

# Esthesioneuroblastoma

## AKA Olfactory Neuroblastoma

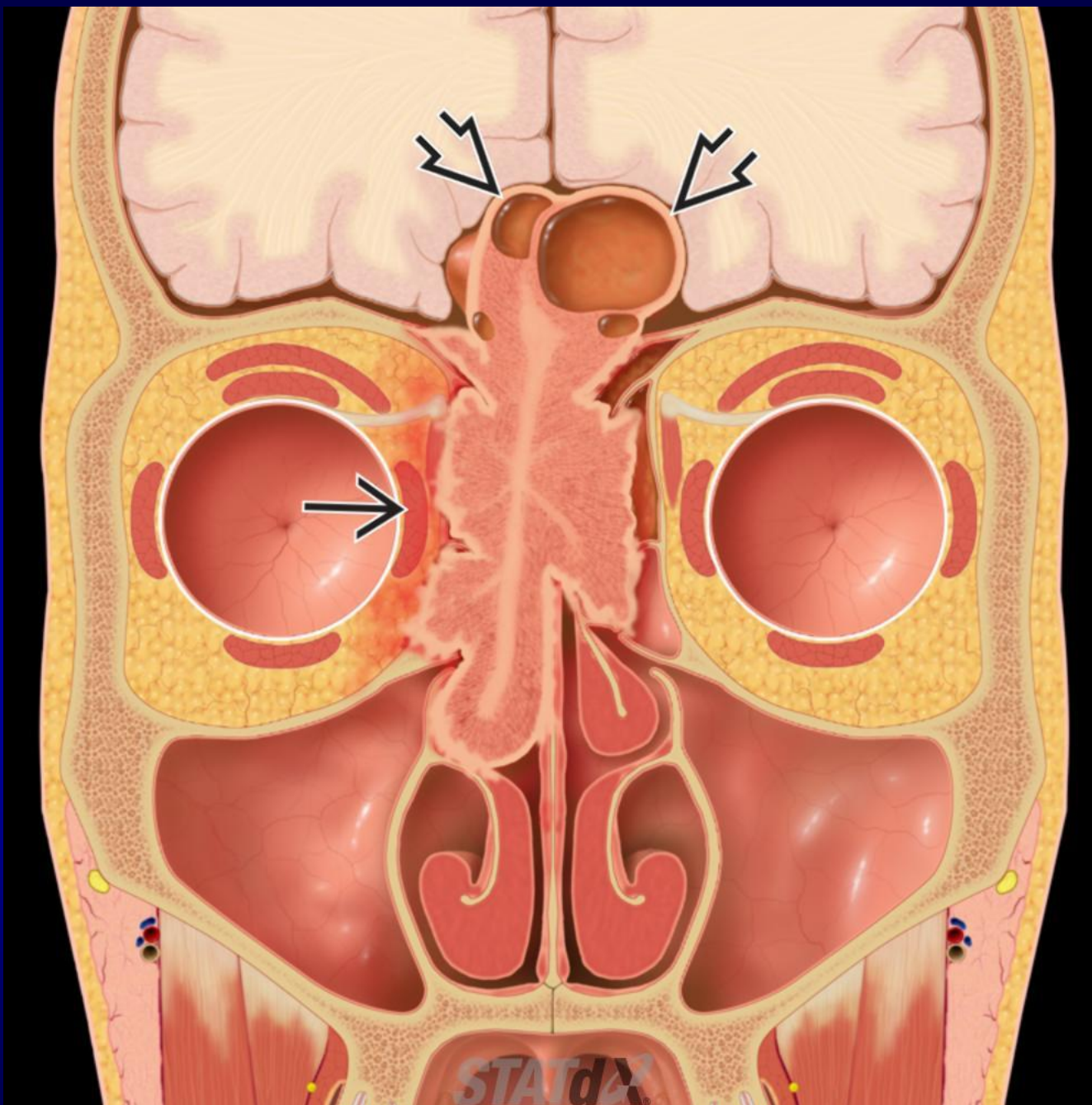
- Tumor of neural crest origin
- Accounts for 2% of sinonasal malignancies
- Arises in nasal cavity near cribriform plate
- Age range 3 to elderly
- Nasal cavity mass, erosion of cribriform plate, often with intracranial extension
- Peripheral intracranial tumoral cysts

# Imaging

- Enhanced MR & bone CT best delineate ENB for en bloc craniofacial surgery
- **Dumbbell-shaped** mass with "waist" at cribriform plate
- Bone CT: Bone remodeling mixed with bone destruction, especially of cribriform plate
- CECT/T1 C+ MR: Homogeneously enhancing mass
  - **Cysts** at intracranial tumor-brain margin
- Mildly restricted diffusion: Small round blue cell tumor
- T2 MR sequences best differentiate tumor from sinus secretions

# Clinical Issues

- **Adolescent or middle-aged** patient with unilateral nasal obstruction & mild epistaxis
  - Bimodal distribution in 2nd & 6th decades
  - Slight male predilection
- Combined surgical resection & radiotherapy is treatment of choice
- Excellent prognosis vs. other sinonasal malignancies
  - 5-year survival rates: 75-77% overall
  - Recurrence in ~ 30%
  - Metastases in 10-30% of patients



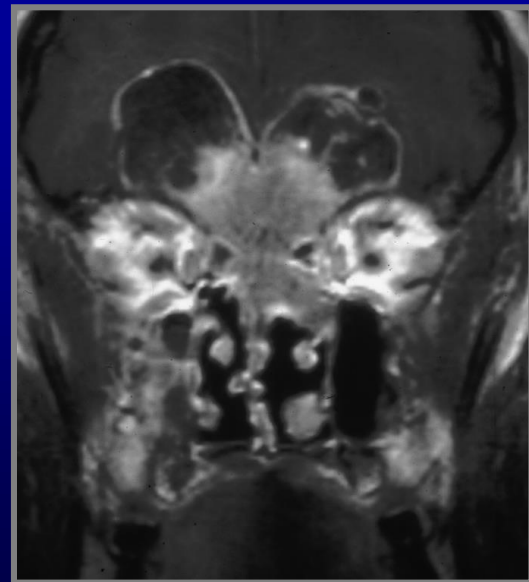
Coronal graphic shows the classic features of esthesioneuroblastoma (ENB) centered below the cribriform plate and extending into the anterior cranial fossa and right orbit (black solid arrow). Cyst formation (black open arrow) is noted at the tumor-brain interface.



Coronal T1 C+ FS MR shows an avidly enhancing ENB with extension into anterior cranial fossa (white solid arrow) and both orbits (white curved arrow). Avid enhancement is characteristic of this highly vascular neoplasm. Note the trapped maxillary secretions (white open arrow).

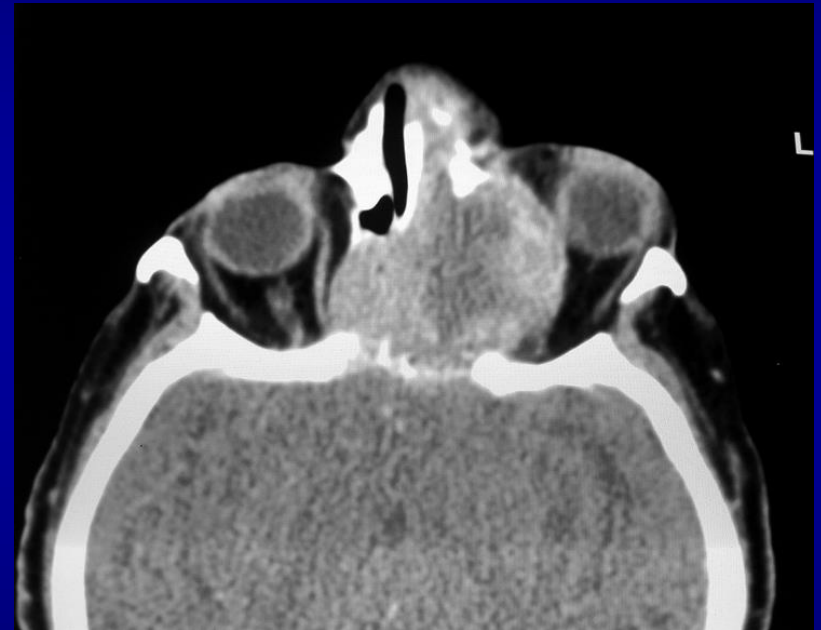
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- Carefully look for skull base erosion
- T1 Cor Gado+ best for intracranial extension





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*Mass eroding intra-cranially consider carcinoma, sarcoma, lymphoma, metastasis, inverted papilloma, Esthesioneuroblastoma*