Fact Sheet

CyberKnife Centers OF TAMPA BAY

CyberKnife Centers of Tampa Bay Therapy Applications

CyberKnife Centers of Tampa Bay reduces treatment time dramatically with completion in just one to five days with no hospital stay. CyberKnife is the world's first and only robotic radiosurgery system designed to treat tumors throughout the body non-invasively in as little as 45 minutes a visit. Before CyberKnife treatments begin, patients will be fitted for a special body cradle. The cradle is made of a soft material that molds to the body and is designed to make treatment more comfortable and ensure positioning is the same for each session. Our physicians offer convenient cancer care in the heart of Tampa Bay.

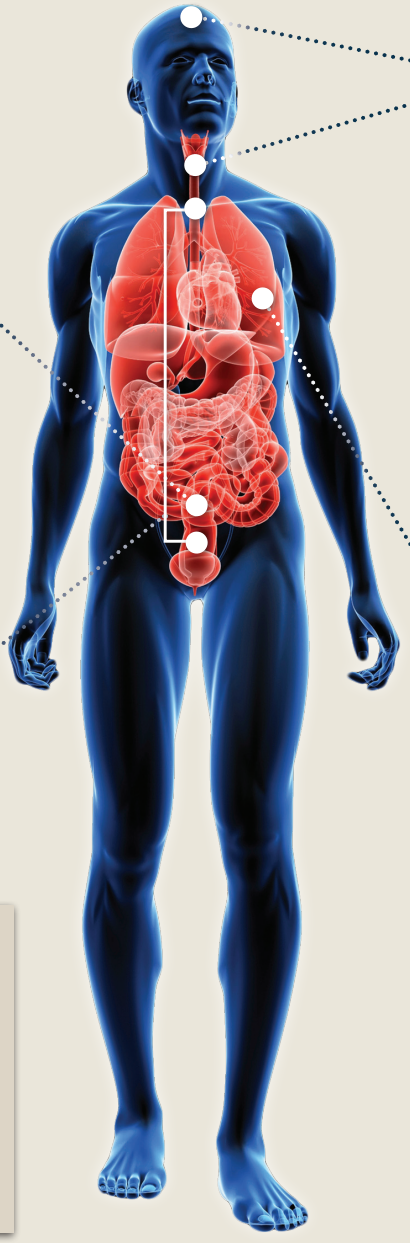
Prostate Cancer

Since 2003, prostate cancer has been treated with CyberKnife's unparalleled precision. It is the only integrated system capable of tumor position verification and real-time tracking during delivery of conformal stereotactic radiotherapy. Fiducial markers within the gland are used to verify organ position and track organ motion via an orthogonal pair of electronic x-ray imaging devices and provide real-time feedback correction to the robotic arm during delivery.

Prostate cancer treatments with the CyberKnife system are typically performed on an outpatient basis over a period of one to five days, requiring no overnight hospital stays. With this option, most patients experience minimal to no side effects with a quick recovery time.

Spinal Cancer

There are many obstacles to consider when treating a tumor on the spine. Traditional therapy can leave the heart, lungs and spinal cord with excess radiation levels. The accuracy of the CyberKnife system precisely targets the tumor, sparing the surrounding tissue and organs. This option is also crucial for patients in need of palliative care who are not good surgical candidates.



Head and Neck Cancers

CyberKnife pinpoints tumors within a sub-millimeter, a strong benefit when treating cancer in the brain. By radiating only the tumor, our oncologists can spare the patient from side effects like memory loss.

CyberKnife radiosurgery is often considered for recurrent head and neck cancers, particularly in the nasopharynx. In this challenging location, the radiosurgery accuracy can spare the nearby nasal passages and hearing tubes connecting to the respiratory tract.

Lung Cancer

Tumors in the lungs move as the patient breathes. The robotic arm, in real-time, tracks the movement to deliver the most accurate dose of radiation. The patient can breathe normally during the procedure, reclined in the custom body cradle, a special vest may also be worn to enable the robot to correlate chest motion and breathing patterns with the tumor position. In as little as five sessions, the patient's tumor is thoroughly treated with immediate, local response. CyberKnife also protects vital organs like the heart from unnecessary radiation.

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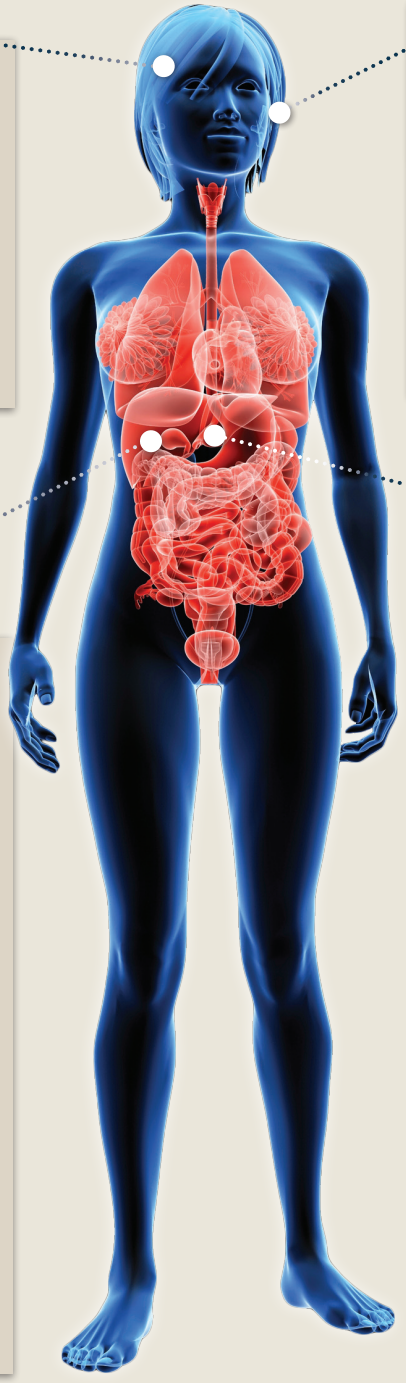
Trigeminal Neuralgia

The sharp, stabbing or burning pain caused by this nerve disorder affects five in every 100,000 people in the United States. Patients can find pain relief and a lower chance of recurrence, often with a single fraction. There is also no recovery time associated with this modality giving patients the option to avoid surgery and pain medication.



Acoustic Neuroma

This slow-growing tumor on the vestibular cochlear nerve can cause hearing loss and pain. CyberKnife Centers of Tampa Bay replaces surgery as a leading modality, treating in as little as three sessions with minimal side effects. It is also a viable option for those unable to have surgery, such as the elderly or people who are very sick.

Liver Cancer

Treating liver cancer with radiation therapy is a challenge because the liver is very sensitive and tumors move with respiration. The CyberKnife Radiosurgery System is able to deliver very high doses of radiation to both primary and metastatic liver tumors with extreme accuracy. Working in conjunction with the CyberKnife System is the Synchrony® Respiratory Tracking System, which enables the radiation beam to track tumor movement in real time and allows patients to breathe normally during their treatment sessions.

Gold fiducials are needed to help guide the technology and allow for real-time imaging. Once a plan is in place, the treatment typically only lasts a week.

Pancreatic Cancer

The CyberKnife system has been used to treat pancreatic cancer in patients who are poor surgical candidates, those who refuse surgery and in patients for whom surgery or other treatments have failed. To destroy, or ablate, the tumor in the pancreas with high doses of radiation safely requires a highly accurate system that detects the movement of the tumor throughout treatment sessions and delivers the radiation with pinpoint precision, since the tumors will move during respiration.

This treatment also requires fiducials be placed inside the tumor allowing the patient to breathe normally during the sessions. As a result, the CyberKnife treatment is more comfortable for patients, radiation is delivered more accurately and treatments can be completed in one to five sessions.

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Scan here to learn more about the benefits of CyberKnife.