Right Product. Right Placement. Right Result.

	Uses	Benefits
Nucleus® Freedom™ Cochlear Implant with Contour Advance™ Electrode CI24RE (CA) 	• Most common implant for normal anatomy & patent cochleae • For minimally traumatic electrode insertions[1] • Inserted with Advance Off-Stylet™ (AOS) technique • May be used in Mondini malformations – depending on cochlear anatomy – or surgeon may consider ST array	• Preservation of delicate cochlear structures for possible future use[1] • Low T and C levels for an unsurpassed hearing experience[2] • Most reliable implant on market[3,4,5] • Perimodiolar for a natural fit • Provides the most electrodes inserted in the cochlea for complete spectral resolution and optimal hearing • Reduces facial nerve stimulation for patients with otosclerosis[6]
Nucleus® Freedom™ Cochlear Implant with Straight Electrode CI24RE (ST) 	• Patent cochleae • Partially/completely ossified cochleae • Revision cases of ST array – and a narrow tunnel has developed • Common cavity • Drill out where more than 14 electrodes will fit • May be used in Mondini malformations – depending on cochlear anatomy – or surgeon may consider CA array	• Proven implant reliability[5] • Provides the most electrodes inserted in the cochlea for complete spectral resolution and optimal hearing • If full insertion is not possible, electrode provides flexible stimulation options • Fully banded contacts for wider stimulation in abnormal anatomy
Nucleus® 24 Auditory Brainstem Implant CI24ABI 	• Used for Neurofibromatosis Type 2 (NF2) patients who become deaf following bilateral vestibular schwannoma removal • Electrically stimulates cochlear nucleus of the brainstem	• The only hearing solution for patients with NF2 to restore some degree of sound perception • 84% of recipients in a clinical study reported that the decision to get the device was the right one[7]
Nucleus® 24 Double Array CI 11 + 11 + 2M 	• The most electrode contacts for ossified cochleae • Wide variety of stimulation modes to maximize patient hearing performance • If drill out supports < 15 electrodes on straight array	• Proven solution for ossified cochleae[8] • Basal array in standard cochleostomy location • Apical array in second turn of cochlea
Depth Gauge  Used with Nucleus Double Array	• Verify patency of cochlea to determine which electrode option to use (Straight Array vs. Double Array) • Used to confirm access around the first turn for post-meningitis cases where the surgeon has drilled through bone and removed fibrous tissue up to the basal turn • Diameter is 0.4 to 0.6 mm • Surgical support is strongly recommended before first use	

1 Roland, JT Jr. A Model for Cochlear Implant Electrode Insertion and Force Evaluation: Results with a New Electrode Design and Insertion Technique. Laryngoscope, 115, 1325-1339. August 2005.

2 Parkinson AJ, Arcaroli J, Staller SJ, Arndt PL, Cosgriff A, Ebinger K. The Nucleus 24 Contour Cochlear Implant System: Adult Clinical Trial Results Ear Hear. 2002 Feb;23 (1 Suppl):41S-48S.

3 MED-EL Website: http://www.medel.at/english/30_Products/01_MAESTRO/pulsar/Pulsar.htm (October 2008)

4 Publication: Advanced Bionics - Auditory Reliability Report, Summer 2008.

5 Publication: Nucleus Reliability Report, Vol. 5, June 2008.

6 Aschendorff A, Jaekel K, Klenzner T, Laszig R, Impact of electrode design on facial nerve stimulation in otosclerosis, Proceedings of the 4th Asia Pacific Symposium on Cochlear Implants, Cochlear Implants Int, 5[Suppl 1], 63-65. 2004.

7 Nucleus ABI Physician Package Insert N94330F ISS1 NOV 2000

8 Lenarz T, Büchner A, Tasche C, Cristofoli T, Lesinski-Schiedat A, Wallenberg EV, Battmer RD, Busby PA, Frohne C. The Results in Patients Implanted with the Nucleus Double Array Cochlear Implant: Pitch Discrimination and Auditory Performance. Ear and Hearing 2002 Feb;23(1 Suppl):90S-101S

Features

Specs

Contour Advance Electrode (CA)

- 22 half–banded independent electrodes
- Minimally traumatic w/ Softip™
- Avoids lateral wall insertion forces with AOS technique
- Patented non-uniform electrode spacing for optimal frequency coverage
- Removable magnet for standard of care 1.5 Tesla MRI
- The best electrode coverage, even in partial insertions

Electrode Diameter
- Softip: 0.2 mm
- Apical: 0.5 mm
- Basal: 0.8 mm
- White mark: 8.5 mm from tip
- 3 Ribs: 17.8 mm from tip
- Ribs: 1.2 mm in diameter
- 22 electrodes over 15 mm

Surgical
- Cochleostomy: 1.2 – 1.5 mm
- Burr Size: 1.4 – 1.0 mm
- Saucerize 1.5 mm endosteum exposure

Implant Package
- Case: 20.3 x 19.3 x 6.9 mm
- Seat: 16mm diameter by 2.3 mm depth

Electronics
- Stim rate up to 32,000 pulses per second

Straight Electrode (ST)

- 22 fully independent active electrodes
- 10 stiffening contacts
- Thin electrode 0.4 – 0.6 mm
- Removable magnet for standard of care 1.5 Tesla MRI
- The best electrode coverage, even in partial insertions

Electrode Diameter
- Apical: 0.4 mm
- Basal: 0.6 mm
- Stiffening Rings: 10
- 22 electrodes over 17 mm

Surgical
- Cochleostomy: 1.0 – 1.4 mm
- Full insertion when last active electrode is well inside cochleostomy
- Surgical support reccomended for first use

Implant Package
- Case: 20.3 x 19.3 x 6.9 mm
- Seat: 16mm diameter by 2.3 mm depth

Electronics
- Stim rate up to 32,000 pulses per second

Auditory Brainstem Implant

- Stabilization PET mesh
- Can be fitted with non-magnetic plug
- 21 active platinum electrodes on the pad
- Removable magnet for standard of care 1.5 Tesla MRI

Pad Dimensions
- Thickness: 0.7 mm
- Length: 8.5 mm
- Width: 3.0 mm

Surgical
Specific ABI training required for implantation and patient support

Implant Package
- Case: 27 x 18 x 6.4 mm

Electronics
- Stim rate up to 14,400 pulses per second

Double Array

- The most electrode contacts per centimeter for patients with ossification
- 11 electrode contacts on each array over 8 mm for maximum stimulation
- Removable magnet for standard of care 1.5 Tesla MRI

Electrode Diameter
- Apical: 0.4 mm
- Basal: 0.5 mm
- 11 active electrodes in each array over 8 mm
- Apical array identifiable by one less stiffening ring
- 2 extracochlear grounds

Surgical
- Recommend surgical review of second cochleostomy in temporal bone lab with support of surgical services

Implant Package
- Case: 27 x 18 x 6.4 mm

Electronics
- Stim rate up to 14,400 pulses per second

FUN950 ISS1 NOV08

Hear now. And always

Cochlear™