

Heidelberg Ion-Beam Therapy Centre (HIT) officially opened

The Heidelberg Ion-Beam Therapy Centre (HIT) at the University Hospital of Heidelberg was officially opened on 2nd November 2009 by Minister President Günther H. Oettinger. The HIT in Heidelberg is the first radiation therapy facility in Europe that enables the treatment of malignant tumours both with heavy ions and with protons. The centre's rotatable gantry used for heavy-ion treatment is the only one of its kind in the world. So far, there are only around 30 ion-beam therapy facilities in the world, in the USA, Japan and Europe. The operating permit was officially handed over at the opening ceremony and the first patients will undergo treatment in the next few weeks.

"The establishment of the HIT adds another unique selling point to the high-technology location of Heidelberg," explained Minister President Oettinger in his lecture, also highlighting the unique clinical and scientific environment in the area of research and the treatment of tumours (oncology).



Further strengthening of oncology

"With the opening of the HIT we are able to further strengthen our most important priority, which is oncology, as well as add an innovative new therapy to interdisciplinary treatment at the National Centre of Tumour Diseases," said Professor Dr. J. Rüdiger Siewert, Managing Medical Director of the University Hospital of Heidelberg. The HIT will investigate the effectiveness of ion-beam therapy with the aim of further developing it in technical and medical terms.

"Over the next few years we will carry out scientific investigations into the effectiveness of ion-beam therapy for the treatment of common tumours such as prostate cancer, and other cancers such as childhood cancers," explained Professor Dr. Dr. Jürgen Debus, Medical Director of the HIT and the Department of Radiooncology and Radiation Therapy at the Heidelberg University Hospital.

"An innovation with considerable entrepreneurial risk"



Offices and meeting rooms are located behind the Heidelberg Ion-Beam Therapy Centre's glass façade.
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Construction of the Heidelberg Ion-Beam Therapy Centre on the Heidelberg University Hospital campus began in 2004; the total construction costs of the 5,000 m² building came to 119 million euros, financed equally by the German government and the University Hospital of Heidelberg.

"The University Hospital of Heidelberg took a considerable entrepreneurial risk in its decision to cover 50 per cent of the total costs through a bank loan," explained Irmtraut Gürkan, Heidelberg University Hospital 's Administrative Director. "The hospital's board of directors and supervisory board nevertheless decided to take on the risk in order to establish this unique innovation in Heidelberg."

Perfect integration into the Heidelberg University Hospital campus

The building, which houses an underground accelerator, three treatment rooms and a rotatable gantry, is perfectly integrated into the Heidelberg University Hospital campus, located in close proximity to the Department of Radiooncology and Radiation Therapy of the Head Clinic as well as to the new building belonging to the National Centre of Tumour Diseases (NCT) in Heidelberg, which is due to open at the beginning of 2010.

In future, the HIT will be able to treat around 1,300 patients per year. The University Hospital of Heidelberg has signed contracts with the German compulsory health insurance companies who have agreed to bear the costs of the ion-beam treatments. One radiation cycle costs around 20,000 euros.

Ion irradiation is a highly precise and biologically highly effective treatment method. The ions are accelerated by an accelerator system, reaching up to 75 per cent of the speed of light. The beam can be guided to the tumour with millimetre precision, thus helping to protect healthy tissue surrounding the tumour.

Clinical model project at GSI in Darmstadt

The preparatory scientific, technical and clinical work was carried out as part of a collaborative project between the Department of Radiooncology and Radiation Therapy, the GSI Helmholtz Centre for Heavy Ion Research in Darmstadt, which continues to be a technical partner of the Heidelberg University Hospital, and the German Cancer Research Centre in Heidelberg (DKFZ) in cooperation with the Rossendorf Research Centre (FZR). In an ongoing pilot project at the GSI in Darmstadt, started in 1992, more than 400 patients suffering from bone, cartilage or soft tissue tumours have been treated with the GSI's accelerator. Tumour treatment was successful in 80 per cent of patients treated.

Another HIT partner is Siemens AG which has provided the medical-technical equipment, including state-of-the-art radiation technology in combination with a specific scanning procedure, innovative solutions for the positioning of patients on the treatment table, imaging methods and control solutions for the ion beam. Siemens AG has also provided a therapy planning system that is used to plan the treatment and ion-beam dose according to patients' individual requirements.

Hotline for patients, relatives and physicians in the Department of Radiooncology and Radiation Therapy:

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