RADIOSURGERY TARGET:

ACOUSTIC NEUROMAS

CYBERKNIFE® CENTER

OF CHICAGO

Revolutionizing treatment. Restoring hope. Improving lives.

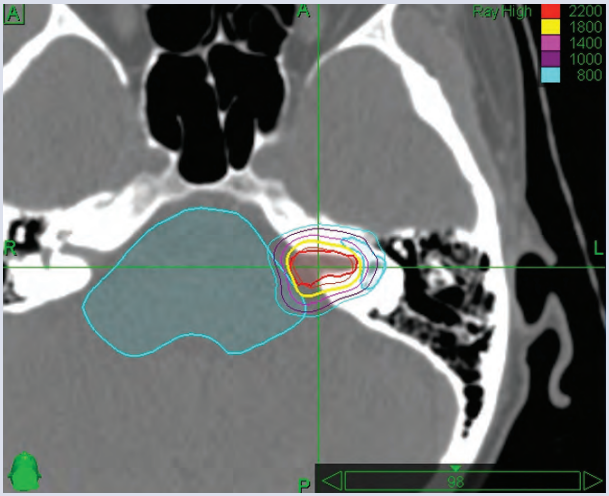
Acoustic Neuromas Radiosurgery

Precisely Delivering Radiation While Sparing Surrounding Healthy Tissue

Acoustic neuromas (also known as vestibular schwannoma) occur at a rate of about 19 tumors per million per year[1]. They are slow-growing, benign tumors resulting from an overproduction of schwann cells in and around the ear. Although they are benign, their growth can interfere with critical areas of the brain and surrounding nerves creating problems with balance, numbness, paralysis and more.

Treatment for patients with an acoustic neuroma often involves surgery or radiation. As the tumor grows, surgical removal of the tumor is complicated by surrounding nerves related to balance, hearing and facial sensations[2]. Now, CyberKnife® offers a revolutionary new way to treat acoustic neuromas that involves no invasive head frame, no anesthesia, no hospital stay and only 1-3 treatments.

	CONVENTIONAL RT	SRS
Daily Dose	1.8-2.0 Gy per fraction	6.0-13 Gy per fraction
Number of treatments	25-30 treatments	1-3 treatments
Normal tissue margin	1 cm+	<1mm
Number of beams	2-7 beams	100-150+ 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



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

CyberKnife is the world's first and only robotic radiosurgery system. Using hundreds of highly concentrated and precise beams of radiation, CyberKnife enables the clinician to conform the dose to the tumor while preserving surrounding healthy tissue. CyberKnife is the only technology that tracks tumors in real time with continual image guidance offering radiosurgical accuracy throughout treatment.

CyberKnife Benefits:

- Treatments delivered in five or fewer outpatient visits
- No hospital stay or post-operative recovery
- Non-invasive treatments provide extreme comfort for patients (no invasive headframe required)
- Non-coplanar treatments enable dose conformality with precise control
- Tumor tracking in real time while others are limited to pre-treatment image guidance only

1 Neurosurgery: November 2010 - Volume 67 - Issue 5 - pp 1335-1340
2 National Institutes of Health: National Institute on Deafness and other Hearing Related Disorders. www.nidcd.nih.gov/health

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The team at CyberKnife Center of Chicago

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