Press Release

Prostate cancer - Cyberknife radiosurgery treats effectively and with little side effects

The European Cyberknife Center in Munich-Grosshadern is one of the most experienced institutions of radiosurgery worldwide

Munich, March 2015 – As of now, the European Cyberknife Center Munich-Grosshadern (ECZM) in cooperation with the Department of Urology, Klinikum Grosshadern, University of Munich, treats low and intermediate risk prostate cancer with Cyberknife. This modern technology kills prostate cancer effectively with little side effects. The Cyberknife technology is based on an integration of an image guided system and a robotic radiation delivery unit. Due to its high end technology, Cyberknife tracks the tumor with submillimeter precision while protecting surrounding healthy tissue and organs. The ECZM has an extensive experience in treating patients with benign or malignant tumors in over 8,000 cases overall. A Cyberknife treatment may be an effective alternative to conventional therapies for prostate cancer.

Cyberknife can serve as an extension of standard treatment options for selected patients with localized prostate cancer. For the treatment of low and intermediate risk prostate cancer the two medical directors of the Munich Cyberknife Center, Professor Dr. Alexander Muacevic and Professor Dr. Berndt Wowra see radiosurgery as an alternative to surgery, conventional radiotherapy or hormone deprivation therapy. “By using an extremely precise and advanced system, we extend the range of treatment options for prostate cancer with a very gentle method”, says Prof. Muacevic. “To decide what is the appropriate prostate cancer therapy, it is necessary to evaluate the treatment chances versus the risk profile. Cyberknife irradiates the tumor with high precision while protecting surrounded tissues such as organs and nerves as demonstrated impressively in a recent publication (1).”

Cyberknife technology treats with image-guidance and with high-precision

Prof. Muacevic explains that the Cyberknife system can treat cancer of the internal organs with submillimetric precision. Prostate movement is detected during the treatment and automatically corrected by the system. The robotic head follows the prostate motion which applies the high dose radiation precisely to the tumor. Thus, no additional tools are needed to block prostate movement during treatment as used with other radiation modalities. ”The computer-controlled image tracking system can locate tumors throughout the treatment and automatically compensates smaller patient movements. The application of small gold markers in the prostate is required for a safe and accurate Cyberknife therapy. These markers help the Cyberknife system to detect the exact position of the prostate. The treatment is an outpatient procedure and typically comprises four treatment sessions.

Patient benefits from treatment - Cyberknife preserves quality of life

The diagnosis of prostate cancer is a stressful situation for the patient and his family. The balance of risks, assessment of the chance of cure and decision for an individual suitable therapy can only be managed by providing comprehensive information and trustful consultations between physicians and patients. Quality of life plays a major role in prostate cancer treatments. Cyberknife patient Ronald H., age 71, got the diagnosis of prostate cancer in 2012: ”The Cyberknife treatment of my prostate cancer has fortunately preserved my quality of life. Most worries and fears were about the thought of suffering severe and stressful complications of conventional tumor treatments. However, immediately after the Cyberknife therapy, I was able to pursue my usual daily routine and enjoy life. Today - 4 years after treatment - my PSA levels are well below 1ng/mL, and my physical condition is excellent“.

High precision radiosurgery got established

High-precision radiosurgery was established in recent years. The European Cyberknife Center Munich-Grosshadern offers a huge experience and expertise in the treatment of benign and

malignant tumors. So far, the ECZM includes the radiosurgical experience of about 8,000 treatments overall. The spectrum ranges from tumors in the skull-brain area to the treatment of tumors in the eye, of the spine and in the lungs, liver and kidneys, and now also in the prostate. For two years now, the physicians at the ECZM in Munich-Grosshadern successfully use the most modern Cyberknife system, M6. This offers fast delivery times of only 30-45 minutes on an outpatient basis. Long-term medical and scientific partnerships with leading German universities, such as the Ludwig-Maximilians-University of Munich (LMU) and the Berlin Charité, help the physicians and physicists of the ECZM to improve the wide range of clinical applications and the quality of care.

1) King et al. Stereotactic body radiotherapy for localized cancer: Pooled analysis from a multi-institutional consortium of prospective phase II trials. Radiotherapy and Oncology 2013; 109:217-221

About the European Cyberknife Center Munich-Grosshadern

The first Cyberknife center in Germany was opened in cooperation with the Munich University Hospital (LMU) on July 1, 2005. The Cyberknife system used in Munich features a compact linear accelerator mounted on a robotic arm. It is the only system that automatically adjusts the beam delivery to motion during treatment in real-time. This precision is essential to deliver high doses to the target area while simultaneously minimizing radiation exposure to surrounding healthy tissue and organs. Meanwhile, about 5,000 patients have been treated with this painless, outpatient and generally applicable method in Munich. In the field of brain tumor treatment, the Munich radio surgeons are leading.

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