



# SANAMI

Sydney Acoustic Neuroma and Meningioma Institute

## Acoustic Tumours (Acoustic Neuroma, Vestibular Schwannoma)

Acoustic tumours are non-malignant growths, originating on the balance nerve, that do not spread (metastasize) to other parts of the body. The balance nerve helps your body to maintain balance. Acoustic tumours constitute six to ten percent of all brain tumours.

The tumour arises in the bony channel carrying the hearing and balance nerves from the inner ear to the brain (Figure 1). The first signs or symptoms one notices usually are related to ear function and include ear noise and disturbances in hearing and balance. As the tumours enlarge, they may involve other surrounding nerves (such as facial sensation and movement) and brain structures often in the area of vital bodily functions, like breathing and blood pressure. Headache may develop as a result of increased pressure on the brain. If allowed to continue over a long period of time, this pressure on the brain could ultimately be fatal.

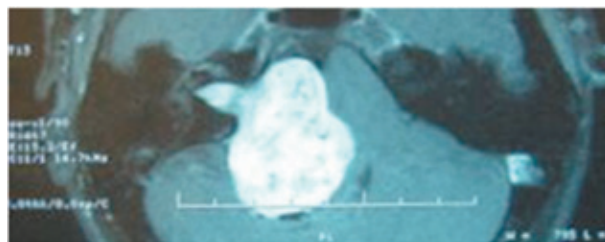


**Figure 1 – the black arrow points to an acoustic tumour growing in the bony channel between the inner ear and brain.**

In most cases, these tumours grow slowly (typically at 1 mm/year) over a period of years. In others, the rate of growth is more rapid (up to 10 mm per year). In some, the symptoms are mild, and in others, severe, multiple symptoms develop rather rapidly.

The patient with an acoustic tumour has a significant problem, therefore, many diagnostic procedures are used to be as certain as possible of an accurate diagnosis. A hearing test, balance test and MRI scan (see Figure 2) are routine to confirming the diagnosis. Using these tests, the exact diagnosis can be established most of the time.

Once the diagnosis is confirmed, three broad management options exist depending on the patient's general health, tumour size / growth rate and the tumour's affect on other critical nerves. The SANAMI team will discuss and assess your case on an individual basis depending on these factors and offer one of three management options. Watchful waiting, where the tumour is closely observed with MRI scans to see if it is growing.



**Figure 2 – MRI scan of large acoustic tumour**

Radiation therapy, is the second option, where radiation is used to arrest tumour growth. Microsurgical excision is the gold standard for large tumours or tumours (larger than 15mm) where growth is demonstrated.

Your SANAMI team that assesses acoustic tumours includes specialist skull base neurosurgeons and a neurotologist (ear surgeon with specialist acoustic tumour training). The team discusses each case, evaluates the MRI images and offers the most appropriate management option based on each person's individual circumstance and tumour. Along with your specialist surgical team our group only works with specialist trained neurosurgical anaesthetists, neurosurgical/ neurotological surgical nurses and neurosurgical ICU nurses. Our facial nerve preservation rates are very high and comparable with the largest and most respected units in the world.

If surgery is appropriate for you and you elect to proceed with the operation, then your first post operative night and day will be in one of Australia's most well respected and largest ICU units, North Private ICU. The rest of your aftercare will be in a specialist neurosurgical post operative ward with neurosurgical nurses.

At SANAMI, some of our senior skull base neurosurgeons established the Sydney Neuro-oncology Group (SNOG) for the advancement of molecular research into skull base tumours. If you do decide to proceed with surgery, then we will ask you to agree to include a small portion of your tumour (once it has been removed) in our research. A small piece of the tumour will be removed and sent to the SNOG research centre, in the North Shore Campus, to join one of Australia's largest molecular skull base tumour databases. The SNOG group are actively researching molecular mechanisms of skull base tumour genetics, growth and development.

Patient's with an acoustic tumour expect excellent care. At SANAMI we look forward to providing you with the highest quality, most ethical, comprehensive and compassionate care possible. Visit the SANAMI difference [www.sanami.com.au](http://www.sanami.com.au)