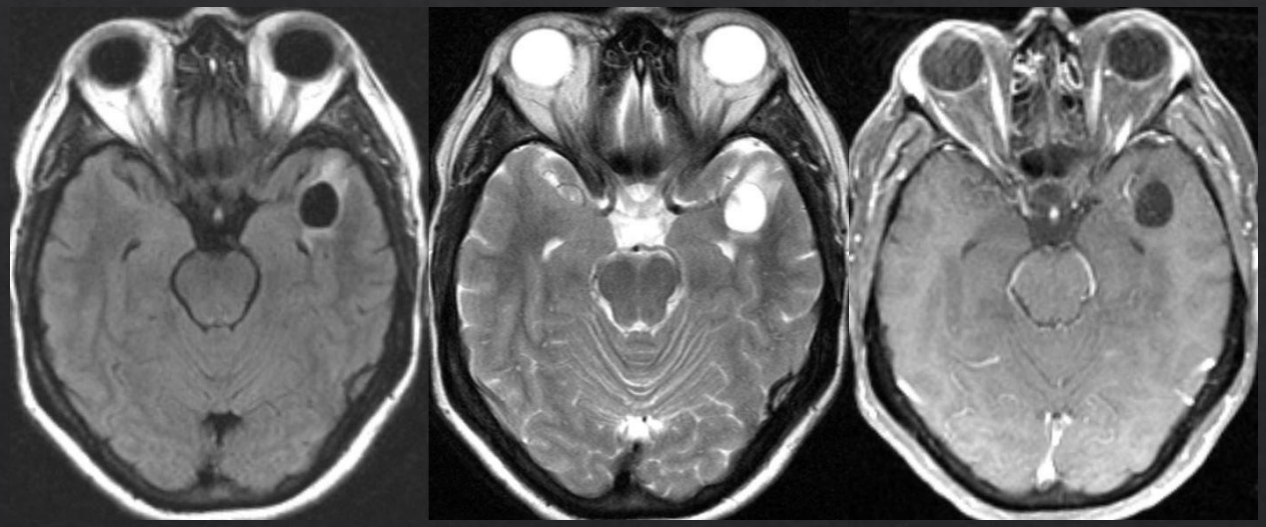
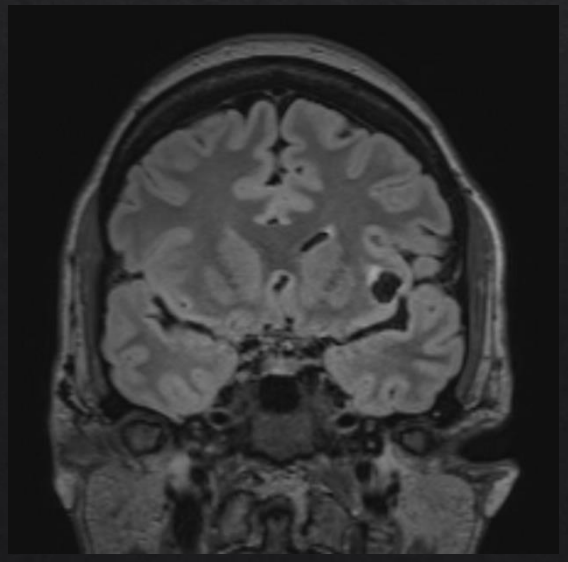
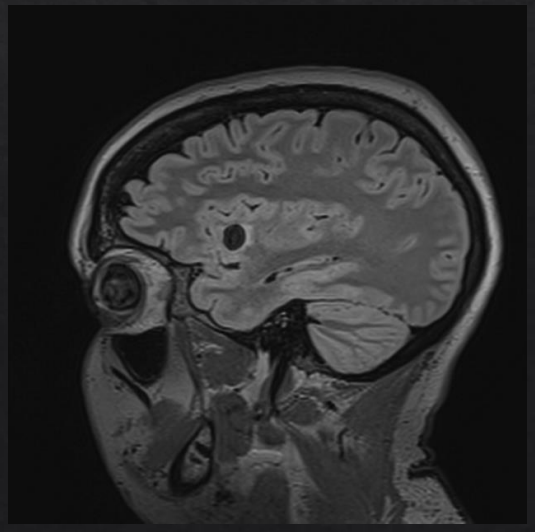
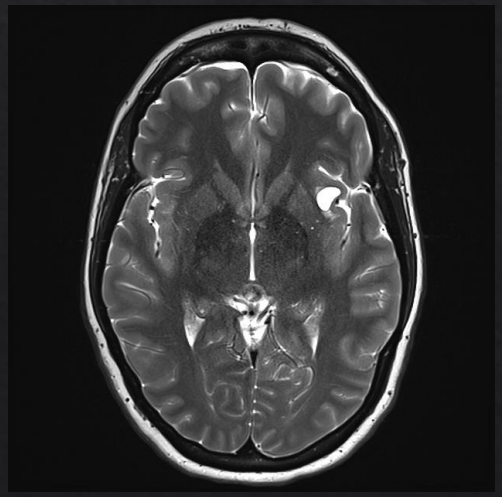
Anterior temporal lobe perivascular space



Opercular perivascular cyst - subinsular

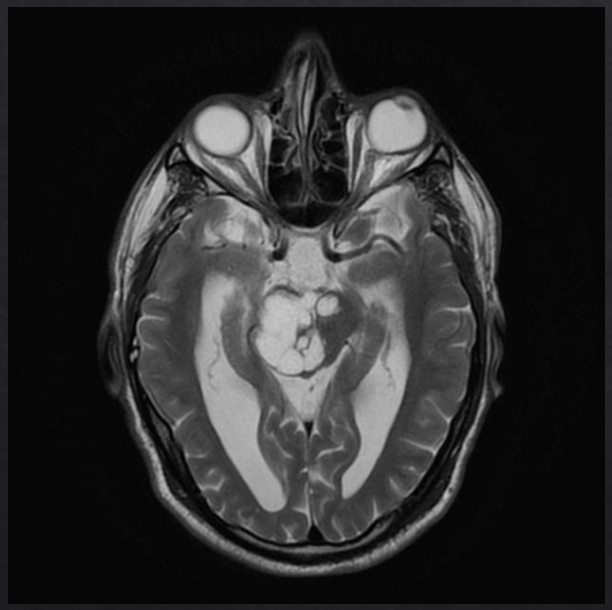


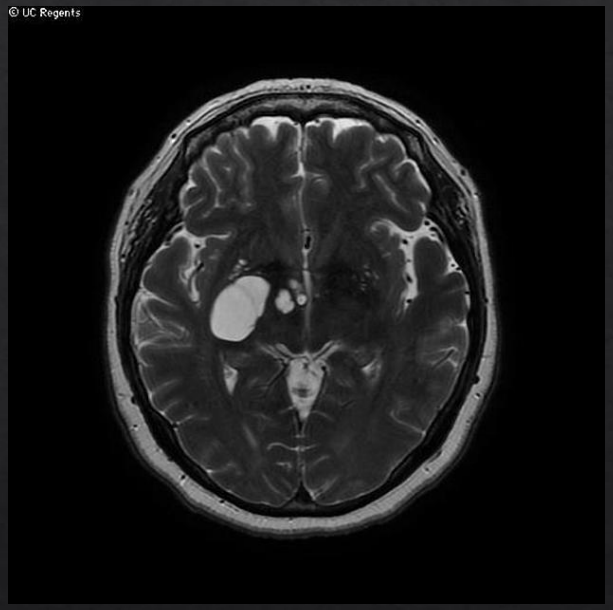


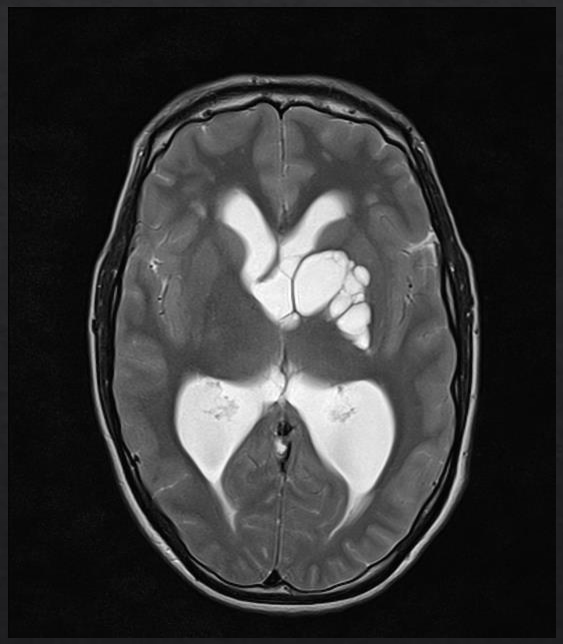


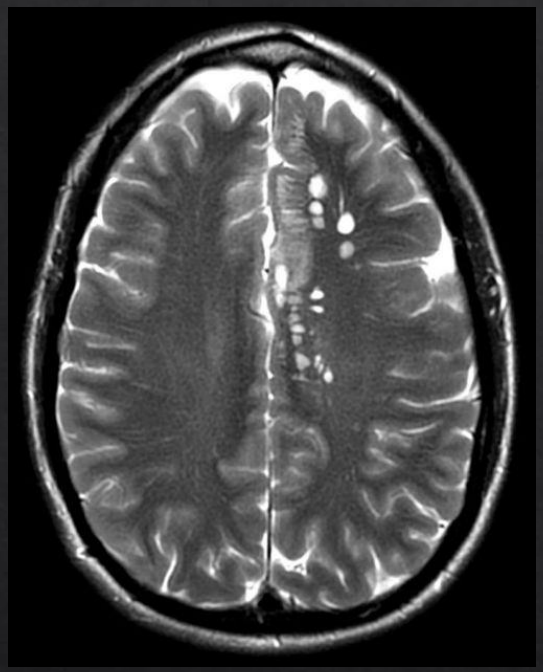
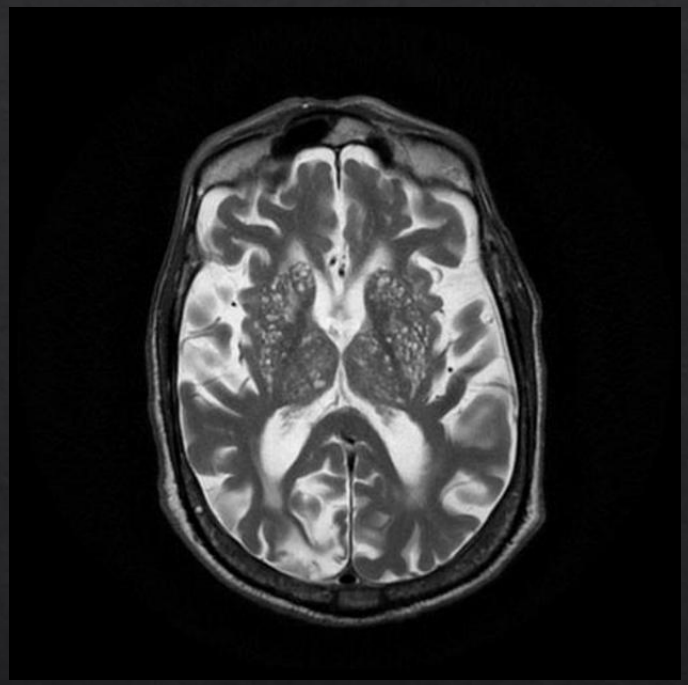
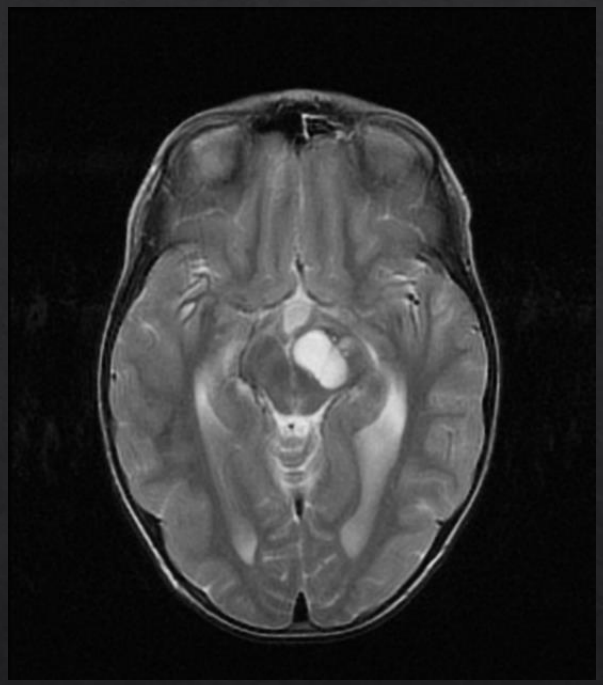
Perivascular spaces

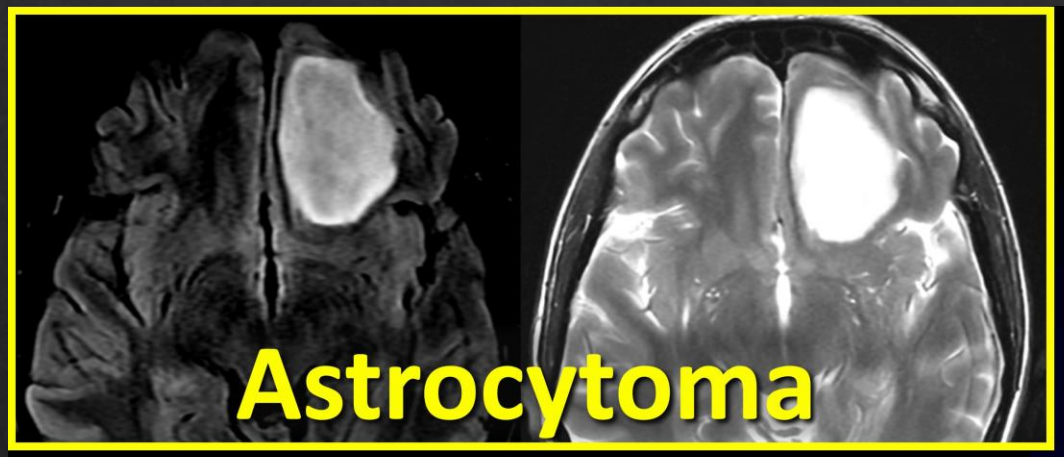
- Giant mesencephalothalamic VR spaces and obstructive hydrocephalus





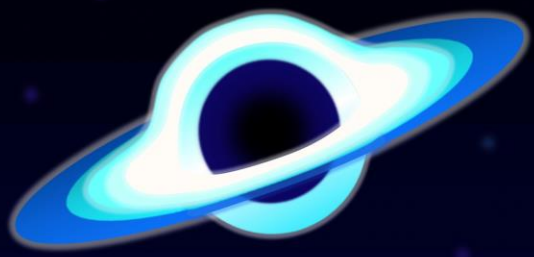




T2/FLAIR mismatch

Astro = Astronomy

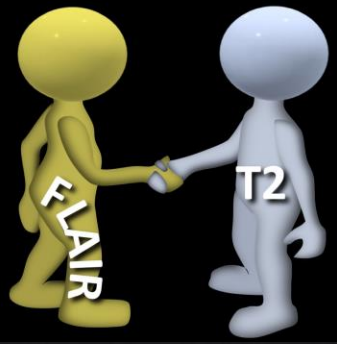


Black hole in the middle

No mismatch

"Ah, **I'll GO**-dendroglioma"

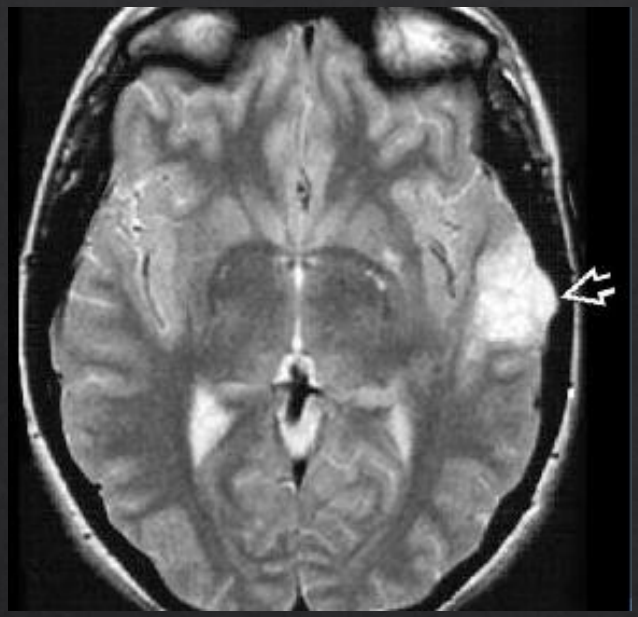
FLAIR **GOES** w/the T2

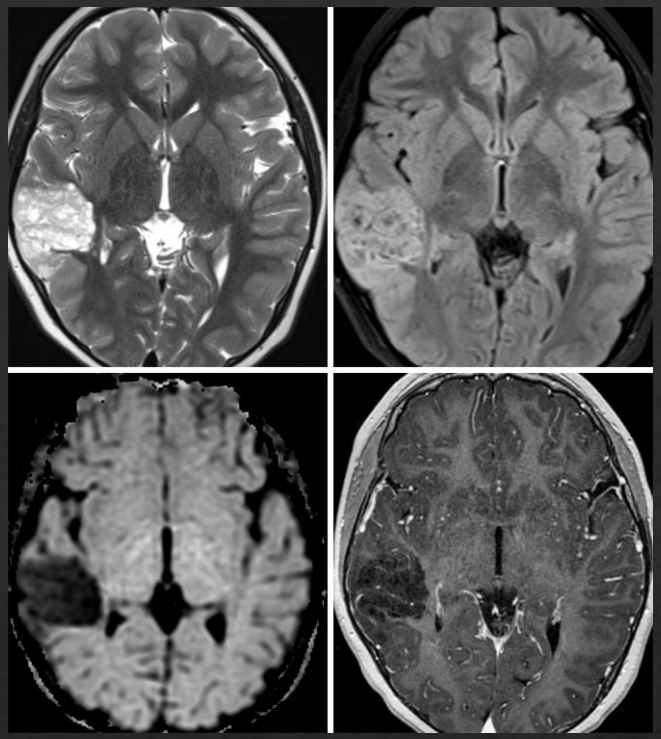


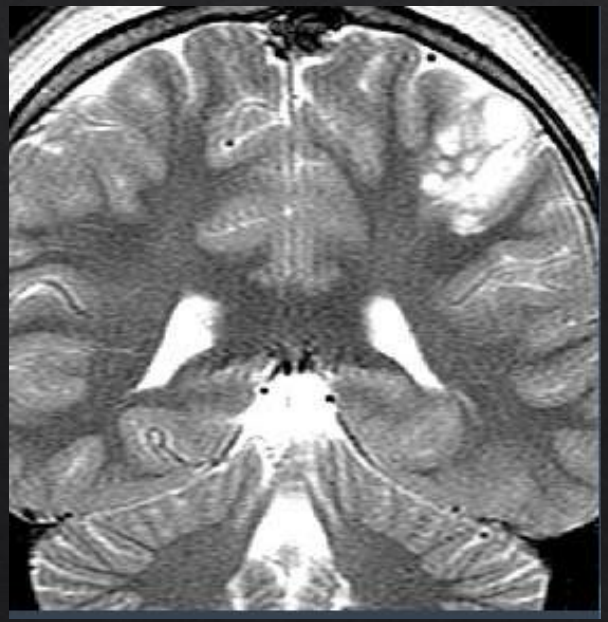
- **Astrocytoma**
  - Astro = astronomy.
  - T2/FLAIR mismatch looks like a black hole, dark centrally with a bright rim, like the event horizon
  - Black holes are in ASTROnomy, T2/FLAIR mismatch is in ASTROcytomas
- **Oligodendroglioma**
  - Oligo sounds "Ah, I'll go"
  - So FLAIR GOES with T2 in oliGOES—so they look similar without mismatch

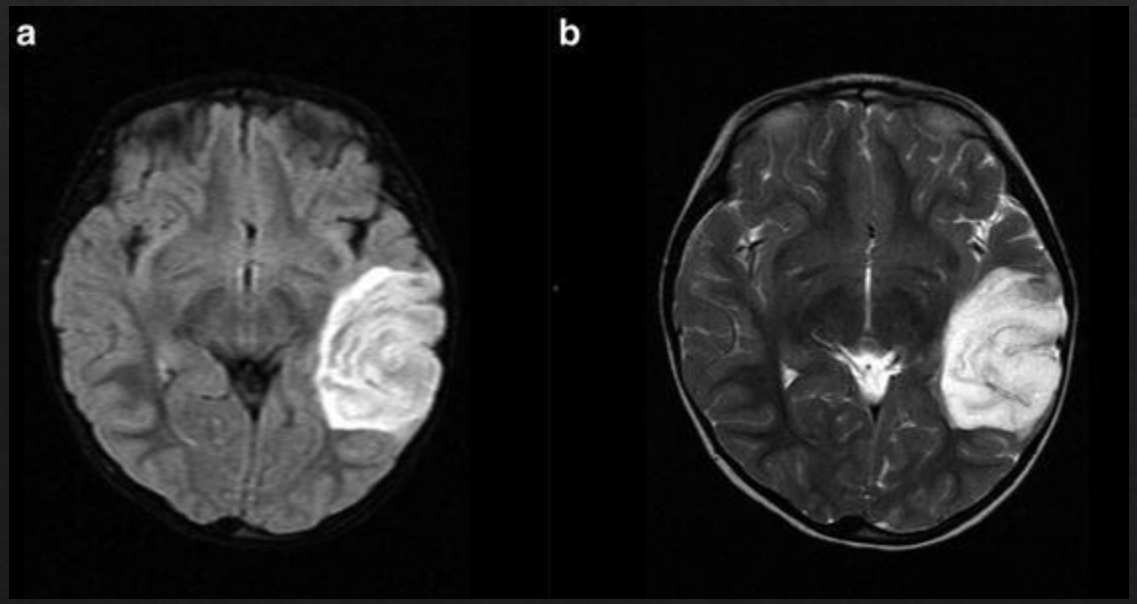
DNET

- **Terminology**
  - Dysembryoplastic neuroepithelial tumor (DNET)
  - Benign, focal, intracortical mass superimposed on background of cortical dysplasia
- **Imaging Findings**
  - Best diagnostic clue: Well-demarcated, wedge-shaped "bubbly" intracortical mass in young patient with longstanding partial seizures
  - Temporal lobe (often amygdala/hippocampus) most common site
  - Intracortical mass scallops inner table of skull and "points" towards ventricle
  - Minimal or no mass effect
  - Usually doesn't enhance
  - Faint focal punctate or ring-enhancement in 20%



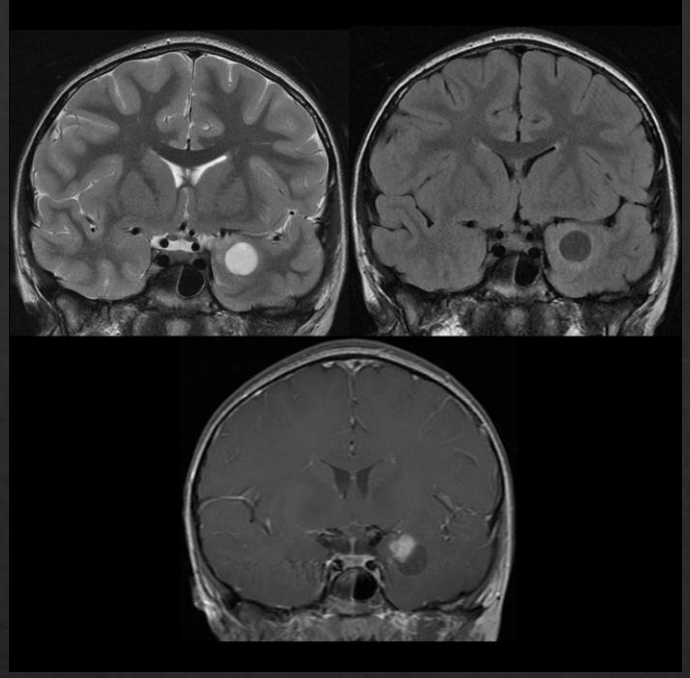


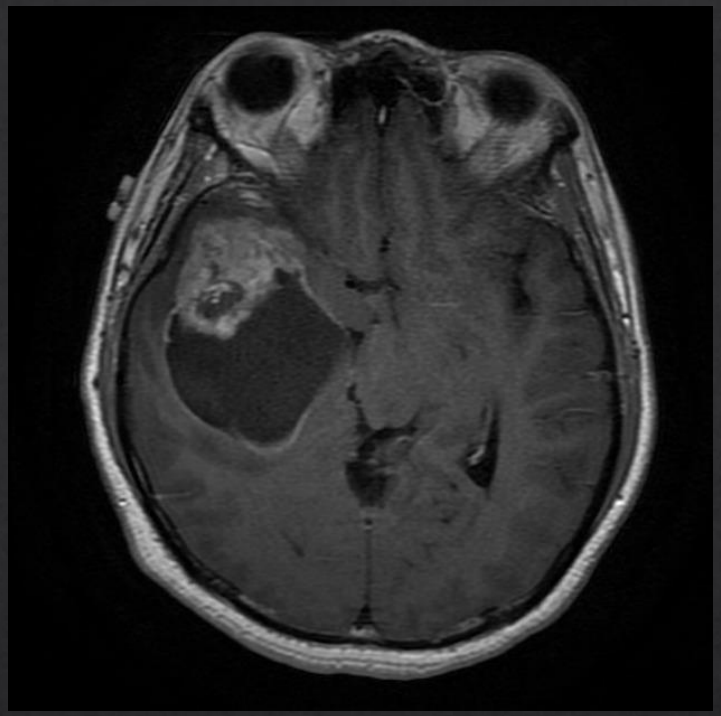


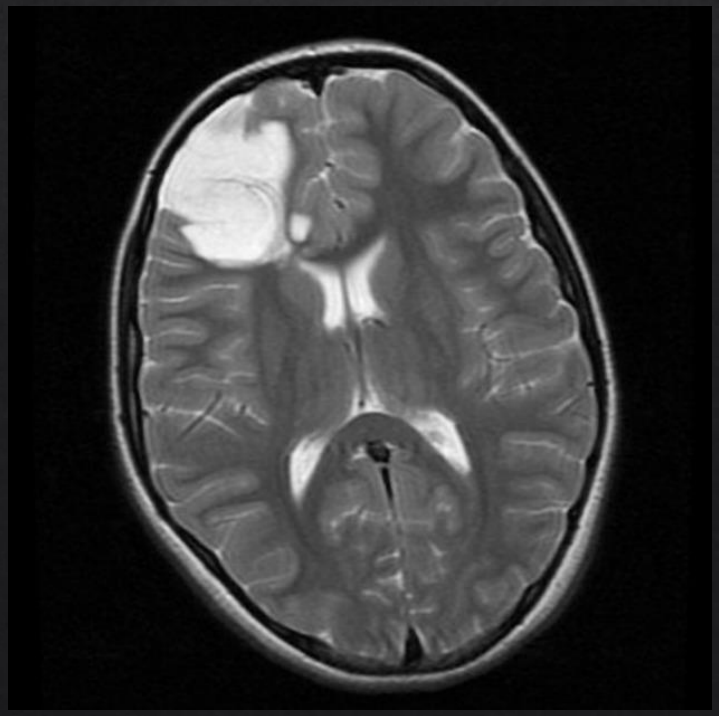

a
b

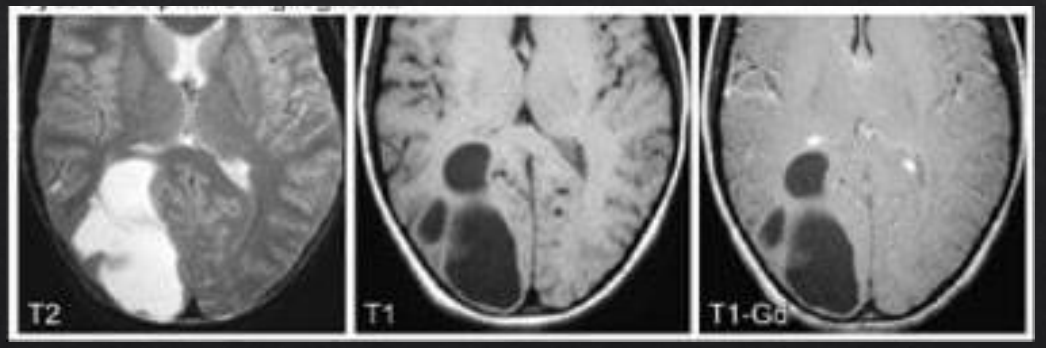
Ganglioglioma

- **Terminology**
  - Well differentiated, slowly growing neuroepithelial tumor composed of neoplastic ganglion cells and neoplastic glial cells
- **Imaging Findings**
  - Best diagnostic clue: Partially cystic, enhancing, cortically-based mass in child/young adult with TLE
  - Can occur anywhere but most commonly superficial hemispheres, temporal lobe





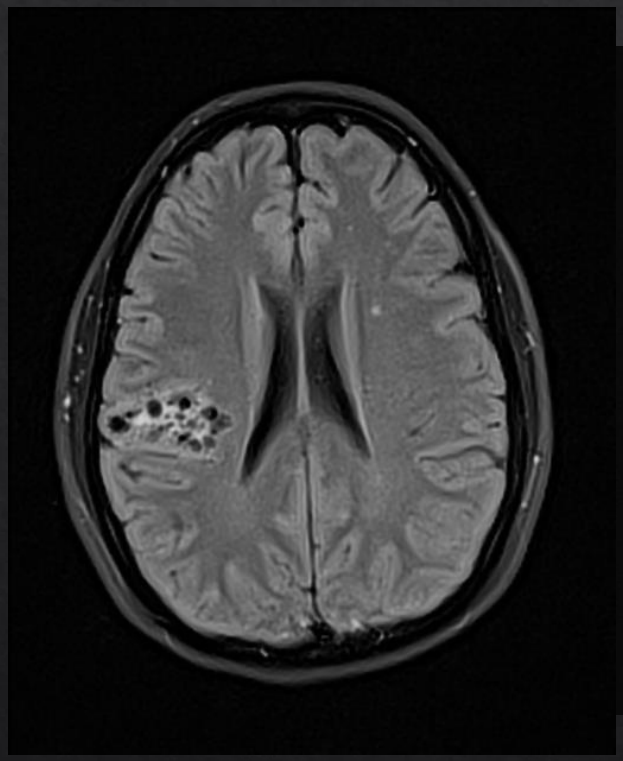


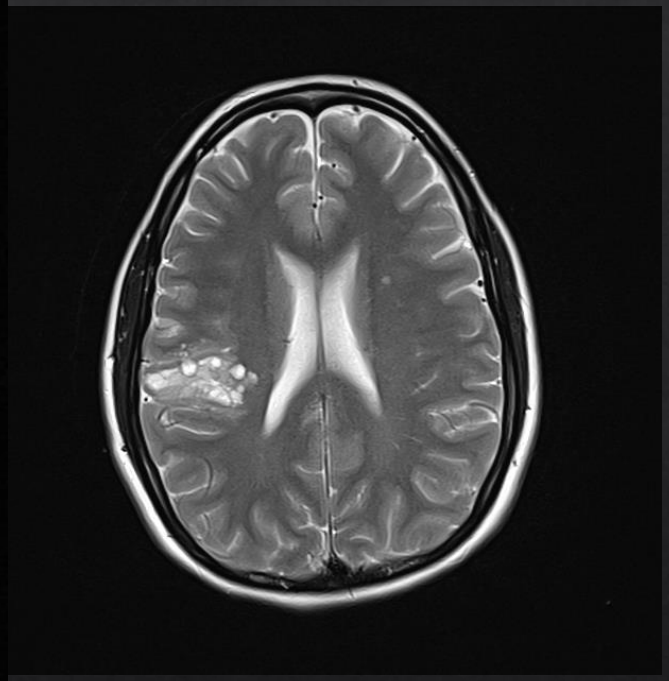

T2
T1
T1-Gd

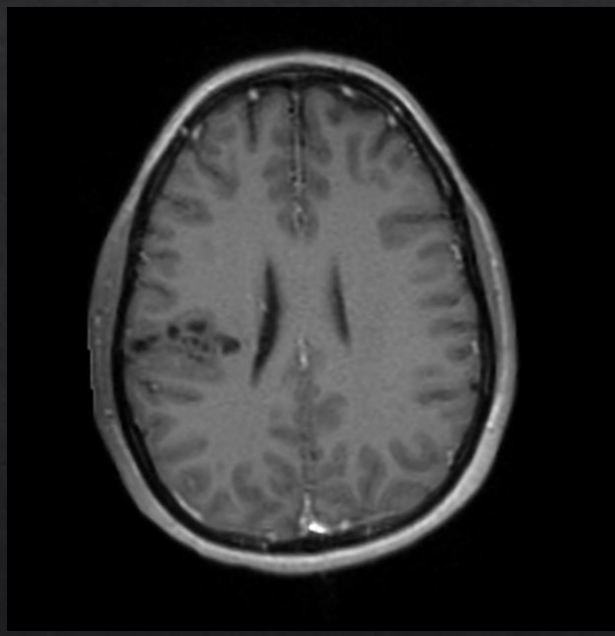
Gangliocytoma

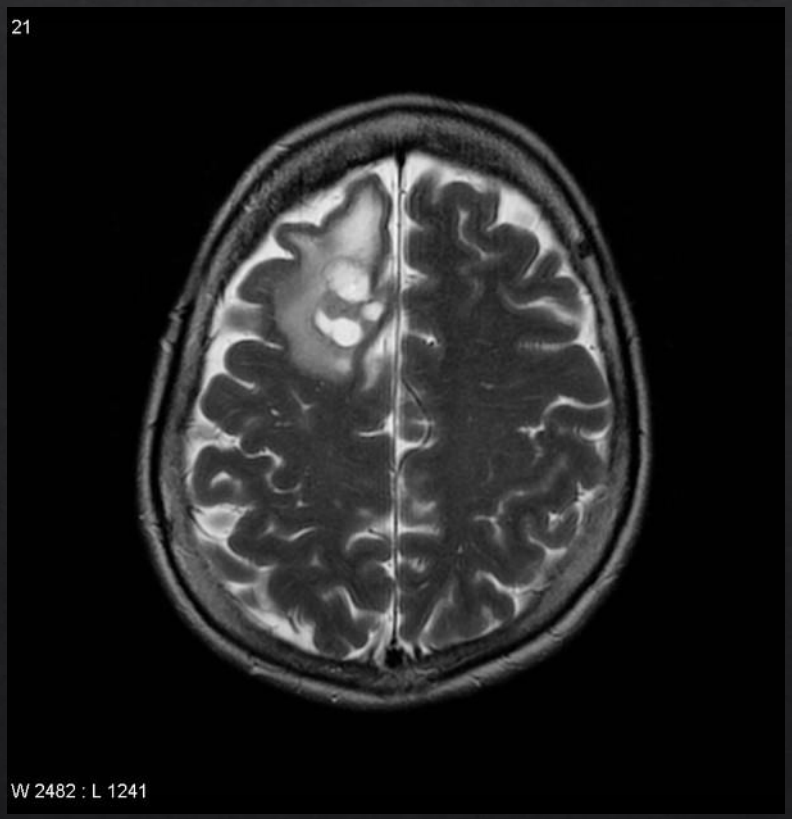
- Differential diagnosis is primarily between a low-grade tumor (DNET, gangliocytoma, ganglioglioma) and a cluster of perivascular cysts.
- rare indolent CNS tumors (WHO grade 1), primarily encountered in children, and frequently discovered as the cause of epilepsy.
- They are considered one of the long-term epilepsy-associated tumors (LEATs).
- They differ from gangliogliomas by the absence of neoplastic glial cells, although both tumors are defined by the presence of displaced ganglion cells (large mature neurons that show cytological or architectural abnormalities).
- Usually characterized by cortical solid lesions with little associated mass effect and minimal or no surrounding vasogenic edema. Calcification and cyst formation can occur, and contrast enhancement is generally present.

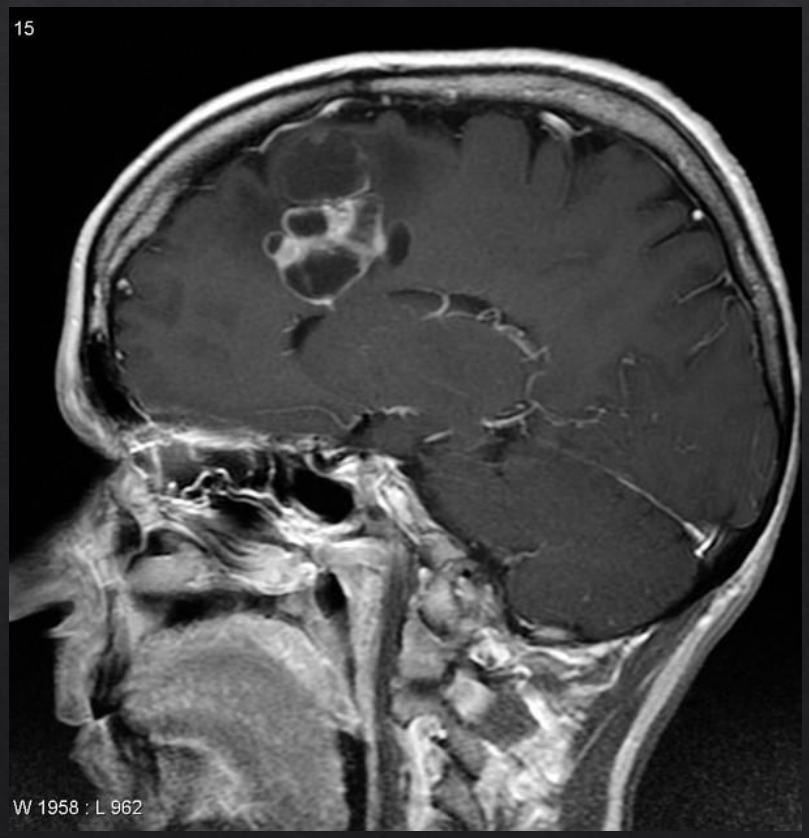
Gangliocytoma





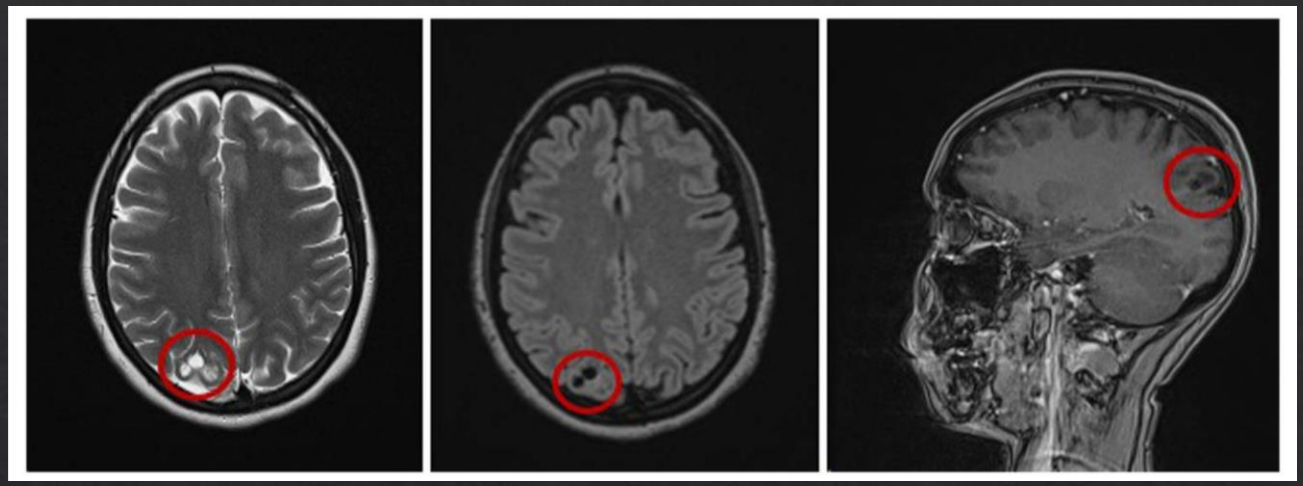


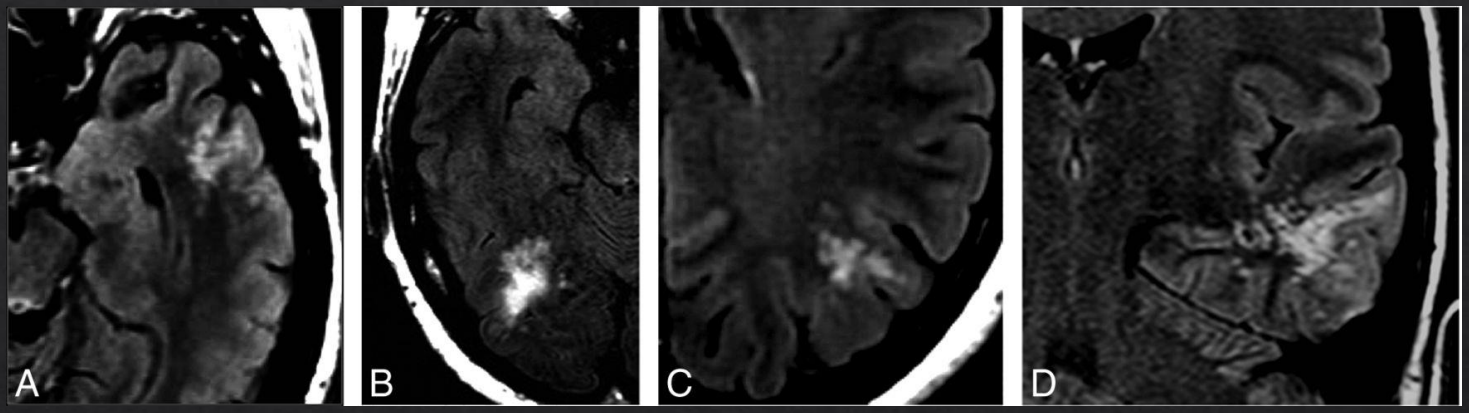

21
W 2482 : L 1241

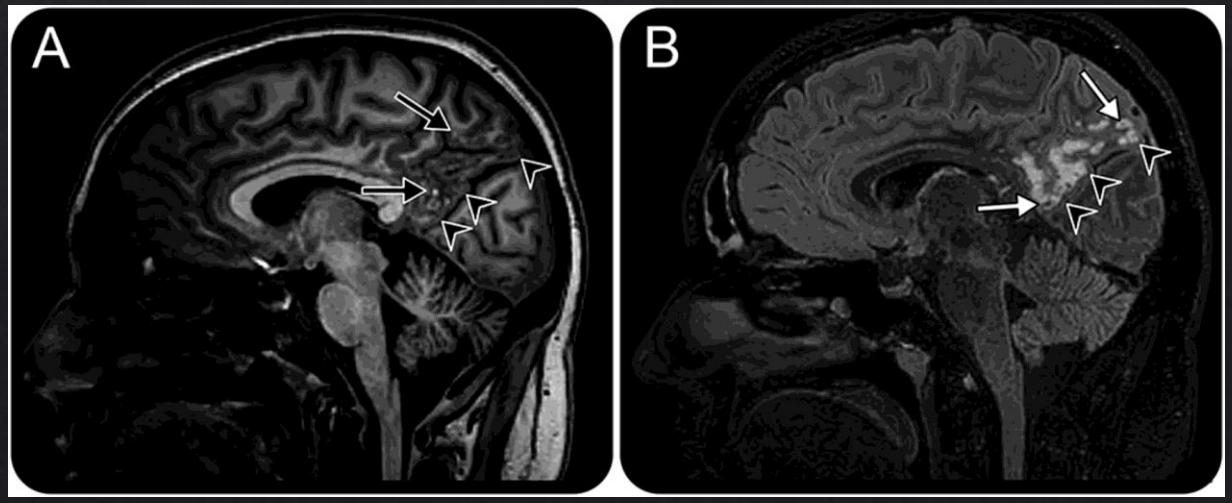

15
W 1958 : L 962

Multinodular and Vacuolating Neuronal Tumor

- Rare from being asymptomatic to epileptic seizures, with headache being the most common
- Symptom benign brain lesion, commonly found in middle-aged adults.
- Tends to remain unchanged over time.
- Small "bubbly" indolent subcortical tumors that sometimes present with seizures.

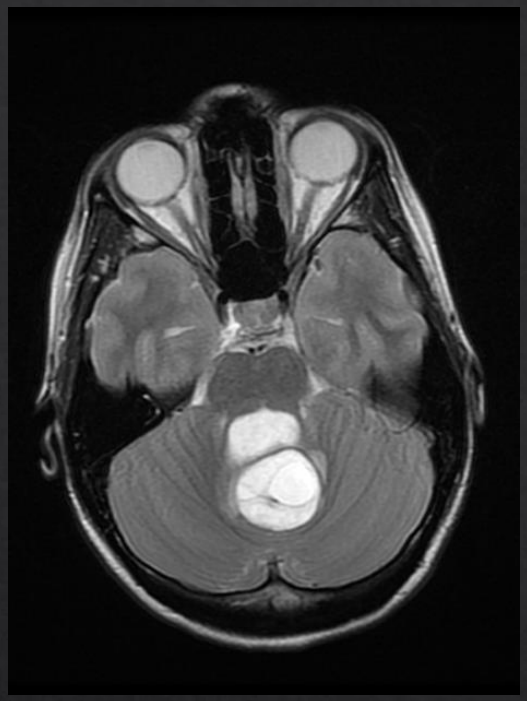


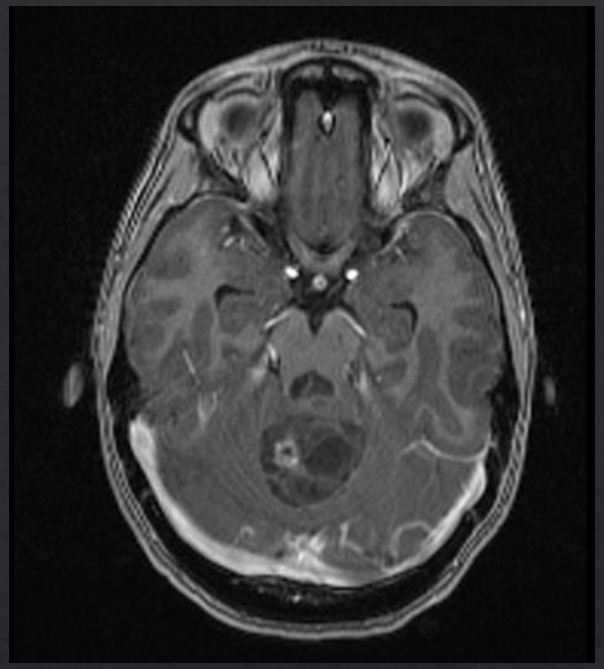

A
B
C
D

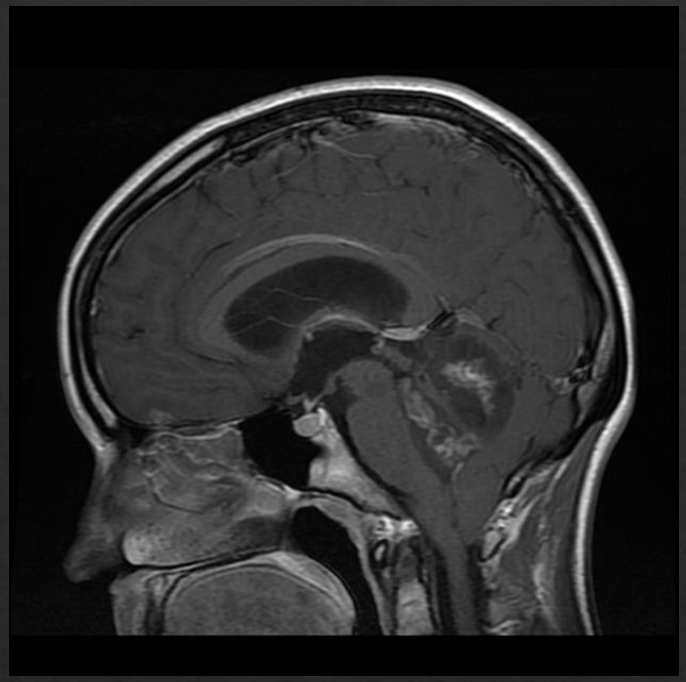

A
B

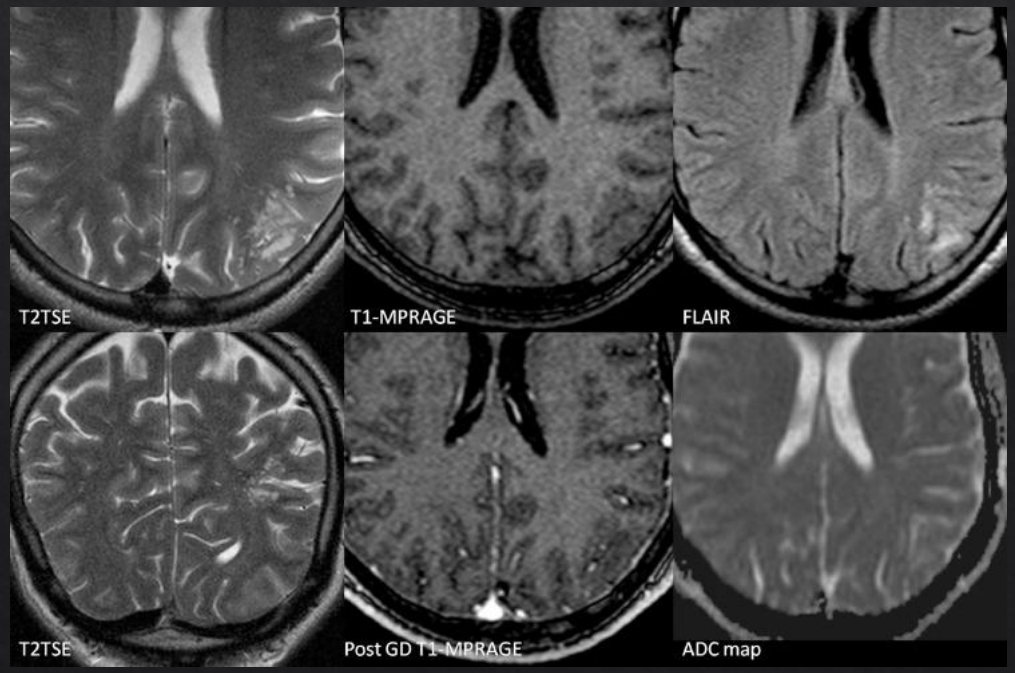
Rosette forming glioneuronal tumor (RGNTs)

- Rare, usually midline, tumors that involve the fourth ventricle and/or aqueduct of Sylvius.
- Younger adult patients with a mean age of 30 years
- Although relatively well-circumscribed on MRI and clinically indolent, they often invade surrounding tissues, involving the cerebellum, pons and even the pineal region.
- Often cystic components and they
- Tend to have heterogeneous enhancement.
- They are considered WHO grade 1 tumors in the current (2021) WHO classification of CNS tumors.
- Main differential diagnosis is pilocytic astrocytoma








T2TSE
T1-MPRAGE
FLAIR
T2TSE
Post GD T1-MPRAGE
ADC map

Myxoid glioneuronal tumor (MGNT)