

New Radiation Oncology Building Adds Clinic Space, Technology to Moores Cancer Center

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The Moores UCSD Cancer Center and the UC San Diego Medical Center have opened a new radiation oncology building on the La Jolla medical center campus that expands clinic and office space, while adding to the program's advanced imaging and treatment technologies. It also offers technology to make radiation therapy more readily available for children who need it.

The new, 16,000 sq. ft., \$20 million-Radiation Oncology PET/CT Center includes two new treatment vaults with state-of-the-art linear accelerators that expand the department's patient treatment capabilities, in addition to a linear accelerator used for research.

The new building "represents another huge step forward for the growth of the radiation oncology services at the Moores Cancer Center," said Arno J. Mundt, MD, chair of radiation oncology at the UC San Diego Medical Center and the Moores UCSD Cancer Center. Mundt said that expansion in both patient care and research capabilities, along with recent faculty recruitments and opening of satellite facilities in Encinitas and South Bay, are all vital to the program's continued development. A radiation oncology medical residency program is also being planned.

An exciting, innovative technology available in the Radiation Oncology PET/CT Center – and in the San Diego region for the first time – is RapidArc™, by Varian Medical Systems. Using RapidArc, the linear accelerator rotates 360 degrees around the patient to deliver continuous radiation. The radiation beam is shaped and reshaped according to the size, shape and location of the tumor thanks to a device that contains 120 computer-controlled "fingers" that create different-sized openings.

Mundt said that RapidArc can cut treatment delivery time from 10 to 15 minutes to two minutes, and enables treatment of two to four patients in the time it previously took to treat only one. Because therapy is given in one rotation, the patient doesn't have to keep still for long periods of time to avoid movement that could compromise therapy. UC San Diego is the primary provider for radiation oncology services for Rady Children's Hospital, and this technique is particularly powerful for treating children, who may have difficulty sitting or lying still for long periods of time.

“Many children are unable to get radiation therapy without anesthesia,” Mundt explained. “RapidArc will reduce the need for anesthesia in many cases and improve the quality of a child’s cancer treatment.”

Another new technology housed in the building – Positron Emission Tomography (PET) and Computerized Tomography (CT) – combines the ability of PET to detect metabolic signals of actively growing tumor cells with the ability of CT to image internal anatomy of patients, including the location, size and shape of cancers.

“The PET/CT is the modern way to image cancer patients,” Mundt said, noting that PET/CT is a very valuable targeting tool for a number of tumors treated with radiation, such as head and neck, lung and cervical cancer.

According to Mundt, these new technologies open the door for image-guided radiotherapy, or IGRT, which enables clinicians to know exactly where radiation targets are in the body nearly all of the time. Changing targets can be a problem for some cancers, such as in the prostate, for example, which can move up to a centimeter daily. “Image guidance involves upfront targeting and then daily adjustments when necessary,” Mundt said.

Mundt also added that clinicians are beginning to use PET/CT during treatment to help determine how well a therapy is working and whether or not treatment adjustments need to be made.

[The Moores UCSD Cancer Center](#) is one of the nation’s 40 National Cancer Institute-designated Comprehensive Cancer Centers, combining research, clinical care and community outreach to advance the prevention, treatment and cure of cancer.

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