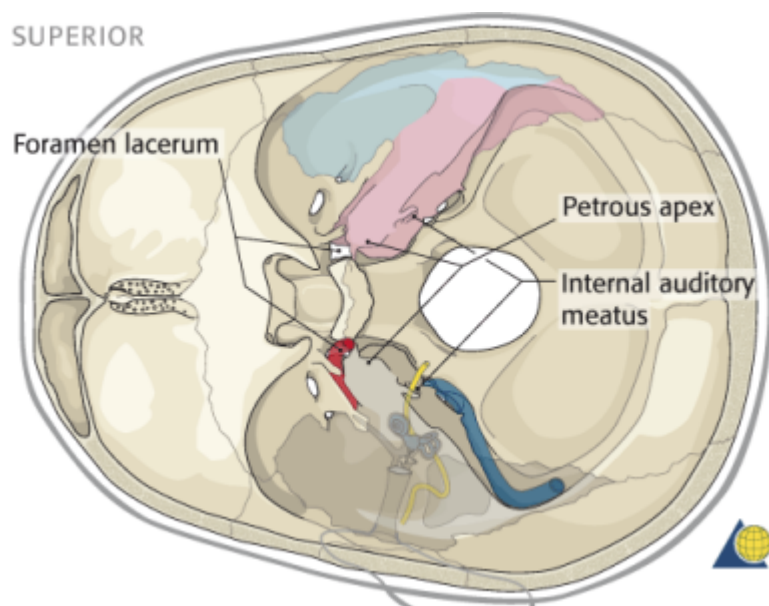


Petrous apex



https://www2.aofoundation.org/AOFileServerSurgery/MyPortalFiles?FilePath=/Surgery/es/_img/surgery/01-Diagnosis/93/Lateral-skull-base/LS_Diagnose_i230_L.gif

The apex of the **petrous bone**, rough and uneven, is received into the angular interval between the posterior border of the great wing of the **sphenoid** and the basilar part of the **occipital bone**; it presents the anterior or internal orifice of the **carotid canal**, and forms the postero-lateral boundary of the **foramen lacerum**.

The **petrous** apex is a pyramid-shaped bone with three surfaces: anterior, posterior, and inferior.

Limits

The anterior surface is limited by the **foramen lacerum**, **sphenopetrosal fissure**, facial nerve hiatus, and **arcuate eminence**.

The posterior surface is limited by the **petrooccipital fissure** (inferior petrosal sinus sulcus), the superior lip of the **jugular foramen**, and the posterior border of the **internal auditory canal**.

The inferior surface of the petrous apex is limited by the foramen lacerum, petro-occipitalis fissure, medial lip of the carotid canal, and sphenopetrous fissure. These three surfaces point to the clivus region posteroanteriorly.

Gianoli and Amedee (1994) also described the petrous apex as a pyramidal segment and divided this structure in two parts through the internal auditory canal. The anterior portion is related to the auditory tuba, the major superficial petrous nerve, the trigeminal nerve, the cavernous sinus, and the internal carotid artery. The posterior portion, formed by dense bone, is located between the internal auditory canal and semicircular canals.

Different surgical approaches to this region have been described, and each has its advantages and disadvantages. The choice of surgical approach depends on the pathology, the clinical status of the patient (hearing grade, facial palsy, infection), the extent of the tumor, and the experience of the

surgeon.

Skull morphology is also involved in the choice of an approach because the distance between the external cortical table of the skull and the petrous apex varies with skull types.

Lesions

see [Petrous apex lesion](#).

Approach

see [Petrous apex approach](#).

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