LONG ISLAND
MDNEWS®

INNOVATIVE AND NOVEL Treatments

for Brain Tumors at The Long Island Brain Tumor Center

FOR PATIENTS REQUIRING SPECIALIZED MEDICAL OR SURGICAL MANAGEMENT FOR BRAIN TUMORS, THE LONG ISLAND BRAIN TUMOR CENTER AT NEUROLOGICAL SURGERY, P.C. OFFERS SOME OF THE NEWEST AND MOST INNOVATIVE TREATMENT OPTIONS FOR BRAIN AND SPINAL TUMORS IN THE COUNTY.

SINCE 2007, NEURO-ONCOLOGISTS at the practice have developed a unique treatment curriculum for patients in the Long Island area and beyond.

"Available treatments are often not sufficient when implemented on their own, so our goal was to put together a comprehensive brain tumor program, offering complementary therapies and clinical trials," says Jai Grewal, M.D., neuro-oncologist at The Long Island Brain Tumor Center. "By focusing on patient therapies and clinical trials, as well as the latest techniques in radiosurgery, we can effectively pinpoint and treat complex conditions affecting the brain, such as metastatic tumors."

Even traditional approaches to brain tumor treatment, such as chemotherapy, are offered in innovative ways to maintain quality of life for patients undergoing aggressive treatment.

"Oral and intravenous chemotherapy are typically not offered at other centers," says Dr. Grewal. "By offering these therapies in nontraditional ways, we have found patients experience fewer side effects, and their quality of life is not as diminished. Many times, quality of life is neglected because of the seriousness of neurological diseases. Yet, it is the most important factor for patients. Steps to enhance quality of life should be incorporated at the beginning of any treatment plan, not just at the end stages."

Keeping patient comfort at the forefront of treatment, The Long Island Brain Tumor Center features chemotherapy infusion suites, and patients with certain indications can also receive chemotherapy

Left to right: Lee Tessler, M.D., neurosurgeon; J. Paul Duic, M.D., neuro-oncologist; and Jai Grewal, M.D., neuro-oncologist, at The Great Neck office of The Long Island Brain Tumor Center at Neurological Surgery, P.C.

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Lee Tessler, M.D., neurosurgeon at The Long Island Brain Tumor Center at Neurological Surgery, P.C., Chief of Neuro-Trauma at Winthrop-University Hospital and assistant professor of neurosurgery at New York University Medical Center

treatments at home.

Ongoing Clinical Trials

Currently, two innovative clinical trials are available to patients at The Long Island Brain Tumor Center. Through a partnership with the National Cancer Institute, the first trial focuses on improving treatment options for patients with recurrent glioblastomas by delivering chemotherapy directly into the tumor, which helps reduce the side effects associated with chemotherapy.

"For patients who have recurring glioblastomas, we can implant a catheter directly into the tumor during stereotactic surgery," says Lee Tessler, M.D., neurosurgeon at The Long Island Brain Tumor Center, Chief of Neuro-Trauma at Winthrop-University Hospital and assistant professor of neurosurgery at New York University Medical Center. "Once the catheter is placed, it is then tunneled under the skin to the chest where the chemotherapy agent is administered,

"By utilizing the latest technology to analyze and treat brain tumors surgically through the combined use of magnetic resonance imaging and tractography, we can increase positive outcomes with lower morbidity rates and fewer neurological deficits. Our program is on par with or exceeds treatment options available at medical centers across the country."

— Lee Tessler, M.D., neurosurgeon at The Long Island Brain Tumor Center at Neurological Surgery, P.C., Chief of Neuro-Trauma at Winthrop-University Hospital and assistant professor of neurosurgery at New York University Medical Center

J. Paul Duic, M.D., neuro-oncologist, and Kerry McConie, R.N., provide intravenous chemotherapy for a brain tumor patient at The Long Island Brain Tumor Center's chemotherapy infusion suite.

which allows the drug to be delivered directly to the targeted lesion."

This clinical trial, which was developed using data from a Japanese study and has been available to patients since 2008, helps not only reduce the side effects associated with chemotherapy, but also determine if adding the angiogenesis inhibitor bevacizumab to the treatment regimen during radiation will improve overall patient outcomes.

Through a partnership with Winthrop-University Hospital, a second clinical trial utilizing hyperbaric oxygen (HBO) therapy to increase the speed of radiation treatments for patients coping with malignant aggressive brain tumors is underway.

"This is a postoperative study that focuses on using HBO as a radiation sensitizer," says J. Paul Duic, M.D., neuro-oncologist at The Long Island Brain Tumor Center. "Once the tumor is removed and patients begin receiving radiation and temozolomide, the HBO helps increase free radicals, which can help the radiation work better."

While these trials are ongoing, the medical staff at The Long Island Brain Tumor Center is currently developing new trials that will become available in the near future.

Past clinical trials have included studies into the use of radiation therapy with temozolomide to treat patients with newly diagnosed glioblastomas, the use of panobinostat to treat malignant brain tumors, and the use of radiation therapy and stereotactic radiosurgery with or without temozolomide or erlotinib for patients with brain metastases secondary to nonsmall cell lung cancer.

"Finding the most appropriate treatments for patients is our main goal," says Dr. Duic. "We are proud to partner with other facilities on local and national levels to further brain tumor treatment research and utilize those advancements in the treatment of our patients.

"From working with colleagues in the neurological field to offering patients access to advanced surgical approaches — such as Gamma Knife and CyberKnife — and leading-edge treatment options, including oral chemotherapy and clinical trials, we can offer care that isn't readily available elsewhere in the Long Island area."

— J. Paul Duic, M.D., neuro-oncologist at The Long Island Brain Tumor Center at Neurological Surgery, P.C.

Advanced Surgical Approaches and Radiosurgery Options

In addition to offering clinical trials, neurosurgeons at The Long Island Brain Tumor Center provide leading-edge surgical approaches, which help patients maintain optimal brain function.

"By combining functional magnetic resonance imaging with intraoperative stereotaxy and electroencephalography before and during surgery, we can create a three-dimensional model of the patient's brain as a navigation tool when planning an approach for removing a tumor near vital parts of the brain that control high-level functions, such as speech and movement," says Dr. Tessler. "By looking at both gray and white matter, we can improve outcomes and limit deficits after surgery."

For benign tumors located near the skull base and lying in close proximity to vital nerves and blood vessels, such as acoustic neuromas, Dr. Tessler utilizes a handheld CO_2 laser to enhance surgical outcomes.

"While CO_2 lasers have been used for the last 30 years in various capacities, physicians previously utilized microscope-mounted lasers. When handheld lasers became available, the technology gave neurosurgeons a wealth of benefits, including the ability to operate in smaller areas while sparing cranial nerves and the surrounding vasculature," says Dr. Tessler. "This technology works well for more fibrous tumors and can help reduce the time of the overall surgery."

For patients benefiting from a minimally invasive treatment approach, stereotactic radiosurgery is avail-

"The pillar of our program is to consider both the latest technology in cancer treatment, as well as the quality of life of our patients and their loved ones."
— Jai Grewal, M.D., neuro-oncologist at The Long Island Brain Tumor Center at Neurological Surgery, P.C.

MEET THE NEURO-ONCOLOGISTS

AT THE LONG ISLAND BRAIN Tumor Center at Neurological Surgery, P.C., neuro-oncologists bring a wealth of knowledge and expertise to patient care. Here's a closer look at the medical staff who work tirelessly to find new and innovative solutions for patients with brain tumors.

J. Paul Duic, M.D., graduated *magna cum laude* with a Bachelor of Science degree from Columbia University before obtaining his Doctor of Medicine from New York University School of Medicine.

Dr. Duic completed a surgical internship at UC Davis Health System and a residency in neurological surgery at UC Davis Medical Center, as well as an additional residency in emergency medicine at Johns Hopkins University. He completed his first clinical fellowship as a part of the combined fellowship program's neuro-oncology branch among the National Cancer Institute, National Institutes of Health and John Hopkins University. His second clinical fellowship was completed as a part of the neuro-oncology branch of the National Cancer Institute and National Institutes of Health. Dr. Duic's main areas of interest include medical management of brain and spine tumors, such as central nervous system (CNS) tumors, lymphoma, gliomas and metatastic tumors.

Dr. Duic is a clinical assistant professor in the department of neurology at the State University of New York, Stony Brook University Medical Center. He is affiliated with hospitals across New York, including Winthrop-University Hospital, South Nassau Communities Hospital, Huntington Hospital, New Island Hospital, Saint Francis Hospital and New York Hospital Queens.

Jai Grewal, M.D., graduated with a Bachelor of Arts degree from Boston University before completing his Doctor of Medicine at Spartan Health Sciences University.

He went on to complete a residency in internal medicine at Yale University-affiliated Griffin Hospital. Dr. Grewal then completed a residency in neurology at the University of Texas Southwestern Medical Center at Dallas. He also completed a neuro-oncology fellowship at MD Anderson Cancer Center, where he focused on the development of novel treatments and clinical trials.

Dr. Grewal focuses on the treatment of primary brain tumors, spine tumors and CNS metastases, as well as encompassing care for the neurological effects of cancer on patients. He is an assistant professor in the department of neurology at Hofstra North Shore–LIJ School of Medicine at Hofstra University and a member of the board of the American Cancer Society.

Lee Eric Tessler, M.D., received his Bachelor of Science degree in biology and neuroscience from Duke University before receiving his Doctor of Medicine from The Ohio State University College of Medicine and Public Health.

He completed a general surgery internship at New York University Medical Center, as well as a residency and chief residency in neurological surgery at New York University Medical Center. He serves as the Chief of Neuro-Trauma at Winthrop-University Hospital and assistant professor of neurosurgery at New York University Medical Center.

Dr. Tessler's main areas of focus include primary brain tumors, metatastic tumors, meningiomas, stereotactic surgery and radiosurgery.

To learn more about the medical staff of The Long Island Brain Tumor Center at Neurological Surgery, P.C., visit www.longislandbraintumorcenter.com and select "Doctors."

Joanne Montoni, R.N., assists Jai Grewal, M.D., neuro-oncologist, with a lumbar puncture procedure using an image-guided C-arm fluoroscopy machine.

Joanne Montoni, R.N., prepares the chemotherapy for intravenous infusion at The Long Island Brain Tumor Center's suite.

able through The Long Island Brain Tumor Center. For the past 10 years, Dr. Tessler has been offering stereotactic radiosurgery using the Gamma Knife and CyberKnife to treat benign and malignant tumors. Benefits provided by stereotactic radiosurgery include a noninvasive, bloodless procedure, precise and accurate radiation delivery that prevents damage to surrounding nerves and structures, and the ability to return home the same day as surgery.

"Radiosurgery offers patients an opportunity to be treated effectively without the complications and risks of traditional surgery or radiation," says Dr. Tessler. "Because the dose of radiation is focused solely on the tumor, the

COMPREHENSIVE CARE FOR COMPLEX CONDITIONS

IF A CURRENT patient needs specialized care or consultation for brain tumors, the medical staff at The Long Island Brain Tumor Center can treat a myriad of conditions, including:

+ Acoustic neuroma
+ Anaplastic tumors
+ Astrocytoma
+ Brain lymphoma
+ Brain metastases
+ Brain tumors
+ Carcinomatous meningitis
+ Central nervous system lymphoma
+ Ependymoma
+ Glioblastoma
+ Gliomas
+ High-grade tumors
+ Leptomeningeal disease
+ Lymphomatous meningitis
+ Medulloblastoma
+ Meningioma
+ Neoplastic meningitis
+ Neurological complications of cancer
+ Oligodendroglioma
+ Pitutiary tumors
+ Schwannoma
+ Spine tumors
+ Spine metastases

Left to right: Kerry McConie, R.N.; Kimberly R. Prabhu, M.A., CCRP, neuro-oncology clinical research coordinator; JoAnne Gleason, medical assistant; and Joanne Montoni, R.N., welcome their patients at The Long Island Brain Tumor Center at Neurological Surgery, P.C.

healthy tissue surrounding the tumor is not affected."

Dr. Tessler also offers stereotactic biopsy for enhanced diagnosis.

Streamlining Care

When patients receive treatment at The Long Island Brain Tumor Center, neuro-oncologists ensure each patient's referring physician is kept abreast of the patient's progress.

"Many times, when patients seek specialized treatments, the referring physician is left out of the loop," says Dr. Grewal. "It's our goal to inform physicians of where their patients are at every stage of care. If patients request multiple physicians be updated, I ensure they receive a note or a personal phone call."

For patients and referring physicians in the Long Island area, the medical professionals at The Long Island Brain Tumor Center can offer new hope without the need for lengthy travel.

"Our treatment offerings are on par with many of the best cancer centers across the country," says Dr. Duic. "We are also able to offer many treatments not readily available anywhere else — right here on Long Island."

To learn more about treatment options and upcoming clinical trials at The Long Island Brain Tumor Center, please visit www.longislandbraintumorcenter.com. ■

Left to right: Jai Grewal, M.D., neuro-oncologist; Lee Tessler, M.D., neurosurgeon; and J. Paul Duic, M.D., neuro-oncologist, discuss a brain tumor patient's case.

FOCUS ON RESEARCH AND ACADEMICS

BECAUSE A PORTION of the brain tumor program is dedicated to novel treatment approaches, it only makes sense that many of the physicians on staff at The Long Island Brain Tumor Center also have a great interest in furthering current knowledge of neuro-onocology approaches at academic and professional levels.

"With more than 20 physicians in our practice, many of our colleagues are affiliated with local universities and medical facilities in the Long Island and New York areas," says J. Paul Duic, M.D., neuro-oncologist at The Long Island Brain Tumor Center. "Sharing knowledge and finding new approaches to treating patients is important to us. If a general oncologist needs a specialized approach or second opinion, we are happy to visit patients and consult with other physicians at facilities across the region to provide an added level of expertise."

Many of the physicians on staff have studied at well-known organizations, such as the National Institutes of Health and MD Anderson Cancer Center, or participate on the board of the American Cancer Society to help advocate for patients to ensure every cancer patient receives the vital care he or she needs.

AFFECTING THE FUTURE OF CANCER TREATMENT

As the physicians at The Long Island Brain Tumor Center continue developing new treatments for brain tumors, it is hoped these new developments will have a significant impact on future treatments for all types of cancer.

"The insights we gain from treating brain tumors now can be used to treat other kinds of cancer down the road," says Jai Grewal, M.D., neuro-oncologist at The Long Island Brain Tumor Center. "Many breakthroughs in cancer biology, such as the concept of the cancer stem cell, have come from research in brain tumors."