To quickly estimate an individual’s cochlear duct length, a research software application was developed. Clinicians can use it to select the cochlear electrode array size that is individually suited to each Cochlear Implant recipient.

**OBJECTIVE**

To evaluate the usefulness and reliability of the Research Software Application (RSA) for the estimation of an individual’s Cochlear Duct Length (CDL) as a basis for CI electrode selection.

**STUDY DESIGN**

Maximum basal turn diameter (value “A”) was measured on a coronal section of HRCT. Based on “A”, the RSA calculated the CDL, and the appropriate electrode array was chosen.

**RESULTS**

Results of 21 consecutive patients (23 ears) obtained using the RSA were compared to their postoperative X-ray measurements.

**DISCUSSION**

- Useful when aiming complete cochlear coverage.
- Avoids too deep insertion and cochlear trauma.
- Surgeon’s notes error: all inserted contacts presumed evenly distributed throughout cochlea.

**SUMMARY**

- Good correlation between predicted and measured insertion depth.
- Measured insertion depth was always shorter than estimated.
- Software allows determining cochlear coverage, insertion angle and depth of individual electrode contacts with fitting implications.