CNS photos

1- hydrocephalus

2- brain infarction

3- massive spontaneous cerebral hematoma

4- Glioblastoma multiform

CNS slides

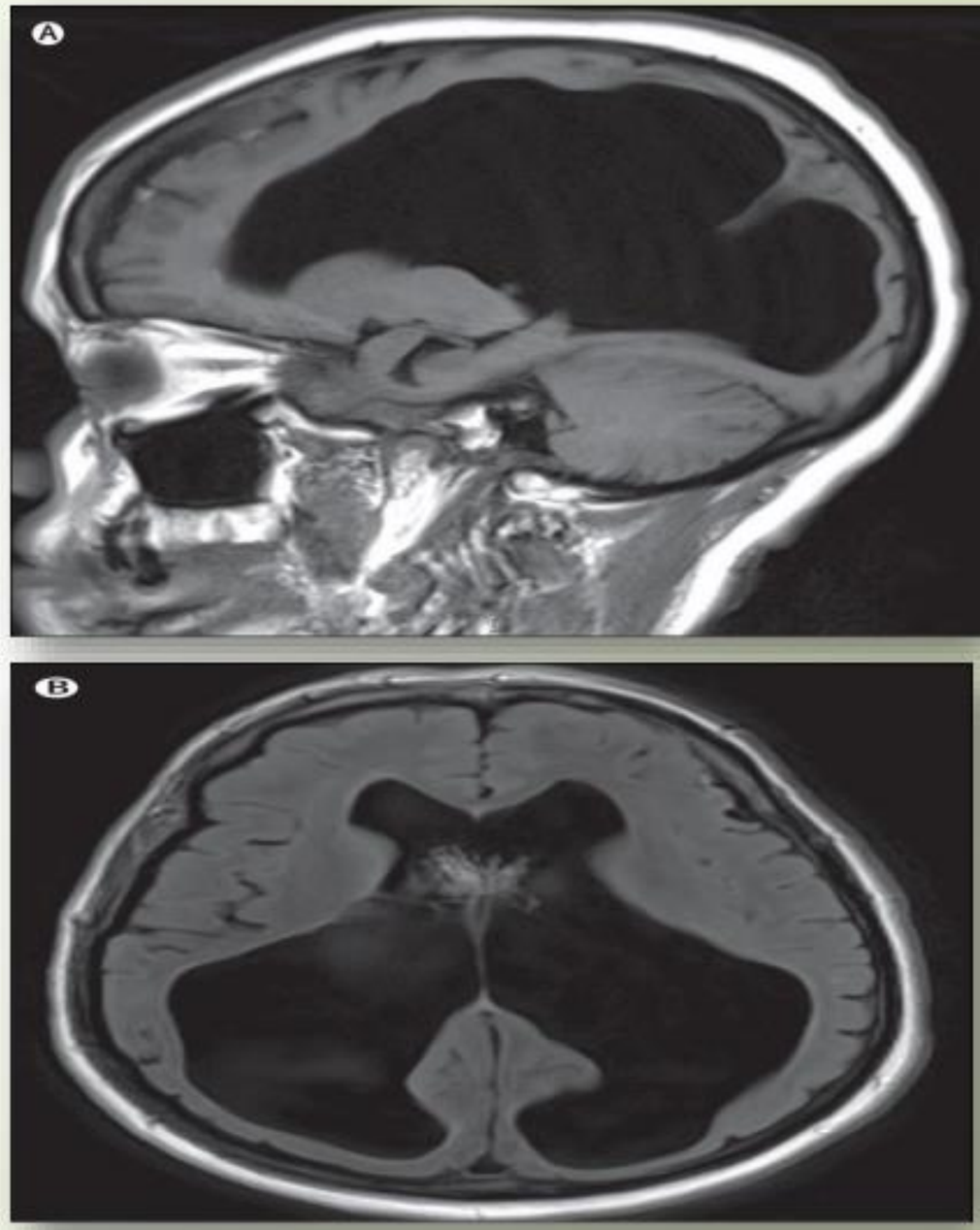
1- meningioma

2- medulloblastoma

Hydrocephalus

Definition:

Abnormal dilatation of the ventricles of the brain due to increased C.S.F volume associated with pressure atrophy of the brain tissue.



Hydrocephalus

Gross Examination:

Specimen : Vault of the skull

Description :

1- The skull sutures : fused (adult skull)

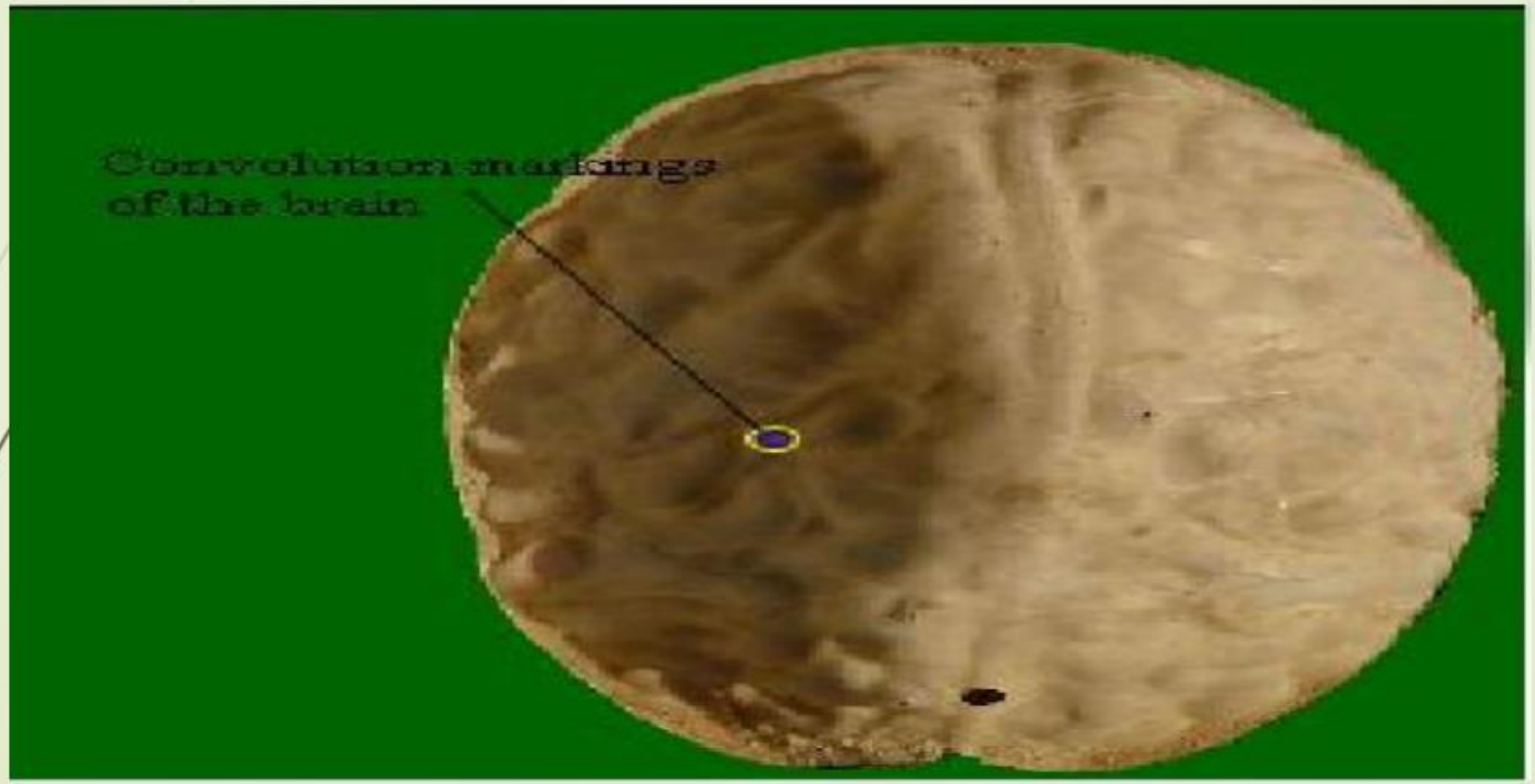
2- The outer surface : smooth.

3- The inner surface : shows excess pits, Thinning of the inner table due to pressure atrophy caused by distended meninges.

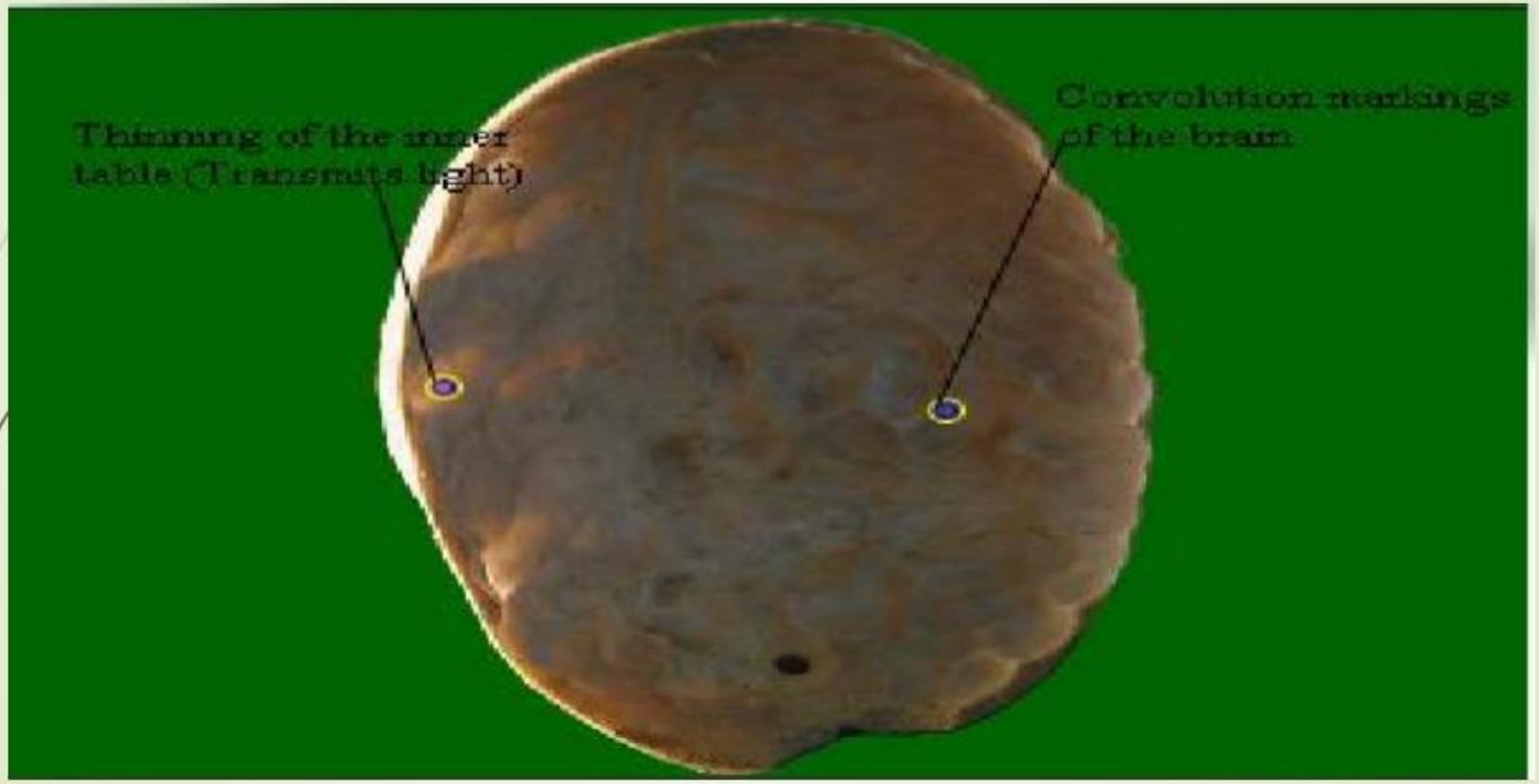
Diagnosis : (Adult hydrocephalic skull)

Hydrocephalus

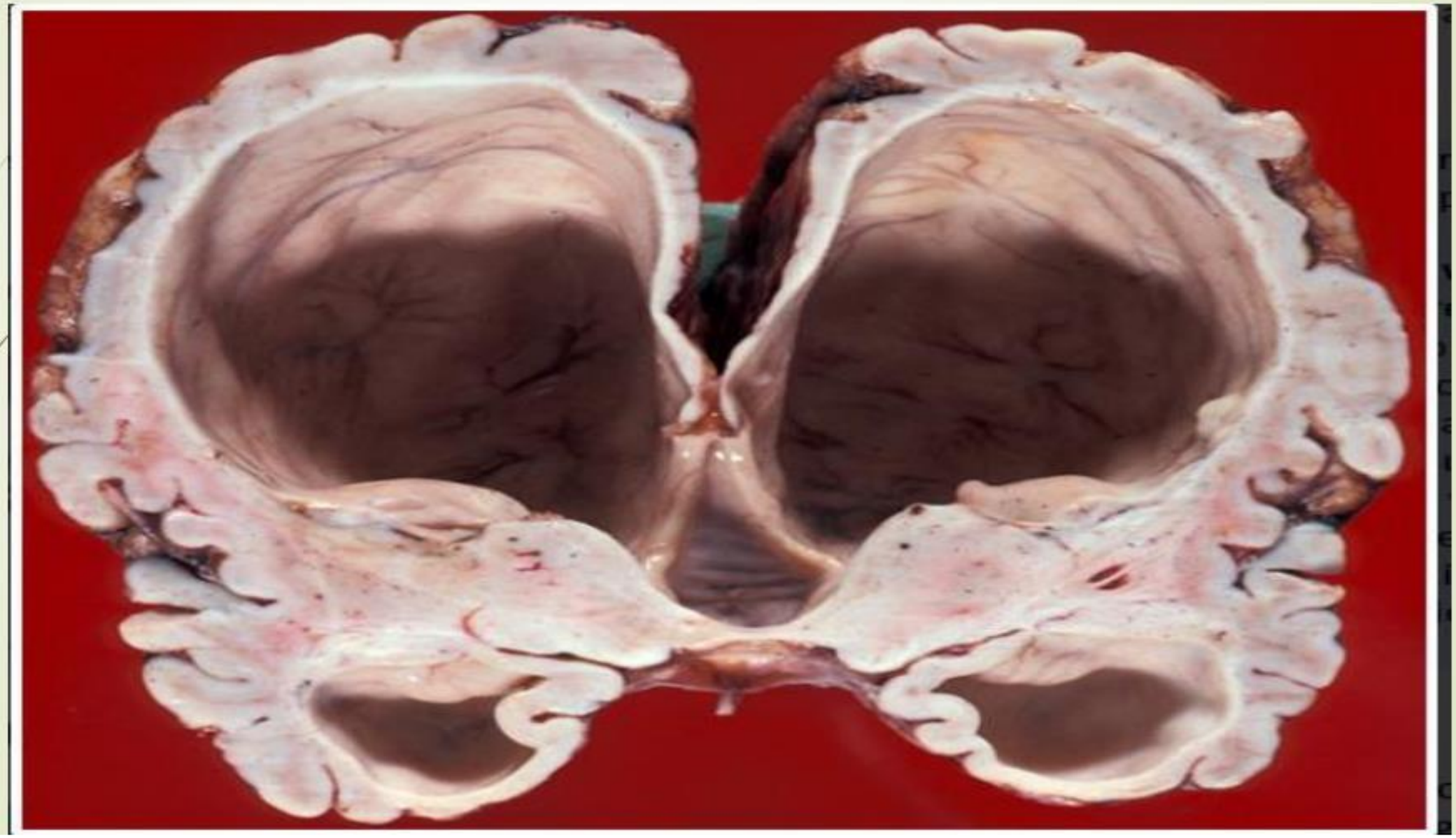
Hydrocephalus.



Hydrocephalus.



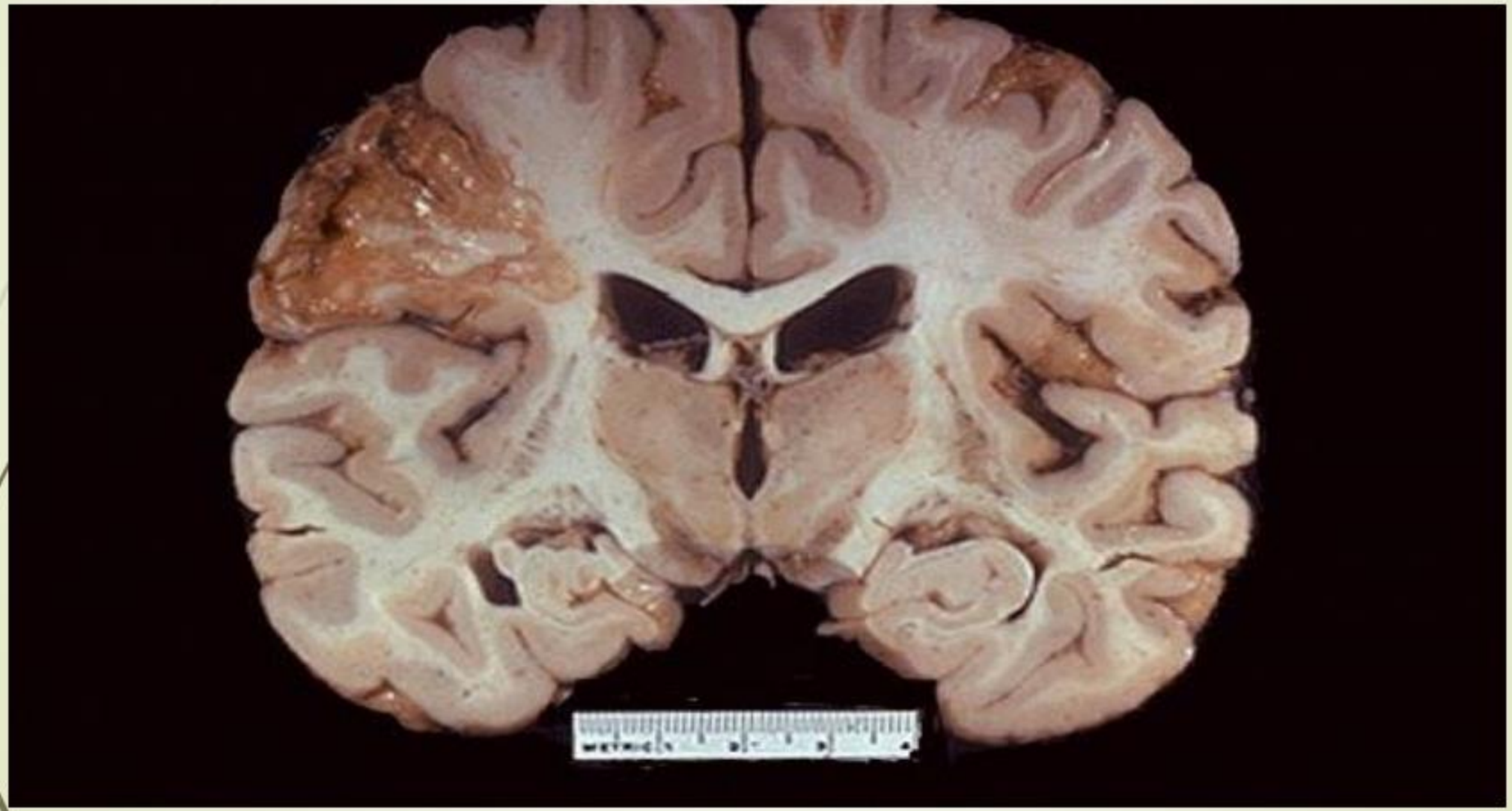
Hydrocephalus. White matter atrophy.



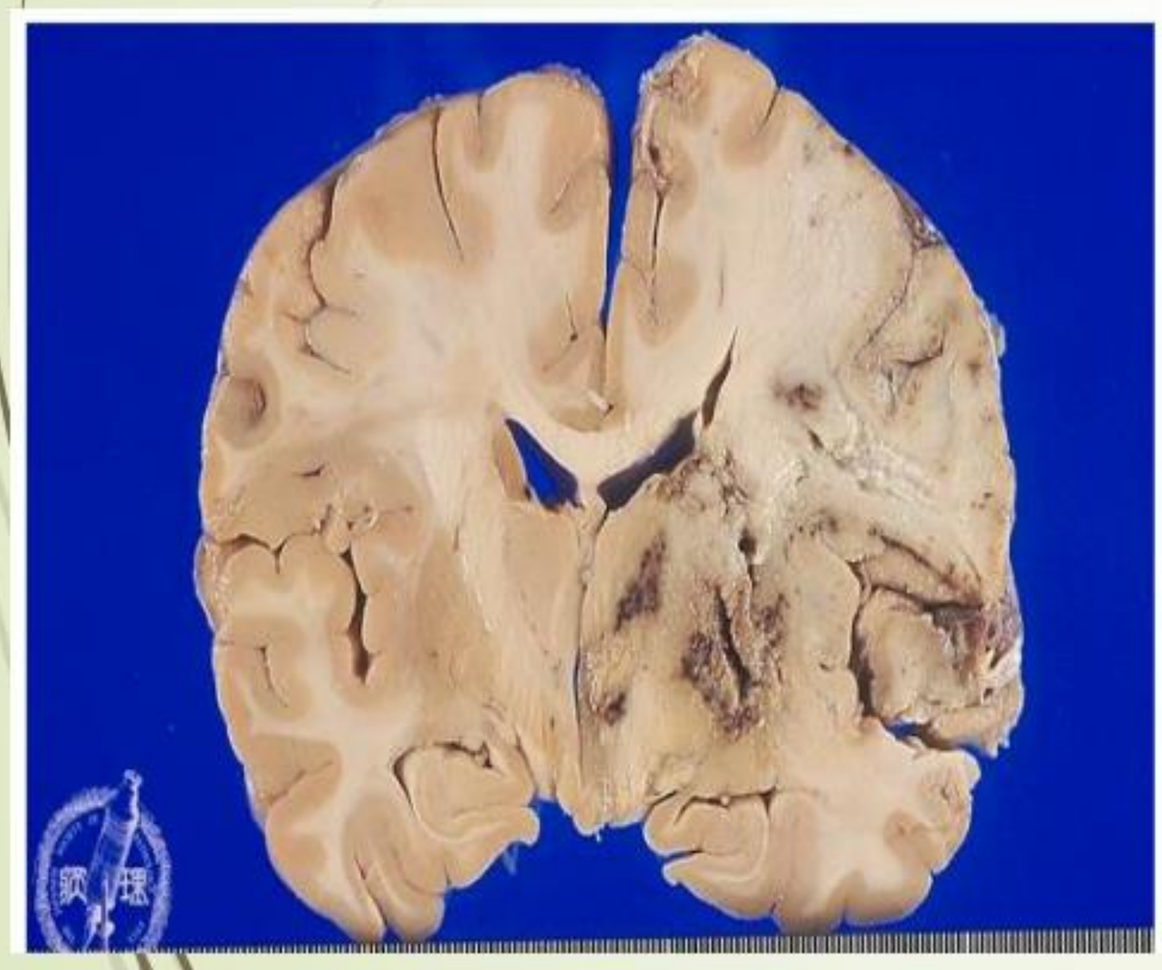
Brain infarction

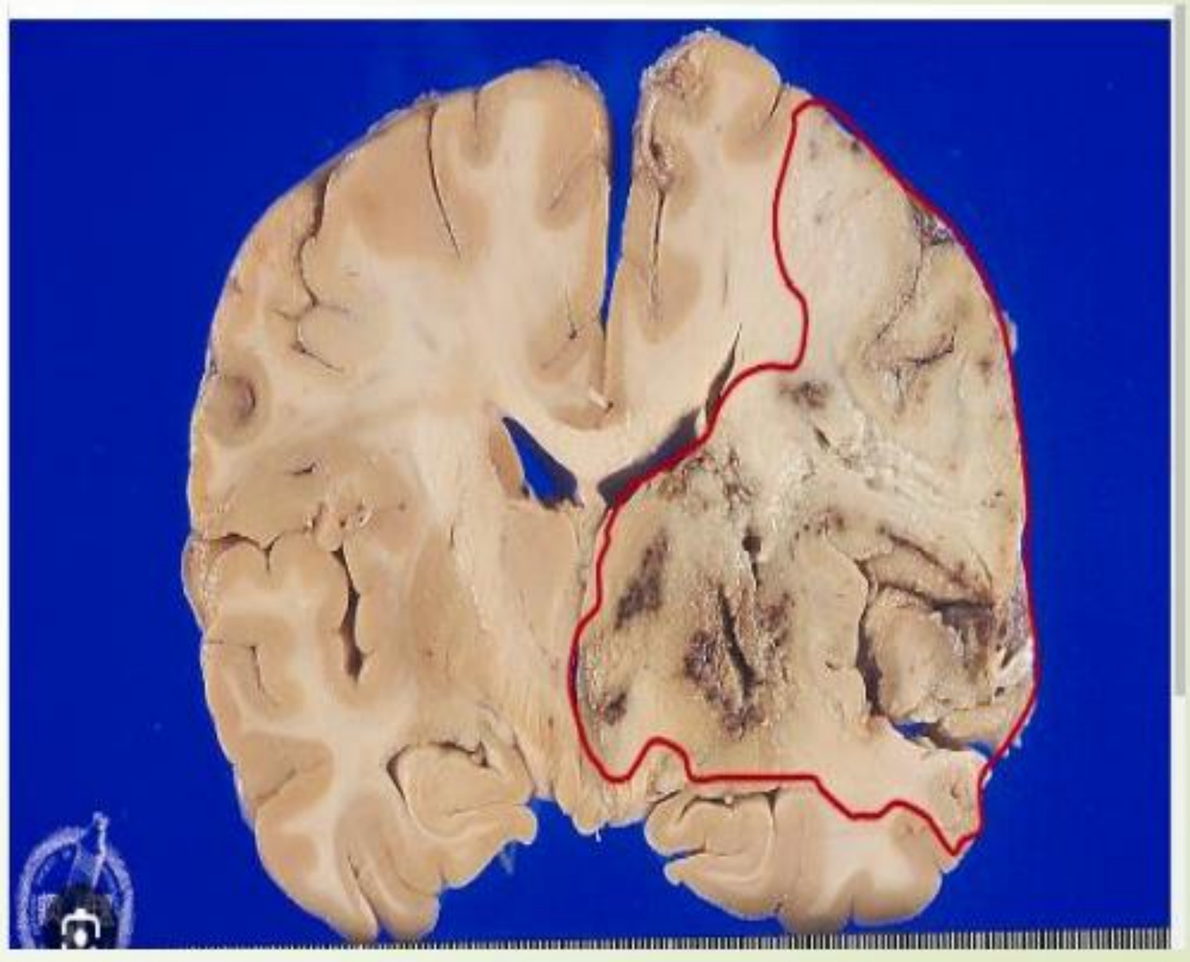
- **Grossly:**
  - Pale, Opaque
  - Triangular in shape in the distribution of middle cerebral artery

Brain infarction

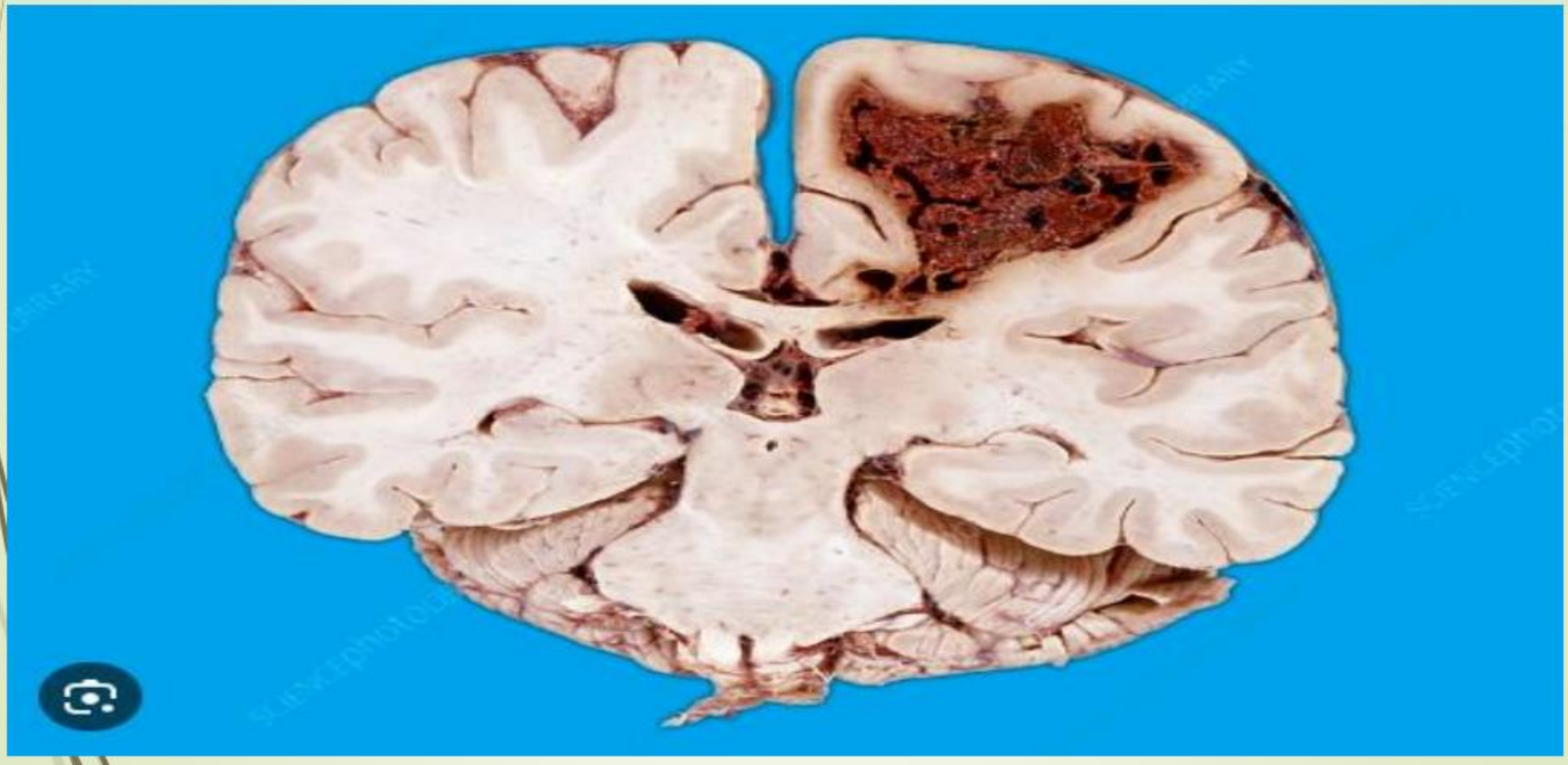


Brain infarction





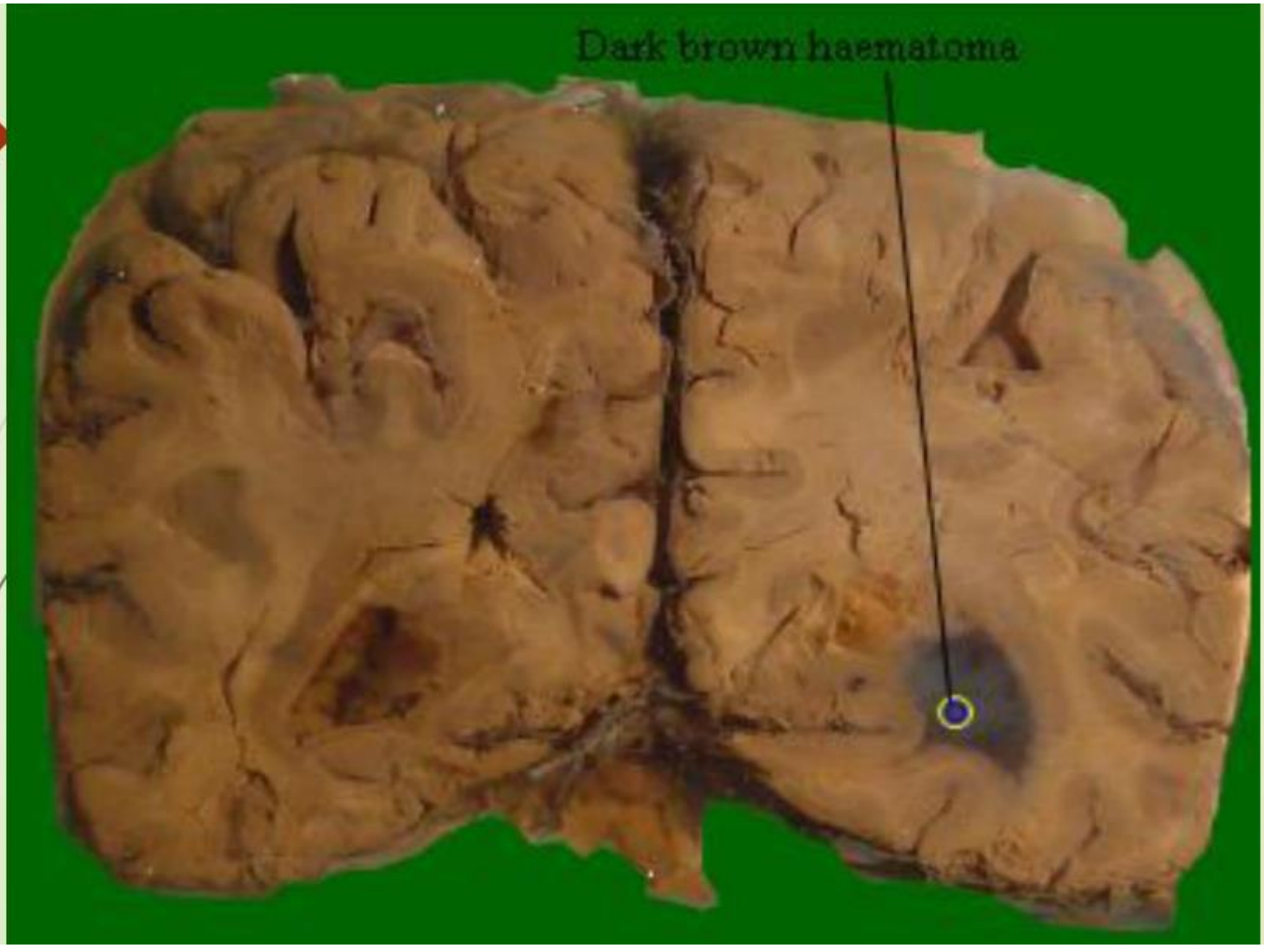
Brain infarction

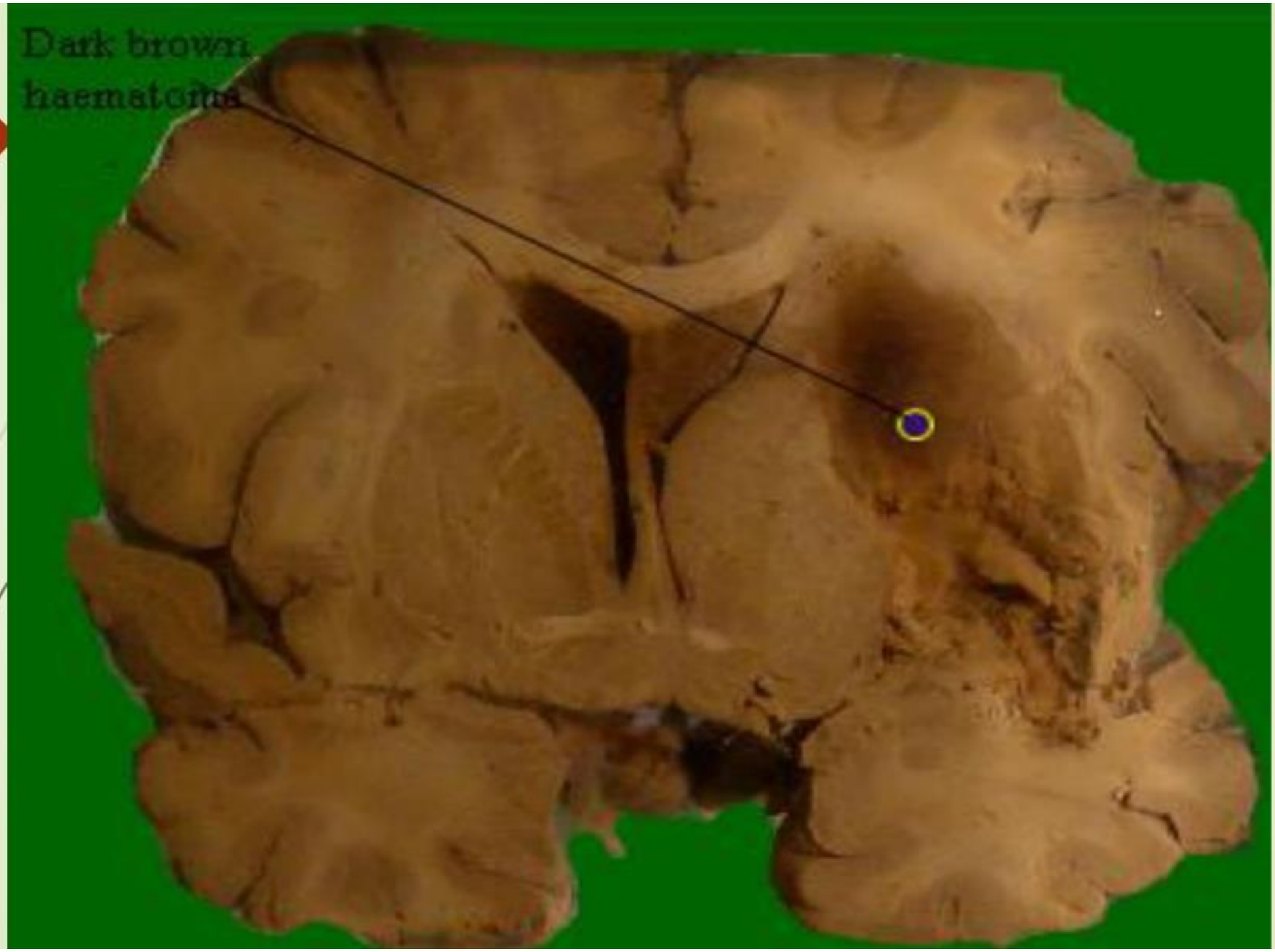


Massive spontaneous cerebral hemorrhage

- Specimen: brain (coronal section)
- Specimen shows **hematoma**
- site: region of right basal ganglia with extension into the ventricular system (blood clots)
- shape: oval
- size: 4x3cm
- color: dark red (old hemolysed blood)


Haematoma oval
with dark red colour
Haematoma finds its way
to the ventricular system


Dark brown haematoma

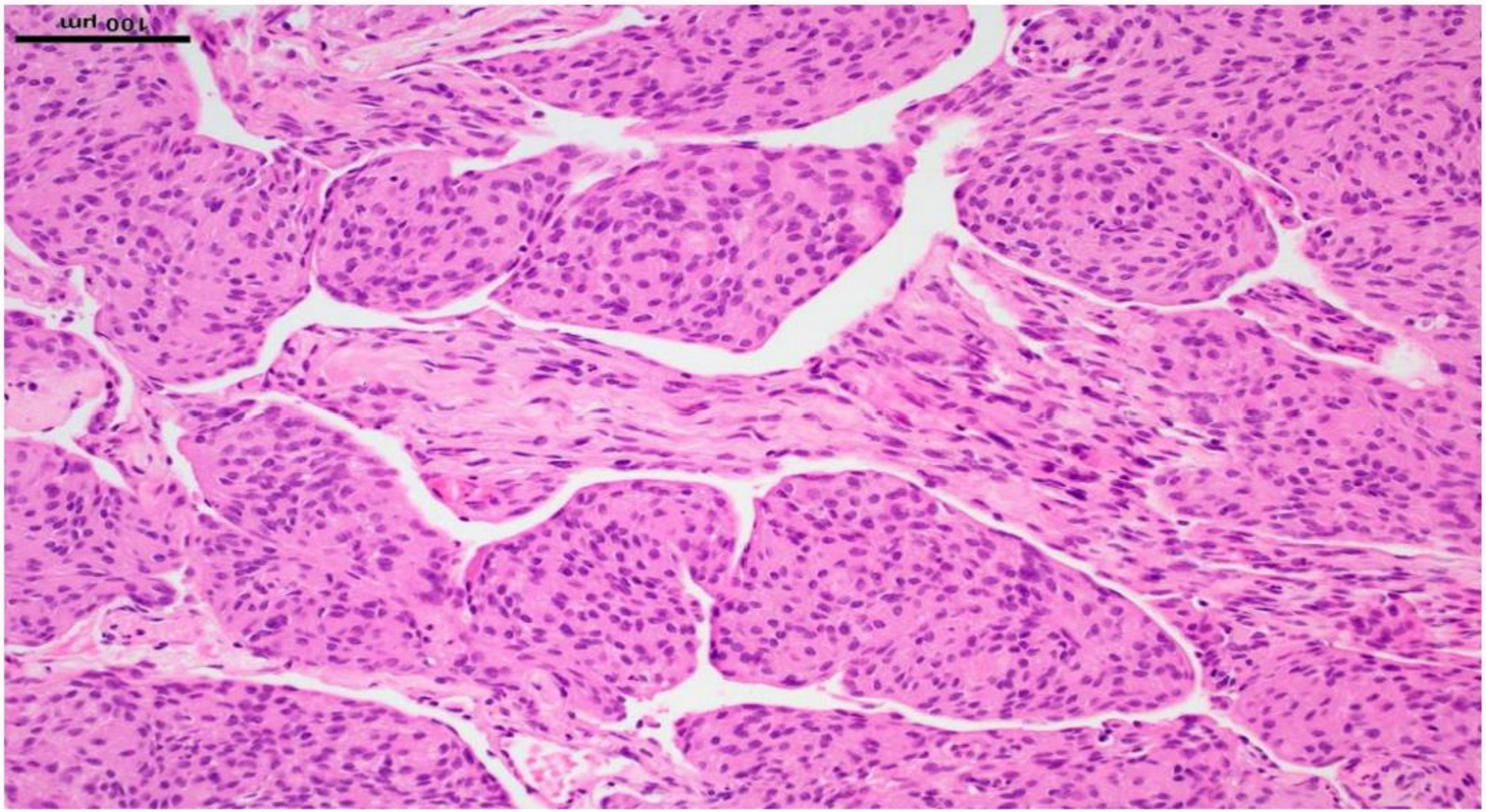

Dark brown haematoma

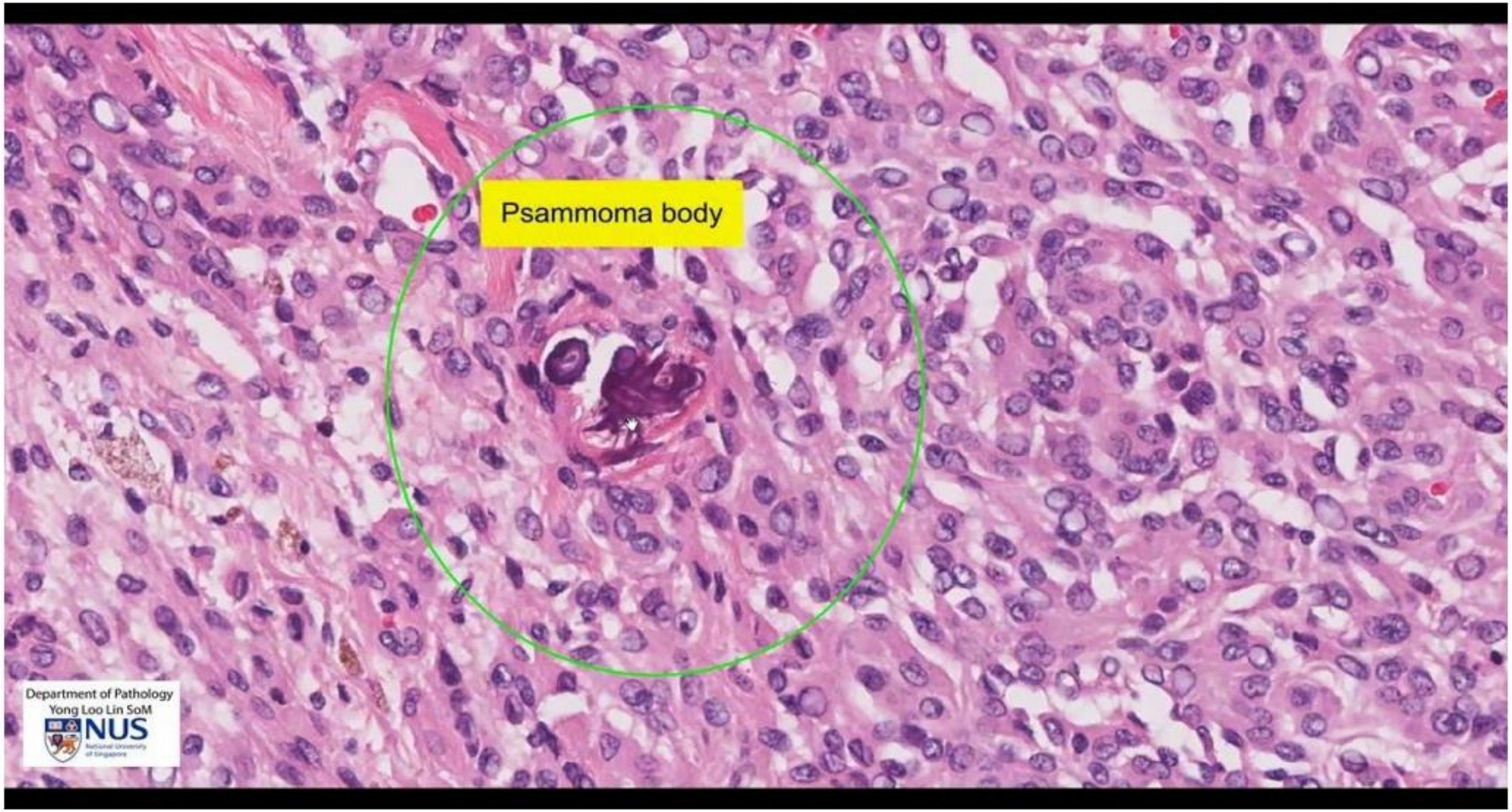

Dark brown
haematoma

Meningioma

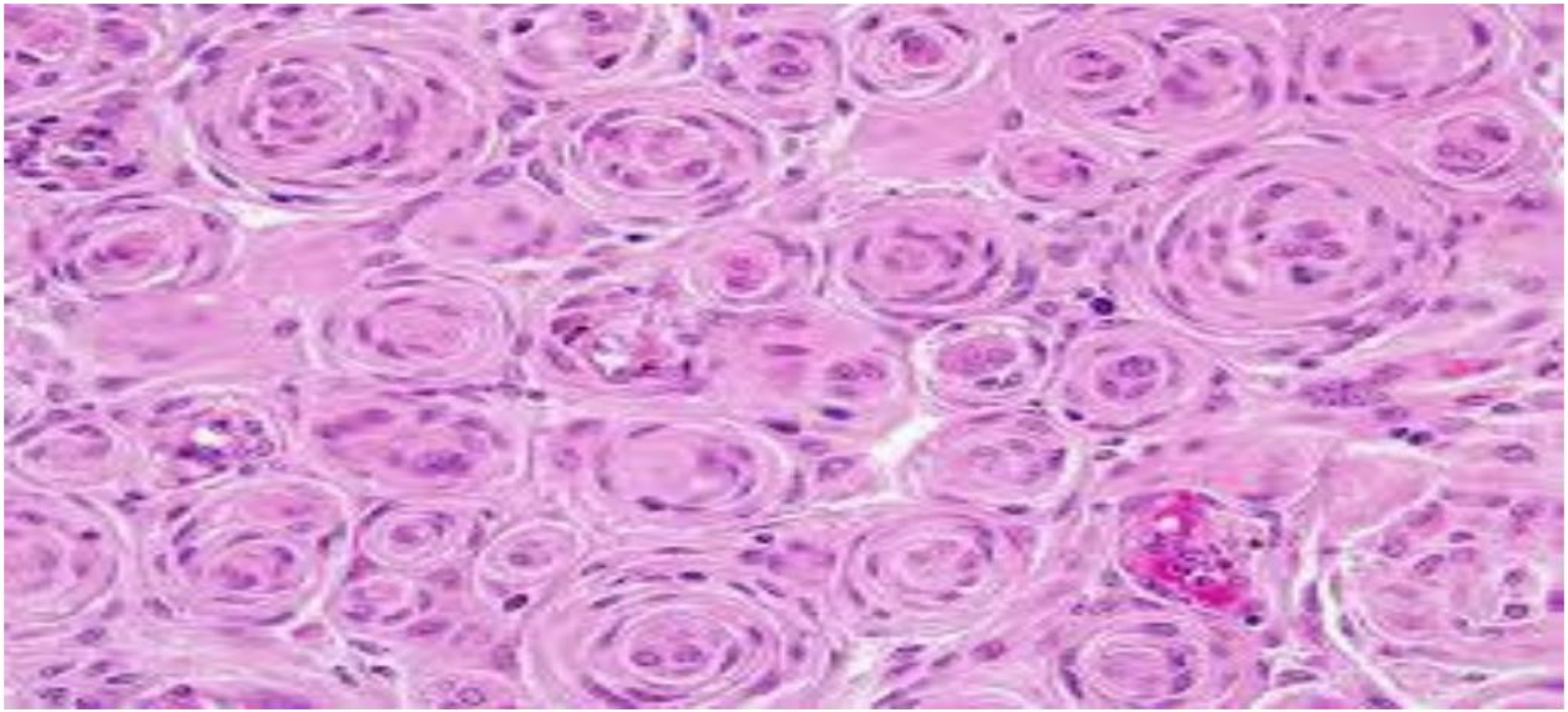
ME:

- Lobulated architecture, often contains meningiothelial whorls
- Syncytial cells with indistinct cell membranes, eosinophilic cytoplasm
- Round uniform nuclei, intranuclear pseudoinclusions are common
- May have sparse psammoma bodies

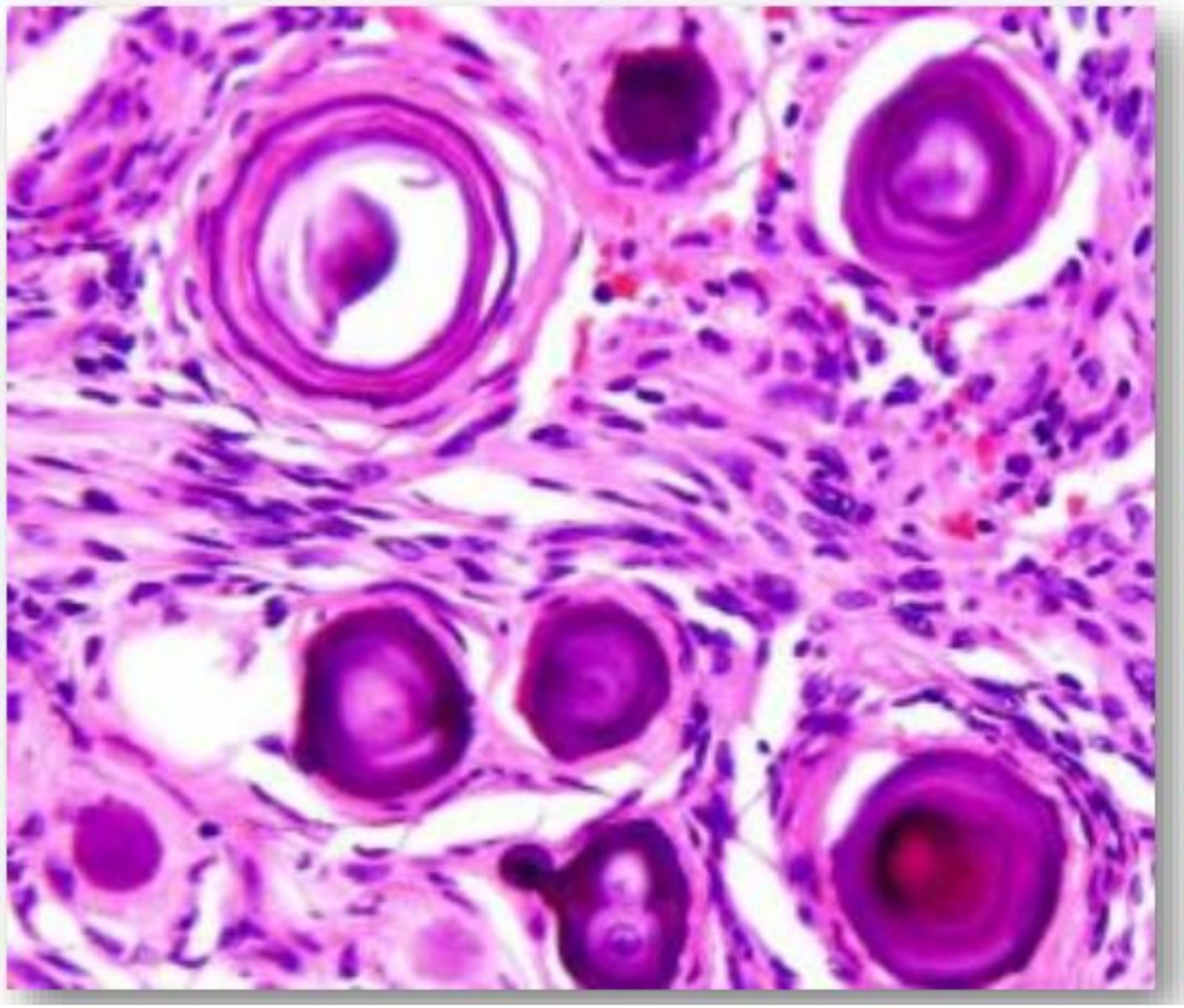

100 µm


Psammoma body
Department of Pathology
Yong Loo Lin SoM
NUS
National University of Singapore

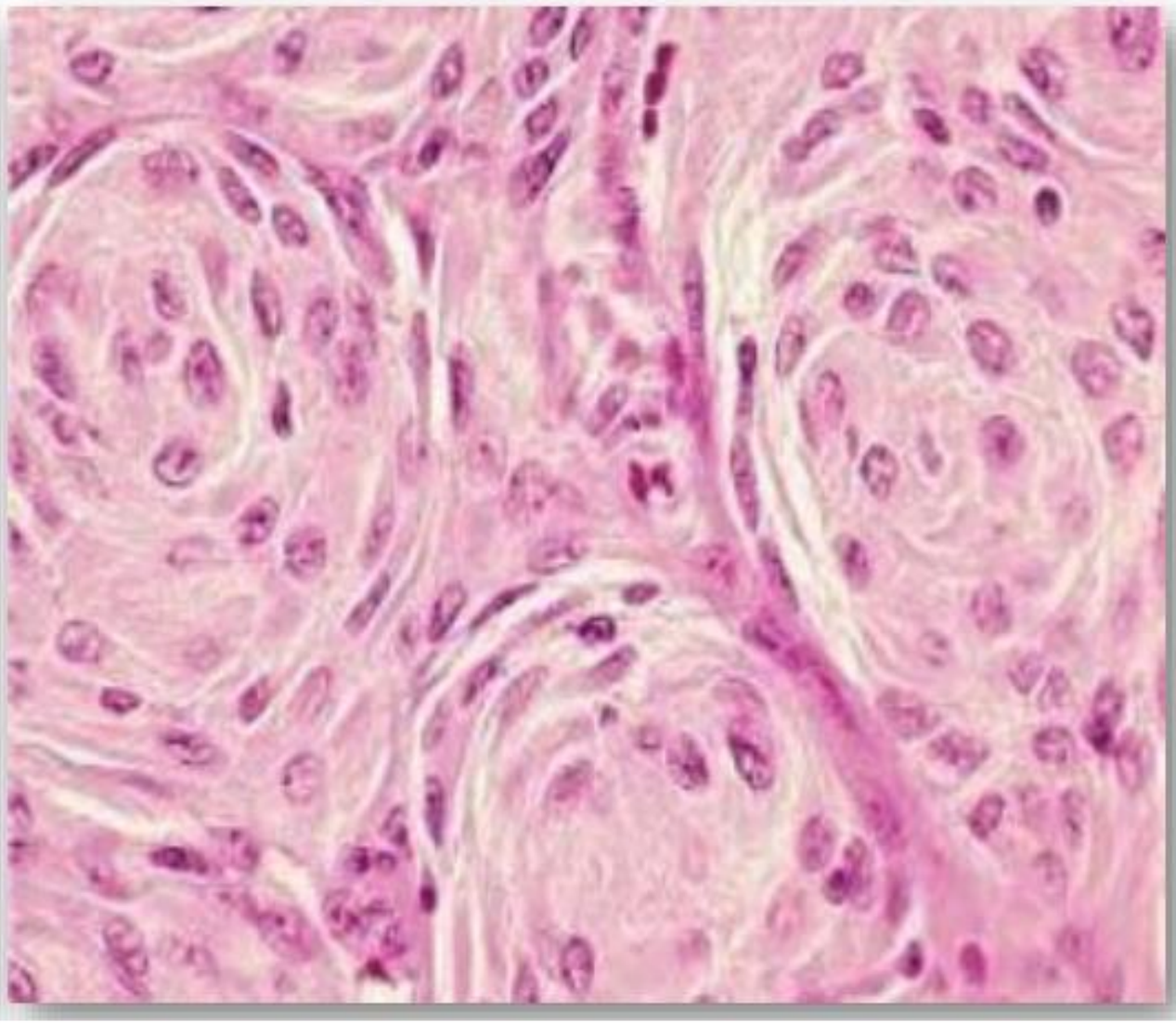
meningiothelial whorls



psammoma bodies



meningiothelial whorls

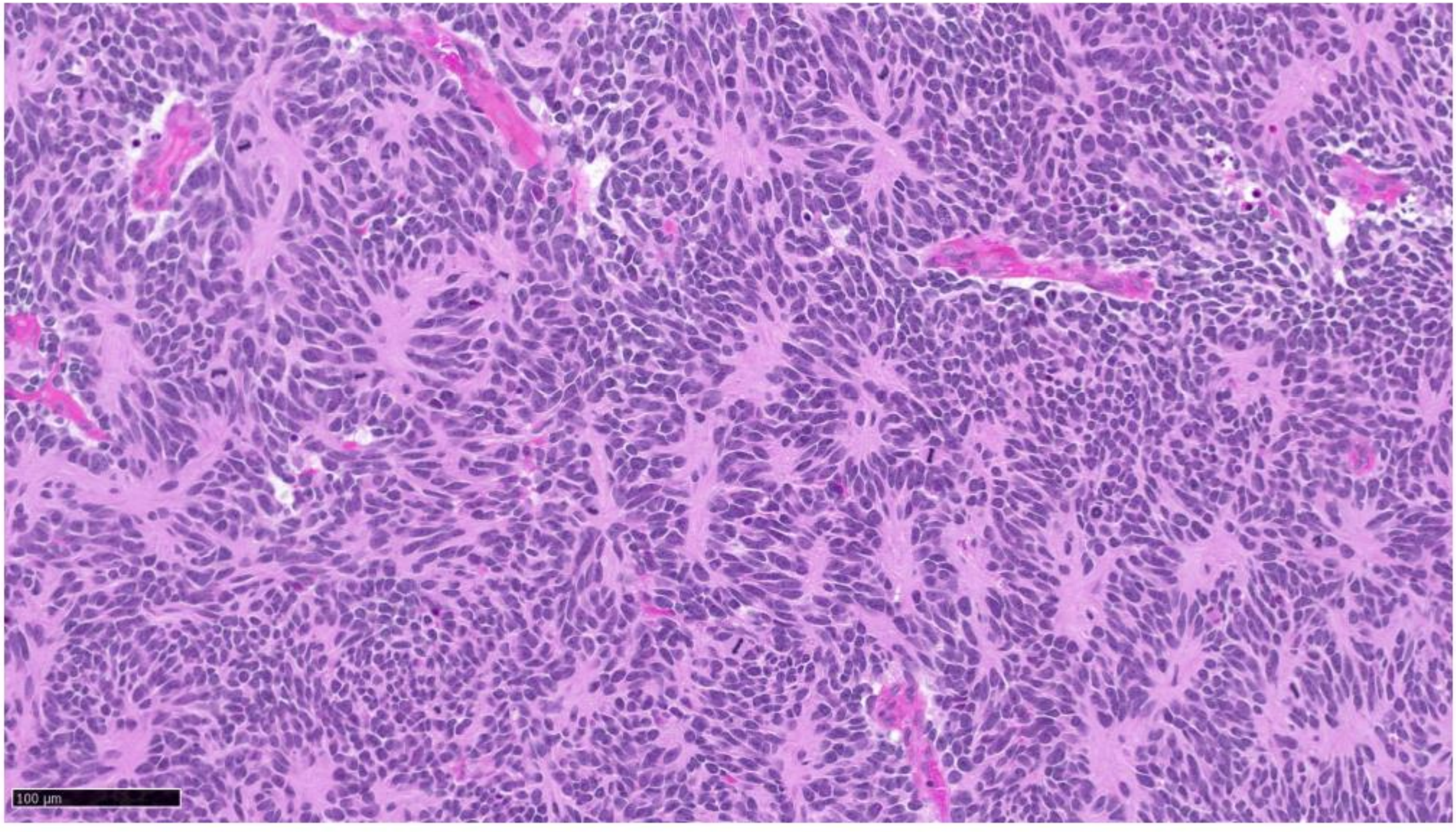


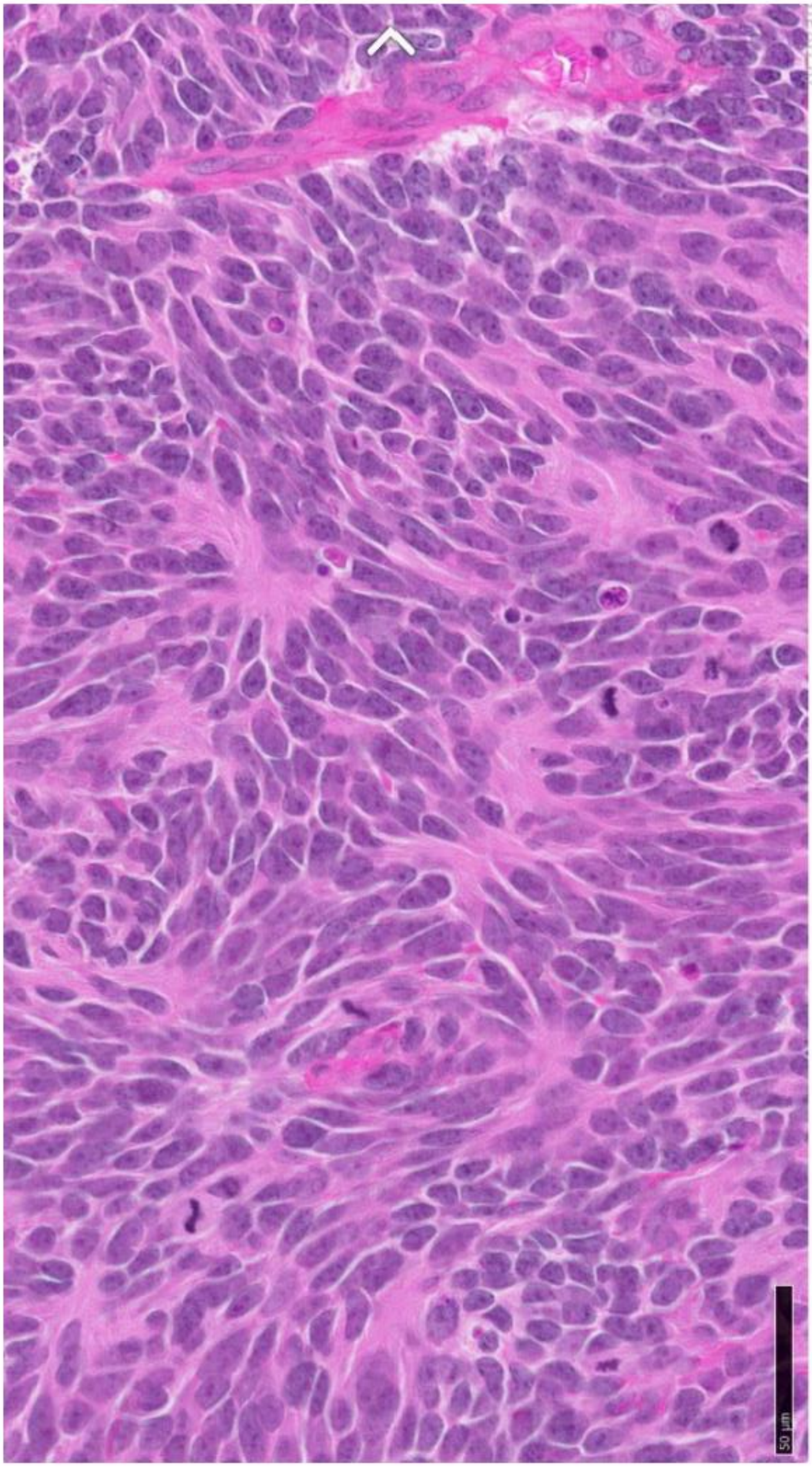
Medulloblastoma (Grade IV)

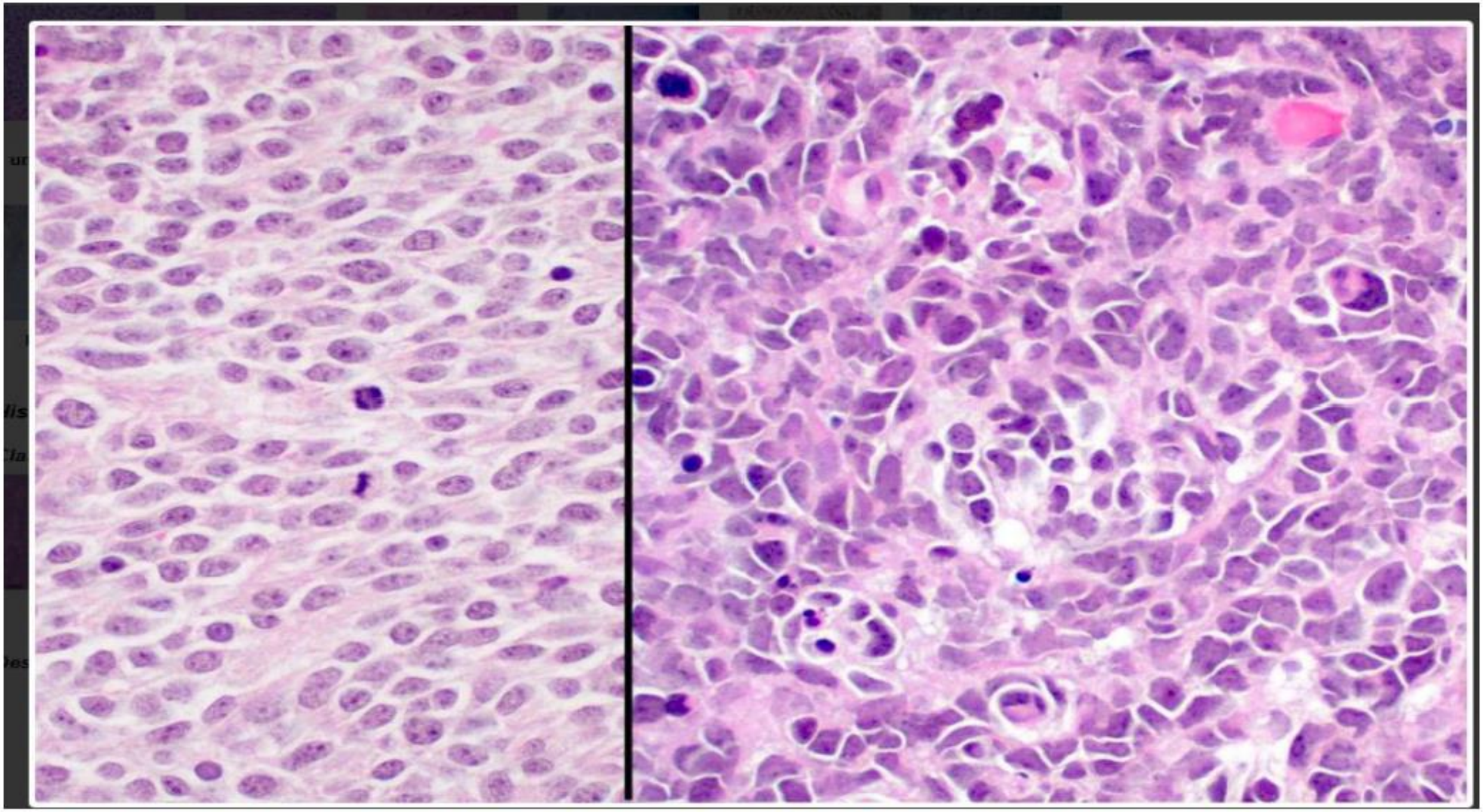
- Common childhood brain tumor
- At the roof of fourth ventricle

ME:

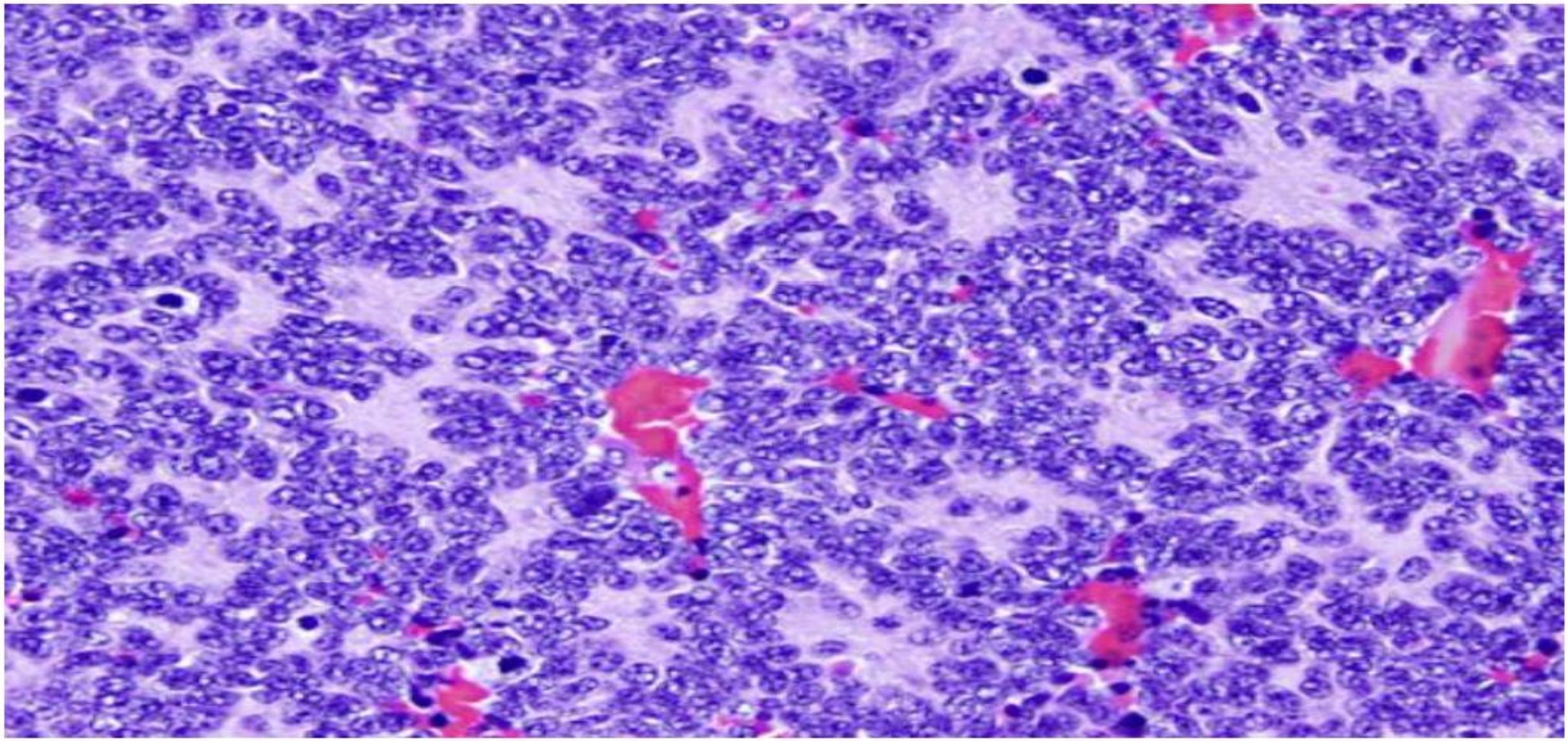
- Small, blue, round cell tumor
- Syncytial arrangement of densely packed undifferentiated cells (embryonal cells)
- Mitosis with apoptotic bodies
- Homer Wright rosettes

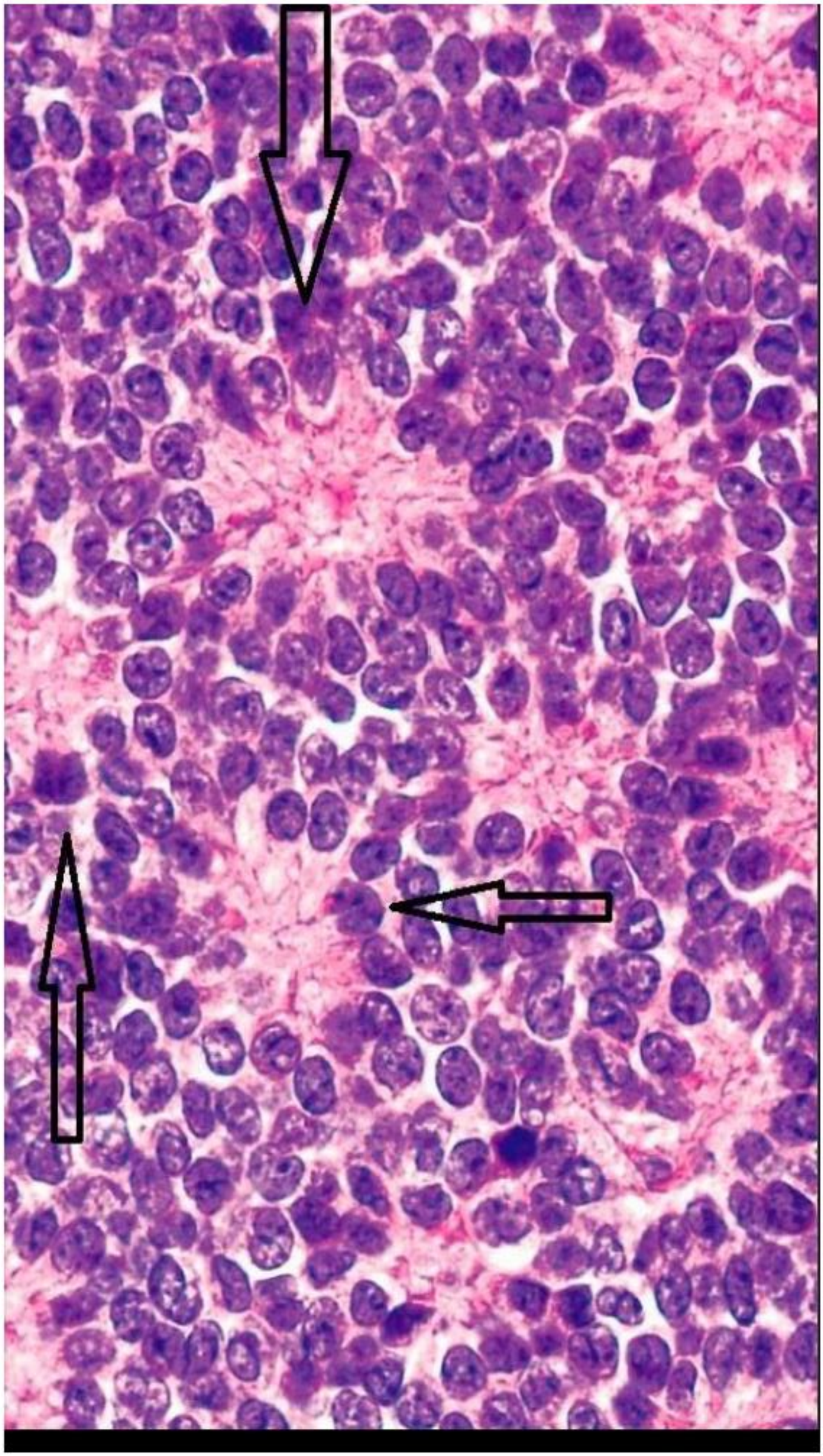

100 µm


50 µm



Homer Wright rosettes

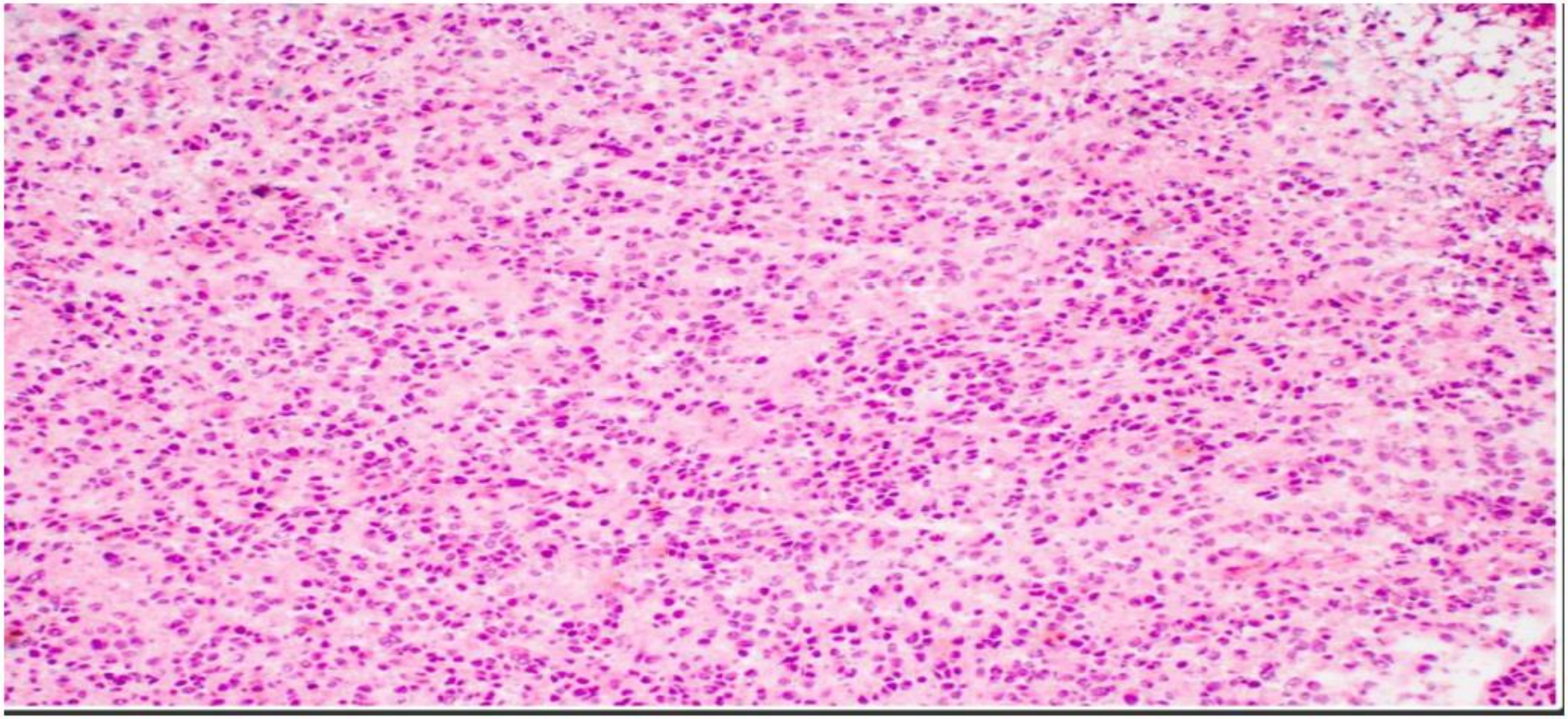




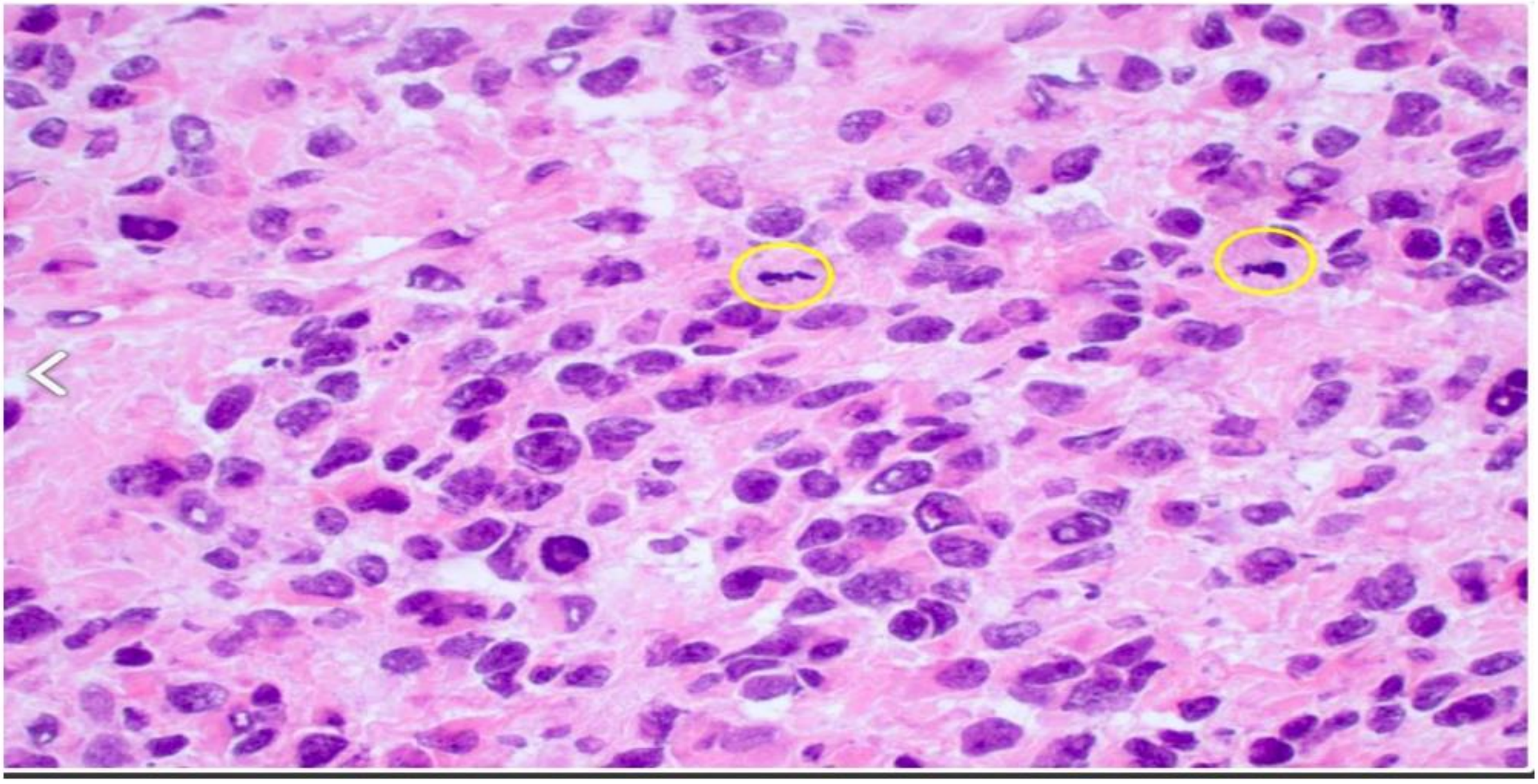
Glioblastoma multiforme (Grade IV)

- Hypercellular astrocytic neoplasm often with marked Pleomorphism, Giant cells, mitosis, nerosis and vascular endothelial proliferation in glomeruloid manner.
- The cells have hyperchromatic, elongated nuclei and irregular nuclear membranes
- Typically mitotically active, Microvascular proliferation: multilayered, small caliber vessels with glomeruloid appearance

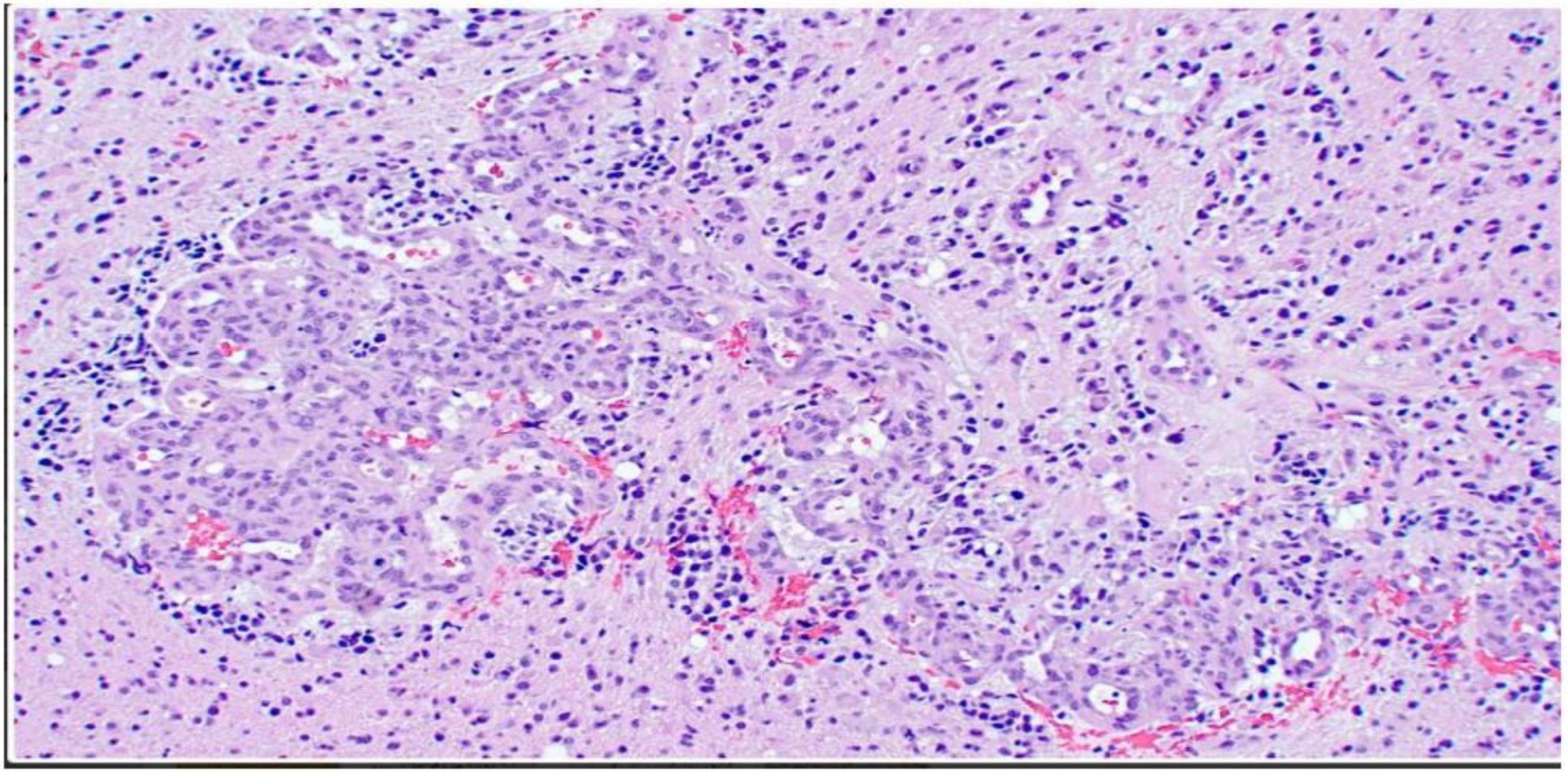
Hypercellular astrocytic neoplasm



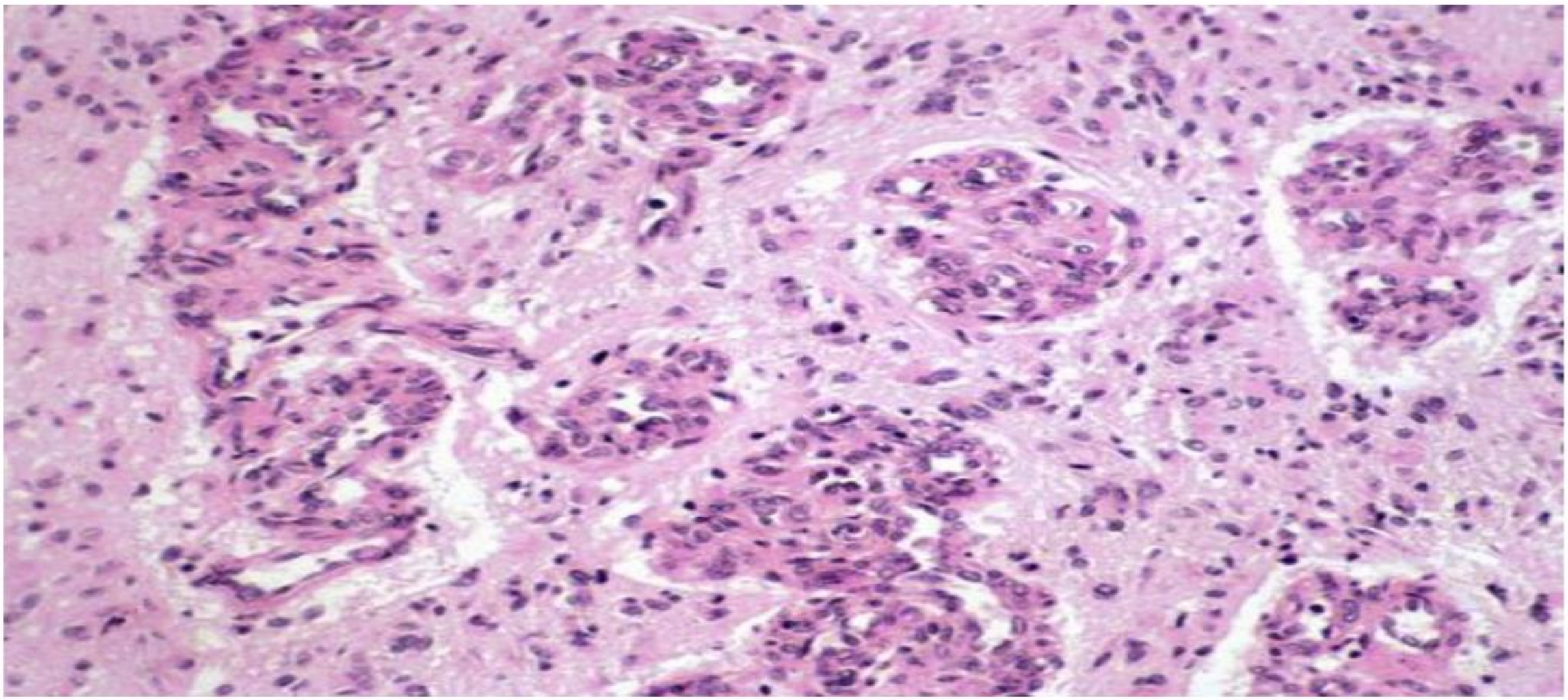
Mitotically active



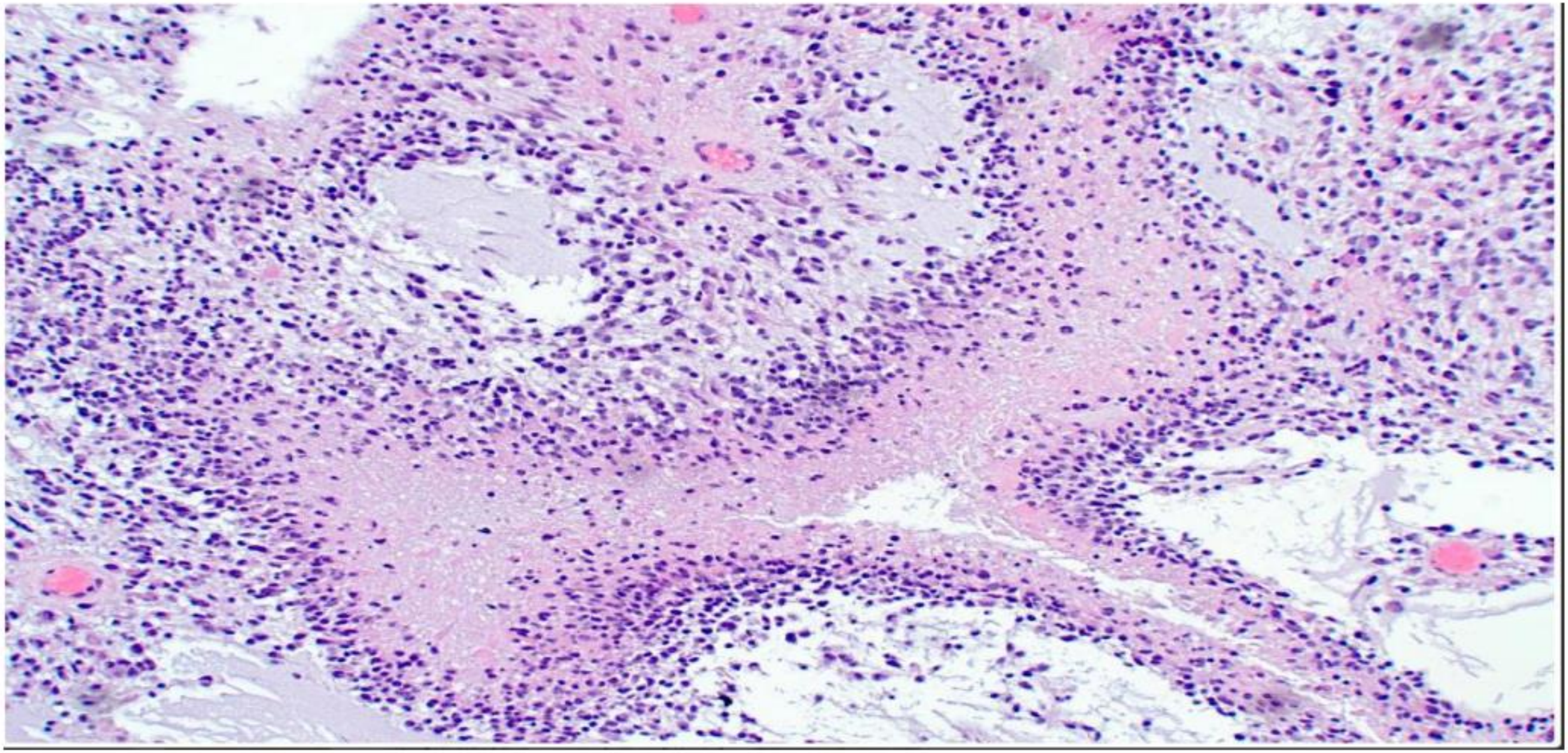
Microvascular proliferation



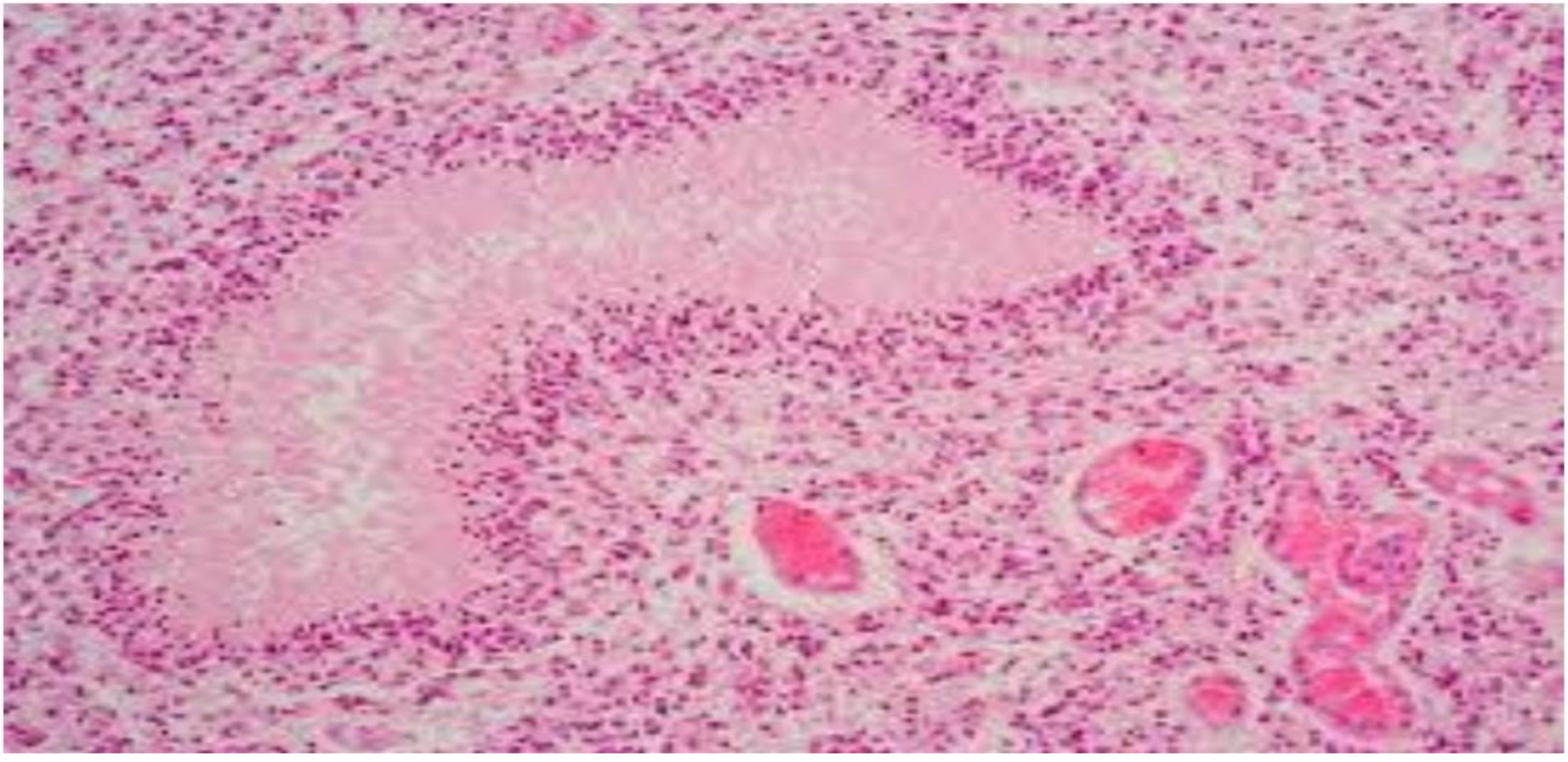
Vascular endothelial proliferation (glomeruloid manner)



Palissaded necrosis

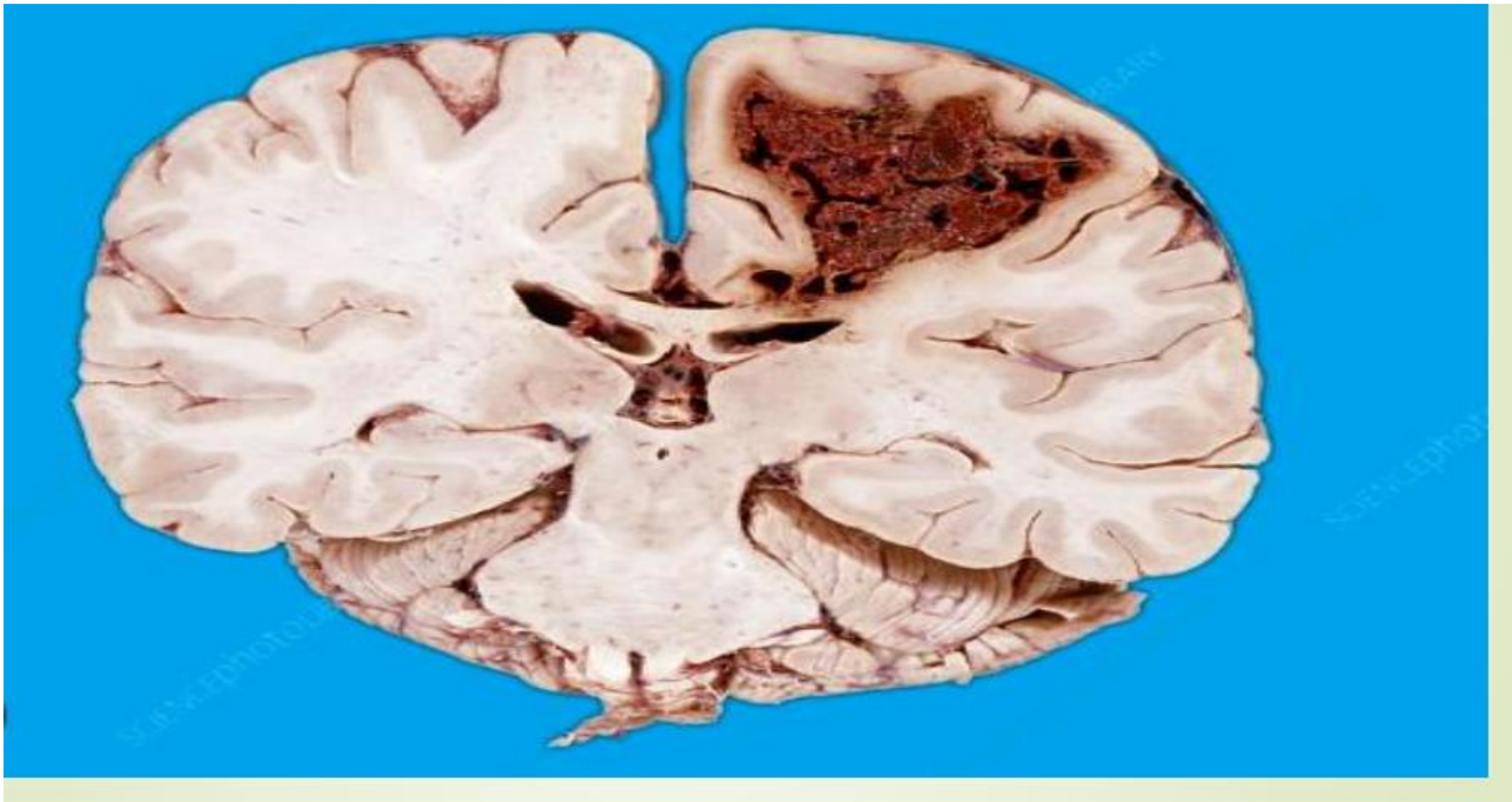


Palissaded necrosis



Test your self

- **A-Identify this lesion**
- **B –Describe**



- **A-Identify this lesion**
- **B –describe**