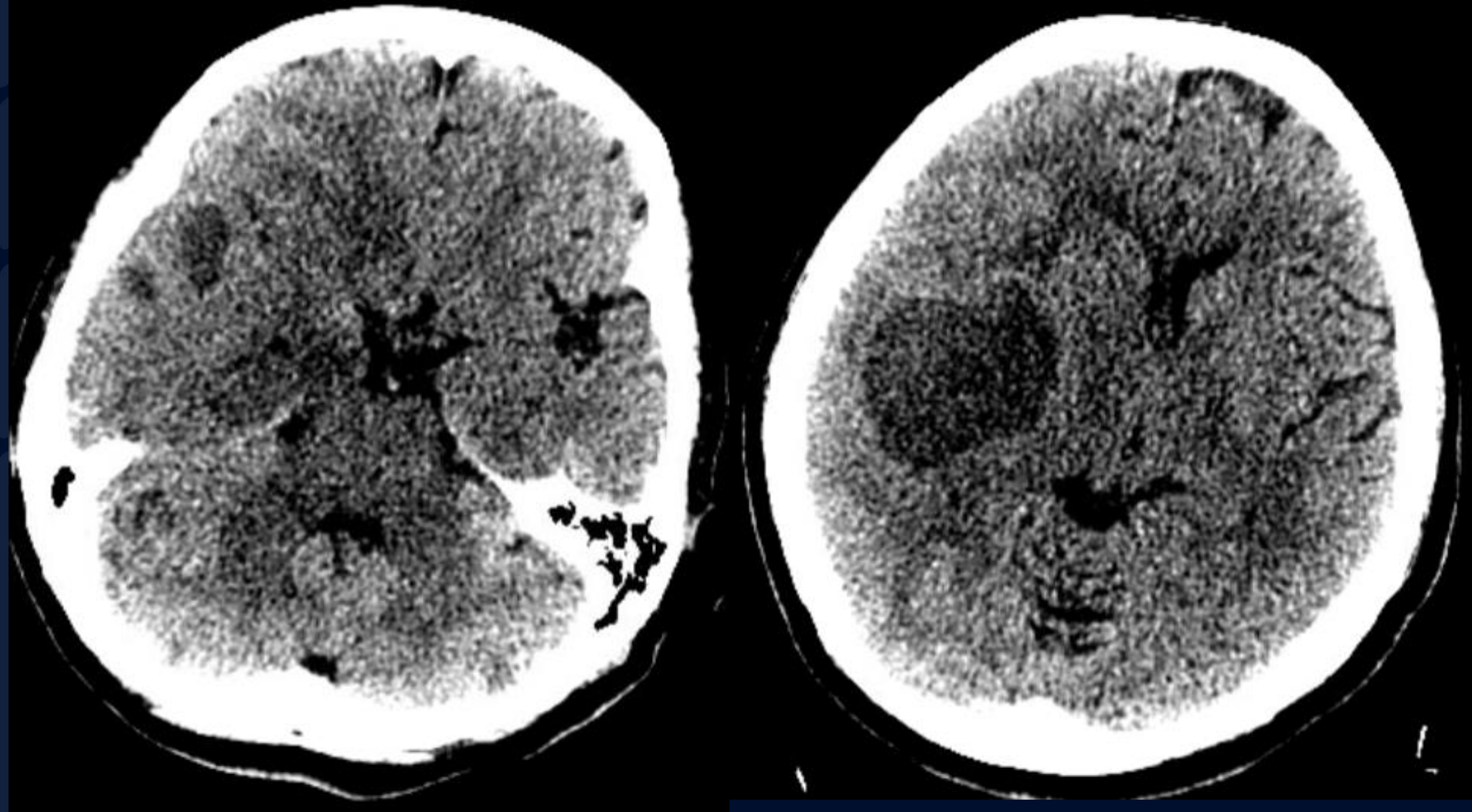
A large, stylized leaf graphic in a dark blue color, positioned on the left side of the slide, partially overlapping the text.

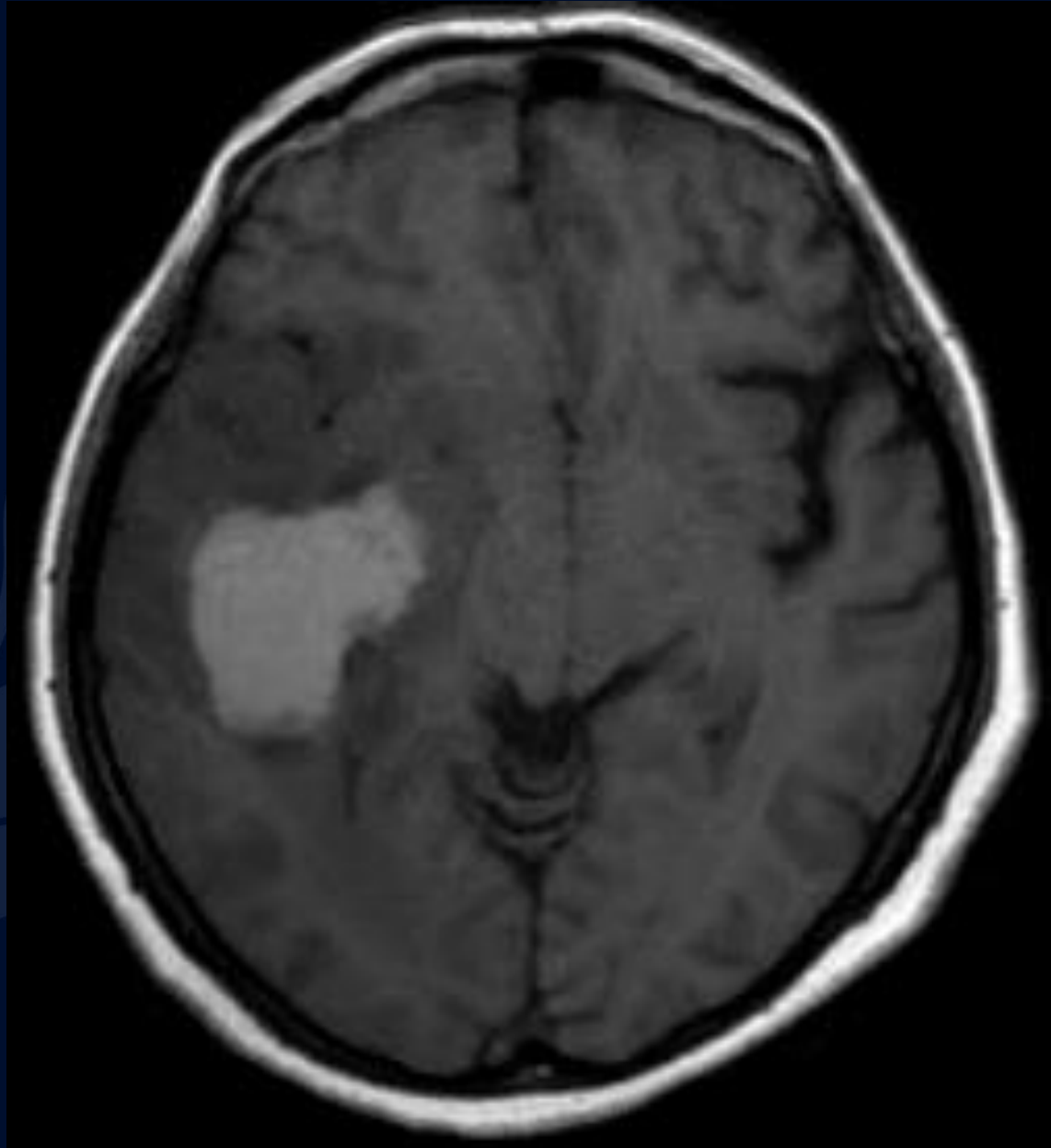
62-year-old female presenting with sudden onset bilateral leg weakness

Ireoluwatomiwa Opayemi, MS3

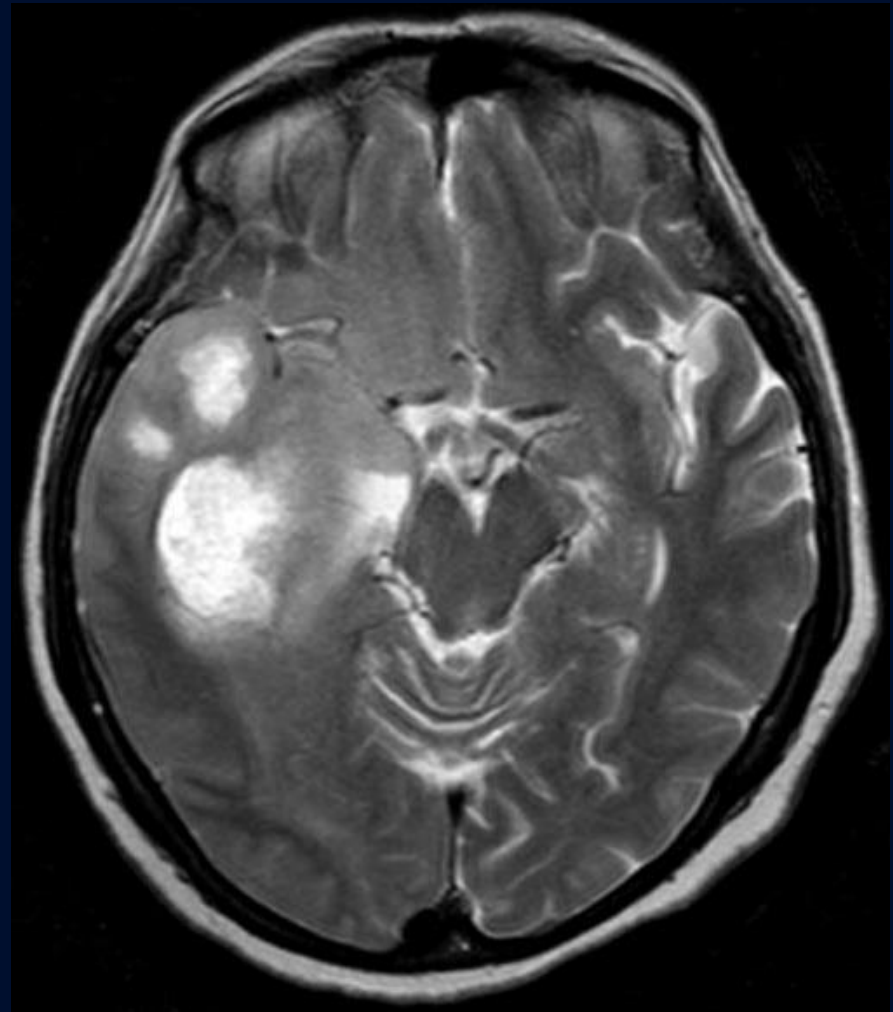
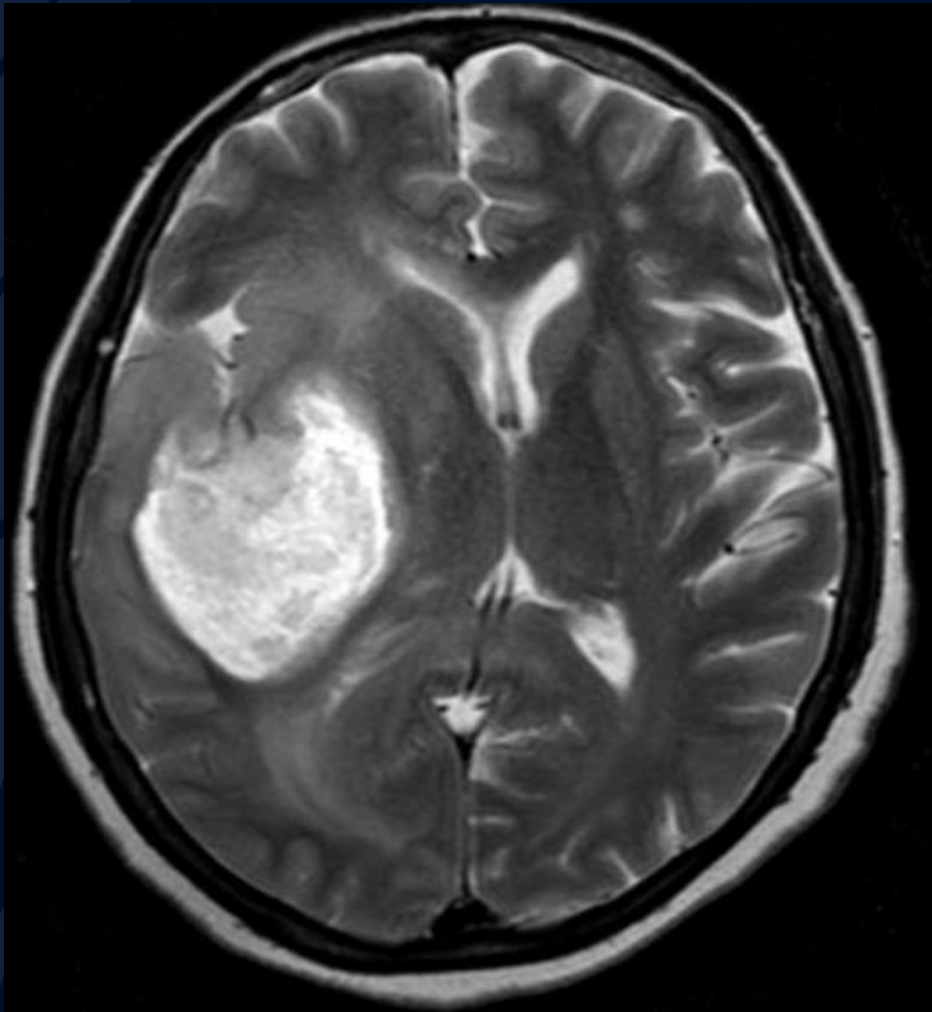
Non-contrast CT



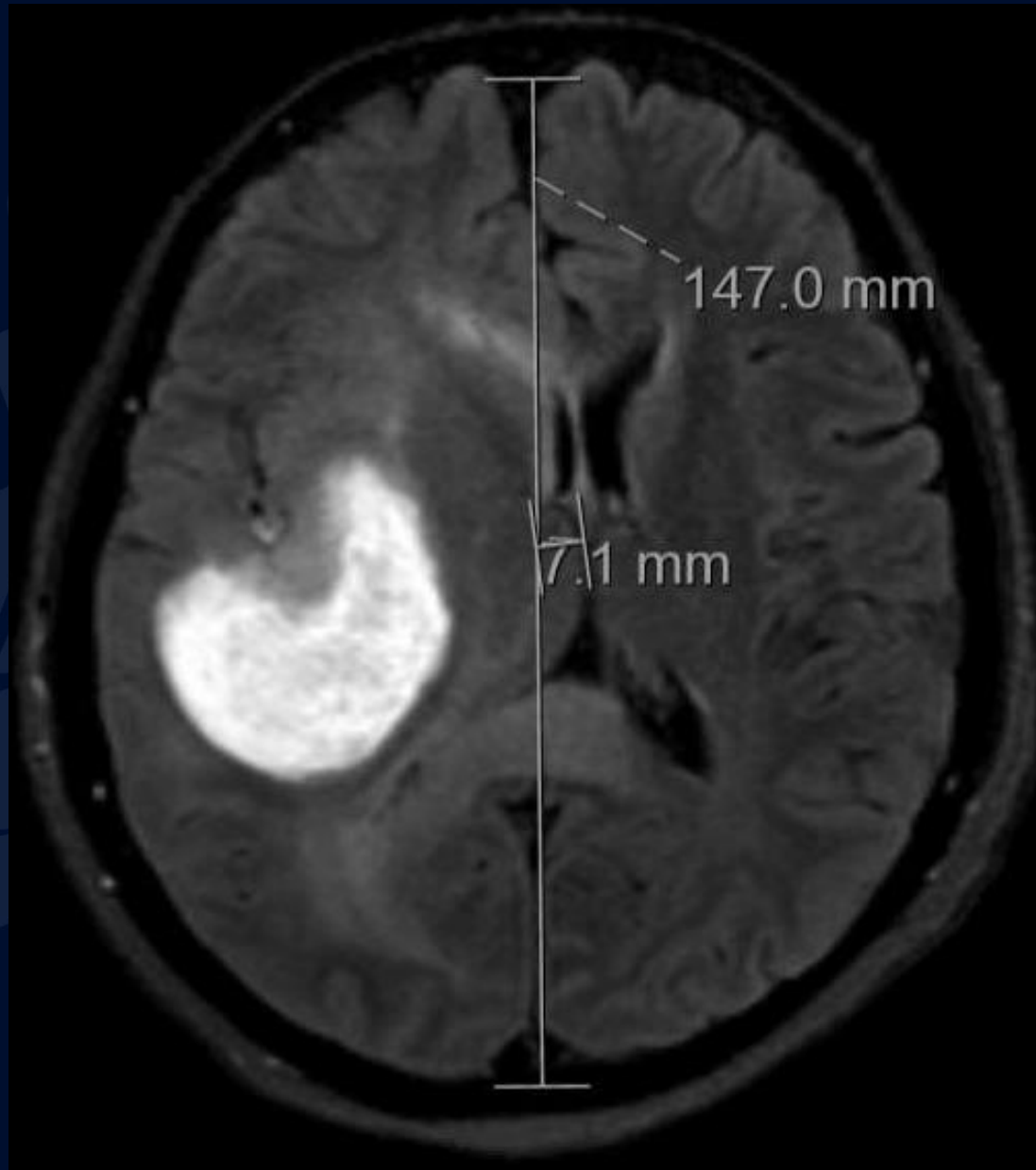
T1 Axial



T2 Axial



T2 FLAIR



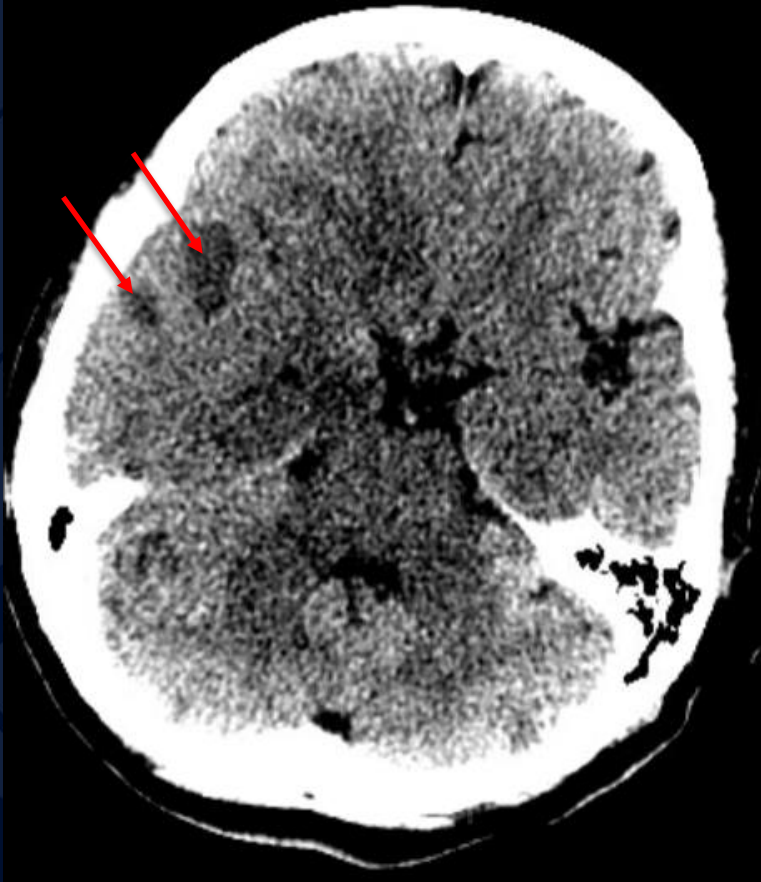
A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide. It features detailed vein patterns and a lobed edge.

?

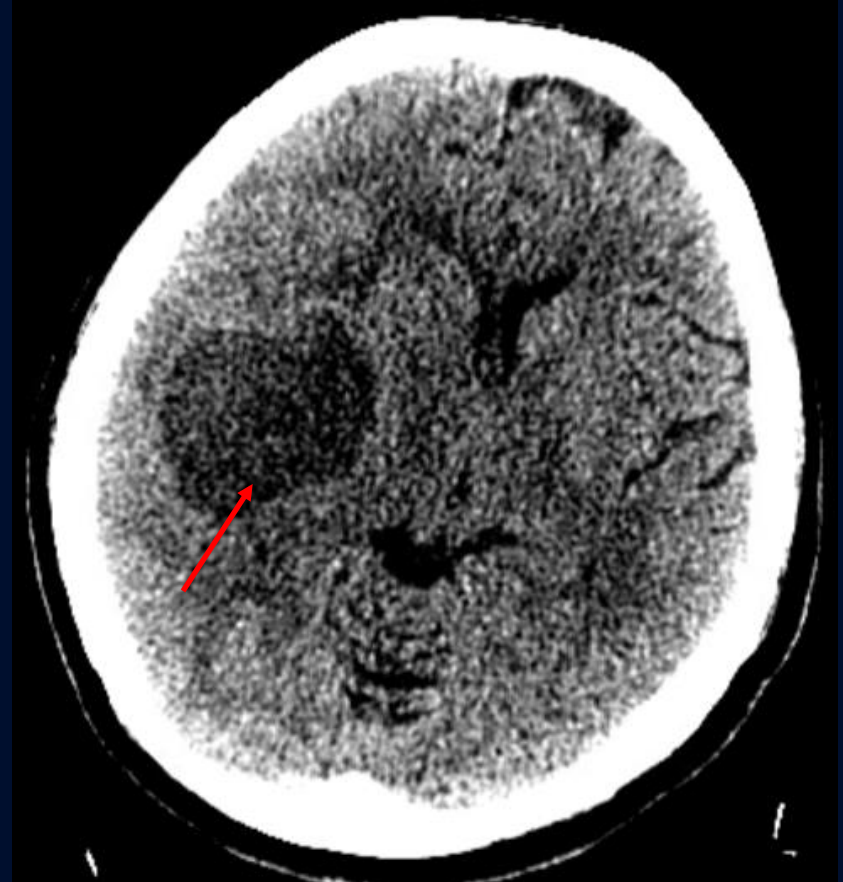
A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide, partially overlapping the title text.

Glioblastoma Multiforme

Non-contrast CT



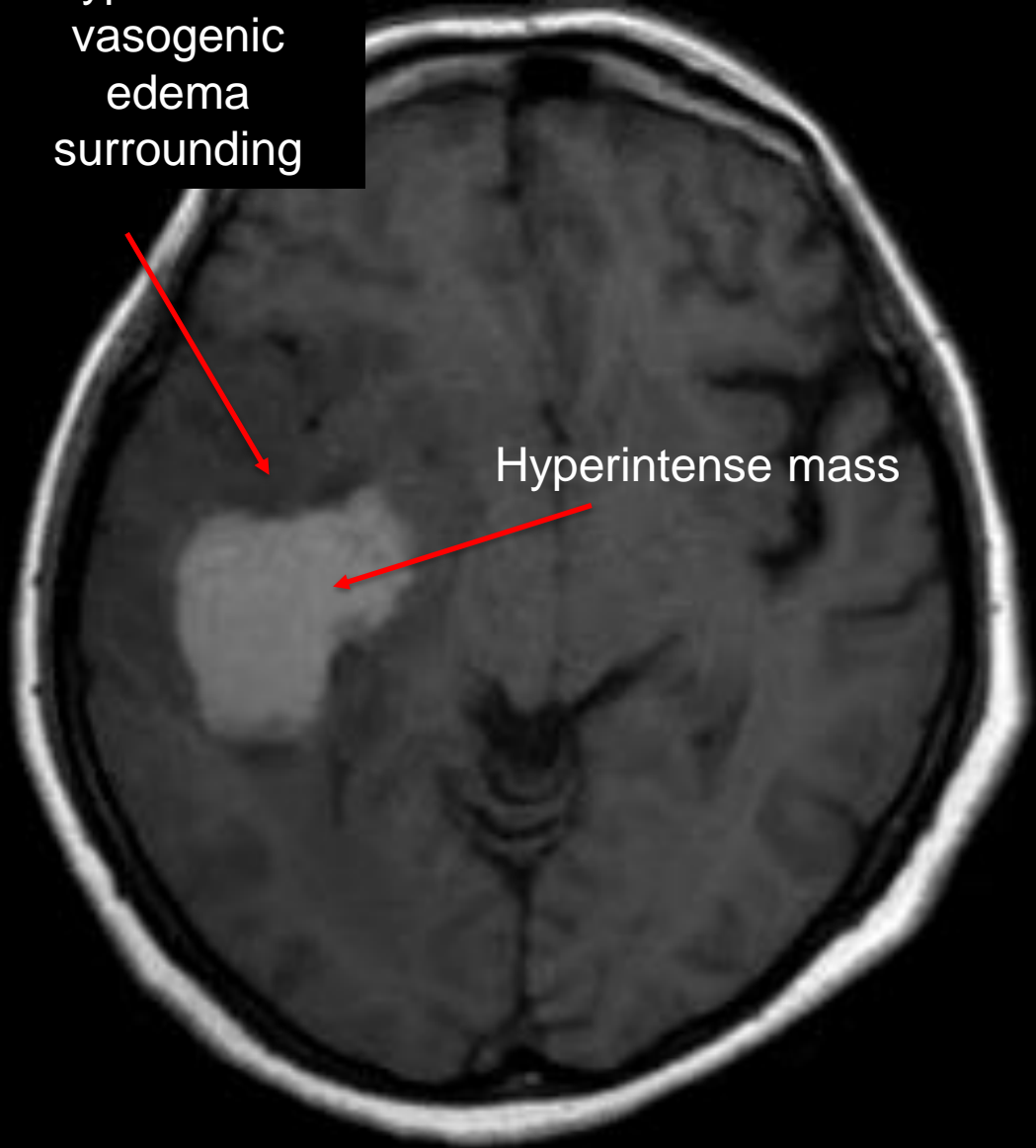
Hypodense masses



Large hypodense mass

T1 Axial

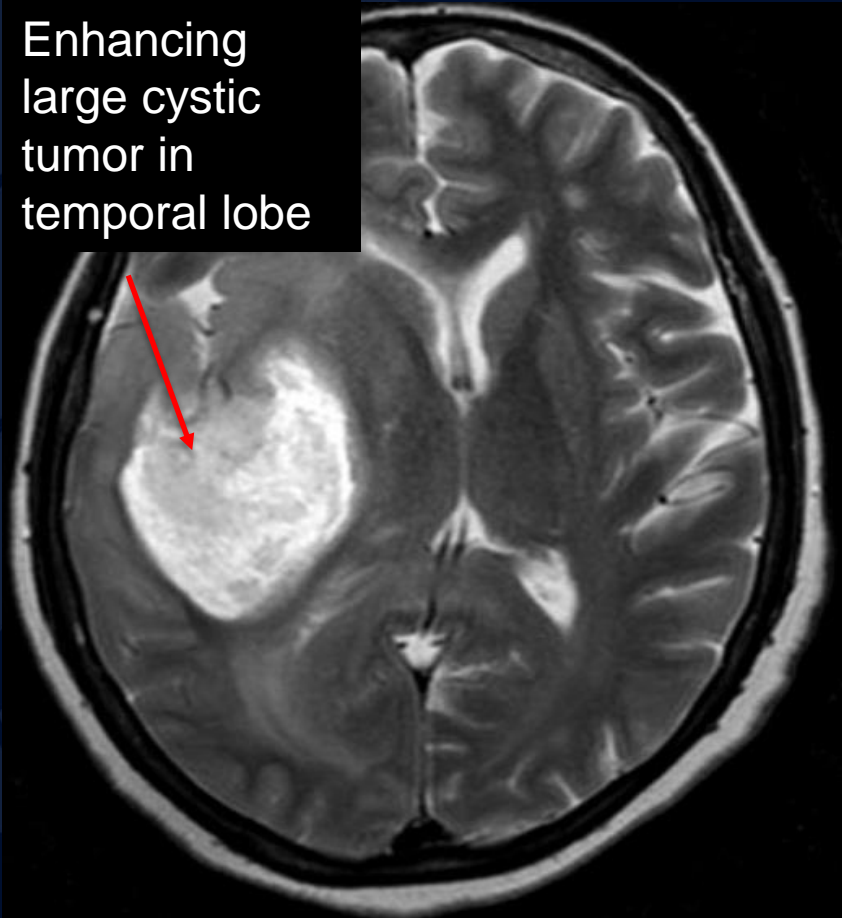
Hypointense
vasogenic
edema
surrounding



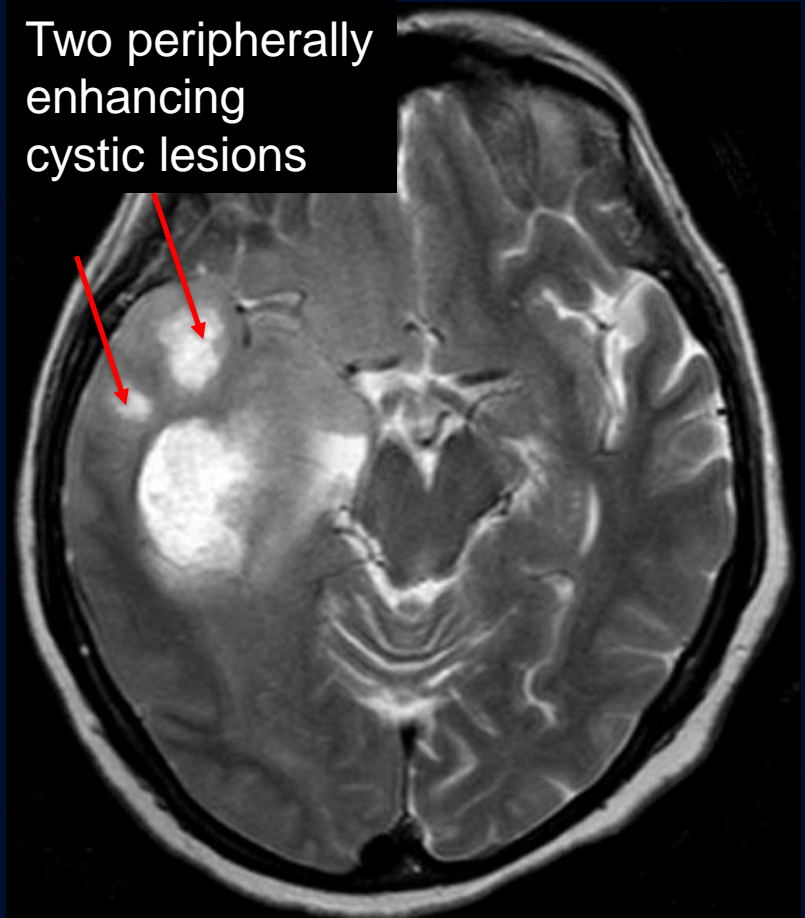
Hyperintense mass

T2 Axial

Enhancing large cystic tumor in temporal lobe

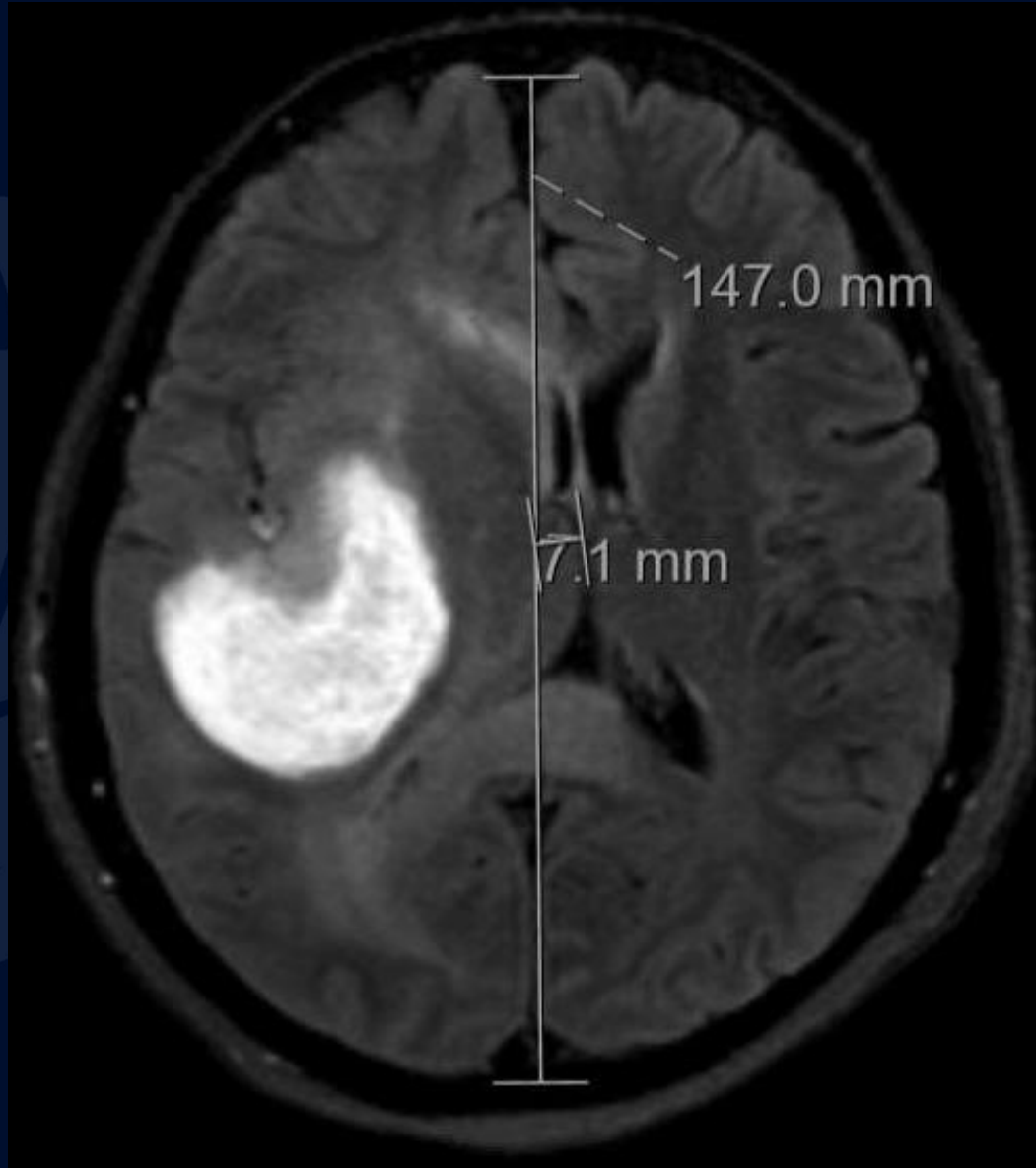


Two peripherally enhancing cystic lesions



T2 FLAIR

Hyperintense
vasogenic edema
causing MLS



UCONN
HEALTH

RADIOLOGY

Glioblastoma Multiforme (GBM)

- GBM are astrocytic tumors whose formation are associated with cell cycle checkpoint inactivation, tumor suppressor gene inactivation and angiogenesis
- IDH Wild Type Glioblastoma Multiforme by biopsy
 - Grade IV astrocytoma due to presence of necrosis
 - Tissue diagnosis is required to distinguish high grade glioma from other brain tumors
 - In 2021, WHO revised classification of CNS Tumors, where glioblastoma is now divided into 2 separate diagnosis based on isocitrate dehydrogenase (IDH) mutation status
 - IDH Wildtype and IDH Mutant
- Clinical presentation
 - Dependent on the location and size of lesions
 - Present with progressive neurologic symptoms
 - Most common symptoms are headache, seizures, and focal neurologic deficits
 - Large tumors can cause significant edema, mass effect causing midline shift and increased ICP. This can lead to symptoms of vomiting, hypertension and bradycardia

Imaging Findings

- CT
 - Areas of hypodensity with neighboring vasogenic edema
 - Effacement of neighboring sulci
- MRI: superior to CT for characterization of brain tumors
 - T1
 - T1 Pre-contrast: edematous mass with loss of sulci and gray-white demarcation
 - T1 Post-contrast: intense rim enhancement with central clearing indicative of necrosis
 - T1 Post-contrast: hyperintense tumor can be distinguished from surrounding hypointense signal of edema
 - T2
 - H2O is dense, so CSF is hyperintense, causing cyst to enhance
 - T2 Flair gets rid of extracellular CSF signal and will show you where the brain parenchyma is dying. Dying brain has increased water content in the edema causing it to be hyperintense on flair

References

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