

## CONSENSUS STATEMENT OF THE ABI ADVISORY GROUP

Developed at the:

### **2nd International Auditory Brainstem Implant Symposium, Freiburg, Germany, 22nd–24th April 1999**

An auditory brainstem implant (ABI) may be used to restore a sense of hearing for subjects with neurofibromatosis type 2 (NF2) and other bilateral auditory nerve pathology. The procedure for ABI surgery is complex and combines the skills of a multidisciplinary team comprising specialists in otology, neurosurgery, electrophysiology, neuro-radiology and anaesthesiology. Furthermore, as the indication for the ABI is rare, due to the low incidence of NF2 and other bilateral auditory nerve disease, it will be difficult for centres seeing very few potential candidates to achieve excellence in the surgical technique or develop the skills to programme the patient's equipment effectively. The optimal outcome for the patient might not be assured.

As a result of these concerns a meeting was held amongst international experts involved in auditory brainstem implantation to gain a consensus on the criteria necessary to secure the best outcome for potential ABI patients. These criteria were presented publicly at the above meeting for further discussion. The statements below represent the common views of experts and participants:

#### **Pre-requisites for an ABI centre**

*Extensive experience* with the surgical removal of tumours of the cerebellopontine angle and an *established* cochlear implant programme with a professional team.

- (1) A minimum level of relevant oto- and/or neurosurgical experience to be defined as:  
– *the cumulative experience of more than 100 acoustic neuroma surgeries.* Microsurgical skills must be sufficient for functional preservation of hearing and acceptable outcomes of the facial nerve, these factors being the paramount concerns for the patient. Intensive care facilities and management of possible post-operative complications are mandatory.
- (2) A minimum level of multichannel cochlear implant experience to be defined as:  
– *no less than 10 cochlear implants within the last year or*

– *a cumulative experience of at least 50 cochlear implants.*

The cochlear implant programme must comprise a team of professionals with a committed rehabilitation programme.

- (3) Routine use of intra-operative neurological monitoring at least for the following nerves:  
– *VIIth, VIIIth, IXth.*
- (4) Routine use of electrophysiological diagnostics including EABR.
- (5) Neuroradiological facilities must include pre- and post-operative computed tomograph (CT) scan and magnetic resonance imaging (MRI).
- (6) A commitment to share outcomes data with professionals from other centres involved in the field of auditory brainstem implantation.
- (7) A quality system within the institution which collects and publishes statistics on results and complications.

#### **Recommended training**

- (1) Cadaver dissections are necessary and cadaver facilities should be present at the home institution.
- (2) Surgical training conducted by an established ABI Centre.
- (3) Relevant audiological-rehabilitative training courses conducted by an established ABI Centre of Excellence.
- (4) On-site training for the first ABI operations by a surgical expert recommended by the advisory group.

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The above professionals would like manufacturers to formally accept this consensus.