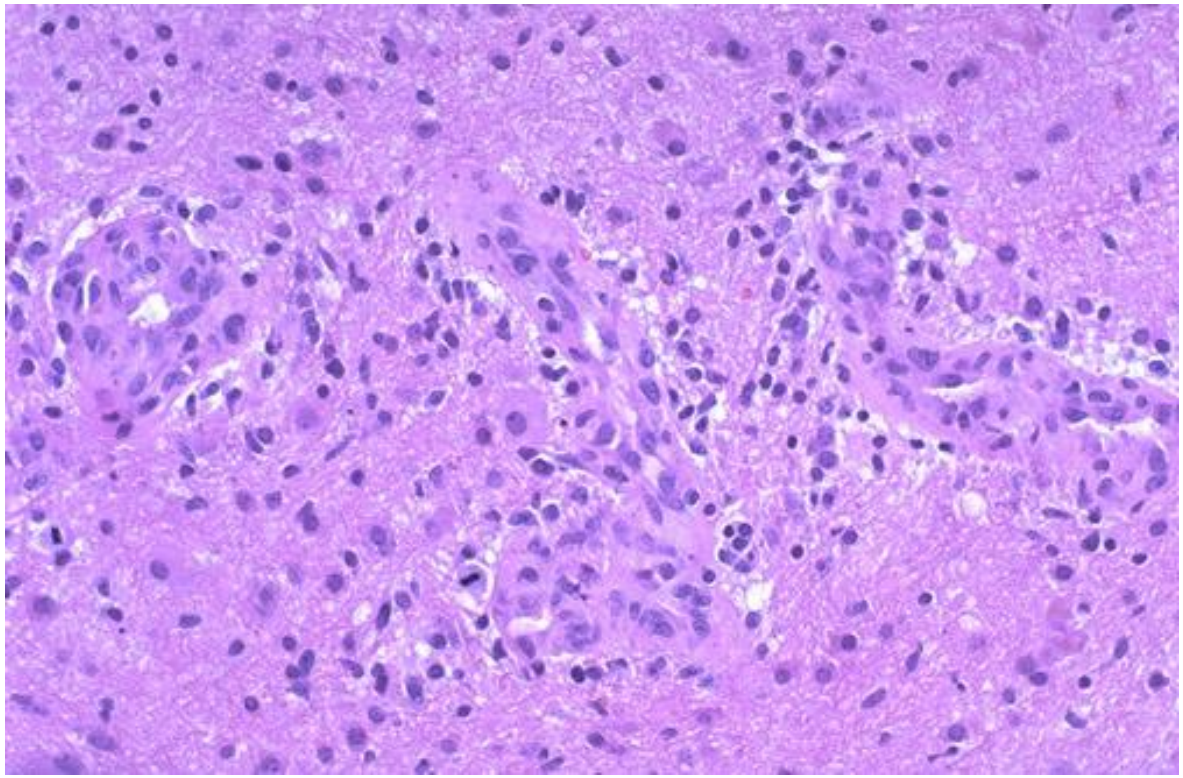
Glioblastoma

high necrotic tissues



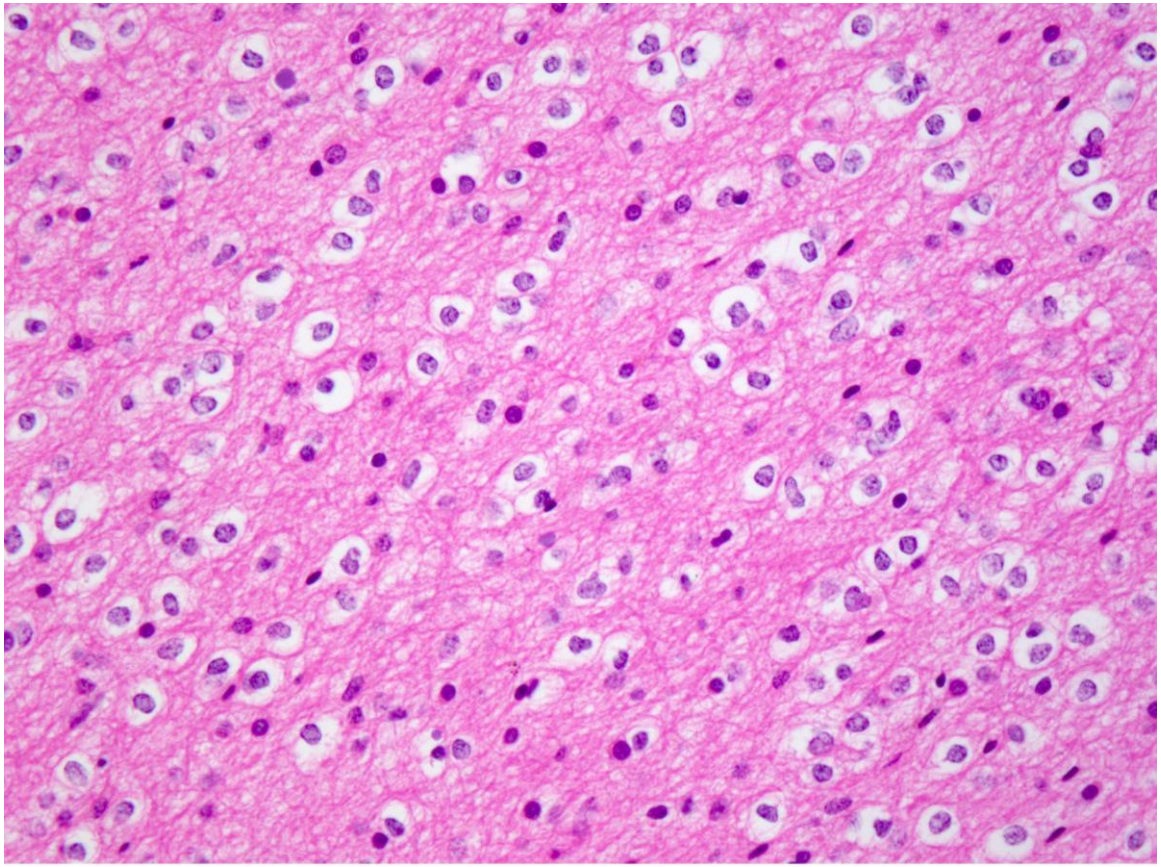
This glioblastoma (GBM) demonstrates marked cellularity with marked hyperchromatism and pleomorphism. This shows necrosis with neoplastic cells palisading around it.

Glioblastoma grade 4
Palisading necrosis (GBM)
vascular proliferation



Another characteristic feature of a glioblastoma (GBM) is capillary endothelial cell proliferation.

Cell proliferation appearance

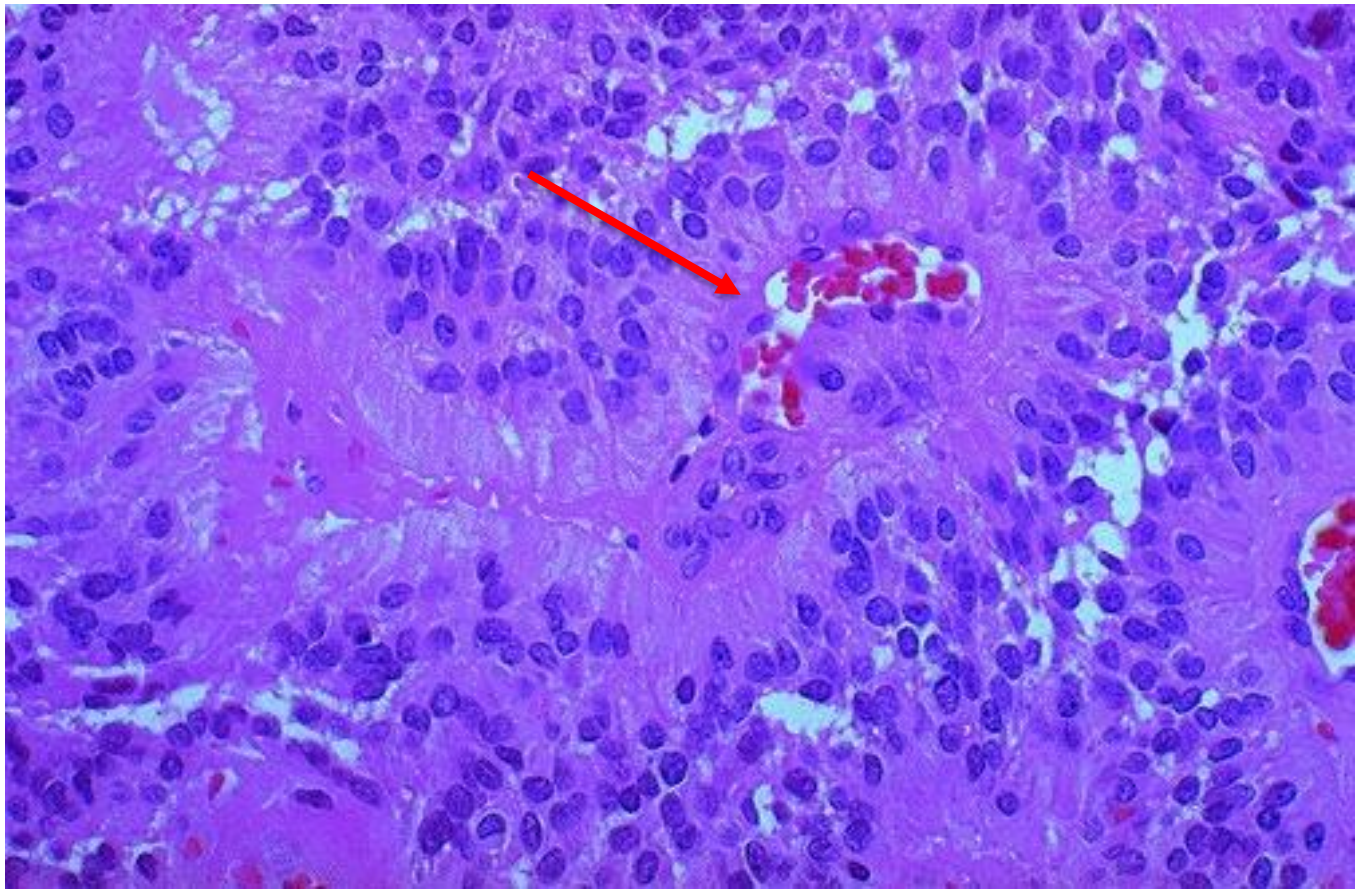


What is the characteristic genetic finding of this tumor?

Oligodendroma
we see fried egg
deletion of chromosomes 1p and 19q

This shows a tumor in the fourth ventricle above the brainstem and bulging toward the cerebellum. What is your differential diagnosis of this finding?

Ependymoma
solid tumeors, no necrosis



Name this finding

Perivascular pseudorosettes

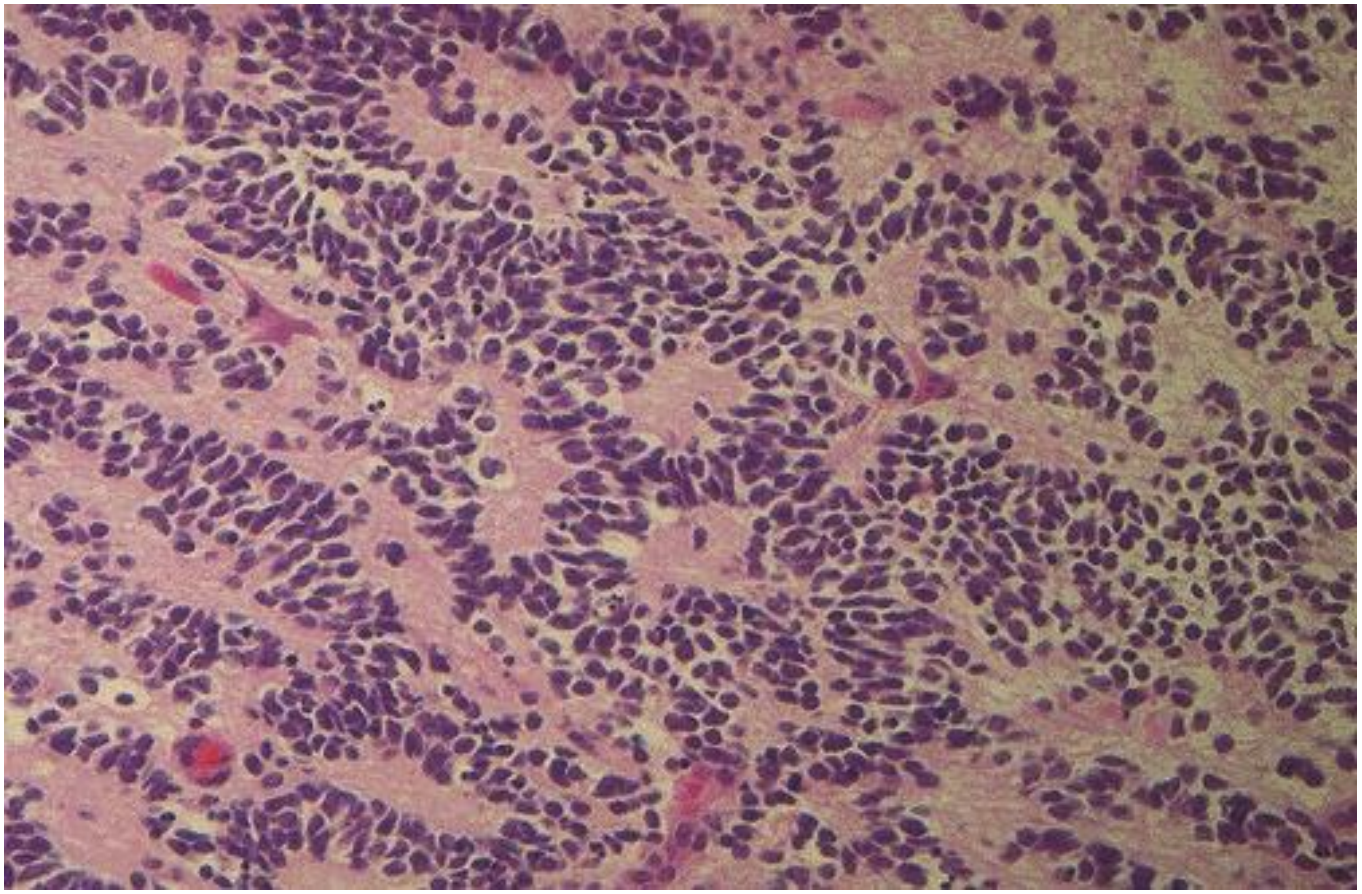
ependymoma tumor grade 2 (typical)

Where is the abnormality?

The irregular mass seen here near the midline of the cerebellum is a medulloblastoma. This is one of the "small round blue cell" tumors and it most often occurs in children

Medulloblastoma grade 4

arise mostly in the chilldren



What is your diagnosis?

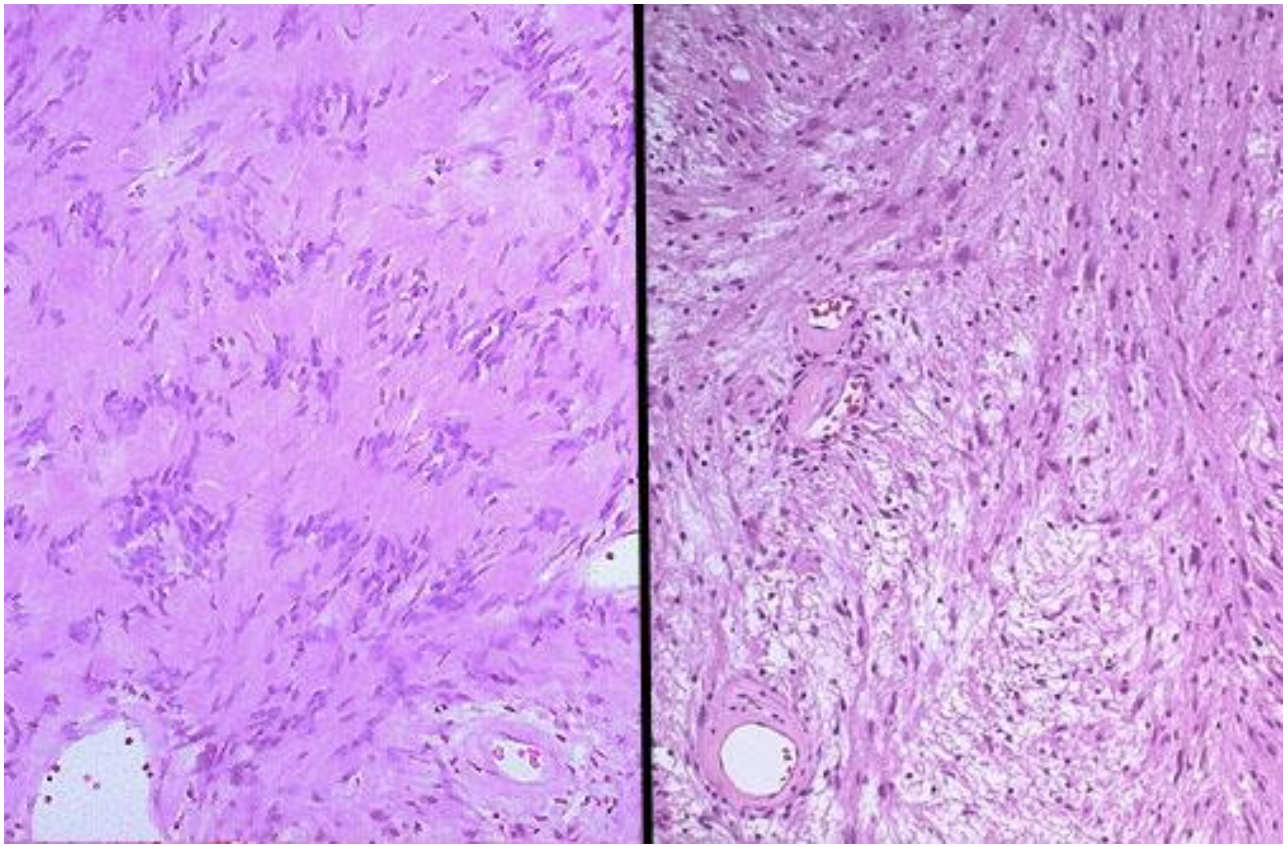
Name the structures seen here

Medulloblastoma

typical we see small blue round cell and homer wright rossetes

This discreet firm neoplasm was removed from the surface of a peripheral nerve. It is a schwannoma (neurilemmoma) which arises from the nerve sheath Schwann cells.

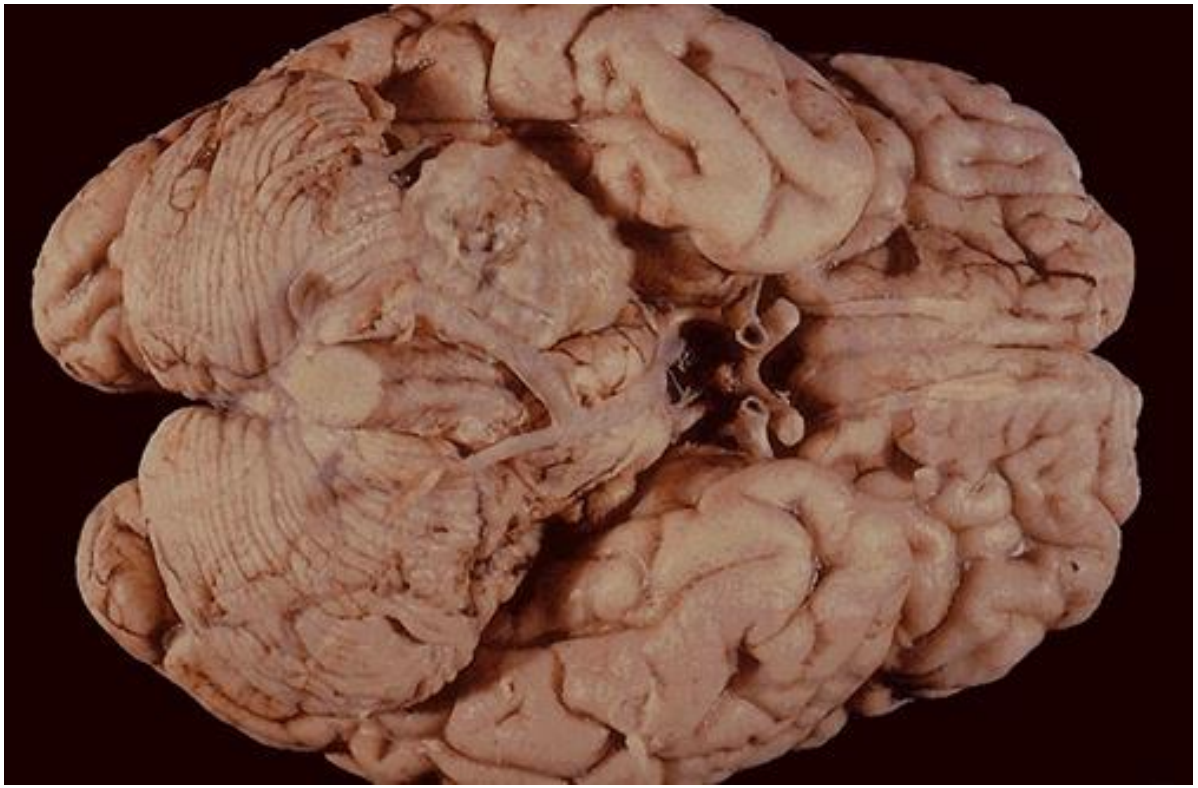
Shwannoma (typical) arise frthis**om shwann cell nerve fiber is not part of tumors**



These are the classic microscopic appearances of a schwannoma, which is benign. Note the more cellular "Antoni A" pattern on the left with palisading nuclei surrounding pink areas (Verocay bodies). On the right is the "Antoni B" pattern with a looser stroma, fewer cells, and myxoid change.

On the left an Antoni(A) palisaded on the right Antoni (B) non palisaded

the Antoni (A) has verocay body



The mass lesion here is arising in the acoustic (eighth cranial) nerve at the cerebellopontine angle. This is a schwannoma. Patients may present with hearing loss. These benign neoplasms can be removed.

Shwannoma (acoustic neuroma)
hearing loss and tinnitus