Medtronic has partnered with the Department of Neurosurgery at Hannover Medical School to provide training on procedures using deep brain stimulation (DBS).

The following is an overview of the DBS procedure in the department:

- Riechert-Mundinger frame with Zamorano-Dujovny 5/8 arc or Leksell frame
- CT stereotactic target definiton
- Targets include STN, GPi, Vim, VLP, CM-Pf, PPN
- Microelectrode recording
- Test stimulation
- Postoperative stereotactic CT
- Externalization of electrodes with LFPs
- Pacemaker programming directly after IPG implantation
Biography

The Department of Neurosurgery at Hannover Medical School was founded in 1970, and since then has continuously developed various fields of expertise. These include neuro-oncology, pediatric neurosurgery, vascular neurosurgery, skull base surgery, complex spine surgery, surgery of hydrocephalus, and last but not least stereotactic and functional neurosurgery.

Hannover Medical School is one of the largest and most efficacious medical facilities in Germany. It is unique since it is the only stand-alone medical university in Germany. The number of patients treated per year amounts to 47,000 outpatients and 300,000 inpatients. Former chairmen of the department of neurosurgery were Profs. Dietz and Samii. Prof. Krauss has been chairman and director since 2005. Clinical facilities include several wards, including a neuropediatric ward, a polyclinic for outpatients and an interdisciplinary intensive care unit.

The surgical team includes eight faculty members, ten residents and various stipendiats from foreign countries. The international flavor of the department is reflected by the various languages spoken, including French, Italian, Spanish, Portuguese, Greek, Hungarian, Romanian, Arabian, Turkish, Japanese, Chinese, Indonesian, Indian and Russian. The lab of experimental neurosurgery concentrates on scientific issues with regard to neuro-oncology and neuromodulation. The department of neurosurgery performs more than 2,000 operations a year. Patients are being referred mainly from the north of Germany, but patients throughout Germany and outside the country come here for treatment.

Outpatients with movement disorders are being seen usually on a Monday or Tuesday, and an interdisciplinary movement disorders clinic is being held on a Thursday. There is no special day for DBS procedures. The procedures are being performed rather in clusters with up to four DBS operations a week (including movement disorders and pain). At the present time about 60% of DBS procedures are for dystonia.

About Professor Krauss

Prof. Krauss has been involved in functional and stereotactic neurosurgery since 1987, when he trained with Prof. Mundinger in Freiburg. He has performed or surveyed more than 400 DBS procedures. At the present time, about 50 DBS procedures are performed yearly.

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General Information:

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