The focus of vestibular schwannoma surgery has shifted from low mortality and tumor resection to retention of neurological function. Hearing preservation is another point in addition to facial nerve function preservation. Hearing preservation rates overall ranged from 2% to 93% in recent studies. Characteristics such as approach, pre-operative neurological function, tumor size, nerve of origin and fundal fluid of the internal auditory canal have been reported as possible influencing factors [1].

The presence of fluid in the fundus on preoperative MRI is predictive of hearing outcomes and should be used in counseling patients who are considering hearing preservation surgery via a middle cranial fossa approach for the treatment of isolated vestibular schwannoma [2].

1)
Tan HY, Wang ZY, Wu H. [Factors of hearing preservation in acoustic neuroma surgery]. Zhonghua Er Bi Yan Hou Tou Jing Wai Ke Za Zhi. 2017 Oct 7;52(10):783-786. doi: 10.3760/cma.j.issn.1673-0860.2017.10.016. Chinese. PubMed PMID: 29050101.
2)
Goddard JC, Schwartz MS, Friedman RA. Fundal fluid as a predictor of hearing preservation in the middle cranial fossa approach for vestibular schwannoma. Otol Neurotol. 2010 Sep;31(7):1128-34. doi: 10.1097/MAO.0b013e3181e8fc3f. PubMed PMID: 20657334.