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Development of speech understanding of adult Cochlear Implant recipients between 1984 and 2004

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With the beginning of cochlear implantation in Hannover the speech development was tested by the mean of speech tests. Based on the results the quality of understanding was categorized in 3 performance classes. Because of the surgical and technical development a revision of the categories was necessary. Out of 2600 implanted patients 864 adult CI patients could be selected to revise the performance classes.

From 1984 until 2004 only the speech tracking test was used continuously. The revision was based on the application "only hearing with CI" using the speech tracking test. The method of analysing the categories will be demonstrated.

The comparison of the categories dependent from time of implantation shows a significant improvement of speech understanding in all 3 classes. Category "good" is reached up to 1992 with only 20 words / min but in 2004 with over 65 words / min. With a feasibility of 80% the allocation to one of the 3 classes after 6 months of CI is still valid after 3 years.

The analyses of the results will be demonstrated dependent from the technical development. A future prospect will be presented for the expected complex development of the new CI systems.

