Retinoblastoma

- Most common ocular tumor in childhood < 3
- **90% are a sporadic mutation**
- **98%** occur before 3
- Familial is dominant with variable penetrance, often bilateral.
- Other tumors in hereditary form (pineal, PNET, osteosarcoma, Melenoma, Rhabdomyosarcoma)
- Pineal gland is the 3rd eye.
- May have **associated retinal detachment**

Retinoblastoma

- 30% BILATERAL
- TRILATERAL – Develops in 4-7% of patients with bilateral disease (PINEAL, Suprasellar, 4th Vent)
- Intracranial tumor develops after 2-3 yr latency
- Most sporadic; 10% familial

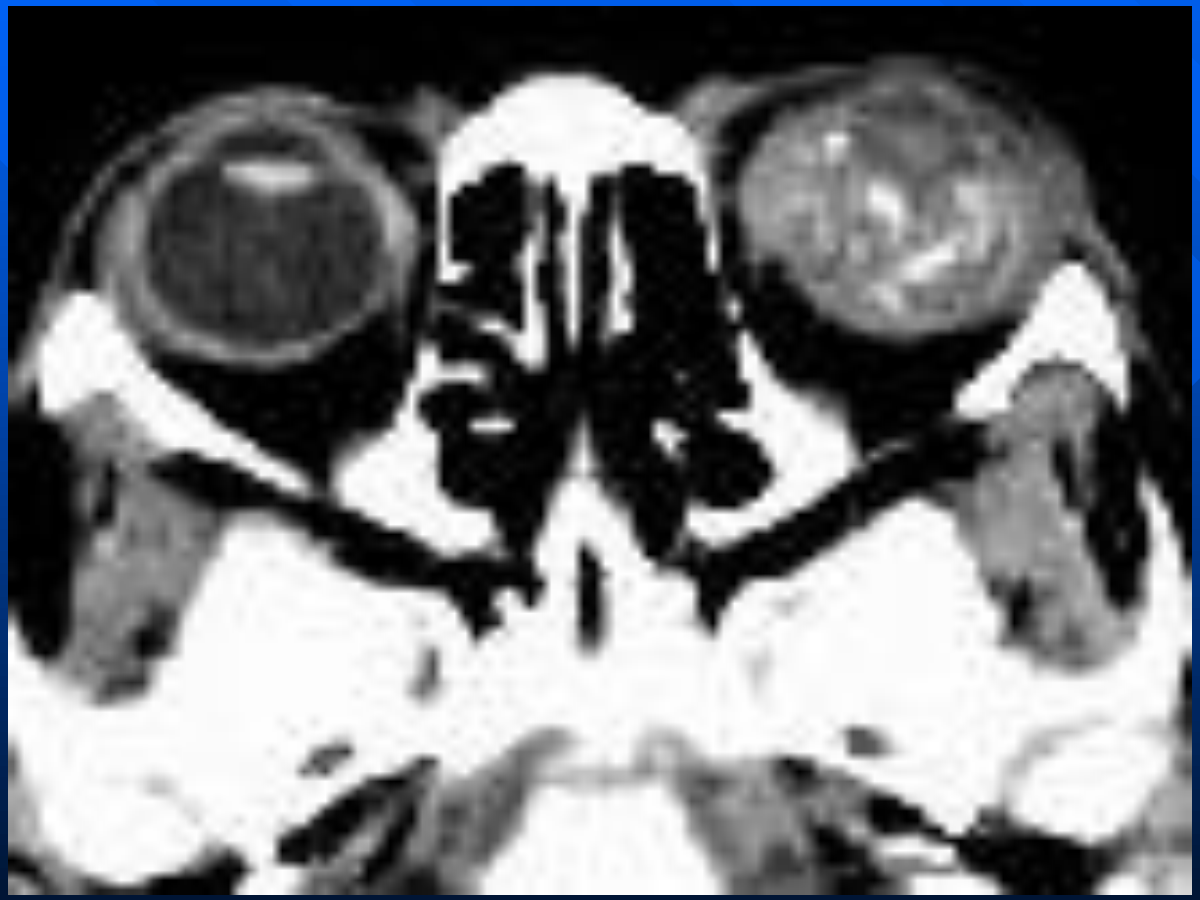
Retinoblastoma

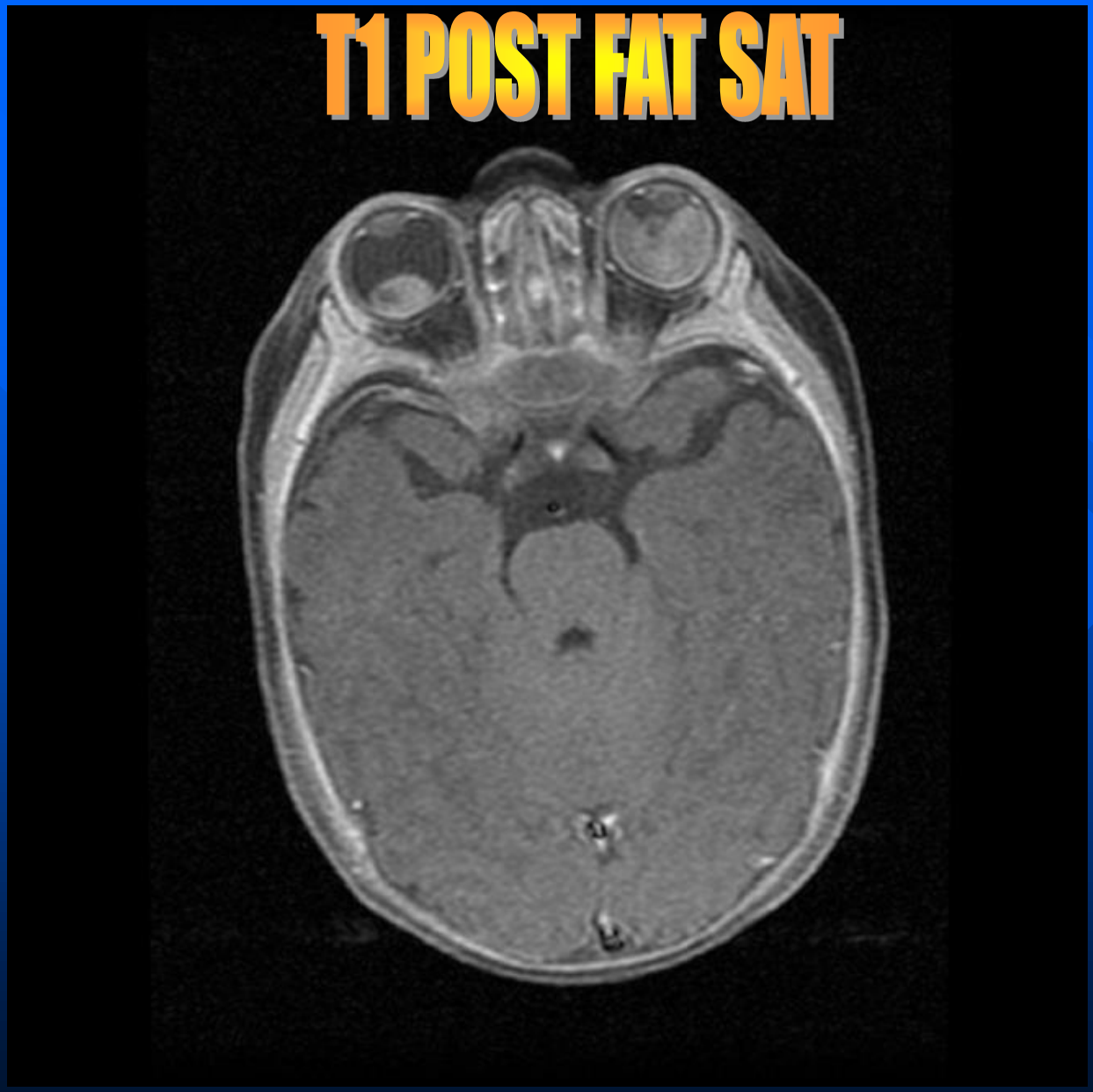
- Presentation = enhancing calcified nodular mass (95%)
- Mode of spread = intracranially via the optic nerve OR through sclera into orbital lymphatics
- Prognosis = 90% cure for unilateral disease

Imaging

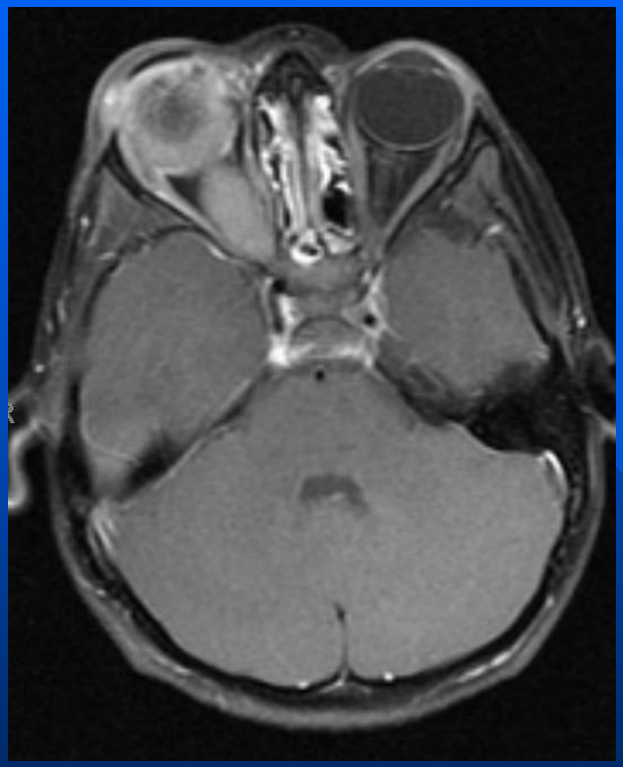
- CT and MRI are complimentary.
- **CT Findings**
  - **Calcification** in the posterior globe, highly sensitive and specific in child less than 3
  - **Occurs in 95**% of patients.
- Minimally enhance
- **MRI**
  - **↑T1** and **↓T2**
  - More sensitive for tumor extension

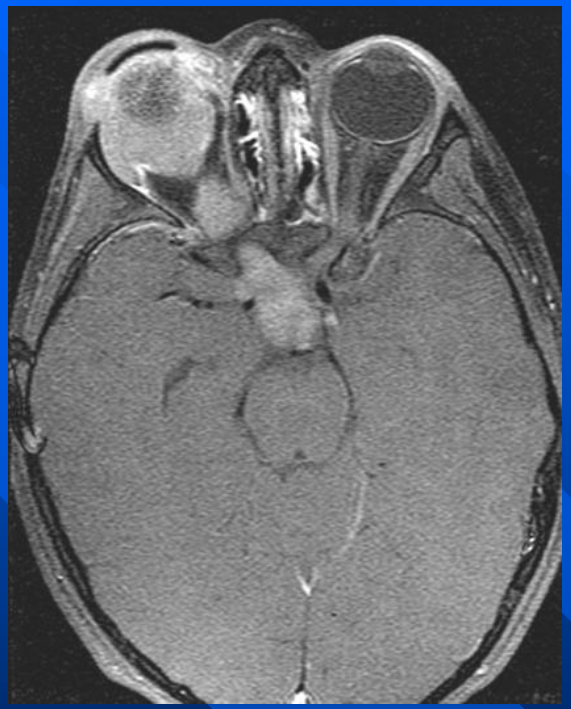
Retinoblasoma

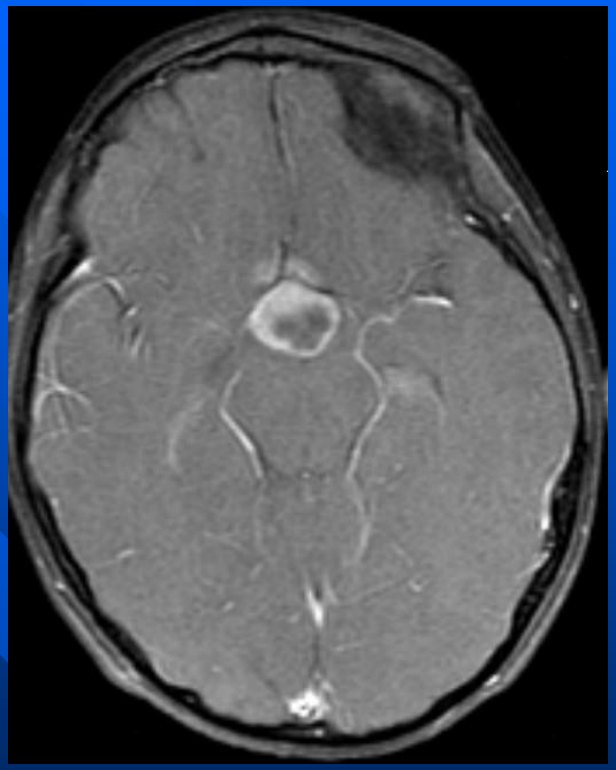


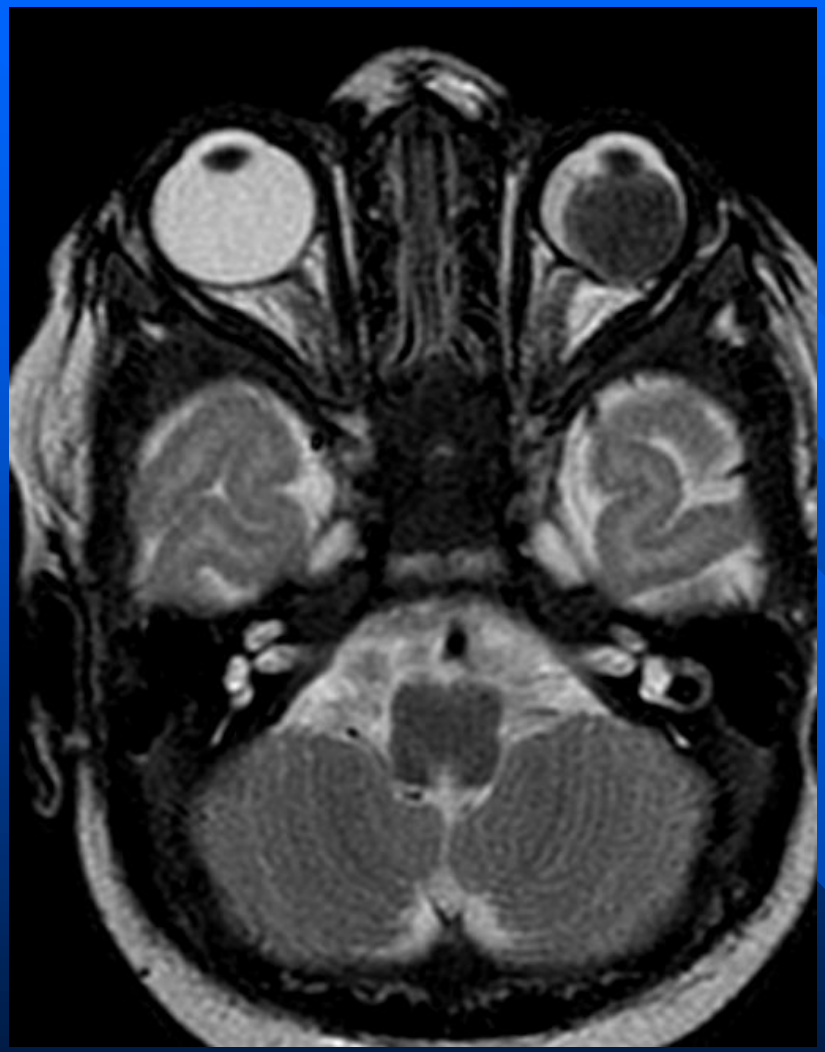

T1 POST FAT SAT

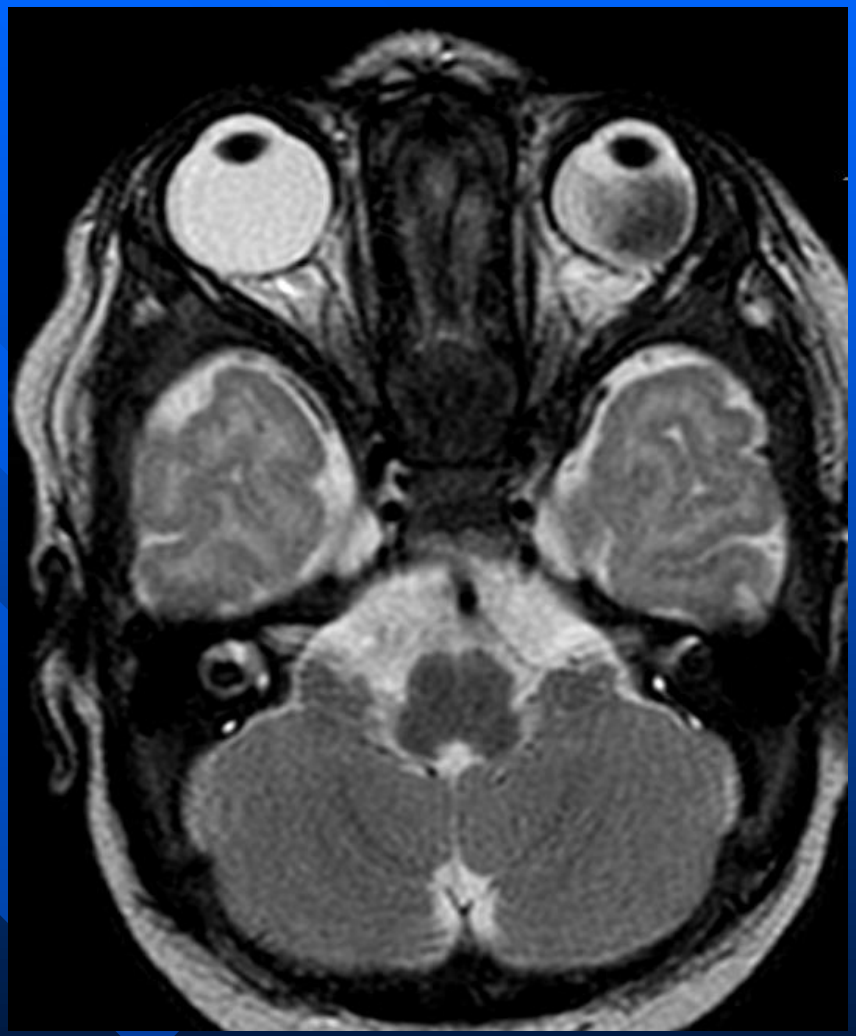
Advanced Retinoblastoma











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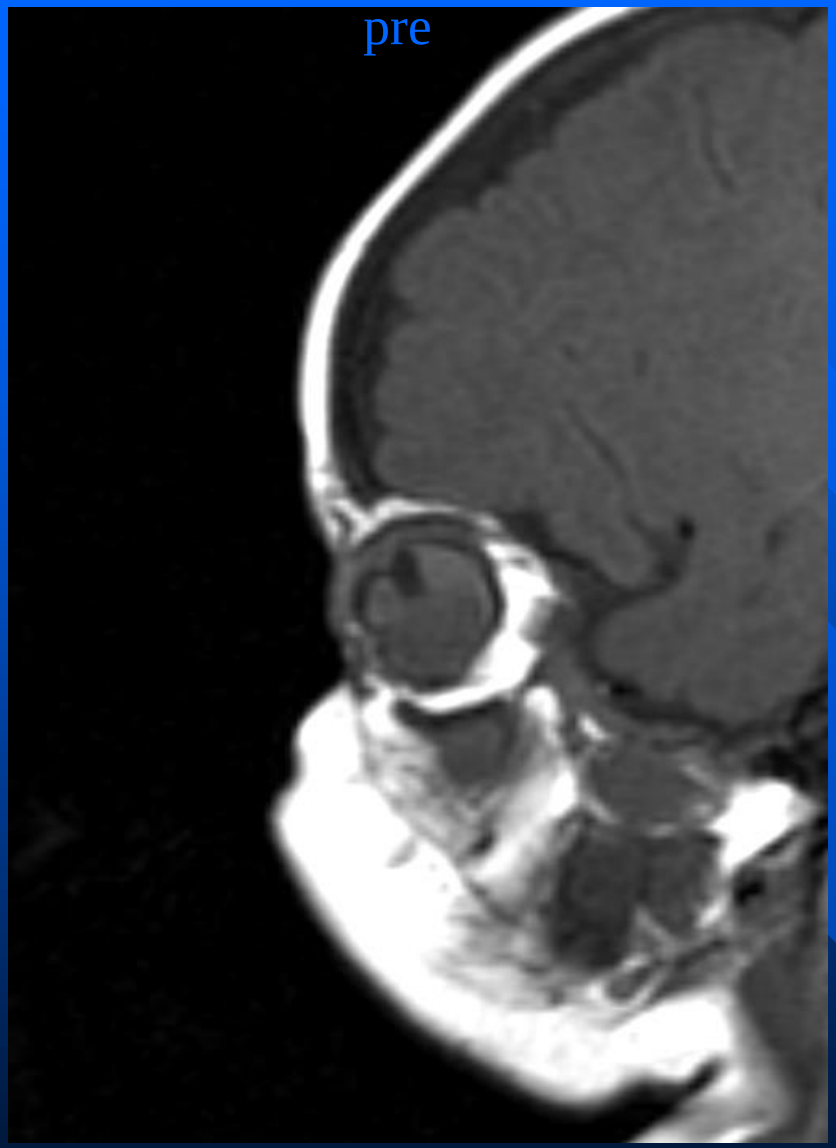
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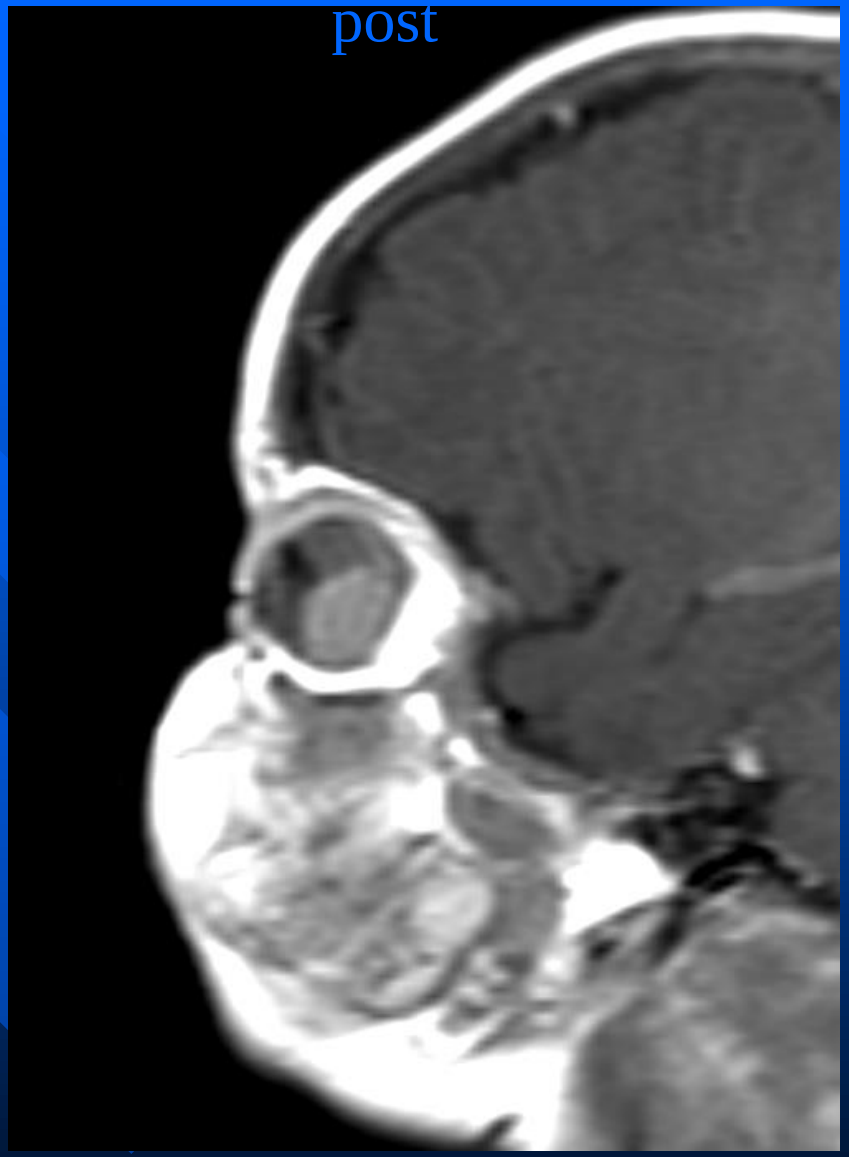
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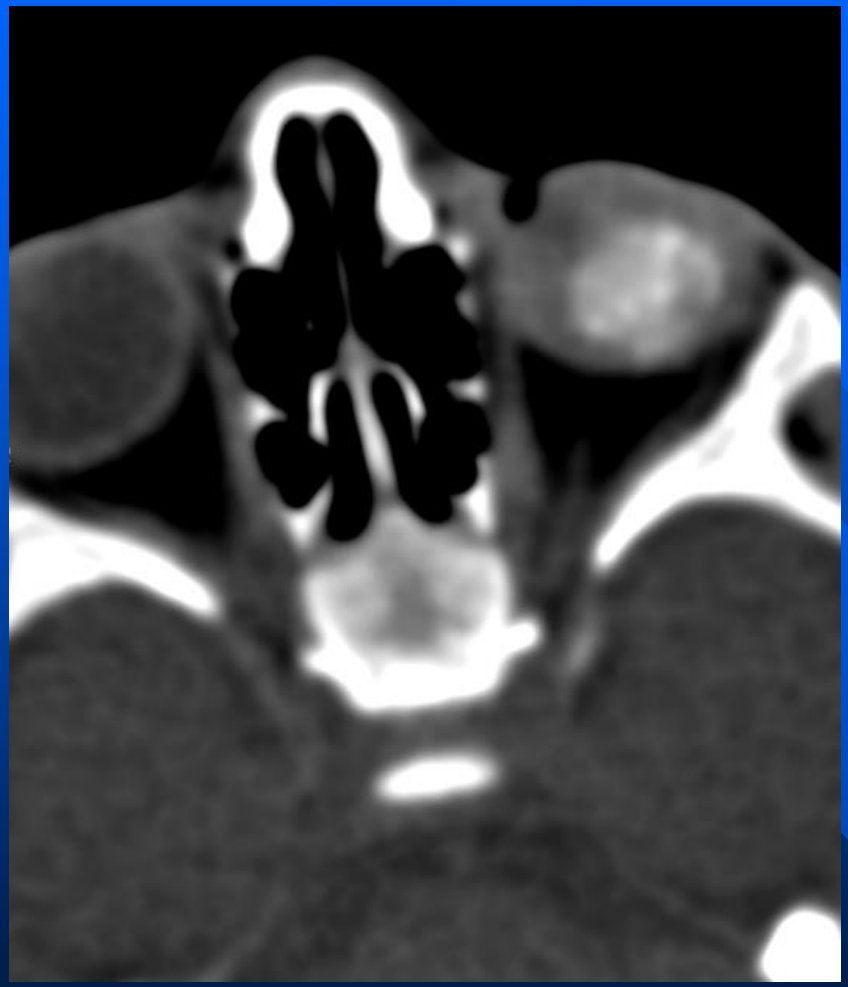

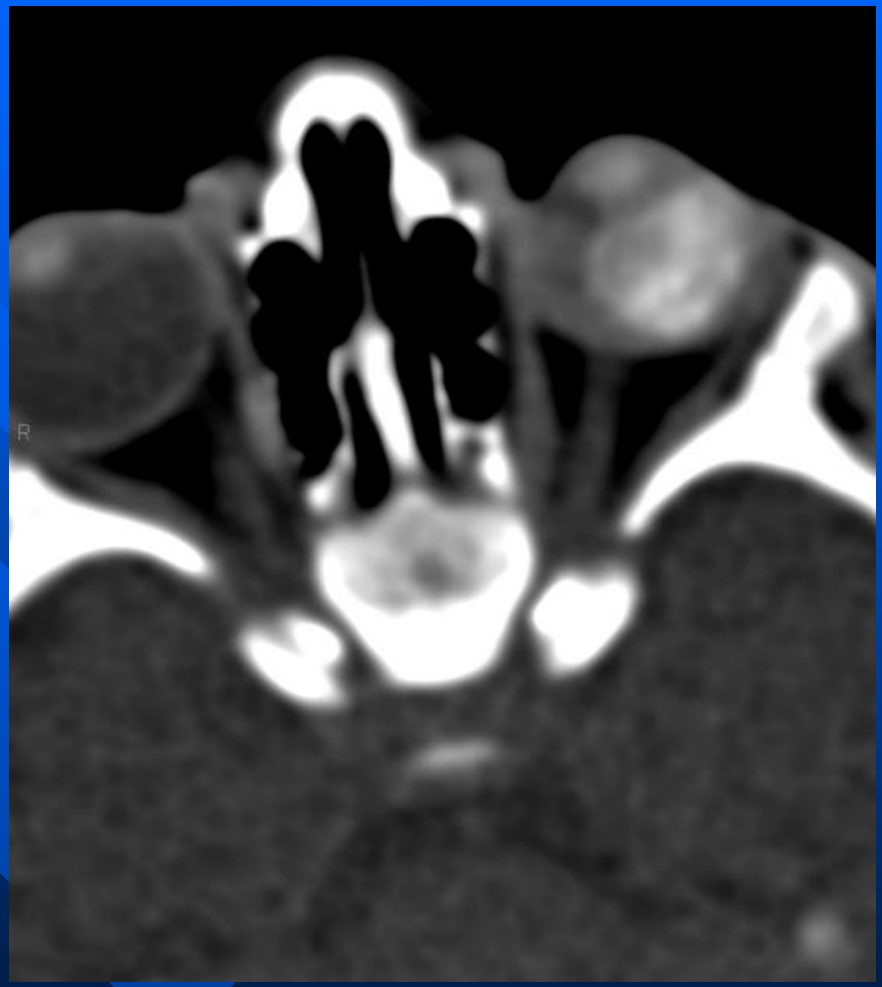

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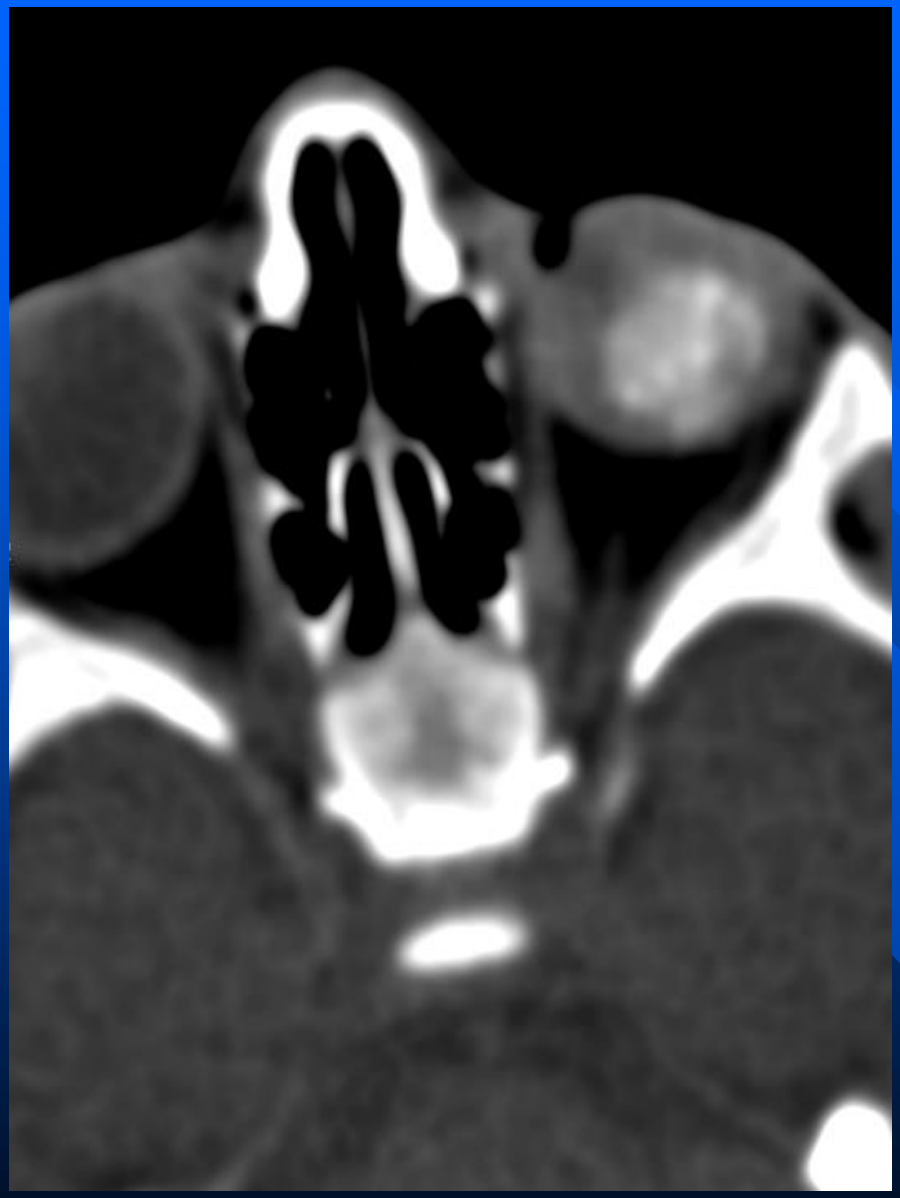

Dx: Retinoblastoma