

# Middle Fossa Approach for Facial Nerve Schwannoma

The treatment paradigm of [skull base surgery](#) has been changed from radical tumor resection to maximal tumor removal while giving priority to functional preservation. [Facial nerve schwannoma](#) is one of the representative disorders of this type of paradigm shift.

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González-López et al. describes the [Middle Fossa Approach](#) along with its [advantages](#) and [limitations](#) to treat a [facial nerve schwannoma](#) involving the middle and [posterior cranial fossa](#).

The MFA is a well-established route to surgically deal with tumors located in and around the proximal four segments of the facial nerve <sup>1)</sup>

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A video demonstrates facial nerve schwannoma surgery through the middle fossa approach, aiming for improvement of facial function.

A 33-yr-old woman presented with gradually worsening [facial palsy](#) (House-Brackmann grade IV), [dizziness](#), and [nausea](#). [Neuroimaging](#) revealed a growing tumor involving the [geniculate ganglion](#), and extending to the [middle fossa](#), [internal acoustic meatus](#), and [cerebellopontine angle](#). The nerve-sparing surgery through the left [middle fossa approach](#) was performed under detailed [neuromonitoring](#) including the evoked facial electromyograms and auditory brainstem response. The facial nerve fibers were involved within the tumor mass and the plane between the tumor and facial nerve could not be identified as seen in most cases of such large facial nerve schwannomas. But sufficient tumor removal with facial nerve preservation was achieved owing to continuous facial monitoring.

The patient had no new neurological deficits. Her facial palsy has been gradually improving, now at grade III, without any signs of tumor regrowth during the 10 mo of follow up after the operation. Careful follow up is being continued to survey the possible tumor recurrence. The video was reproduced after informed consent of the patient <sup>2)</sup>.

<sup>1)</sup>

González-López P, Martorell-Llobregat C, Beneš V, Daniel RT. Middle fossa approach for a facial nerve schwannoma: how I do it. Acta Neurochir (Wien). 2022 Apr 6. doi: 10.1007/s00701-022-05199-6. Epub ahead of print. PMID: 35384500.

<sup>2)</sup>

Matsushima K, Kohno M, Izawa H, Tanaka Y. Middle Fossa Approach for Facial Nerve Schwannoma Aiming for Functional Improvement: 2-Dimensional Operative Video. Oper Neurosurg (Hagerstown). 2019 Jul 13. pii: opz178. doi: 10.1093/ons/opz178. [Epub ahead of print] PubMed PMID: 31301140.

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