

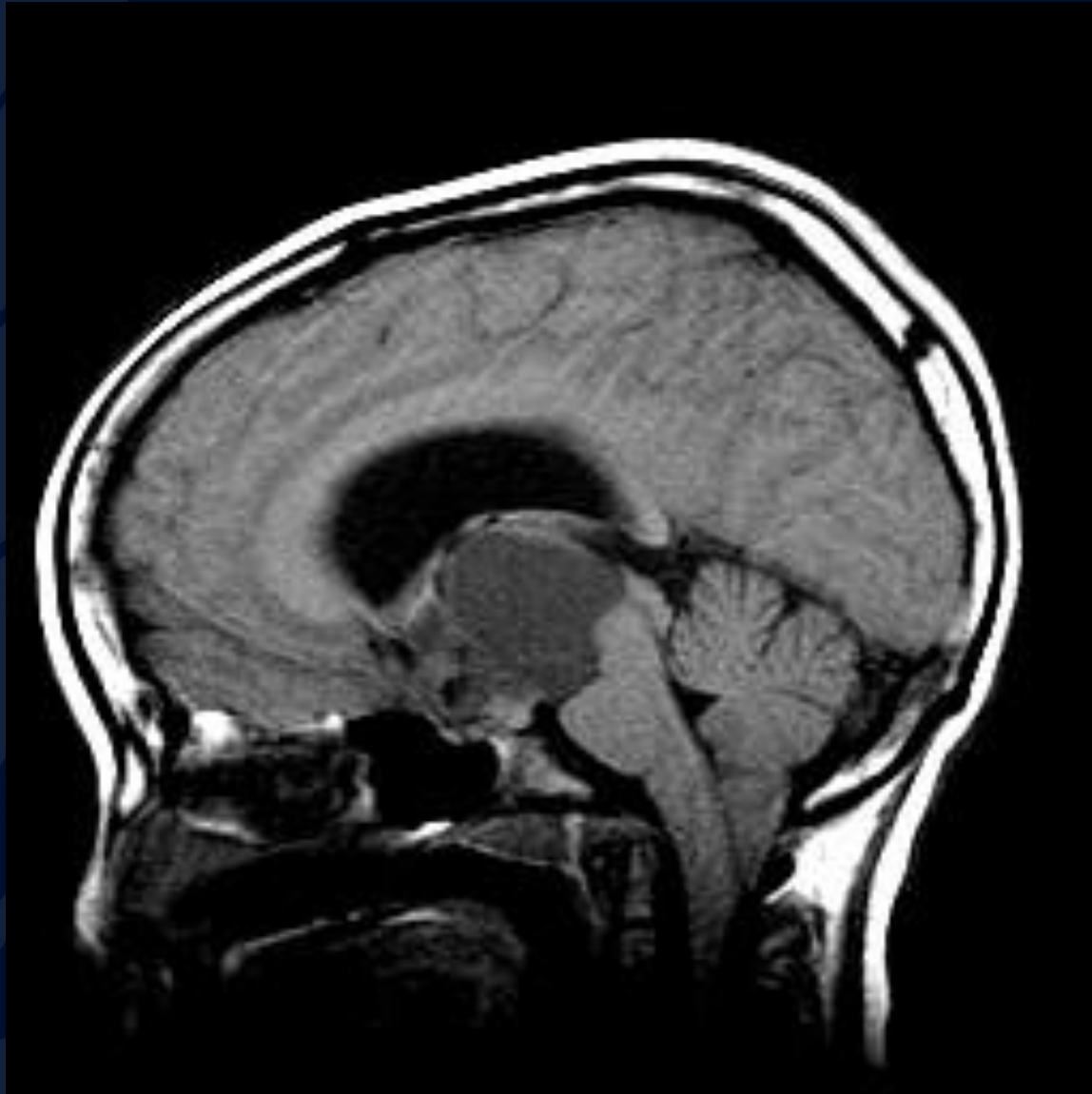
A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide, partially overlapping the text.

# 10 y/o with blurry vision, vomiting, and headache

Jignesh Modi, MD



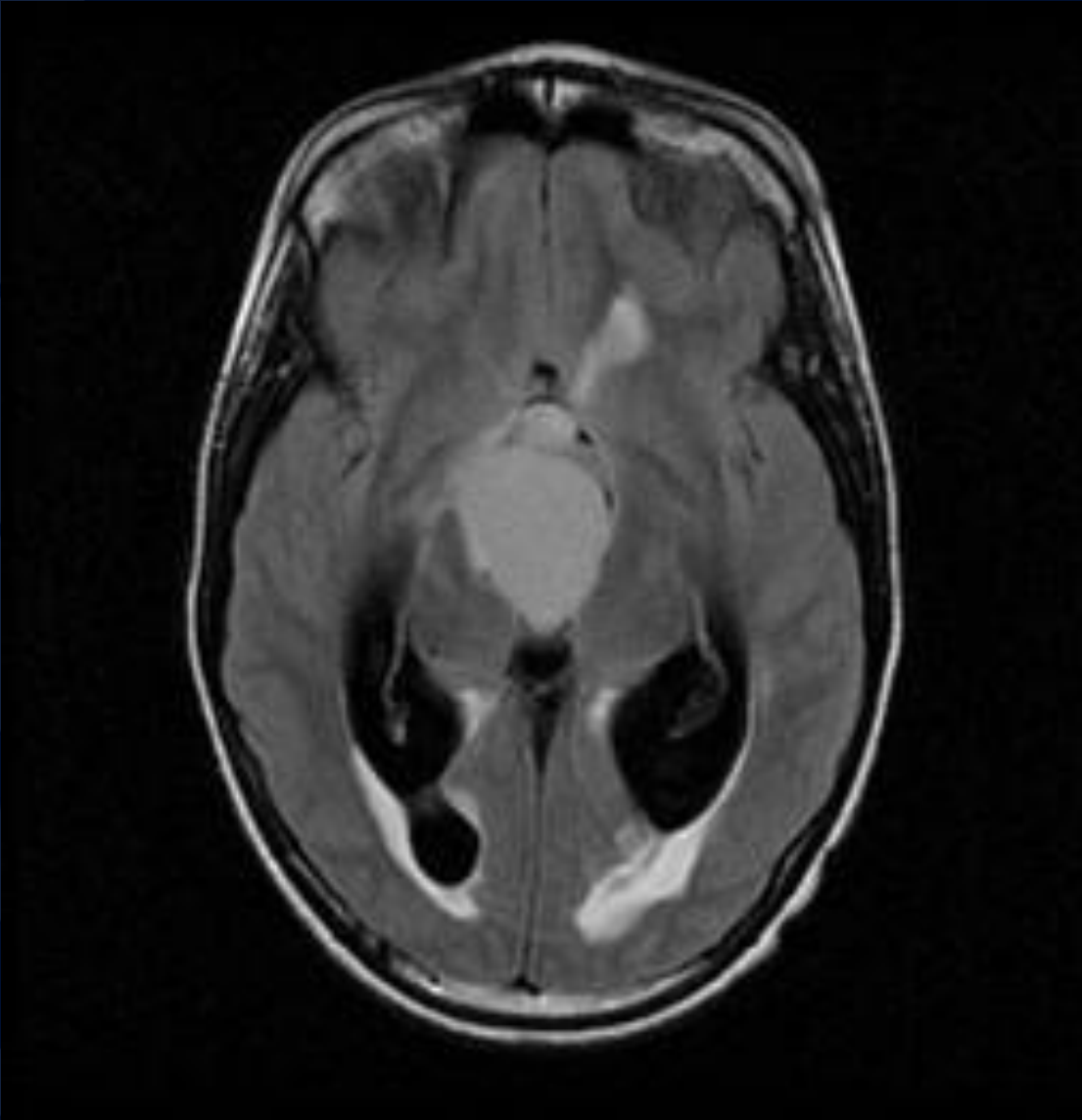
CT brain with  
contrast



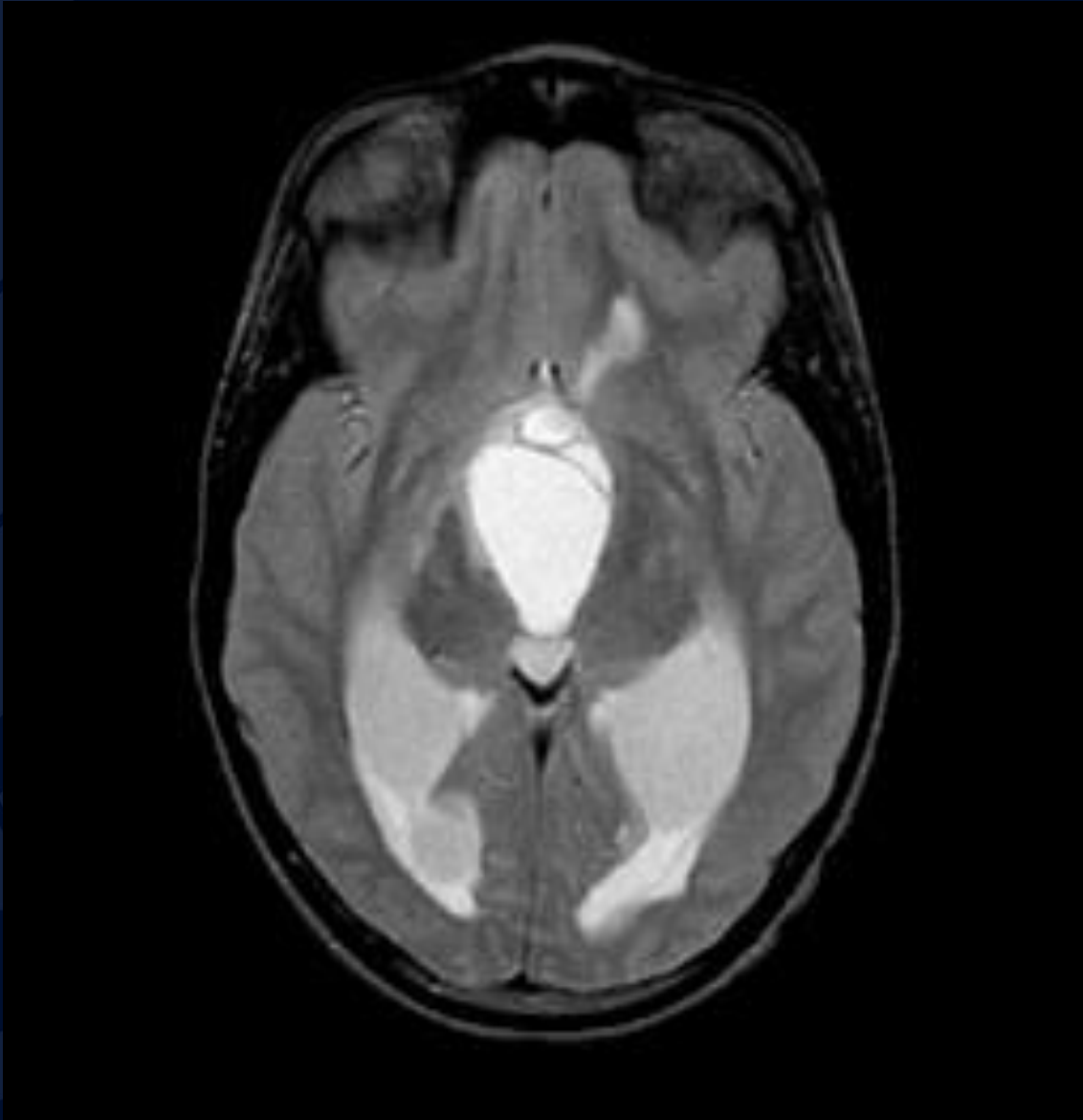
Sagittal T1  
Pre-Contrast



Sagittal T1  
Post-Contrast



Axial Flair



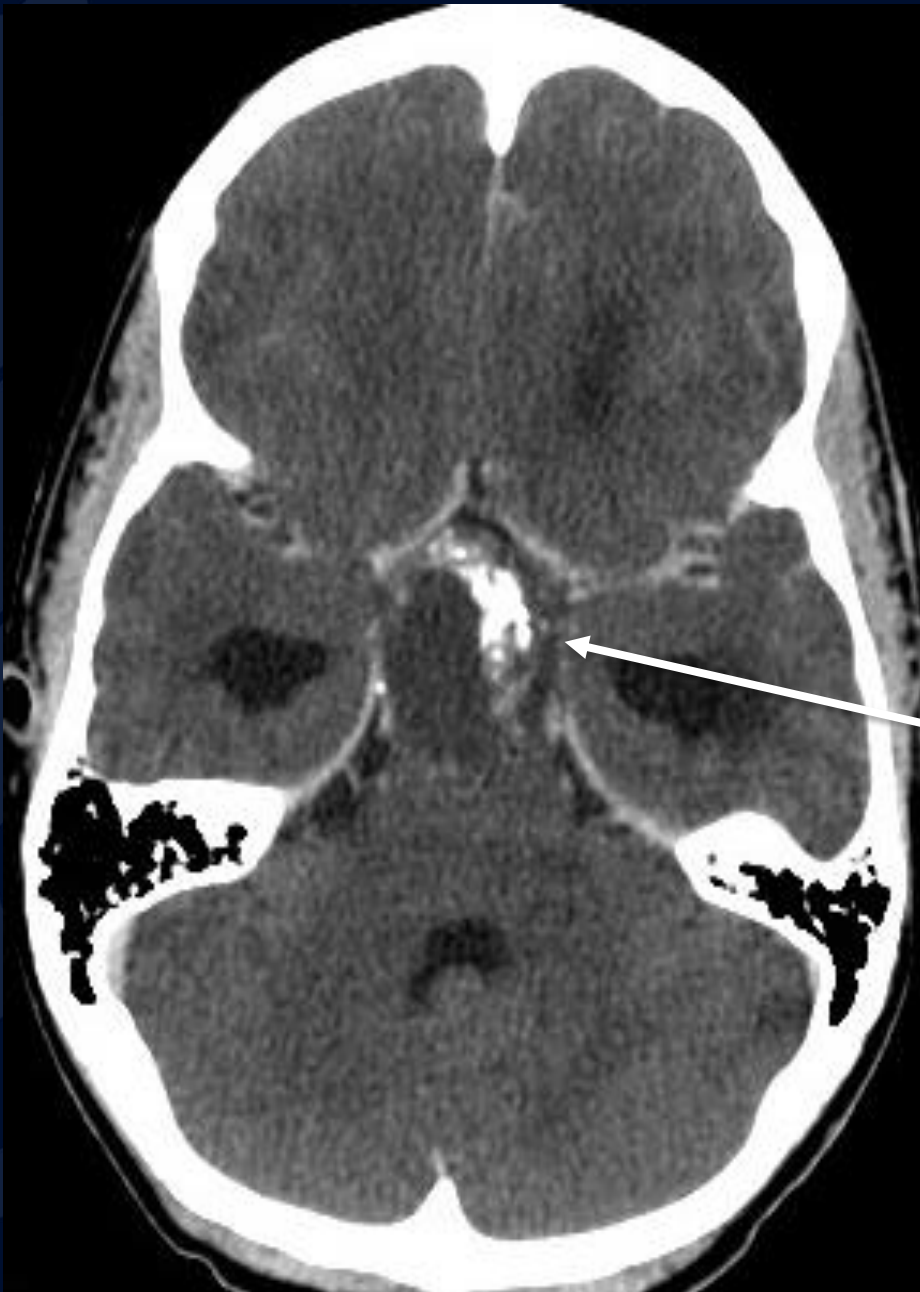
Axial T2



?

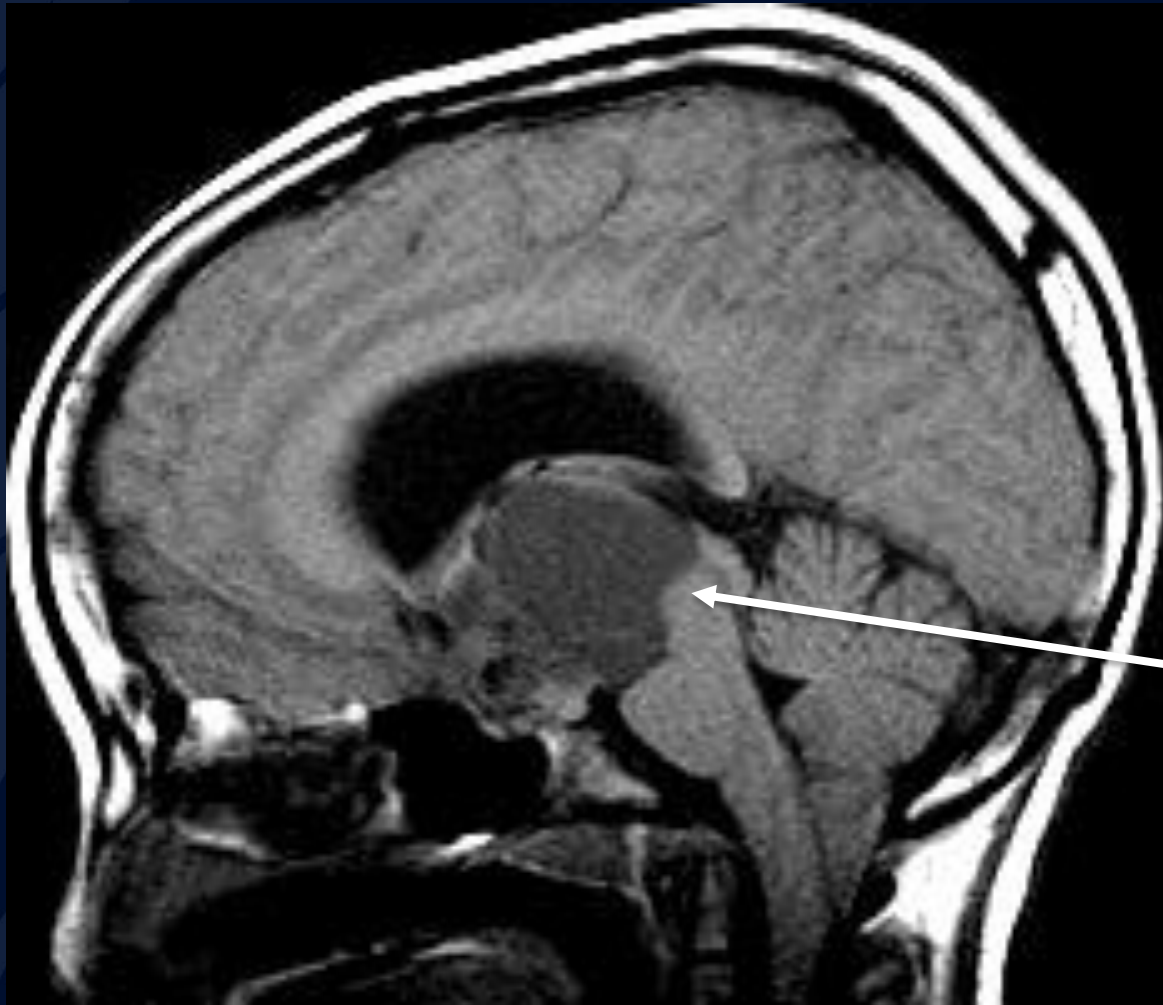
# Craniopharyngioma





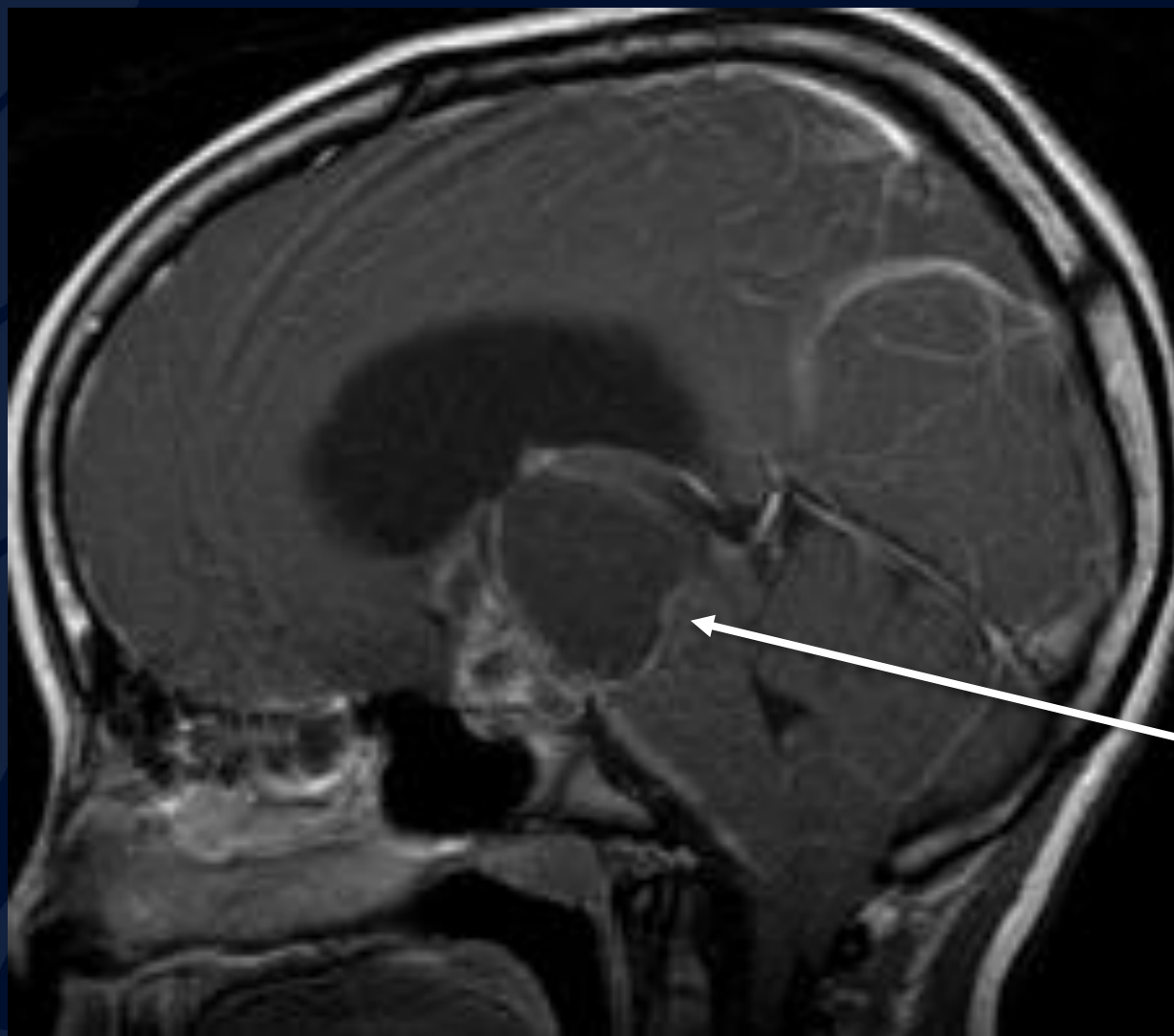
CT brain with  
Contrast

← Calcifications



Sagittal T1  
Pre-Contrast

Cystic  
Suprasellar  
Mass



Sagittal T1  
Post-Contrast

Cystic  
Suprasellar  
Mass



Axial Flair

Hydrocephalus



Axial T2

Cystic Mass

# Craniopharyngioma

- slow-growing, benign dysontogenetic epithelial tumors derived from the Rathke's cleft.
- **Two subtypes:** based on histological appearance.
  - **Adamantinomatous type:** typically seen in children, more prevalent.  
typical presentation in a pediatric patient with morning headache, visual disturbances, and short stature.
  - **Papillary type** is more common in adults
- Approximately 54% of all pediatric sellar and suprasellar lesions , 5-10 yrs. peak, second small peak 6 th decade.

# Imaging Features

- On CT, the “classic,” or adamantinomatous: multilobulated, multicystic, partially calcified mass.
- CTA may demonstrate displacement and encasement of the circle of Willis.
- Like CT, MR findings depend on the morphology of the tumor, but the adamantinomatous type is heterogeneous.
- Papillary: solid and rarely calcifies. Isointense solid component which enhances as does the cyst wall.

# Treatment

- Cranipharyngiomas are generally benign and rarely undergo malignant transformation.
- Both subtypes are considered WHO grade I tumors.
- Complete resection can be curative, however, treatment often also incorporates irradiation.
- Surgical resection via craniotomy or endoscopically— via endonasal/transsphenoidal approach, when feasible, however endoscopic transsphenoidal approach can be more challenging given incomplete development of the sphenoid sinus
- Surgical management, especially in children, remains controversial.
- Imaging is critical in evaluating this tumor with regards to tumor location and adjacent structure involvement— tumor involvement of and/or proximity to frontal, temporal lobes, ventricle, optic chiasm and nerves, hypothalamus, pituitary gland, circle of willis, and brain stem all impact treatment plan



# References

- Applied Radiology. 2021;50(5);58-60
- [cdn.agilitycms.com](https://cdn.agilitycms.com)
- Pediatric Neuroimaging book- A. James Barkowich, Charles Raybaud
- Citation: Modi J, Craniopharyngioma. Radiology Online (2022)