



Leksell Gamma Knife® Perfexion™

“Yesterday, I had brain surgery. Today, I’m taking dance lessons; teaching soccer; enjoying life.”

That’s because unlike traditional, open brain surgery, Gamma Knife surgery involves no incision. There is no bleeding, no risk of infection and no lengthy hospital stay following treatment. In fact, most patients can return to their normal daily activities the day after Gamma Knife surgery.

The Long Island Gamma Knife Center at Mount Sinai South Nassau offers you state-of-the-art, non-surgical treatment of certain brain abnormalities, including malignant and benign tumors, arteriovenous malformations (AVMs) and functional disorders such as trigeminal neuralgia. Gamma Knife is the proven, original brain radiosurgery device backed by more than 50 years of clinical experience and is considered the gold standard, with over 1 million patients treated worldwide. Gamma Knife was developed specifically for brain radiosurgery and no radiosurgery platform offers more brain treatment experience or faster, more accurate treatment than the Gamma Knife. We are the longest running Gamma Knife center on Long Island; having performed more than 2,300 patient treatments for brain conditions, our physicians are among the most experienced in the region.

Directions:

From all points west: Take the Queens-Midtown Tunnel at 34th Street to the Long Island Expressway (495); Expressway to the Cross Island Parkway south; Cross Island to the Southern State Parkway, eastbound; take the Southern State to exit 17 south, (Hempstead Avenue); Hempstead Avenue becomes Ocean Avenue; continue south on Ocean Avenue to Merrick Road; make a left on Merrick Road; make a right on Oceanside Road; continue until first traffic light (Oswald Court) and make a left onto Oswald Court; Hospital is on your right.

From all points east: Take Southern State Parkway westbound to exit 20S (Grand Avenue, Baldwin). Take Grand Avenue south to Merrick Road. Make a right on Merrick Road. Go approximately one mile to Oceanside Road. Make a left on Oceanside Road. Hospital is on your left.



**Mount
Sinai
South
Nassau**

Mount Sinai South Nassau
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LIGamma.org

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All photos, with exception of cover photo, were taken prior to the COVID pandemic. Our practitioners and patients are required to wear appropriate PPE at all times.

Except where noted, models are used in photos and their appearance here is not reflective of a specific disease profile.

Gamma Knife® Radiosurgery

**Faster, safer and more effective
non-invasive brain radiosurgery**



**Mount
Sinai
South
Nassau**

Leksell Gamma Knife® Perfexion™

How Does the Gamma Knife Perfexion Work?

The Gamma Knife Perfexion precisely focuses a high dose of ionizing radiation, through 192 cobalt-60 sources, on the area to be treated.

At the point where the 192 beams converge, enough radiation is deposited to destroy the abnormality. Since the Gamma Knife's accuracy is within the width of a human hair, surrounding tissue, blood vessels and nerves receive only a minimal dose of radiation.

The Gamma Knife can have many advantages over open surgery, for those whose conditions make them candidates for radiosurgical treatment. Because the treatment can often be

conducted in a single session, even when there are multiple lesions, you will spend dramatically less time in treatment with the Gamma Knife. Since there is no open surgery, there is no time lost in recovery and there are fewer opportunities for serious surgical side effects. Additionally, there is no need to shave your head which

allows for an immediate and comfortable return to social activities; and because you can almost always leave the day of the procedure, you're able to spend more quality time in the supporting presence of family and friends.

Who Can Benefit from Gamma Knife Treatment?

The Gamma Knife is the gold standard for the non-surgical treatment of inaccessible or inoperable brain disorders. It has been used on more than 1.3 million patients worldwide for the treatment of malignant and benign brain tumors, arteriovenous malformations (AVMs) and certain functional disorders such as trigeminal neuralgia.

Mount Sinai South Nassau Gamma Knife was the first on Long Island and has the most Gamma Knife experience in the region.

What Happens in a Gamma Knife Treatment?

The treatment is simple, painless and straightforward. The treatment consists of four steps:

- 1. A head frame is attached.** The frame allows for the most accurate pinpointing of the target to be treated and prevents your head from moving during imaging and treatment
- 2. Imaging is completed.** CT, MRI or angiography will be done to determine the exact size, shape and position of the target
- 3. Treatment planning is made.** Once imaging is complete, your physician will design a customized treatment plan tailored for your individual needs
- 4. Gamma Knife treatment is performed.** Treatments may last from a few minutes to an hour or more; you may listen to music and you will be able to speak with your treatment team the entire time

When your treatment is complete, the head frame will be removed. Your doctor will tell you whether or not you should stay overnight for observation or if you can go home immediately. Either way, you should be able to return to your normal routines in a day or so.



What Happens Next?

The effects of your treatment will occur over time. Radiation treatments are designed to stop the growth of tumors or dysfunctional tissue, which means the effects will be seen over a period of weeks or months. Your doctor will stay in contact with you to assess your progress, which may include follow-up MRI, CT or angiography images.

The Long Island Gamma Knife Perfexion is offered under the direction of these highly trained and experienced physicians:

Leester Wu, MD, Director of Radiation Oncology and Co-Medical Director of Long Island Gamma Knife

Dr. Wu is board certified in radiation oncology and brings a diverse background in community practice, research, and academic training to Mount Sinai South Nassau's Radiation Oncology Department. He was the recipient of numerous honors throughout his undergraduate work at Harvard University and while he was in medical school at the University of Pennsylvania. He completed his residency at Columbia University Medical Center in New York, training in state-of-the-art external beam radiation therapy and Gamma Knife stereotactic radiosurgery.

Michael H. Brisman, MD, Chief, Surgical Neuro-Oncology and Co-Medical Director, Long Island Gamma Knife

Dr. Brisman is board certified in neurosurgery and specializes in the management of malignant and benign brain tumors and is a recognized national expert in the treatment of face pain/trigeminal neuralgia, as well as metastatic brain cancer. Experienced in Gamma Knife radiosurgery, he also performs linear accelerator-based stereotactic radiotherapy. Dr. Brisman is a graduate of Harvard University, completed his medical degree at Columbia University, and a neurosurgical residency at Mt. Sinai Medical Center in New York.

Constantinos G. Hadjipanayis, MD, PhD, Director of Neurosurgical Oncology, Mount Sinai Health System Professor of Neurosurgery and Oncological Sciences, Icahn School of Medicine at Mount Sinai

Dr. Hadjipanayis is a board certified neurosurgeon and recognized as a pioneer in the therapy and surgical management of malignant brain tumors. He completed his neurosurgical residency and graduate PhD training at the University of Pittsburgh Medical Center where he was specialty trained on the use of the Gamma Knife by his mentor, Dr. L. Dade Lunsford. He routinely performs brain tumor microsurgery and neuro-endoscopy and is an expert in Gamma Knife and linear accelerator-based stereotactic radiosurgery for brain and skull-based tumors.