Advanced Tumor Treatment
The CyberKnife Stereotactic Radiosurgery System, offered by Southwest Washington Medical Center, is a noninvasive outpatient treatment without the risks and complications associated with traditional open surgery. Offered by less than 2% of hospitals in the nation, CyberKnife represents the latest technology in cancer treatment.

Now there is a treatment option for tumors and lesions in the brain, neck and spine that may have previously been considered inoperable or inaccessible by radiation therapy.

What is CyberKnife®?
In addition to the head and neck areas, CyberKnife can also treat tumors of the lungs, liver, pancreas and prostate. The Southwest CyberKnife team will work with your physician to determine the best treatment plan for you.

What are the benefits of CyberKnife?
Because the CyberKnife is noninvasive, it has fewer complications than surgery.

Benefits of CyberKnife treatment may include:

**Better quality of life**

- Better access to hard-to-reach, larger or previously inoperable tumors
- More accurate radiation targeting for minimal radiation exposure to surrounding tissue
- Ability to treat multiple tumors in different locations during a single session
- No need to be admitted to the hospital for CyberKnife treatment
- Allows for treatment of lesions that have previously received the maximum allowed dose of traditional radiation therapy
New Options

- Improved comfort due to the elimination of an invasive and uncomfortable head frame usually required with radiosurgery
- No incision or scalpel
- No blood loss
- No anesthesia required for treatment
- No recovery time
- Immediate return to normal activity
- Far fewer complications than traditional surgery such as infection, hemorrhage or nerve damage

The CyberKnife treats the following conditions:

- Malignant brain tumors
- Benign brain tumors
- Vascular malformations
- Trigeminal neuralgia
- Extracranial tumors and lesions: Base of skull, head and neck, spine/bone, liver, lung, pancreas and prostate

Because of its high precision, the CyberKnife at Southwest can, without surgical incisions, go inside the body to achieve a surgical-like treatment.
How does the CyberKnife work?
The CyberKnife, paired with other hospital imaging technology, allows our specialists to customize a treatment plan for each patient. Through the use of robotics technology, the CyberKnife system locates the position of the tumor and uses a robotic arm to deliver highly focused beams of radiation to the tumor. The robotic arm’s range of motion allows for radiation to be delivered to tumor sites that are unreachable when using most other stereotactic treatment procedures. The imaging system periodically verifies the target position to ensure the radiation is delivered accurately to the lesion.

What conditions are treated with the CyberKnife at Southwest?
Specialists at Southwest are using this new tool to treat tumors in the brain, lung, liver, pancreas, prostate, and any other body site. In addition to treating newly diagnosed tumors, it can be used to treat sites that have had prior radiotherapy, an option that is often impossible with standard radiation techniques.
Is the CyberKnife proven?
Developed and manufactured by Accuray, the CyberKnife technology was cleared by the Food and Drug Administration (FDA) in August 2001. More than 10,000 patients worldwide have been treated to date, and emerging data is promising for this new technology and its ability to treat an expanding list of cancer types.

What are the steps for treatment?
Radiosurgery using the CyberKnife generally requires one to five treatments. Before you begin treatment, you will visit us so we can prepare a customized face mask or other device (for patients receiving treatment outside of the brain). This will help stabilize your body during treatment. Preparation is noninvasive.

We will also take a set of CT and MRI images of the tumor. These images will be used to plan your treatment. Patients being treated for spine or other tumors or lesions outside the head may need to undergo placement of “fiducials” or special markers.
near the tumor prior to treatment. Placement of the fiducials is done as a minor outpatient procedure using local anesthetic.

On the day of the actual treatment, you will lie on a table and wear the custom-fit face mask or body stabilizer while the robotic arm delivers the radiation. Most treatments typically last one to two hours, after which you can go home.

**Who will be involved in my treatment?**

A specially trained team of highly qualified medical experts operates the CyberKnife. Team members include a surgeon, radiation oncologist, medical oncologist, physicist, radiation therapists, oncology nurses and other healthcare professionals. This team will work with your referring physician to ensure your treatment plan is customized to your specific needs, thereby delivering the best possible treatment outcome.

To learn more about CyberKnife, visit [www.swmedicalcenter.org/cyberknife](http://www.swmedicalcenter.org/cyberknife), call 360-514-CYBR(2927), or ask your physician.
Where can I find out more about CyberKnife? The Southwest Washington Medical Center’s Web site offers more information about the CyberKnife system, including videos and images. Visit us at www.swmedicalcenter.org/cyberknife or call us at (360) 514-CYBR (2927).

You can also learn more about CyberKnife radiosurgery and talk to other patients who have been through an experience similar to yours by visiting the CyberKnife Patient Support Group Web site at www.cyberknifesupport.org.

Southwest Washington Medical Center
400 NE Mother Joseph Place
Vancouver, Washington 98664

Campus Location:
The CyberKnife Center is located within the Cancer Center building, located at the 87th Avenue entrance.