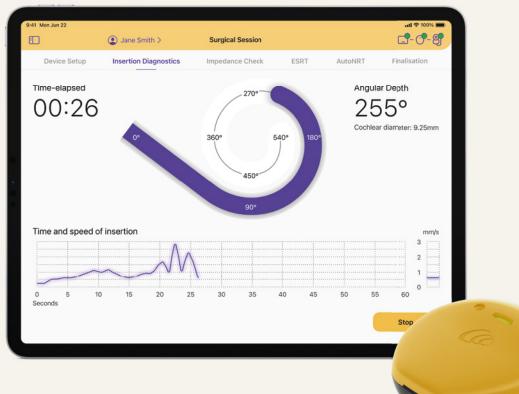


Introducing the Nucleus SmartNav System



**Surgical Care** solutions are part of Cochlear Connected Care



## Real-time insights during surgery

Cochlear™ Surgical Care solutions are designed to improve the surgical experience for you, and enhance benefits for patients, through intraoperative tools and insights.

The award-winning Nucleus<sup>®</sup> SmartNav System provides wireless, real-time, actionable insights to support navigation during cochlear implant surgery, delivering added assurance that surgery was successful, and the electrode was properly placed.<sup>1</sup>

This iPad-based solution and off-the-ear surgical processor provide an intuitive workflow to help you in surgery, giving you real-time feedback for in-theatre decision-making around angular depth and speed of insertion.<sup>2-7</sup>

Wireless connectivity, automated implant registration, and intuitive design deliver a seamless workflow in the operating room.8

Data can then be directly imported into Custom Sound® Pro fitting software to support MAP creation.9



## **Nucleus SmartNav intraoperative metrics:**



Placement Check – provides valuable information on final electrode placement and is designed to reduce the need for intraoperative imaging post electrode insertion.<sup>7,8</sup>





**Angular insertion depth** – provides real-time measurement of angular insertion depth and final electrode position.\*,5-6



Speed of insertion – provides feedback on speed and consistency of the electrode insertion.<sup>2-4</sup>



**Impedance** – provides assurance that the device is operating as intended, prior to leaving the operating room.<sup>1,10</sup>



**Advanced and AutoNRT** measurements – Nucleus SmartNav includes the option to use Advanced NRT for obtaining neural response telemetry thresholds, providing flexibility in settings for optimal measurement.<sup>8,10</sup>



Electrical Stapedius Reflex Threshold (eSRT) – confirms nerve response to electrical stimulation in order to establish stimulation thresholds.<sup>8,10</sup>

For more information visit www.cochlear.com/us



<sup>\*</sup> The angular insertion depth function is disabled when the Nucleus SmartNav System is used with a periomodiolar electrode.

## Hear now. And always

Cochlear is dedicated to helping people with moderate to profound hearing loss experience a world full of hearing. As the global leader in implantable hearing solutions, we have provided more than 650,000 devices and helped people of all ages to hear and connect with life's opportunities.

We aim to give people the best lifelong hearing experience and access to next generation technologies. We collaborate with leading clinical, research and support networks to advance hearing science and improve care.

That's why more people choose Cochlear than any other hearing implant company.

## References

- 1. Page JC, Cox MD, Hollowoa B, Bonilla-Velez J, Trinidade A, Dornhoffer JL. Trends in Intraoperative Testing During Cochlear Implantation. Otol Neurotol. (2018 Mar); 39(3):294-298.
- 2. Kontorinis G, Lenarz T, Stöver T, Paasche G. Impact of the insertion speed of cochlear implant electrodes on the insertion forces. Otol Neurotol. (2011 Jun); 32(4):565-70.
- 3. Rajan GP, Kontorinis G, Kuthubutheen J. The effects of insertion speed on inner ear function during cochlear implantation: a comparison study. Audiol Neurootol. (2013); 18(1):17-22.
- 4. Todt I, Mittmann P, Ernst A. Intracochlear fluid pressure changes related to the insertional speed of a CI electrode. Biomed Res Int (2014);
- 5. Morrel, WG, Holder, JT, Dawant, BM, et al. Effect of Scala Tympani Height on Insertion Depth of Straight Cochlear Implant Electrodes. Otolaryngology—Head and Neck Surgery. (2020); 194599820904941. Available from https://doi.org/10.1177/0194599820904941
- 6. Skarzynski H, Lorens A, Matusiak M, Porowski M, Skarzynski PH, James CJ. Cochlear implantation with the Nucleus slim straight electrode in subjects with residual low-frequency hearing. Ear Hear (2014); 35(2):e33-43.
- 7. Cochlear Limited. D1665111 V1 SEP2019. Angular Insertion Monitoring Algorithm TRL6 Validation.
- 8. Cochlear Limited. D1946550 Cochlear Nucleus® SmartNav App user guide.
- 9. Cochlear Limited. D1840640 Custom Sound Pro User guide.
- 10. Botros A, van Dijk B, Killian M. AutoNR: an automated system that measures ECAP thresholds with the Nucleus Freedom cochlear implant via machine intelligence. Artif Intell Med. 2007 May;40(1):15-28.

This material is intended for health professionals. If you are a consumer, please seek advice from your health professional about treatments for hearing loss. Outcomes may vary, and your health professional will advise you about the factors which could affect your outcome. Always read the instructions for use. Not all products are available in all countries. Please contact your local Cochlear representative for product information.

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