How does it work?
The morning of the treatment the patient will have a stereotactic frame placed by the neurosurgeon. This frame is what allows the Perfexion™ system to provide sub-millimeter accuracy. Imaging studies will be done with the frame in place, which can be Computed tomography (CT), magnetic resonance imaging (MRI) or a combination. Sometimes the patient may need to have imaging studies done prior to the day of treatment; these are done without the stereotactic frame. Once imaging is obtained, a plan will be developed by the physicist, radiation oncologist and neurosurgeon to accurately treat the target/s. Once the plan is complete the frame will be removed and the patient may go home and resume normal activities.

What are some of the conditions treated?
The Leksell Gamma Knife® Perfexion™ can treat a wide variety of benign and malignant conditions including:
- Brain metastases
- Malignant brain tumors
- Meningiomas
- Pituitary adenomas
- Acoustic neuromas
- Arteriovenous malformations
- Trigeminal Neuralgia
The Extend™ system for the Gamma Knife® Perfexion™ uses a vacuum assisted mouth piece to help maintain the patient’s position during treatment and reproduce this same position every day. The treatment is completely non-invasive and the patients only have to come to the department a few times.

With the Extend™ system patients may receive treatment to lesions that would have otherwise not been able to be treated with the conventional Gamma Knife® Perfexion™ procedure due to the need to fractionate.

**Gamma Knife® Radiosurgery at Sylvester**

- Minimally invasive radiosurgery with the latest technology available
- Sub-millimeter accuracy in the treatment of a wide variety of conditions
- Skilled physicians with years of experience in stereotactic radiosurgery procedures

*All images courtesy of Elekta*