

## Skull Base (Middle Cranial Fossa Lesions)

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### Abstract

Anatomy: middle cranial fossa mainly floored by sphenoidal bone and located post. To innominate bone or lesser wing and ant. to temporal bone. Main foramens are located in deep part, bilateral to sellae are orbital fissures, optic canals, foramen rotundum, ovale and spinosum, foramen lacerum also meckle cave or trigeminal impression and carotid canal. This fossa is like a butterfly in shape. Lesions: related to basic anatomy optic canal (gliomas, schwannomas) chiasmal, anterior clinoidal and middle also post clinoidal tumors (meningiomas) pituitary macroadenomas, carotid aneurysms, cavernous sinus tumors, all nerve tumors in related foramens or fissures, arachnoid cysts, skull base metastasis, bone tumors like Ewing's sarcoma and osteogenic sarcoma. Imaging: both CT and MRI with and without contrast are needed for exact diagnosis but CT is special for bone and MRI for soft tissue and vessels. They are complementary for each other. CT also is special for calcification, sclerosis and CSF leakage. Useful MR pulses are T1, T2 of spin-echo, STIR-T2, T2\* (calcification, paramagnetic effect and melanin) and DWI to DDX between benign and malignant tumors. T1+GD images are necessary to enhance lesions. PET-CT and PET-MR for metabolic activity and metastatic evaluation could be helpful. Radiology and imaging for surgery: imaging is not only necessary for diagnosis but for a good and one and only way to find surgery approach and reducing post-op. complication even complications in surgery room. By modern operating rooms and in future real time CT and MRI could control surgery procedure.

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