Technicians from diverse companies have completed the proton-treatment unit in Dresden’s Carl Gustav Carus University Hospital on schedule. The treatment room for cancer patients, which features a flexible beam exit (Gantry and Nozzle), a control unit, a robot-controlled therapy bed and a movable computer tomography device for precision control, is now fully operational.

The new system is currently awaiting official certification before the first patient can be treated; the hospital expects to begin scheduling in the fall of this year.

On August 22, 2014, at the inauguration of the proton-treatment unit at Dresden’s Carl Gustav Carus University Hospital, State Minister for Education and Research Dr. Johanna Wanka, and Saxon’s Prime Minister Stanislaw Tillich announced that a consortium formed by the medical faculty and the University Hospital of TU Dresden, and the Helmholtz Center Dresden-Rossendorf, will receive additional yearly funding of several millions. The funding will serve to establish the Dresden partner location for the National Center for Tumor Diseases (NCT) that already exists in Heidelberg. The funding, which the government intends to increase each year, will support patient-oriented research for individualized precision oncology. Based on clinical, imaging and molecular data, the research will enable a therapy that is custom-tailored to the individual needs of each patient.

Despite the impressive progress in cancer therapies, a large gap remains between technological innovations and the rapidly developing biological understanding of cancer and the effectiveness of current treatments. For the future, Dresden and Heidelberg research institutes are planning to considerably increase the close and complementing collaboration they have maintained over the years. The Saxon side will focus on further developing individualized treatment options for localized tumors, and imaging for diagnostics and control of tumor diseases, as well as the development of new technologies. The future-oriented project spanning across the Heidelberg and Dresden locations will significantly contribute to strengthening Germany’s leading position in cancer research and medicine worldwide.

One branch of treatment to eradicate localized tumors is proton therapy, and in order to take into account the various interests in the study of patient care and treatment, all activities involving proton therapy are pooled under the roof of the newly established University Proton Therapy Dresden (UPTD) in the Department for Radiation Therapy and the OncoRay Center. The UPTD will focus on the medical evaluation of this promising new form of treatment.

University Proton Therapy Dresden (UPTD) will be an important component of Saxon’s NCT and will be complemented by additional innovations in the years ahead. This new treatment unit makes Dresden University Hospital one of the world’s leading institutions to offer this form of innovative radiation therapy.

Even though the proton therapy treatment itself takes only a few minutes, due to the extreme effect of the protons that are accelerated to two thirds of light speed, preparation requires much effort. The protons are expected to release their energy only at the exact location of the cancerous tissue. In order
to perform the highly precise calculations of the radiation dose, and the proton’s path to the tumor, and to ensure the highest degree of safety for the patient, the treatment room is equipped with a movable computer tomography device. With the patient in position on the therapy bed, the radiation therapists use the ‘CT on Rails’ to determine the exact location of the tumor to be treated before the proton therapy is applied.

The UPTD plans to use this innovative treatment for patients whose vital organs would suffer significant damage during regular radiation therapy, and for those who are expected to develop fewer side effects if proton therapy is used. In the beginning phase, treatment will applied to tumors in or in close proximity of the brain and pelvis, as well as specific tumors in children.

Every patient treated with proton therapy in Dresden will be monitored in clinical studies in order to scientifically calculate the progress and success of the therapy. For the purpose of these studies or to exchange data, the UPTD will collaborate with the Heidelberg NCT and other research institutes worldwide. This close cooperation between university level medicine and the Helmholtz Center located in the OncoRay Center will ensure the technology will continuously improve.

Since August 25, 2014 a central contact person for the UPTD has been designated to inform the public about proton therapy and to find potential patients. Individuals interested in this new treatment option – and whose doctors have deemed their conditions curable – can learn more about the opportunities of being part of a study by calling a telephone hotline number or via e-mail.

**UPTD-Hotline and e-mail for patients and doctors**

Monday through Friday 9-11 am; and 1-3 pm  
Phone: +49 (0)351 458-15693  
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