

Heidelberg Symposium "Cancer and Photonics"

From the search for cancer-specific chromosome damages to precision radiotherapy: Radiation – from visible light to gamma, x-ray, and positron radiation - has become a indispensable tool in almost every area of modern cancer medicine.

For the fourth time, the Deutsches Krebsforschungszentrum (German Cancer Research Center) organizes, jointly with the company Hamamatsu, a symposium on current developments in these techniques, which have been grouped under the artificial term "photonics". Physicians and researchers will be lecturing on the latest application possibilities of photonics in the diagnosis and treatment of cancer.

Many advanced methods of analyzing the hereditary material of tumor cells are based on the detection of fluorescence signals that indicate tumor-specific alterations. Some of the new molecular-biological methods that will be presented during the symposium are so sensitive that individual cells are sufficient as research material.

Imaging technologies such as magnetic resonance tomography (MRT) and positron emission tomography (PET) provide images of processes within the body. New application protocols make it possible to track the progress of a chemotherapy or a gene therapy immediately and non-invasively.

Photons are used in medicine not only in the area of cancer diagnosis, but also in cancer therapy. In photodynamic therapy, cancer cells accumulate a special dye which sensitizes them to laser light of a specific wavelength.

Photon radiation has always been part of the radiologist's tool kit. At the symposium, lecturers will also present new methods of calculating the interaction between photons and tissue. This enables physicians to focus the radiation dose on the tumor with ever increasing accurateness and thereby to avoid damage to surrounding healthy tissue. Radiation therapy has thus developed into a precision weapon in the fight against cancer.

4th DKFZ-Hamamatsu Symposium on Biomedical Photonics:

"Cancer and Photonics", February 24- 26, 2003, Kommunikationszentrum of the Deutsches Krebsforschungszentrum.

Journalists are cordially invited to participate in this event.

The task of the Deutsches Krebsforschungszentrum in Heidelberg (German Cancer Research Center, DKFZ) is to systematically investigate the mechanisms of cancer development and to identify cancer risk factors. The results of this basic research are expected to lead to new approaches in the prevention, diagnosis and treatment of cancer. The Center is financed to 90 percent by the Federal Ministry of Education and Research and to 10 percent by the State of Baden-Wuerttemberg. It is a member of the Helmholtz Association of National Research Centers (Helmholtz-Gemeinschaft Deutscher Forschungszentren e.V.).

This press release is available at www.dkfz.de/pressemitteilungen

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