95F, no hx provided

Krithika Srikanthan, MD

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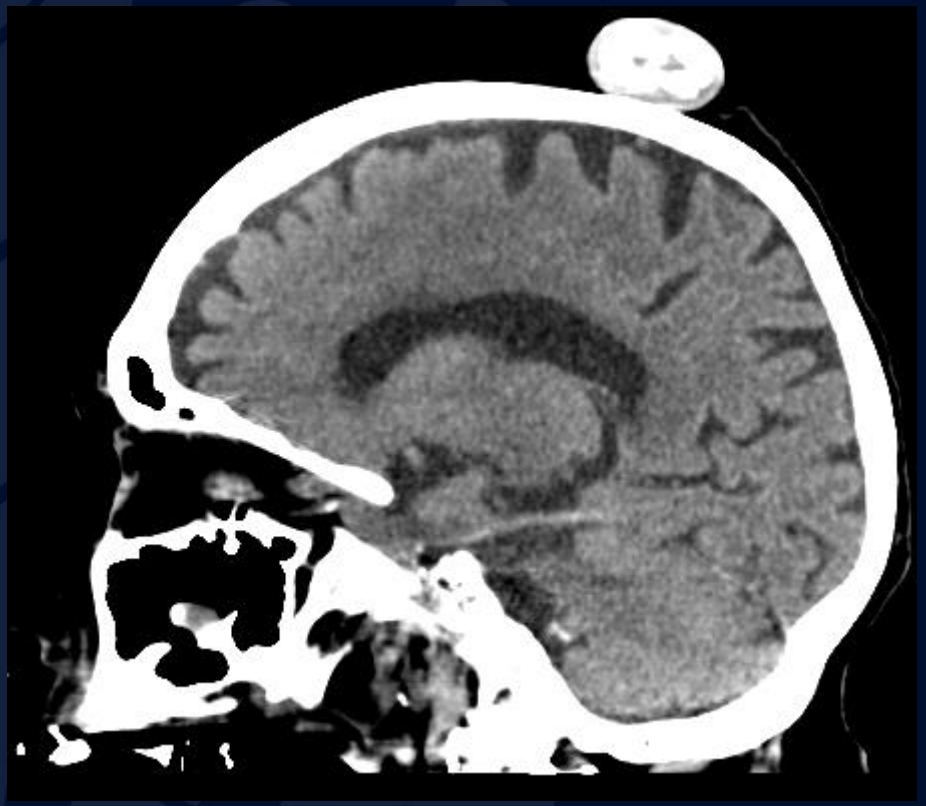
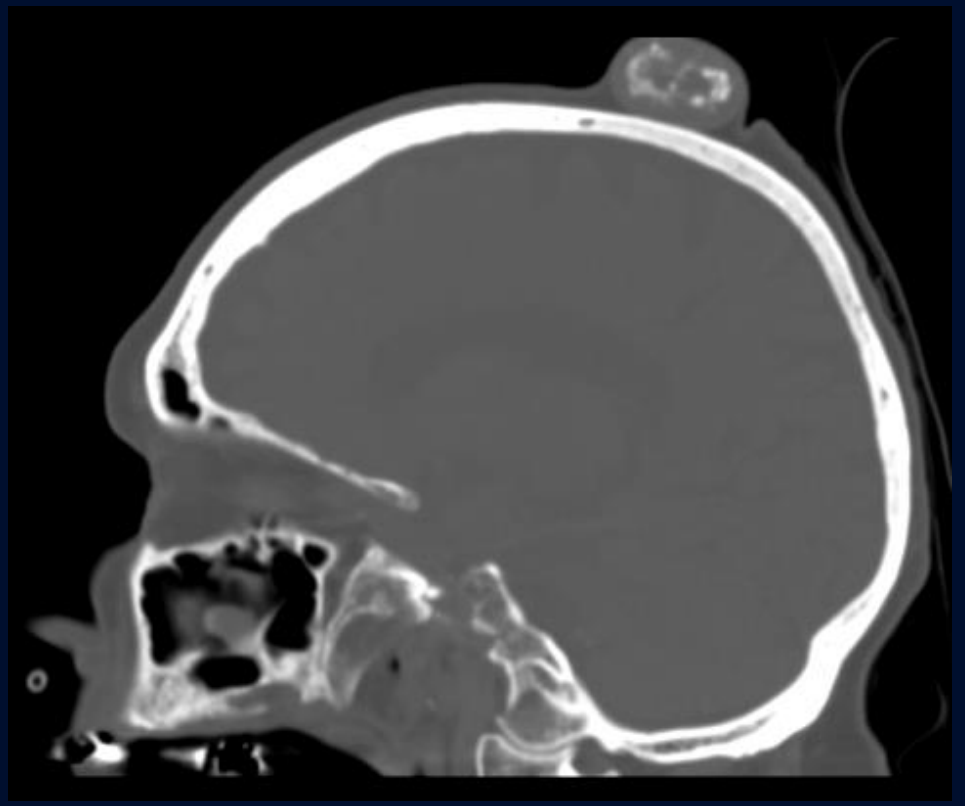
Sagittal Noncontrast CT





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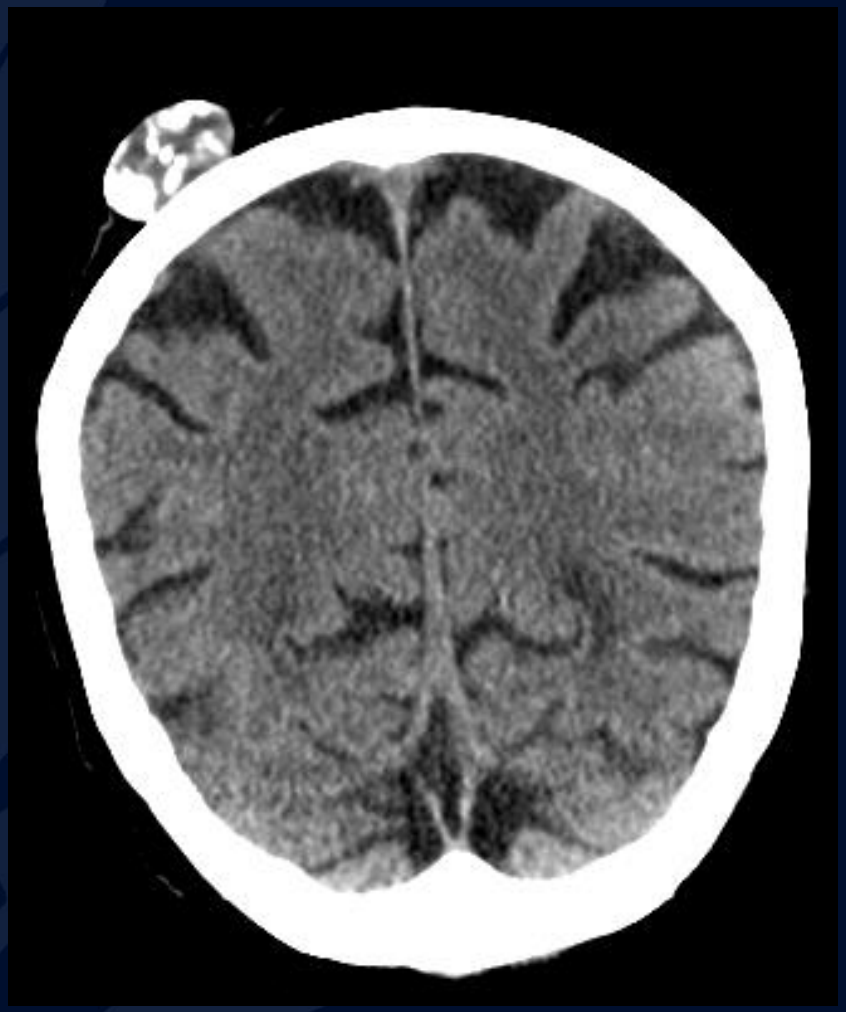
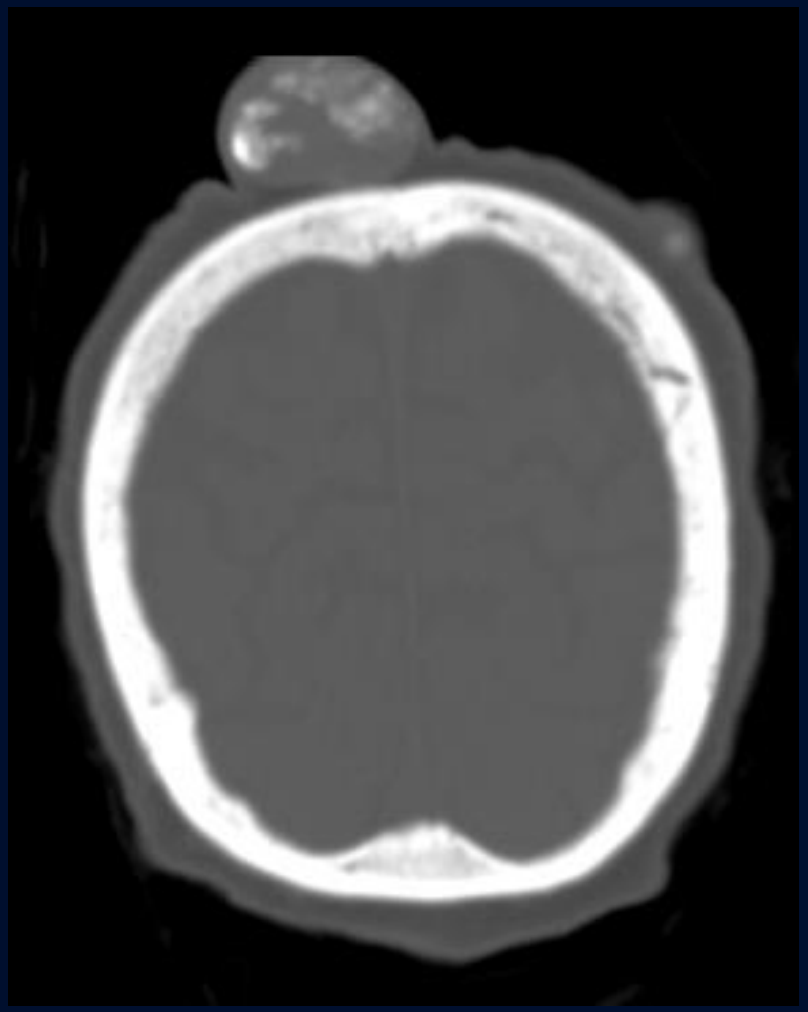
Coronal Noncontrast CT





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Pilomatrixoma

(Pilomatricoma, Calcifying Epithelioma of Malherbe)

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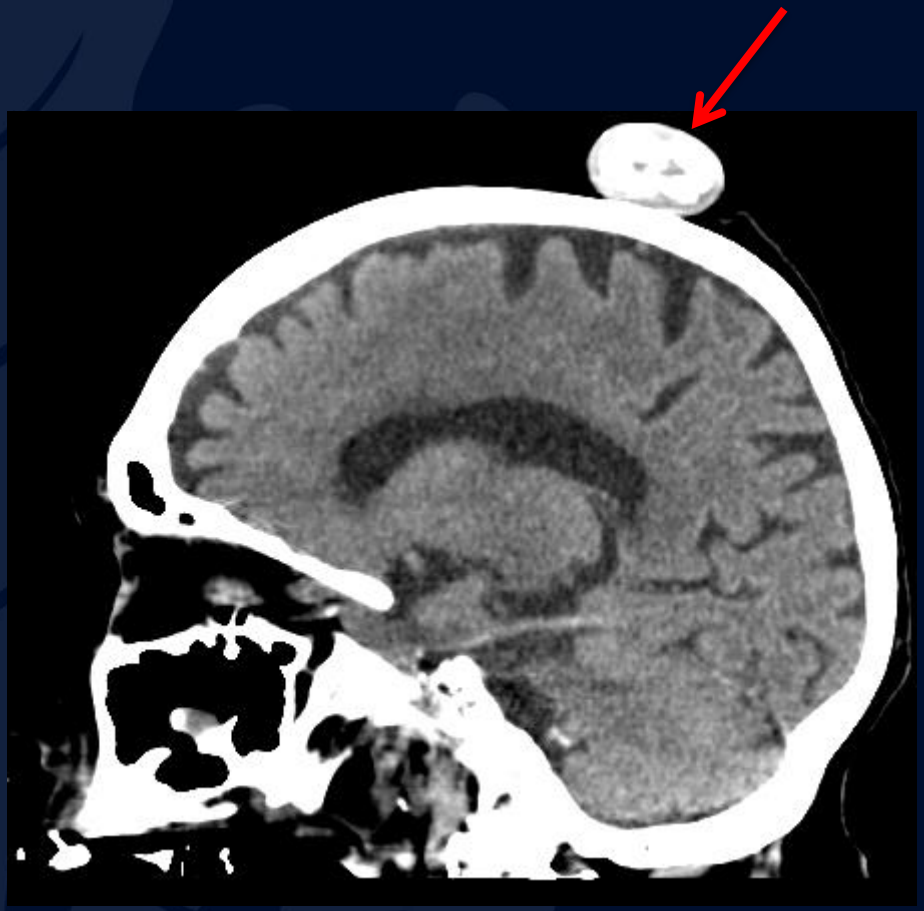

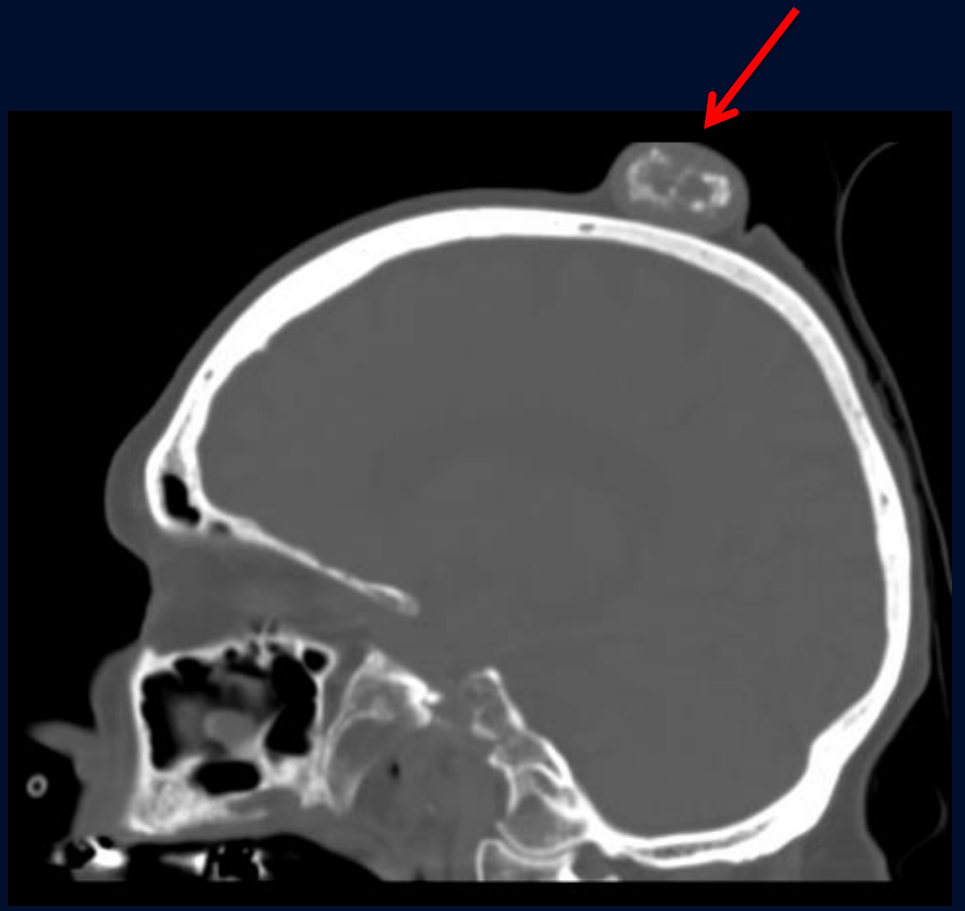

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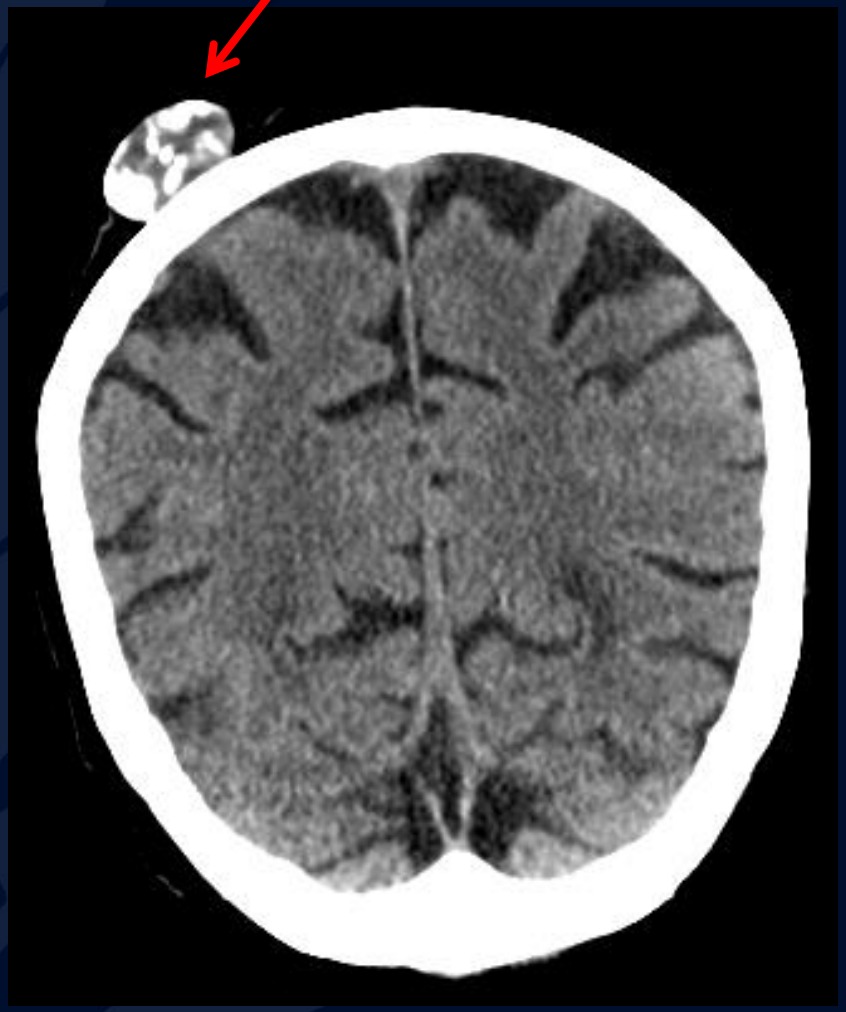
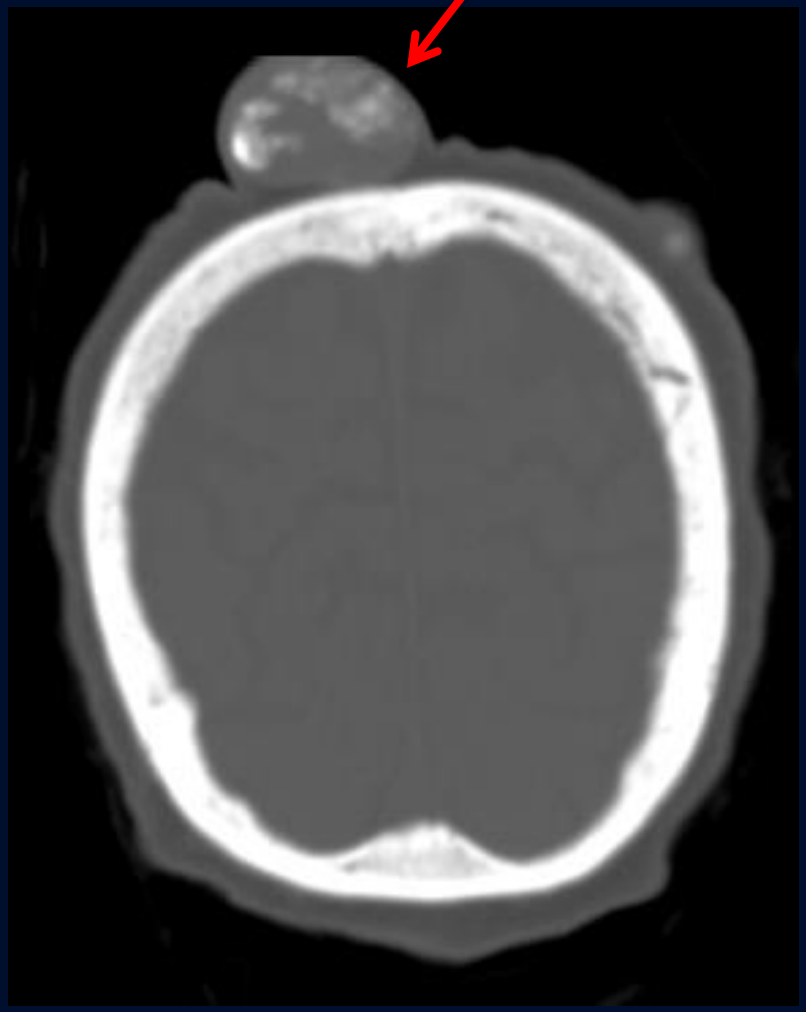
Coronal Noncontrast CT





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Imaging Findings

- CT: well defined, subcutaneous soft tissue attenuation mass +/- calcifications, +/- moderate enhancement.
- US: well circumscribed, ovoid, heterogeneous, solid subdermal mass, containing matrix calcification, intrinsic vascularity, peripheral hypoechoic rim (connective tissue capsule).

Imaging Findings (cont.)

- MRI:
  - T1: uniform, homogeneously low-intermediate signal
  - T2: variable appearance
    - heterogeneous with multiple areas of intermediate signal
    - homogeneous with intermediate - high signal radiating from the centre
  - T1 C+ (Gd): variable, mild to moderate contrast enhancement, some only peripherally enhance
- Imaging studies are not usually required except when the diagnosis is uncertain or for preoperative planning - therefore the radiology literature on the subject is sparse.
- No method of imaging produces a firm definitive diagnosis – histopathological diagnosis.

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Pilomatrixoma

- Benign tumor arising from cells of hair matrix.
- Incidence ranges between 1 in 500-2000.
- Make up 0.12% of cutaneous neoplasms and 20% of all hair follicle related tumors.
- F>M; Caucasians; Children.
  - Developmental bimodal peak during the first and sixth decades of life.
  - 60% of cases develop before the age of 20 years.
- 75% have mutations in *CTNNB1* gene – regulates β-catenin/LEF, which influences hair matrix cell tumorigenesis
- Usually solitary but up to 3% are multiple.
- Presentation: Painless, slow growing, superficial, mobile, hard mass.
  - Overlying skin with bluish-red discoloration, 0.5 - 5cm diameter.
  - 58% of cases occur in the head and neck region.
- Rare - malignant transformation into pilomatrix carcinoma
- Rx: Surgical excision. In most cases, the tumors do not recur after surgery, unless incomplete excision.

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Differential Diagnosis

- epidermal inclusion cyst
- ossifying hematoma
- giant cell tumor
- chondroma
- dermoid cyst
- foreign body reaction
- degenerating fibroxanthoma
- metastatic bone formation
- osteoma cutis

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References

- Radiopaedia
- Statdx
- http://appliedradiology.com/articles/pilomatricoma
- https://rarediseases.info.nih.gov/diseases/9452/pilomatrixoma

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