

5 Things to know about CyberKnife Stereotactic Radiosurgery and Stereotactic Ablative Body Radiotherapy



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Stereotactic Radiosurgery is a non-invasive, non-surgical treatment that delivers very high doses of radiation therapy in a very precise fashion. The sub-millimeter accuracy of CyberKnife, which cannot be achieved with conventional radiotherapy, minimizes the damage to the surrounding normal tissues. Stereotactic Radiosurgery (SRS) refers to the use of radiosurgery for lesions in the brain or spine while Stereotactic Ablative Body Radiotherapy (SABR) refers to the use of radiosurgery for lesions in the rest of the body. Here are five things that you should know about treatment with CyberKnife SRS or SABR at the Alaska CyberKnife Center:

1

Clinical outcomes are similar to surgery, but with fewer side effects.

For decades, surgery has been the standard of care treatment, but the technological advances seen with CyberKnife are quickly changing the paradigm. In many clinical situations, CyberKnife has local control and effectiveness that is equivalent to surgery. However, due to its non-invasive nature, the risk of side effects is significantly lower with CyberKnife.

2

Real-time tumor tracking results in less radiation to the nearby normal tissues.

In any situation where the tumor may move during treatment, gold fiducials (markers) may be implanted into the tumor. During treatment, the CyberKnife tracks the movement of the markers to account for changes in the position of the tumor. The real-time tumor tracking and high degree of precision allows for a much smaller safety margin to be placed around the tumor compared to other linear accelerators (treatment machines), which results in significantly less radiation to the surrounding healthy tissues. *Continued on back...*

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3

The CyberKnife is extremely versatile.

While the CyberKnife was initially invented to treat brain metastases, its use has expanded to treat lesions in the spine, lung, liver, pancreas, kidney, adrenal gland, prostate and bone.

4

The CyberKnife is very convenient.

Unlike surgery, which requires hospitalization and recovery time, the non-invasive nature of CyberKnife allows for outpatient treatments and an immediate return to normal activity. Additionally, unlike conventional radiotherapy treatments which can take up to 9 weeks or surgery which can require up to 10 weeks of recovery time, treatment with CyberKnife is completed in a week or less. Each CyberKnife treatment takes 15-45 minutes, depending upon the complexity of the treatment plan.

5

You will receive the level of expertise on par with major academic centers.

As the only physician fellowship trained in SRS and SABR in the state of Alaska, I can provide your patients with the level of care and expertise that they would receive at major academic centers in the Lower 48. During my fellowship at Yale, I treated over 300 patients with SRS or SABR while working with some of the world's experts in radiosurgery. Additionally, I worked extensively with Neurosurgeons, Thoracic Surgeons, Surgical Oncologists, Urologists, Interventional Radiologists and Medical Oncologists in a multi-disciplinary fashion to gain an understanding of the best treatment approach for each individual patient, depending on the clinical situation. As a result, I can give a fair, objective recommendation backed by scientific data as to the treatment course (CyberKnife, conventional radiotherapy, surgery or systemic therapy) that would be best for each individual patient.

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