

B A L T I M O R E

C A N C E R C O N T R O L M O N T H

The Future of Radiosurgery Is Now

Revolutionary CyberKnife® Technology at Sinai Hospital of Baltimore

U ntil now, radiosurgery has had severe limitations. The CyberKnife®, however, has raised the benchmark.

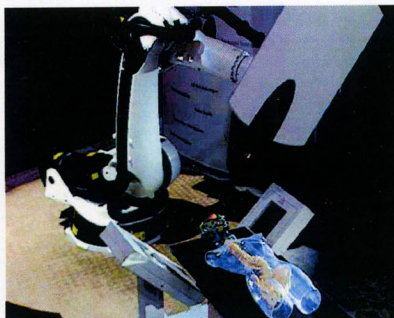
"This is a very exciting new technology," says neurosurgeon Neal Naff, M.D., Surgical Director of the CyberKnife® Center at Sinai Hospital's Alvin & Lois Lapidus Cancer Institute. "The CyberKnife® goes beyond traditional stereotactic radiosurgery to allow treatment of tumors both within and outside of the brain."

The Science Behind the Technology

Radiosurgery is a noninvasive means of delivering concentrated high doses of radiation. In traditional applications, an unwieldy frame was required to correctly administer and target the treatment. This frame, which would be bolted to the patient's skull, made radiosurgery impossible for lesions located outside of the head.

The CyberKnife® Advantage

- All the advantages of radiosurgery without the need for a metal frame to be bolted onto the skull, as required by older radiosurgery methods
- The first radiosurgery device to treat tumors outside the head
- A painless, outpatient option without the risk of complications associated with open surgery
- The only radiosurgery system that continually checks and compensates for patient movement through an image-guidance system during treatment for superior accuracy
- The flexibility of single or multiple radiosurgery treatments for improved safety to normal structures
- Computer-controlled, flexible robotic arm allows easy access to lesions in otherwise inoperable locations
- Better conformal treatment for irregular shaped tumors than older radiosurgery methods designed to treat spherical tumors



Sinai Hospital hosts the only CyberKnife® center in Maryland

The CyberKnife®, on the other hand, represents an entirely new approach, combining robotics and advanced three-dimensional imaging to deliver radiosurgery — without the frame. Multiple beams of radiation are delivered to the tumor by a robot-mounted linear accelerator, and healthy surrounding tissue is spared while the lesion is targeted with pinpoint precision.

"The CyberKnife® utilizes a sophisticated, dynamic tracking system, so the computer knows exactly where the tumor is located in space," explains radiation oncologist and Medical Director Mark Brenner, M.D., who, together with Dr. Naff, directs the CyberKnife® program at Sinai Hospital's Alvin & Lois Lapidus Cancer Institute. "In a same-day, outpatient setting, we are now able to treat tumors of the spine, lung, neck, sinuses and other previously inoperable locations," Dr. Brenner says.

"Additionally, we can now provide radiosurgery for infants, whose skulls are too thin to support a stereotactic frame," reports Dr. Naff. "Patients benefit

from a painless procedure that requires neither anesthesia nor incisions, delivered by a multidisciplinary team of specialists," concludes Dr. Brenner.

The Best in Care

Sinai Hospital's Alvin & Lois Lapidus Cancer Institute offers one of the region's most sophisticated array of services for cancer patients. Members of the Institute actively participate in clinical research studies, providing patients with the most advanced treatment modalities available. In fact, the Institute hosts the *only* CyberKnife® center in Maryland.



Dr. Mark Brenner and Dr. Neal Naff are the co-directors of the CyberKnife® program at Sinai Hospital

At Sinai Hospital of Baltimore, patients and their families find something rare: an institution large enough to offer leading-edge care, yet small enough to touch their individual lives.



SINAI HOSPITAL
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To learn more about Sinai Hospital and CyberKnife® radiosurgery, please call
410-601-5689
or visit the Website at
www.lifebridgehealth.org.