ExAblate 2000

Cancer Center to Offer Painless Treatment
To Remove Suspicious Growths

A non-invasive, painless treatment, called “MR-guided focused ultrasound,” soon will be a reality at the Rebecca and John Moores UCSD Cancer Center, initially for patients with benign uterine fibroids. Over the next few years, the Cancer Center anticipates participating in clinical research to treat cancer patients; potential applications include breast, liver, bone and brain cancers.

The Cancer Center currently is one of only nine sites in the U.S. equipped with the ExAblate® 2000 system made by InSightec. It is the first system to combine magnetic resonance imaging (MRI) with high-intensity focused ultrasound to destroy tissue without making any incisions.

“Imagine surgery where you never cut the skin, or you zap a brain tumor without ever opening the skull,” says William G. Bradley, M.D., Ph.D., FACR, professor and chair of the UCSD Department of Radiology.

The Cancer Center’s ExAblate 2000 has 200 transducers – devices that convert electrical energy into ultrasound energy – arrayed in a movable dish that can be focused on various points in the body.

“Most people think of ultrasound as being a diagnostic modality,” Bradley said. “Yet when multiple transducers are focused on a small volume of tissue below the skin’s surface, they heat and thus destroy the targeted tissue, without harming the surface skin or nontargeted tissue.”

One of the procedure’s biggest benefits for patients is freedom from pain, since the skin is not cut and, as in the case of uterine fibroids, there is no need for uterine artery embolization, which can be painful, too. Also, since the skin is not cut, there is no risk of infection and the procedures are done in a regular MR suite, not an operating room.

UCSD’s ExAblate for uterine fibroids will be available in June 2005. It will be used in conjunction with the General Electric 3 Tesla Ultrahigh Field MRI system in the Cancer Center. An MRI system operating at 3 Tesla has a magnetic field strength 60,000 times greater than that of the Earth.

Media Contact: Nancy Stringer, 619-543-6163