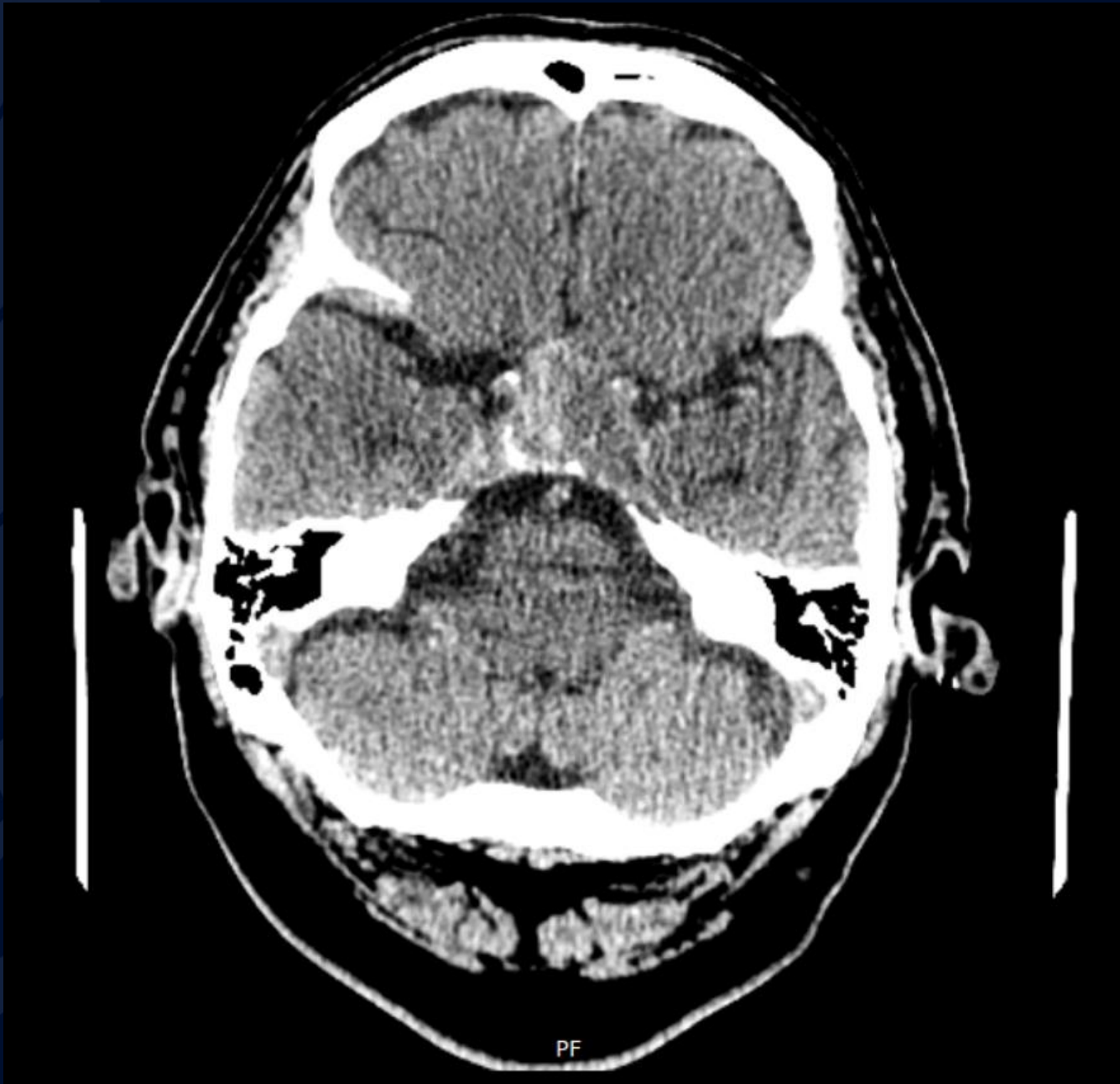


# 64-year-old male with new onset of severe headache & double vision

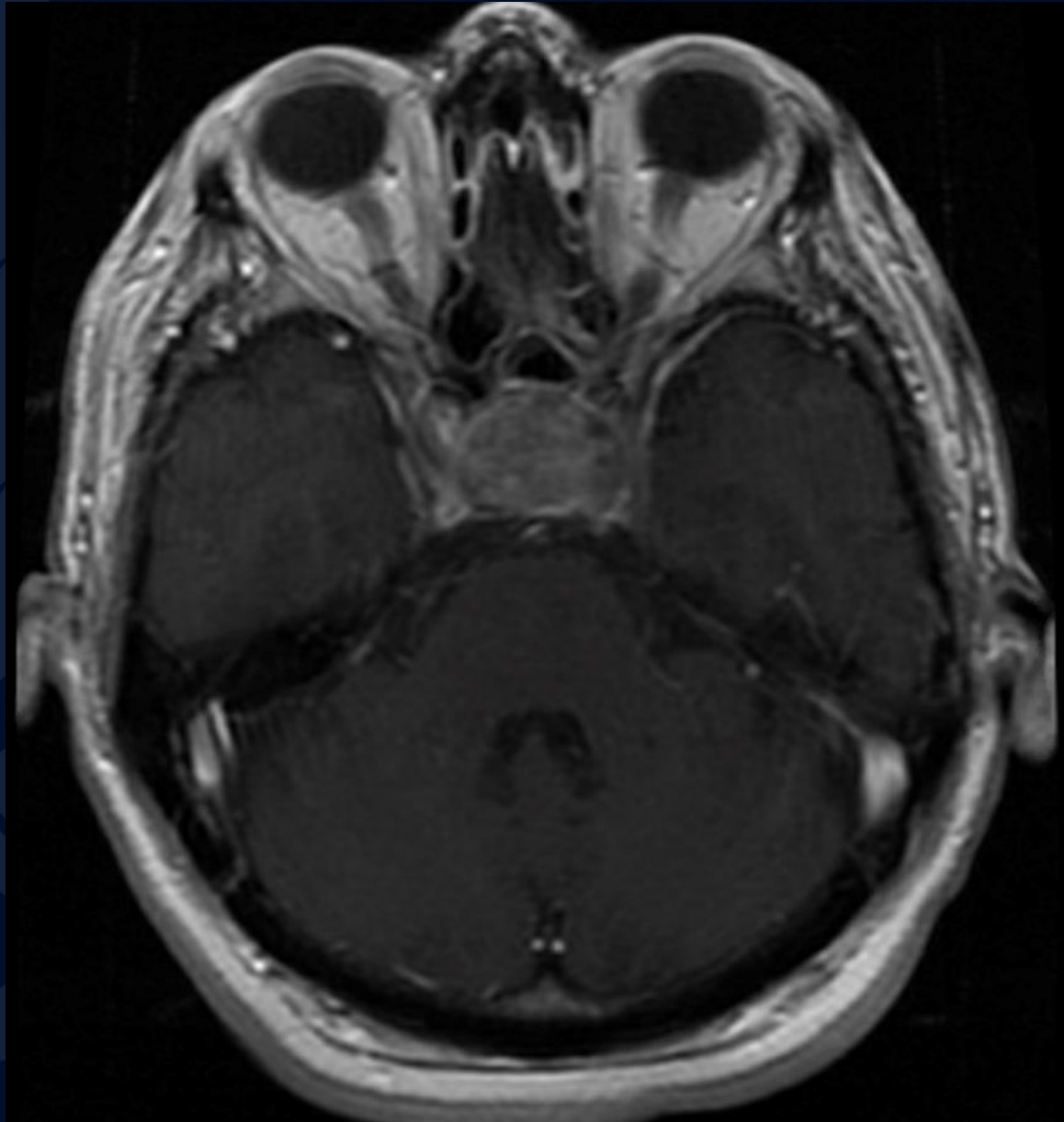
Kaitlin Lipner, MD

Brad Kincaid, MD

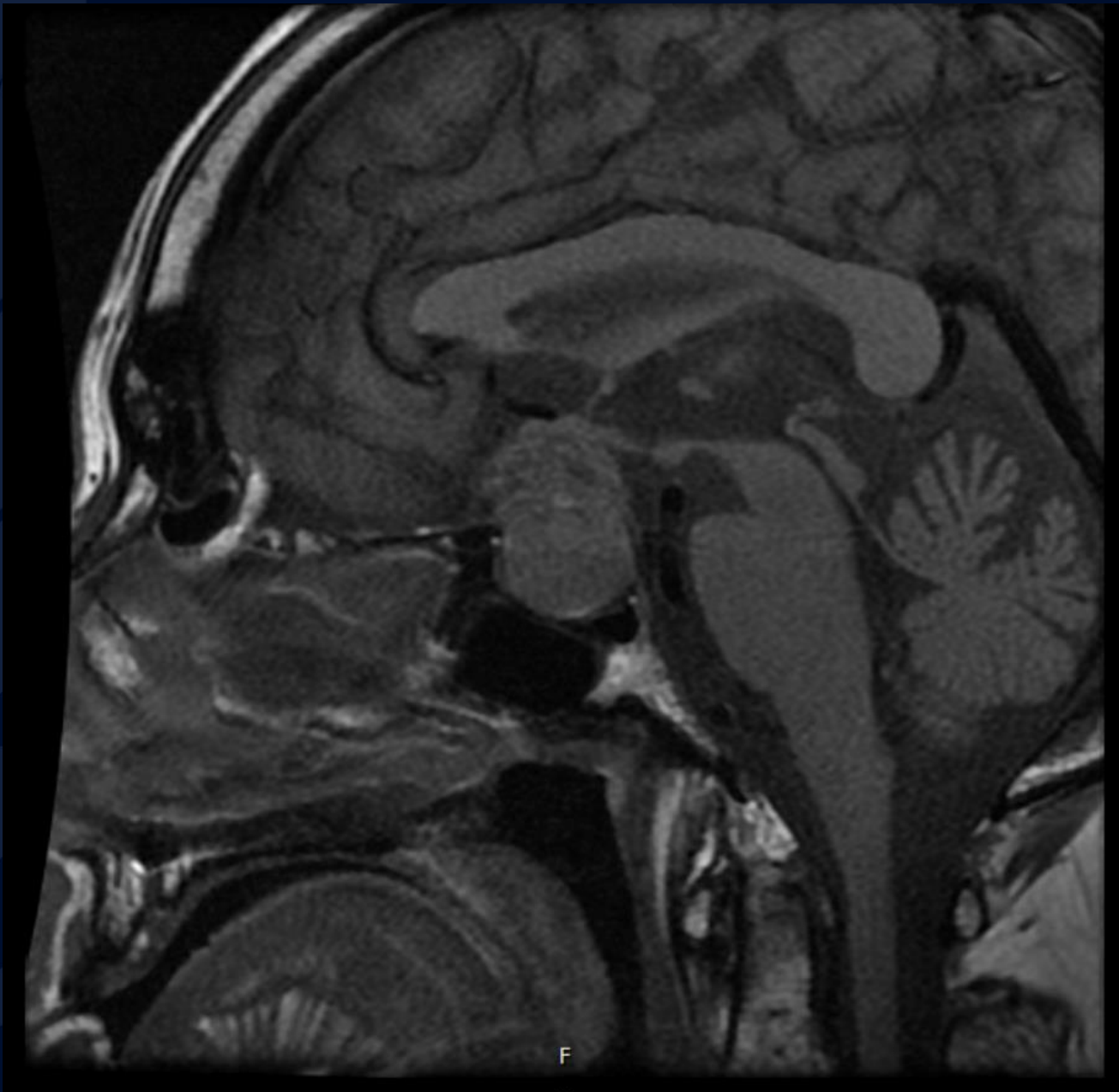
Leo Wolansky, MD



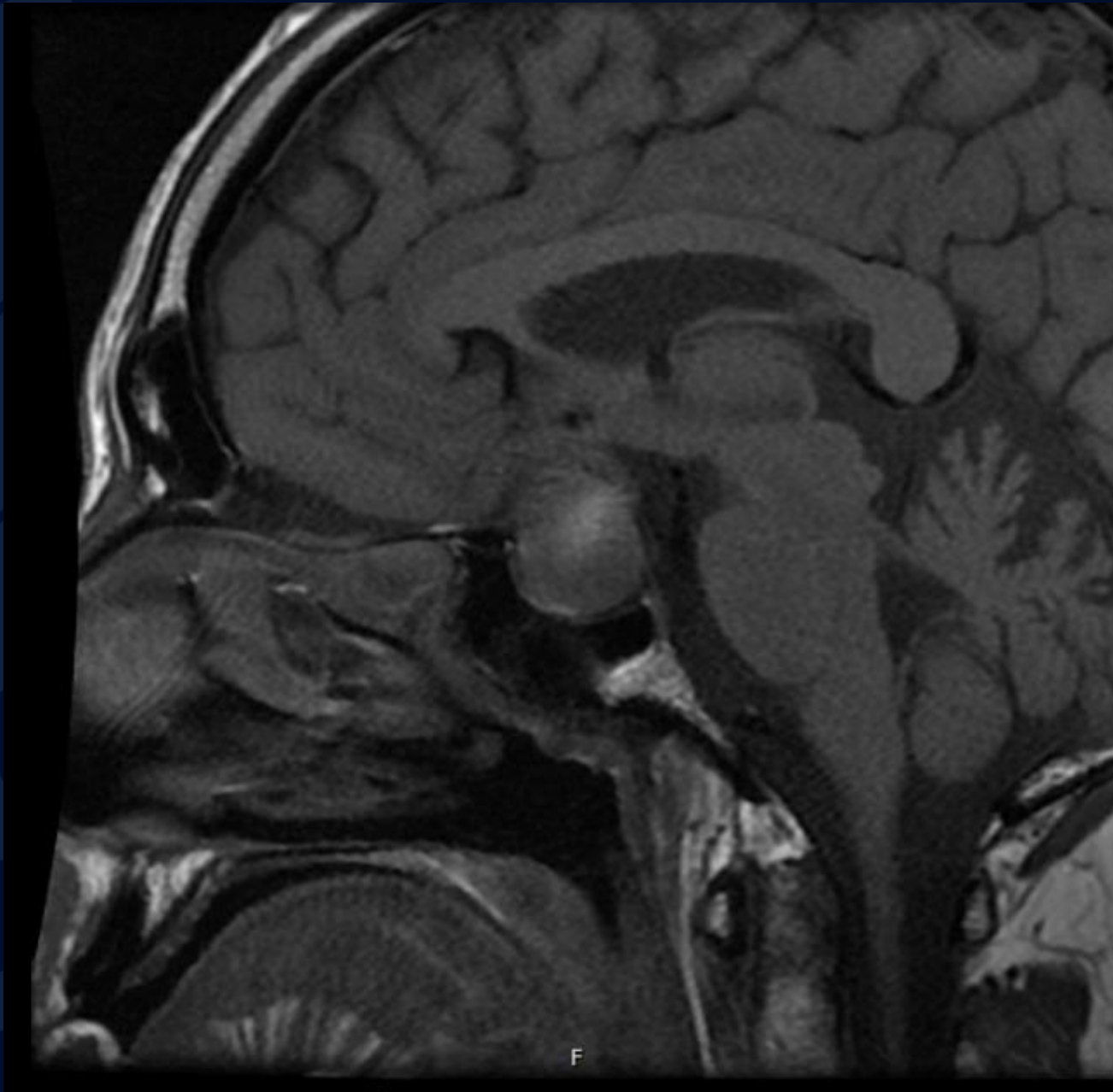
CT Head Non-  
Contrast



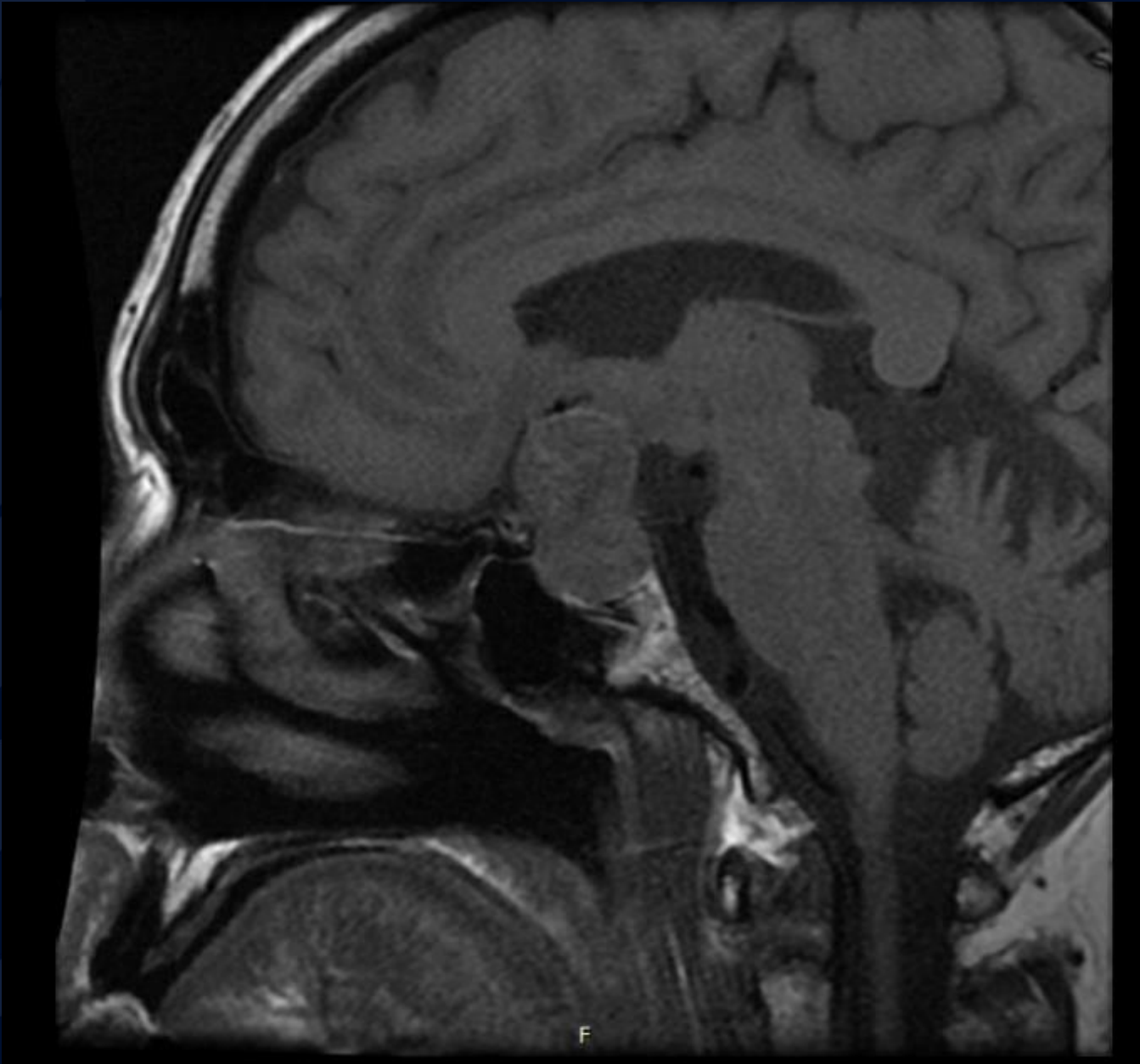
Axial MRI T1



Sagittal MRI  
T1



Sagittal MRI  
T1



Sagittal MRI  
T1

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.

?

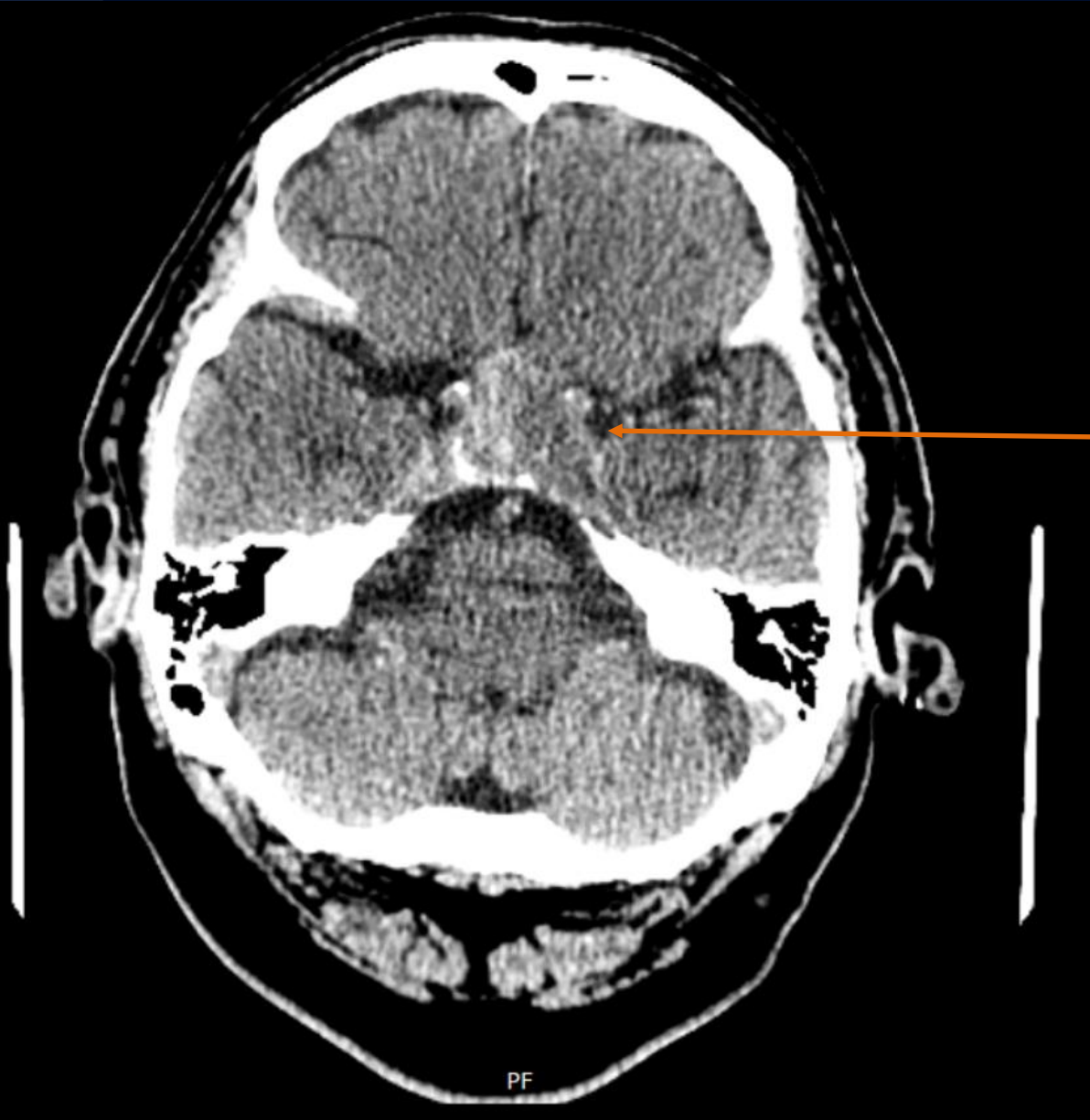
A large, stylized, dark blue oak leaf graphic is positioned on the left side of the slide, extending from the top to the bottom. The leaf has a prominent central vein and several smaller veins branching off it.

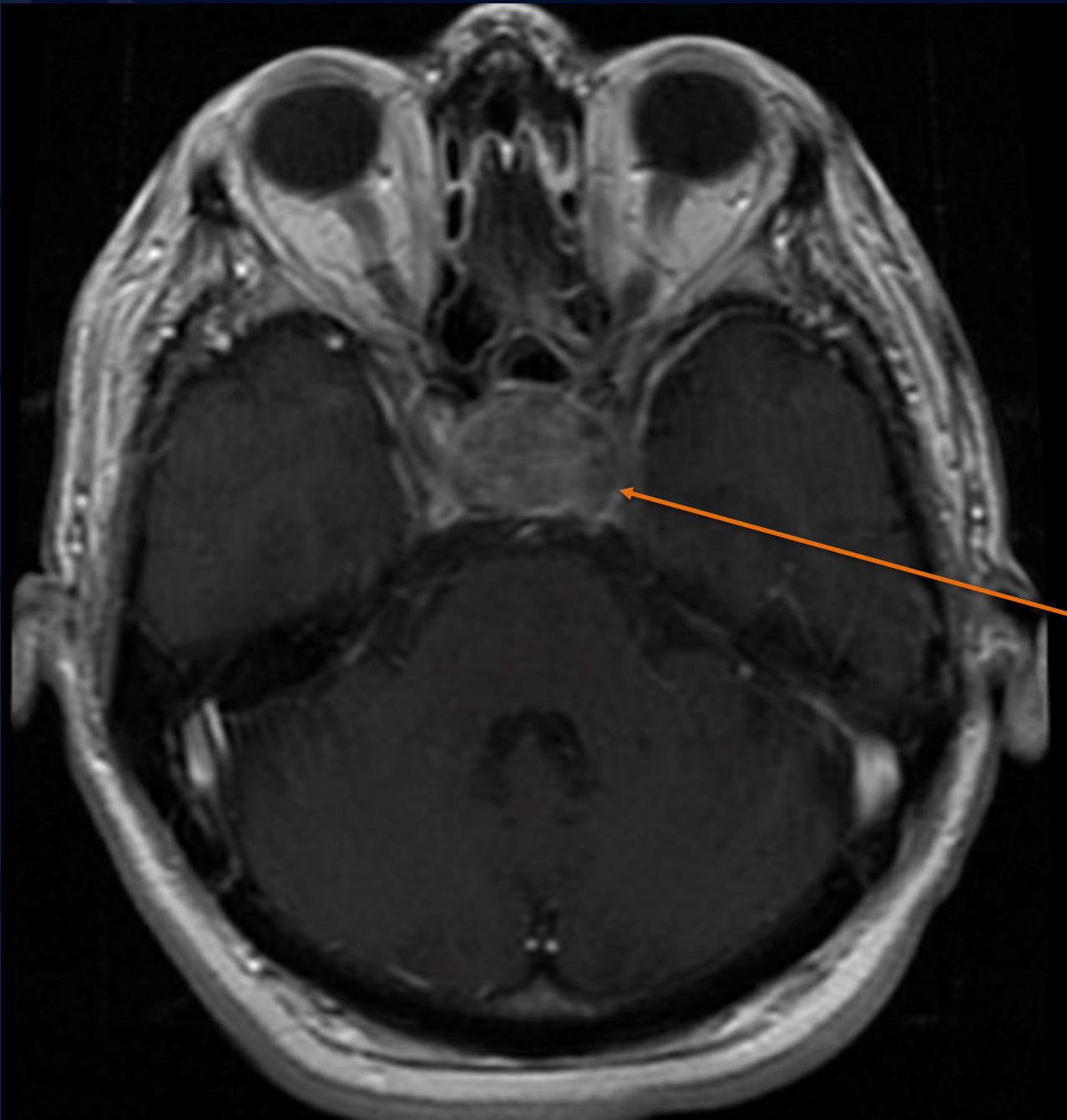
# Pituitary Apoplexy: Pituitary Macroadenoma



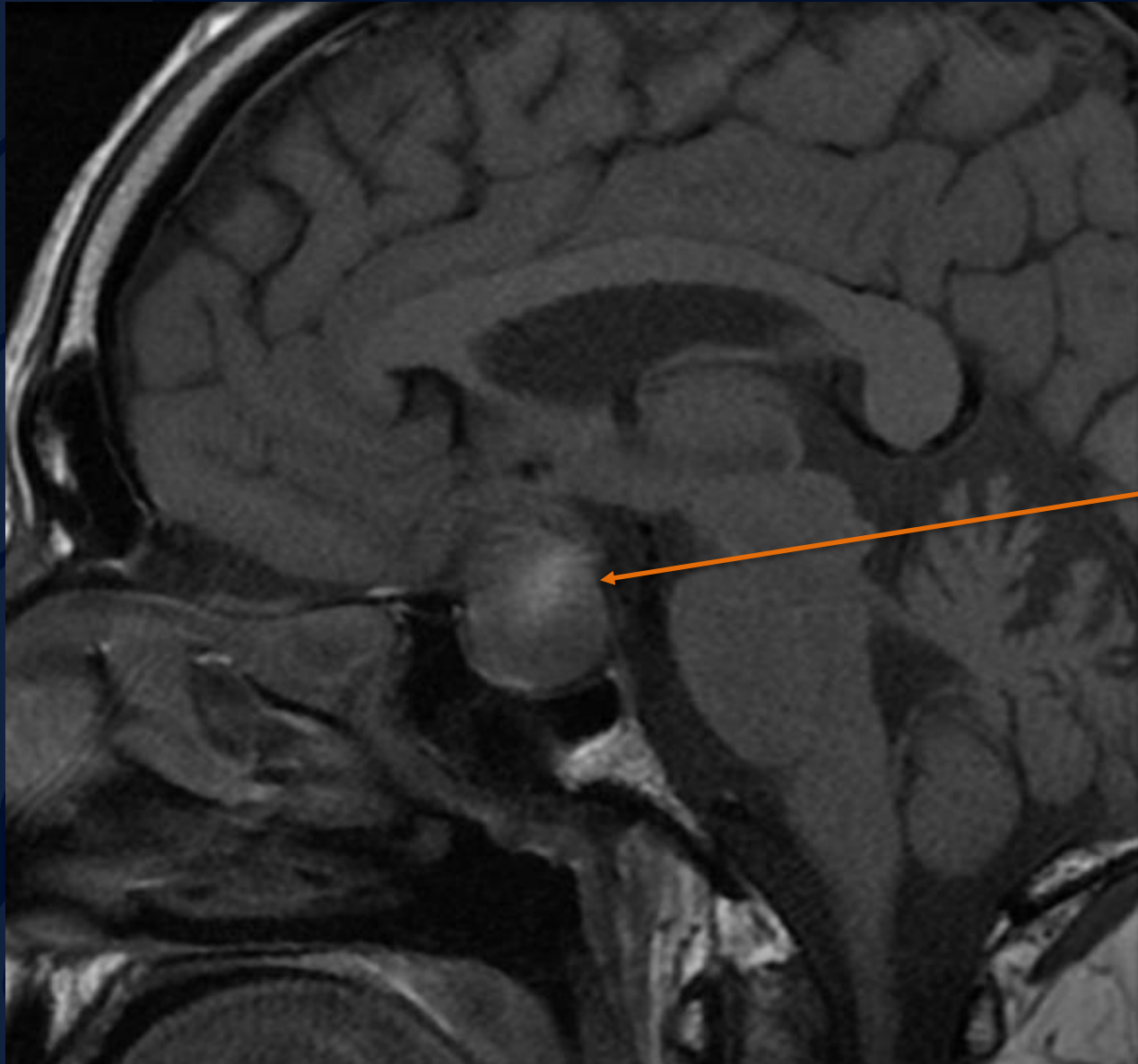
Large mass in the location of the pituitary gland.

Hyperdense blood in the mass and in the suprasellar cistern

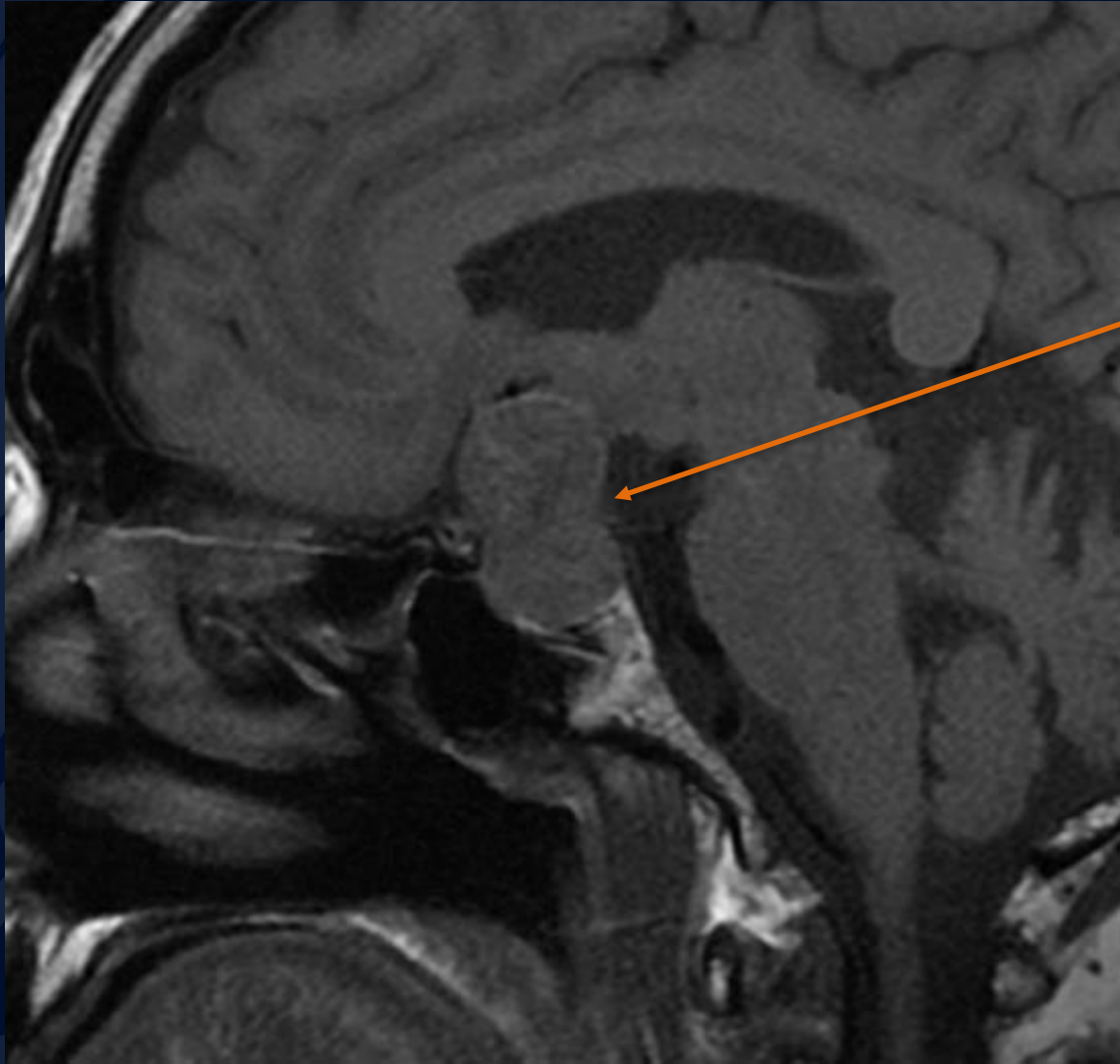




Expansile  
intrasellar  
mass  
measuring  
2.0 x 2.9 x  
3.0 cm



Intralesional signal characteristics are heterogeneous with some intrinsic T1 signal hyperintensity indicating hemorrhage.



Sagittal MRI T1  
“Figure of 8” or  
“Snowman sign,”  
The result of  
constriction by  
the diaphragma  
sella as the mass  
extends from  
intrasellar to  
suprasellar

# Pituitary Macroadenoma

## Definitions:

Macroadenoma: Pituitary Adenoma larger than 10 mm

Pituitary Apoplexy: Pituitary Stroke (sudden onset) usually associated with hemorrhagic adenoma.

## Epidemiology

- Adenoma is most common cause of sellar mass
- accounts for up to 10 percent of all intracranial neoplasms

# Pituitary Macroadenoma

## Etiology

- Occasionally genetic: MEN1, Gs-alpha, AIP
- Causes of apoplexy (ischemic or hemorrhagic)
  - Spontaneous, Postpartum (Sheehan's syndrome), DM, HTN, Sickle cell anemia, Acute shock
  - Within Adenoma

## Presentation

- Bitemporal hemianopsia due to compression of optic chiasm, headaches
- If functional, sequelae of anterior pituitary hormone overproduction.

# Pituitary Macroadenoma

## Diagnosis

- Labs: prolactin, insulin like growth factor 1, 24-hour urinary free cortisol, testosterone LH, FSH, TSH with T4
- Mild to moderate elevation of Prolactin is nonspecific due to loss of inhibition by dopamine (“Stalk-effect”)
- Differential for adenoma: hyperplasia, craniopharyngioma, meningioma, pituicytoma, Rathke’s cleft cyst, abscess, hypophysitis

# Pituitary Macroadenoma

## Imaging

- Macroadenoma >10mm
- CT – solid, soft tissue attenuation similar to brain, moderate contrast enhancement, calcification is rare.
- MRI (preferred modality) –
  - T1 isointense, heterogenous areas vary in signal due to necrosis or hemorrhage.
  - T2 isointense to gray matter, heterogenous signal due to necrosis or hemorrhage with larger masses.
  - Hematocrit-effect suggests recent hemorrhage



# References

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4. Snyder, Peter J. "Causes, presentation, and evaluation of sellar masses." *UptoDate*, [www-uptodate-com.online.uchc.edu/contents/causes-presentation-and-evaluation-of-sellar-masses?search=pituitary%20adenoma&source=search\\_result&selectedTitle=1~150&usage\\_type=default&display\\_rank=1#H4](https://www-uptodate-com.online.uchc.edu/contents/causes-presentation-and-evaluation-of-sellar-masses?search=pituitary%20adenoma&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1#H4). Accessed 2 Mar. 2019.
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