

Acoustic Neuromas

Acoustic neuromas are the most common type of tumor that develops in the acoustic nerve. These benign tumors grow on the vestibular (balance) nerve where it emerges into the cerebellopontine angle (at the base of the skull). In particular they arise from the Schwann cells (hence the synonym schwannoma) of the 8th cranial nerve, which is responsible for transmitting sound impulses to the brain. Acoustic neuromas may also occur in other nerves, such as the 5th cranial nerve. They are sometimes called neurinomas or neurolemmomas.

Symptoms caused by acoustic neuromas

Most acoustic neuromas are slow growing, benign tumors. As acoustic neuromas grow larger, however, they exert pressure on hearing nerve and the blood supply to the inner ear, leading to hearing loss. If the tumor compresses the hearing and balance nerves, tinnitus and dizziness may also occur. Even the brain itself may become compressed, leading to symptoms including headache (often from hydrocephalus, which is excessive cerebrospinal fluid in the ventricles of the brain), disturbances of balance and gait, and facial numbness. In many middle aged patients, hearing loss is the first symptom.

Treating Acoustic Neuromas (*Acoustic Neuromas may be treated by watchful waiting, radiation therapy, or microsurgical removal*)

Watchful Waiting. Patients who have small tumors and few side effects may opt to wait and watch, under very careful monitoring by their physicians. Neuromas grow an average of 2 to 4 mm (1/12 to 1/6 of an inch) per year, but their growth rate may slow down or speed up unpredictably. They may also remain stable, sometimes for years. MRIs should be taken every six-twelve months in order to continuously monitor the tumor.

Radiation Therapy. Radiation therapy may be used to shrink tumors that are generally 3 cm in diameter or smaller. There are many forms of radiation therapy, and their results vary according to factors such as the dosage levels, methods of targeting the tumor, accuracy, and physicians' experience. Overall, radiation therapy can shrink tumors, but does not remove them completely.

Surgery. Surgical procedures can remove tumors completely, and is the treatment of choice for patients who are able to undergo surgery. The recurrence rate is less than 0.1% after complete removal. Surgical procedures include a range of techniques, using either traditional excision and radiosurgery. All of these procedures are undergoing continuous improvement and innovation.