

CYBERKNIFE TARGET:

PROSTATE CANCER



CYBERKNIFE® CENTER
OF CHICAGO

Revolutionizing treatment. Restoring hope. Improving lives.

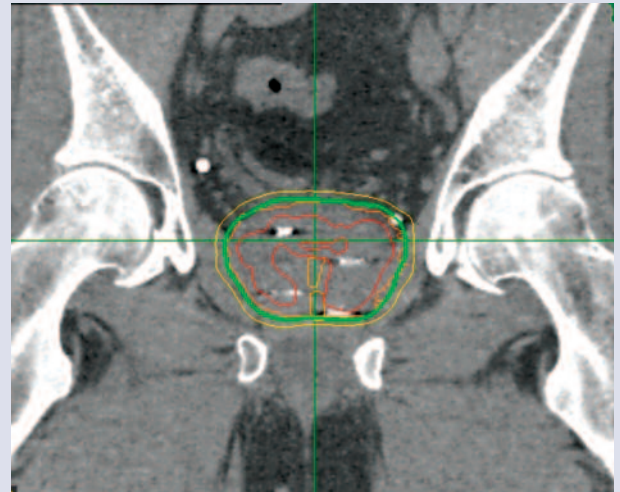
Prostate Radiosurgery

Precisely Delivering Radiation While Sparing Surrounding Healthy Tissue

▶ One man in 6 will get prostate cancer in his lifetime. It is currently the second leading cause of cancer death in men. However, the death rate for prostate cancer is going down due to early detection and advanced treatment options.*

Traditional treatments for these patients often include HDR brachytherapy, permanent seed placement, external beam radiotherapy, and/or radical prostatectomy. Now, CyberKnife® offers a revolutionary new way to treat prostate cancer that involves no anesthesia and no hospital stay.

The CyberKnife is the world's first and only robotic radiosurgery system. Using hundreds of highly concentrated and incredibly precise beams of radiation, the CyberKnife enables the clinician to conform the dose to the tumor while preserving surrounding healthy tissue. In addition, the CyberKnife is the only technology that tracks



The sub-millimeter accuracy of the CyberKnife ensures protection of surrounding critical structures.

tumors in real time with continual image guidance, offering extreme accuracy throughout treatment. Real time targeting is important for safe treatment because the prostate moves considerable distances and does so both frequently and in an unpredictable manner throughout the daily radiation treatment. The Cyberknife is the only technology that can continuously track and correct for this random motion, allowing for reduced margins.

CyberKnife Benefits:

- Treatments delivered in five or fewer outpatient visits compared to conventional radiation therapy which requires 40-45 visits
- Non-coplanar treatments enable dose escalation with precise control
- Tumor tracking in real time while others are limited to pre-treatment image guidance only
- No hospital stay or post-operative recovery
- Non-invasive treatments provide extreme comfort for patients

	CONVENTIONAL RT	CYBERKNIFE
Daily Dose	1.8-3.0 Gy per fraction	7.0-9.0 Gy per fraction
Number of treatments	40-44 treatments	4-5
Normal tissue margin	1 cm+	1-5mm
Number of beams	5-9 beams	100-200+ beams
Biology	Sublethal damage/ G2-M phase sensitive	Ablative/Overcomes resistance due to hypoxia, slow cell cycle turnover
Target characteristics	Microscopic disease, infiltrating tumors, wider field	Solid, well-defined tumors that can be tracked, <=6cm

*References: American Cancer Society 2010, www.cancer.org



*Top Row: Dr. Andy W. Su, Dr. Joy Coleman
Bottom Row: Dr. Alex Phillips, Dr. Dean Conterato*

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The team at CyberKnife Center of Chicago



**Elmhurst Memorial
Healthcare**

CyberKnife Center of Chicago is a service of Elmhurst Memorial Hospital.