

# Genesis CyberKnife

Powerful Cancer Treatment



Genesis  
HEALTHCARE

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*Non-Invasive and Pain-Free  
Without Incisions or Blood Loss*

## CyberKnife—Powerful Cancer Treatment

“You have cancer.” At first these words sound devastating; however, for countless cancer patients there is advanced technology to treat many cancers, including hard-to-reach tumors, without putting life on hold. It is a painless, non-invasive treatment. CyberKnife Radiosurgery at Genesis delivers high doses of precisely targeted radiation directly to the tumor offering more effective treatment and potential cure. The extreme accuracy of CyberKnife means less collateral damage to healthy tissues surrounding the cancer which results in fewer side effects. At Genesis, CyberKnife treatment is completed in just a few visits (one to five visits), instead of weeks or months. More than 100,000 cancer patients have chosen CyberKnife for their cancer treatment. Effective cancer treatment doesn't always require a long recovery. Get back to your life faster.

To find out if CyberKnife is right for you – call us at 858.505.4100.

## Benefits of CyberKnife Treatment

- *Non-invasive and pain-free without incisions or blood loss*
- *An outpatient procedure that usually takes less than an hour per treatment*
- *Treatment is completed in just a few visits, instead of longer treatment methods that can take weeks or months*
- *No recovery time—CyberKnife patients go home the same day and can immediately return to normal activities*
- *Sedation Free—no anesthesia required*
- *No need for invasive body frames, uncomfortable head frames or skull pins*
- *Exceptional accuracy spares healthy tissues and organs with fewer complications*
- *Covered by Medicare and most insurance plans for treatments throughout the body*

CyberKnife is able to treat multiple tumors at different locations during a single treatment session. CyberKnife can treat otherwise inoperable tumors and tumors located near sensitive areas. CyberKnife can treat difficult or recurring tumors without additional surgery or chemotherapy. Because CyberKnife is non-invasive, it may have significantly fewer complications than traditional open surgery. CyberKnife treats both early stage and advanced cancer. For certain patients, CyberKnife may be partnered with other treatment approaches such as surgery, chemotherapy and conventional radiation therapy.

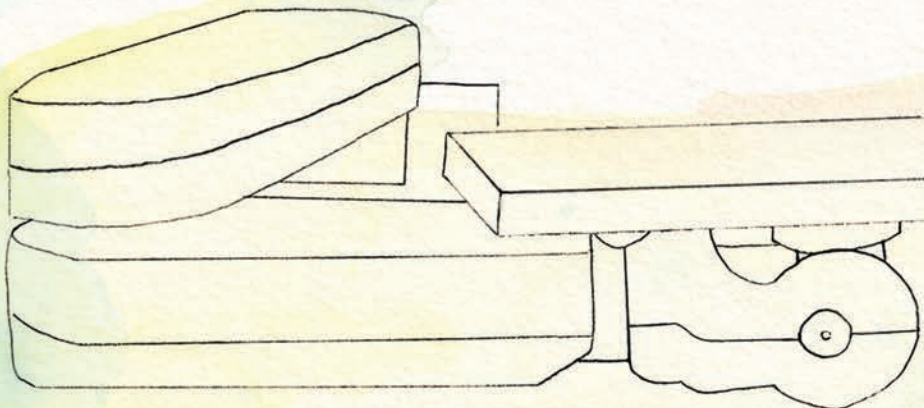


## How Does CyberKnife Work?

Despite its name, CyberKnife Radiosurgery is not a surgical procedure. Instead, CyberKnife, without a single incision, uses sophisticated software and a robotic arm to deliver highly focused beams of radiation to the exact location of the cancer. The flexibility of the robotic arm enables CyberKnife to precisely send radiation to tumors anywhere in the body, including the brain, head and neck, spine, lung, liver, pancreas and prostate.

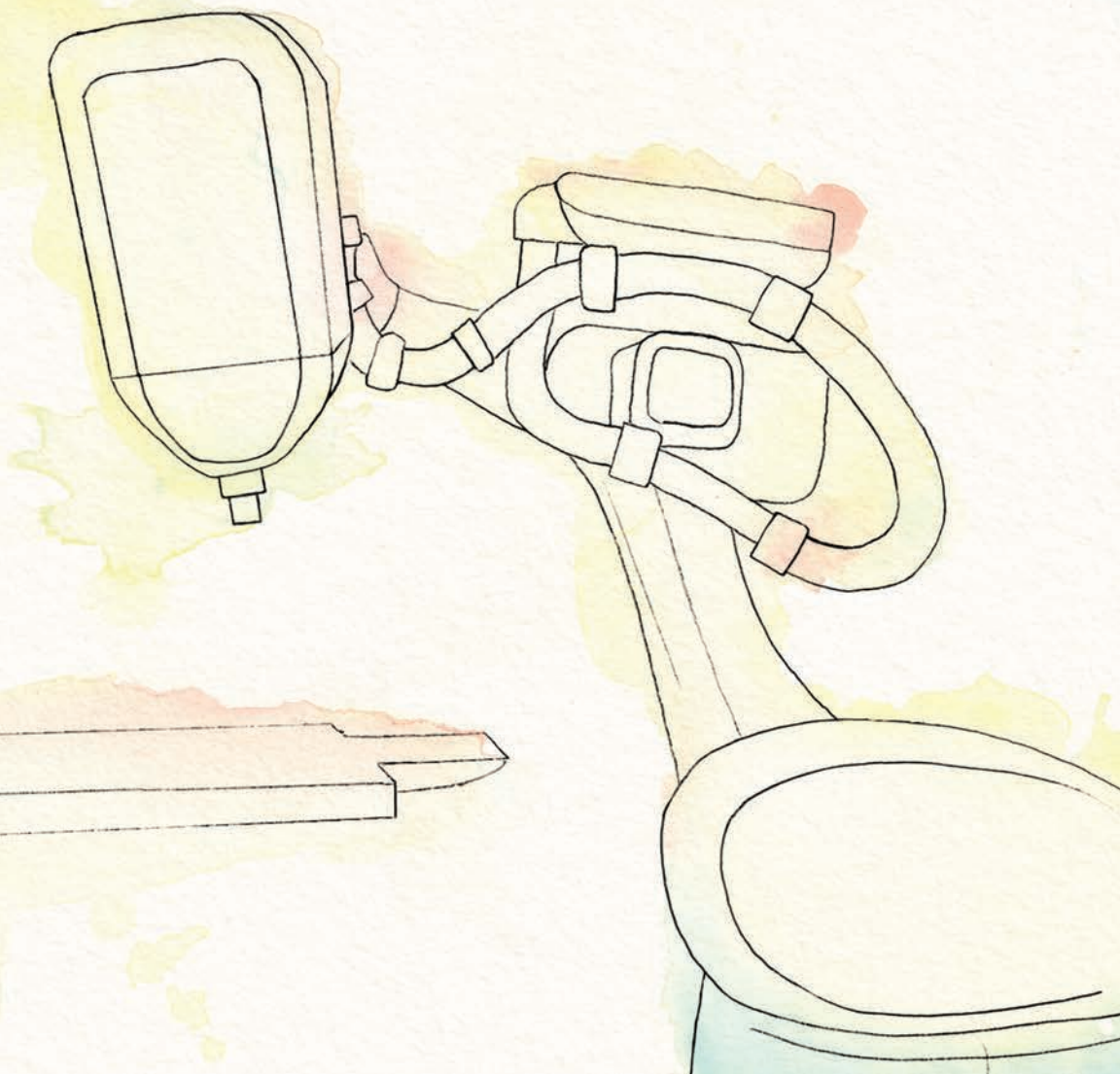
CyberKnife allows physicians to treat complex-shaped tumors as well as tumors that are difficult to reach or near delicate areas with extreme accuracy. CyberKnife locates the position of the tumor without the use of an invasive stereotactic head frame (even for brain treatments) or stereotactic body frame. CyberKnife continually tracks the location of the tumor throughout treatment. Should patients move during treatment, CyberKnife automatically detects and compensates for the change in position. This sub-millimeter accuracy ensures that the targeted tumor location is reached as accurately as possible during treatment and radiation exposure is reduced to surrounding healthy tissue.

While CyberKnife's robotic movements may look and sound like Star Wars technology, it is clinically proven technology. Originally developed at Stanford University in 1994, CyberKnife was approved by the FDA (U.S. Food and Drug Administration) in 2001 and has since safely treated tens of thousands of patients without invasive surgery for many tumors and other problems that used to require surgical intervention. Today, CyberKnife provides a pain-free, nonsurgical option for patients who have inoperable or surgically complex tumors, or who may be looking for an alternative to surgery.



For those whose cancer requires radiation therapy, CyberKnife offers a significantly shorter treatment time. Patients complete treatment within a week or sometimes even in a single visit instead of weeks or months of conventional radiation treatments.

CyberKnife is not right for every patient. Genesis radiation oncologists are clinical researchers and leading experts in many specialized radiation treatments including CyberKnife Radiosurgery, SmartArc Image-Guided Radiotherapy, Calypso GPS for tumors in the body, brachytherapy, Image-Guided Radiation Therapy (IGRT) and Intensity Modulated Radiation Therapy (IMRT). A Genesis radiation oncologist will work together with you and your personal physician to determine which type of treatment is best suited for your individual needs.



## What to Expect

### FIRST STEPS:

Prior to the CyberKnife procedure, you will receive a high-resolution CT scan, to image the exact size, shape and location of the tumor. Your CT images are digitally transferred to the CyberKnife's workstation, where treatment planning begins. Your Genesis radiation oncologist and medical physicist work together, often collaborating with your doctor, to create an individualized treatment plan that matches the desired radiation dose to the tumor location while limiting radiation exposure to the surrounding healthy tissue. Depending on the type and location of your tumor, small gold markers called fiducials may be placed near the tumor to help identify the exact location of your tumor during treatment. Not all treatments require fiducial markers. The determination will be made based on the density, size and location of the tumor.

### YOUR CYBERKNIFE TREATMENT:

Once your treatment plan is developed, you can begin your treatment at Genesis CyberKnife Center. CyberKnife treatment is a completely pain-free experience. You may dress in comfortable clothes and listen to music during the treatment. You may bring your favorite music CD or even a book on CD to play in our music system during your treatment progress.

Specially trained Genesis radiation oncologists shall be with you throughout the treatment—watching every step of the way as CyberKnife locates and tracks your tumor while precisely delivering the radiation dose.

After your radiation therapist comfortably positions you on the treatment table, the CyberKnife System's computer-controlled robot will slowly move around you to deliver radiation at various locations as prescribed by your treatment plan. At the same time, the CyberKnife System is taking continual X-ray images that will provide real-time information about the location of your tumor and enable the system to dynamically track and correct for any movement of your tumor. Depending on the type and location of your tumor, you can expect to undergo between one and five treatment sessions. Each treatment session lasts between 20 to 90 minutes for one to five days, depending on the location and type of tumor being treated.

### AFTER TREATMENT:

Immediately after treatment you can resume normal activities. Most CyberKnife patients do not experience side effects. Depending on the treatment site, some patient's may experience mild fatigue or nausea. Your Genesis CyberKnife physician will discuss all possible side effects with you prior to treatment.

## What can be treated with CyberKnife?

The CyberKnife System is a non-invasive alternative to surgery for the treatment of both cancerous and non-cancerous tumors anywhere in the body including:

- Brain
- Head and Neck
- Spine
- Lung
- Liver
- Kidneys
- Pancreas
- Prostate
- Recurrent Tumors



*CyberKnife offers new hope to patients who have inoperable, surgically complex or recurrent tumors. In addition to cancer, CyberKnife is used to treat benign (non-cancerous) lesions and other types of medical conditions such as arteriovenous malformations (AVMs). CyberKnife may also be used to treat acoustic neuromas and trigeminal neuralgia, often in a single session.*



## Genesis Radiation Oncology Physician Team



*From Left to Right:* Donald B. Fuller, MD / Tahir Ijaz, MD, FRCP, FACRO / Reza Shirazi, MD, EE, FACRO / Siavosh Vakilian, MD, FRCP(C), DABR

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Learn more about  
treatment options at  
**Genesis Cyberknife**



### About Genesis

The Genesis CyberKnife Center is one of the many integrated patient care facilities operated by Genesis Healthcare—San Diego’s premier multi-specialty physician practice dedicated to the accurate diagnosis and comprehensive treatment of many cancers, including prostate cancer and other urologic conditions. With 15 offices located throughout San Diego County, our multi-disciplinary team of physicians, technologists and staff provide patients with a full range of clinical advances including minimally invasive treatment alternatives such as active surveillance, CyberKnife and robotic surgery—all available in a private practice setting that is personal & easy to access. For more information, visit us at [mygenesishealth.com](http://mygenesishealth.com)