



THE CYBERKNIFE: A PATIENT GUIDE TO ROBOTIC RADIOSURGERY

 THE
CANCER CENTER

NORTH FLORIDA REGIONAL HEALTHCARE

We are with you **for life.**



Welcome to The CyberKnife Center.

North Florida Regional Healthcare is proud to be the first hospital in north Florida to offer the CyberKnife – revolutionary technology that offers precise, painless, non-invasive radiation treatment. In certain cases, it can be a highly effective alternative to open surgery. The CyberKnife is so precise that radiation beams can be sculpted to small, complex-shaped tumors near critical structures, such as the nerves that control hearing and vision, the spinal cord or the intestines. This ability to irradiate only the tumor while protecting nearby healthy tissue makes it possible for the CyberKnife to treat lesions that might otherwise be considered inoperable or untreatable.

And that gives many patients new hope.





How does the CyberKnife work?

It delivers multiple beams (usually 50 to 250) of high-energy radiation from multiple points outside the body. These beams converge precisely at the site of the tumor inside the body. The radiation from each individual beam is not enough to damage the normal tissue as it passes through, but the convergence of all beams at the tumor site delivers an extremely high and highly effective dose of radiation.

The CyberKnife combines two advanced technologies to make it possible to destroy cancer without surgery. A multi-jointed robotic arm provides flexibility to aim precisely at tumors anywhere in the body. A sophisticated image guidance system allows the CyberKnife to visualize and follow the tumor throughout treatment and correct for small patient movements, as well as for breathing motion. This allows treatment to occur without attaching the patient to a frame for immobilization.

What are the benefits of the CyberKnife?

The technology of CyberKnife offers a number of advantages that are not possible with traditional therapies.

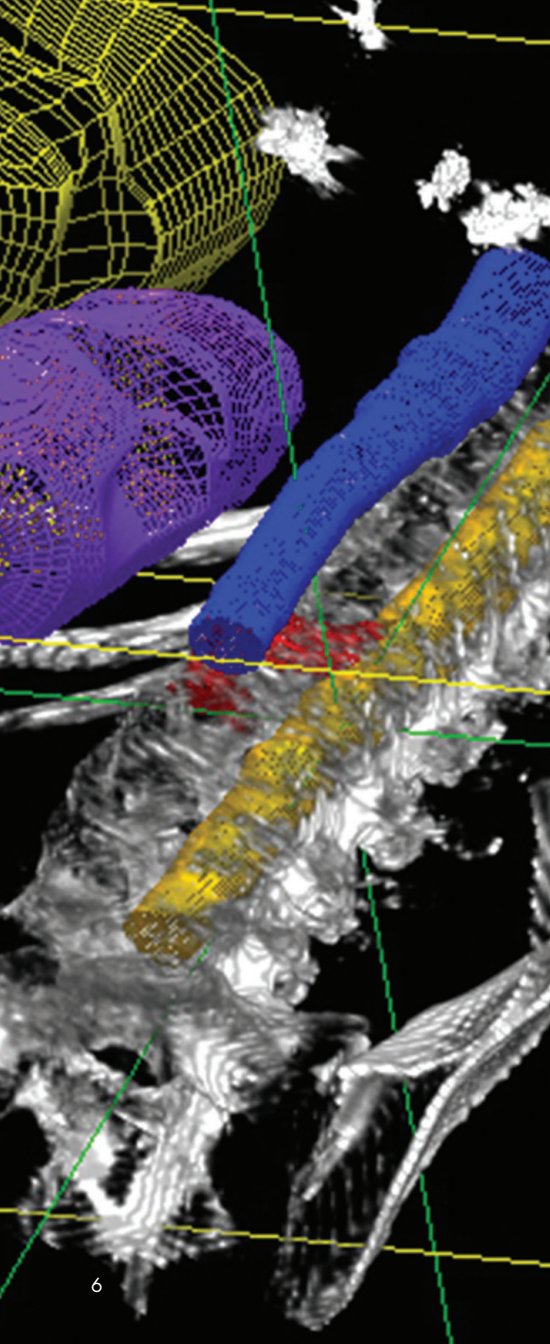
- Shorter recovery time, sometimes no recovery at all
- Little or no pain
- No scalpel and no blood loss
- No anesthesia
- Minimal to no risk of infection or hemorrhaging
- No hospital stay
- Treatment of tumors in places that were previously impossible to reach and thus, untreatable
- Treatment of some tumors which have recurred in areas previously treated with maximum doses of standard radiation

What can the CyberKnife treat?

The CyberKnife is cleared by federal regulators to treat tumors and other lesions anywhere in the body, including, but not limited to:

- Cancerous and non-cancerous brain tumors
- Trigeminal neuralgia
- Lung tumors
- Liver tumors
- Pancreas tumors
- Pelvic tumors
- Prostate tumors
- Spine tumors
- Some tumors which recur in areas previously treated with radiation

In addition to the primary sites listed above, other cancerous sites may be eligible for CyberKnife treatment. This depends on your specific medical condition and the recommendation from your physician.



What is the treatment process?

Step 1: Setup

Fiducial Placement

Depending on your case, you may require the placement of 1 to 4 tiny metal markers called fiducials. This is a short outpatient procedure done at your surgeon's office or in radiology. It is necessary to allow the CyberKnife to track the tumor position throughout your treatment. Lesions in the head do not require this step.

Making a Mask or Body Mold

A custom mask or body mold is formed and used to help minimize movement during your treatment. The procedure is simple and painless.

Imaging

A CT scan and possibly an MRI will be performed to identify the size, location and shape of your lesion.

Step 2: Treatment Delivery

Dress in comfortable clothing and bring your favorite CD to listen to during your treatment.

Positioning

You will lie on the treatment table and be fitted with your custom mask or body mold. Usually, no sedation is needed.

Painless Treatment

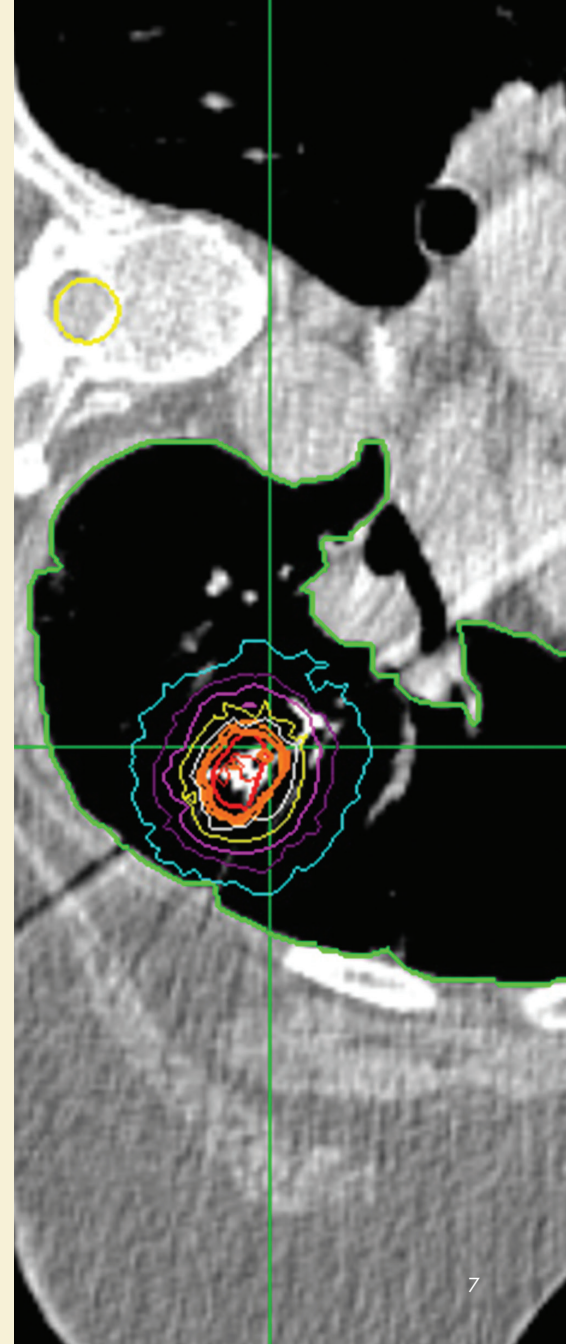
You will need to lie as still as possible. The process typically lasts 30 to 75 minutes, and you will be awake the entire time. The image guidance system continually takes images and compares them to data from your CT scan to ensure radiation is targeted accurately on the tumor.

Completion

If you are undergoing a single-session treatment, your treatment is complete. You can now leave the center and resume normal activity immediately. If your physician prescribes a staged treatment, you will return for additional treatments – typically, from three to five treatments on consecutive days.

Follow-up

As with any treatment procedure, there will be follow-up imaging and physician visits to review imaging and monitor your progress.





The CyberKnife Center entrance is located at the side of The Cancer Center on the campus of North Florida Regional Medical Center in Gainesville, Florida.

Directions to The CyberKnife Center:

From Interstate-75: Take exit 387 for Newberry Road (State Road 26). Head east on Newberry Road and pass 2 traffic lights. At the third traffic light, turn left onto 66th Street into the North Florida Regional Medical Center entrance. You will notice signs that point toward the Emergency Department. Pass the Emergency Department and continue past Invision Imaging and Pre-Op Services. The Cancer Center will be on your left. Park and walk toward the rear of the building. You will find the entrance to The CyberKnife Center is clearly marked.

From Highway 441: Turn West onto University Avenue (Newberry Road, State Road 26). Proceed for approximately 4 miles and remain in the right lane. Keep straight through the street light at 62nd Street and turn right at the next street light onto 66th Street. You will notice signs that point toward the Emergency Department. Pass the Emergency Department and continue past Invision Imaging and Pre-Op Services. The Cancer Center will be on your left. Park and walk toward the rear of the building. You will find the entrance to The CyberKnife Center is clearly marked.

www.cancergainesville.com

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