

- Hope Is Everything: Fighting Brain Cancer With Positivity and Specialized Medical Care
- Expanded Access to Expert Care
- Laser Interstitial Thermal Therapy (LITT): A Brain Tumor Diagnosis Doesn't Have to Mean Traditional Surgery
- Living Proof of Normal Life After a Brain Tumor
- New Caregiver Support Group
- Leading the Cutting-Edge of Innovation

At the Gerald J. Glasser Brain Tumor Center, brain cancer care is as much about science as it is about hope. That's why our team is continually working to bring cutting-edge research, innovative treatments and holistic support to our patients and their caregivers.

In fact, there are more therapies for brain cancer at the Glasser Center than ever before. This includes effective minimally invasive treatment options and an array of promising clinical trials. Our multidisciplinary team of experts is leading the way with this type of game-changing care – and our patients are living proof of what's possible.

We're moving comprehensive brain tumor care forward every day because you and your loved ones deserve the best.





Co-Directors Yaron A. Moshel, MD, PhD Neurosurgery

Robert Aiken, MD Neuro-oncology

H PE Is Everything

Diagnosed with a glioblastoma, Dana D. is fighting brain cancer by surrounding herself with positivity and specialized medical care.

"I plan on being one of those one-percenters."

That's what Dana D., referring to the approximately 1% of glioblastoma patients who survive 10 years, has to say about living with brain cancer. When the 61-year-old from Denville, NJ, was diagnosed with a glioblastoma, she saw only one path forward: choosing hope.

"After the shock of my diagnosis wore off, I realized there were two ways I could handle myself," says Dana. "I could stay in bed and cry, or I could surround myself with hope and live my life to the fullest. Thanks to my amazing support team – my family, friends and the wonderful specialists at the Gerald J. Glasser Brain Tumor Center – I'm doing exactly that."

Dana's tumor was discovered when she experienced the abrupt onset of stroke-like symptoms. She had been raking leaves with her husband and suddenly was unable to speak. Having taken a CPR and First Aid course to ensure she could care for her young grandchildren in case of an emergency, she remembered the F.A.S.T. acronym for stroke symptoms (now B.E. F.A.S.T.) and recalled face drooping, arm weakness or speech difficulties meant it was time to call 911. She was able to mutter the word "stroke," and her family called an ambulance to rush her to the emergency department.

Dana was treated at the nearest hospital, where an MRI scan revealed a "cluster" on her brain. This mass is likely what caused the seizure episode that was initially believed to be a stroke. Not taking any chances, John J. Knightly, MD, director of quality for neurosurgery at Atlantic Health System, had her transferred to the Glasser Brain Tumor Center.



"Dr. Knightly told me I would have a great team of subspecialized doctors and caregivers at the Glasser Brain Tumor Center. He was so right. They couldn't have been nicer, more informative or more encouraging," adds Dana, with her contagious positivity.

At the Center, Dana was evaluated by an integrated team of brain tumor specialists, including neurosurgeon Fabio A. Frisoli, MD, neuro-oncologist Nicholas R. Metrus, MD, radiation oncologist Joana S. Emmolo, MD, and Angela Davis, APN, a nurse practitioner specializing in neuro-oncology. Bringing expertise to the table from every angle, they worked collaboratively to develop a personalized care plan, which started with removing the cluster.

"Given Dana's constellation of neurological symptoms and the proximity of the tumor to the speech center in the brain, we needed to start with surgery to remove the mass. This would allow us to both alleviate her symptoms and obtain an appropriate diagnosis," explains Dr. Frisoli. "The goal of surgery is always to safely remove as much of the tumor as possible, without causing a neurological deficit. With a focus on safety and precision, we were able to remove all of Dana's tumor without damaging healthy brain tissue." After pathology confirmed that Dana's tumor was a glioblastoma, Dr. Metrus and Dr. Emmolo discussed the different possibilities for post-surgical treatment, including clinical trial options, with Dana and her family.

"Dana's tumor had a mutation called MGMT methylation, which was a key factor in deciding to use temozolomide for chemotherapy. Not only is it the standard-of-care chemotherapy for glioblastoma, but studies also show it works even more effectively for tumors that have this specific type of mutation," explains Dr. Metrus.

Dana's personalized treatment plan combined this chemotherapy with six weeks of daily radiotherapy to address any potential remaining cancer cells.

"With our advanced radiotherapy treatment techniques, we were able to safely deliver the needed treatment while minimizing both immediate and longer-term toxicity," notes Dr. Emmolo. "Dana was incredibly brave throughout the process, and we both looked forward to chatting weekly about her upcoming travel plans."

After radiation, Dana's treatment included Optune® Tumor Treating Fields, a device worn on the scalp that disrupts tumor cell division, while she continued with chemotherapy.

During her treatment, Dana was traveling and making unforgettable memories with her family. In the past year, she visited Disney World, Rome, Paris and Martha's Vineyard. She renewed her vows with her high school sweetheart and husband of 40 years, Bill. And she's not done yet.

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"I want to do absolutely everything I can, and I wouldn't be able to do it without the support I've received," Dana says. "The team at the Glasser Brain Tumor Center hasn't only delivered amazing medical care. Their doctors and nurses have cared for me and my family since Day One. My patient navigator Janet LeMonnier and the Glasser Brain Tumor Center Support Group made my journey so much easier to handle. They've helped me keep my light shining bright. There's truly no greater gift than that."

NEW LOCATIONS



Expanded Access to Expert Care at Chilton and CentraState medical centers

Comprehensive brain tumor care is closer to home for many Northern New Jersey patients with the opening of new Glasser Brain Tumor Center locations at Chilton Medical Center in Pompton Plains, NJ, and CentraState Medical Center in Freehold Township, NJ.

Now, patients in these areas can access multidisciplinary care that integrates science, innovation and a team of nationally recognized experts with personalized guidance and support right in their communities.

For information on these locations, visit atlantichealth.org/braintumor or call 908-522-5914.



Brain cancer treatment is evolving every day, and laser interstitial thermal therapy (LITT) is one of the most significant new advancements.

A minimally invasive surgical technique, LITT uses a small laser to destroy unhealthy brain tissue. Also known as laser ablation, LITT is an effective treatment option for patients with brain tumors, radiation necrosis (cell damage) and certain types of epilepsy. It provides the benefits of traditional brain surgery with less risk and little to no recovery time.

"LITT is a major advancement that provides major advantages for our patients," says Yaron A. Moshel, MD, PhD, a neurosurgeon and co-director of the Gerald J. Glasser Brain Tumor Center at Atlantic Health System. "Because it's minimally disruptive to the brain, it's suitable for most patients, even those on chemotherapy who can't have open surgery. Offering this effective, innovative treatment is just one of the many cutting-edge techniques we use to deliver the very best brain tumor care."

During the procedure, a neurosurgeon opens a very tiny hole in the skull while the patient is asleep under anesthesia. Then, using stereotactic guidance (a GPS system for the brain based on an MRI scan) and, sometimes, a robotic arm, the surgeon places a thin fiberoptic probe in the area of the brain to be treated. The remainder of the procedure is completed in an MRI machine, where a laser beam travels through the probe to thermally treat the tumor.

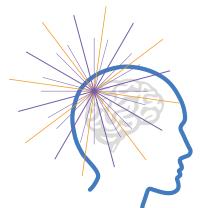
"Most people think of a laser as something from 'Star Wars'. In reality, a laser is an extraordinarily precise device," Dr. Moshel explains. "With proper monitoring, the laser directs controlled heat inside the tumor and destroys malignant cells without damaging the healthy tissue that surrounds it. The heating and cooling of the laser is automatically regulated to prevent damage to healthy tissue."

While the heat from the laser is being deployed within a tumor – or creating a lesion in the region of the brain that is causing epileptic seizures – the MRI is used as a 3-D thermometer. Providing live imaging and feedback in real time, the MRI determines how far the heat has spread and verifies the efficacy of the procedure.

At the end of the procedure, the probe is removed, and, if necessary, the tiny incision is sealed. The body's natural immune system then cleans up the debris left behind after the thermally treated tumor cells disintegrate.

"With LITT, patients are spared the physical stress and recovery that comes with open surgery," Dr. Moshel adds. "They have little to no hair removal, minimal scarring, and because the incision is so small, they usually require little to no recovery time. Many go home the day of the procedure or the next day."

LITT technology is rapidly becoming standard practice and an accepted adjunct to surgery and radiation therapy.



Radiosurgery Now Available

at Morristown Medical Center

radiosurgery noun

ra·dio·sur·gery

: surgery using precisely targeted radiation to destroy tissue without cutting

Radiosurgery – also referred to as radiation surgery, stereotactic radiosurgery and stereotaxic radiosurgery – uses 3-D imaging to target high doses of radiation to a specific affected area. It's a precise, non-surgical alternative to treating cancerous and non-cancerous tumors with minimal impact to surrounding healthy tissue.

"Two decades ago, we opened the first CyberKnife® radiosurgery facility on the East Coast at Overlook Medical Center," explains Joana S. Emmolo, MD, a radiation

oncologist and director of neurologic radiosurgery at Atlantic Health System. "Since then, we have been operating the largest and most experienced program in the

"Expanding these services beyond Overlook Medical Center provides patients with additional convenient access to pinpoint radiation therapy."

state, treating patients with brain metastasis, cancer that originates elsewhere in the body and spreads to the brain. By treating individual tumors with highly accurate, focused doses of radiation, we're able to eradicate lesions while safeguarding healthy brain tissue."

That's why Atlantic Health System recently expanded its radiosurgery capabilities to Morristown Medical Center with the addition of the TrueBeam® Radiotherapy System. Similar to CyberKnife, TrueBeam offers the most advanced image-guided technologies for enhanced tumor visualization and targeting.

"Prior to modern technologic advances like this, every patient's entire brain was treated with one uniform dose, which caused many life-altering consequences," Yana P. Goldberg, MD, a radiation oncologist at Morristown and medical director at Hackettstown Medical Center, details. "Now with these more individually tailored and targeted treatments, our patients are enjoying a longer and higher quality of life."

"By bringing this technology – which we also have at Overlook – to Morristown Medical Center, we are expanding access to this highly specialized treatment," Mona Karim, MD, a radiation oncologist and vice chair of the radiation oncology department at Morristown, continues. "This is critically important as patients with metastatic brain cancer often experience health challenges. Having facilities in diverse New Jersey locations makes it easier for them to benefit from this effective treatment."

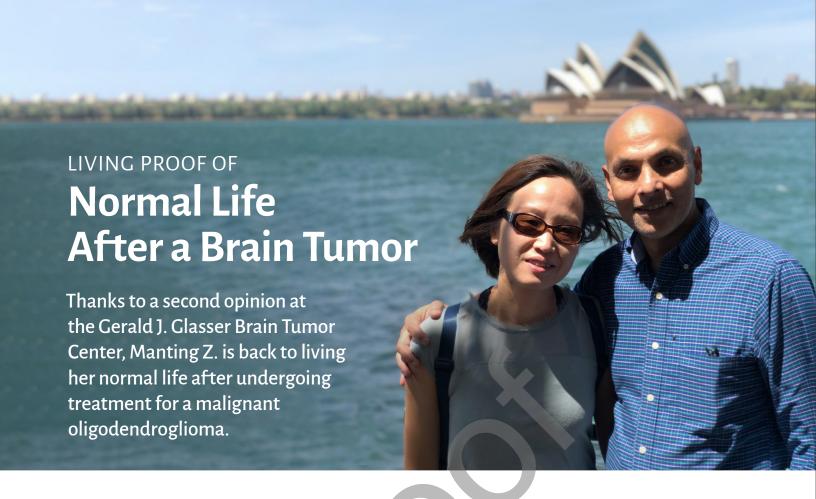
Providing radiosurgery treatment requires intense administration and follow-up by specialty-trained experts.

"At the Glasser Brain Tumor Center, every patient's treatment is designed and followed by a multidisciplinary team of radiosurgery experts," notes Joseph Paul Weiner, MD, a radiation oncologist and medical director of advanced radiation technology. "From their first encounter to post-treatment surveillance, patient care is coordinated among

all members of the team for a streamlined experience. And the results speak for themselves."

Dr. Emmolo concludes, "Here at Glasser, we are seeing our

patients live far longer without suffering the crippling effects of whole brain radiation. These outcomes and our patients are our inspiration for providing expanded and increasingly easy access to state-of-the-art therapies and treatments like this."



How would you describe learning you or your loved one has brain cancer?

As Shaun B. puts it, "It's like the end of the world. And learning that it's one of the kinds of cancer that's not curable is even worse."

That was his reality when his wife, Manting Z., was diagnosed with a Grade 3 oligodendroglioma at the age of 49. But after treatment, the message Manting and Shaun want others to know is that sometimes, a lot of things can go right during your brain cancer journey, and it may not be as bad as you fear.

In Manting and Shaun's case, one of those right things was to go to the Gerald J. Glasser Brain Tumor Center at Atlantic Health System for treatment. They were first told Manting had a brain tumor at a hospital close to their home in Edison, NJ. She was being evaluated for abnormal behavior – including her head involuntarily turning to the side, verbal tics and compromised depth perception – when an MRI scan revealed a mass in her brain. The couple was referred to a local neurosurgeon, but they weren't satisfied with that physician's approach. Looking for a second opinion at a comprehensive brain tumor center, their research pointed them to the Glasser Brain Tumor Center.

"We were initially drawn to the Glasser Brain Tumor Center since they handle the most brain tumor surgeries in the region with very good outcomes. Once we went in for a consultation, it was clear how their experts work collaboratively and how smooth they make the process for patients," says Shaun.

Manting emphasizes, "It was important to us that the doctors provided all the information we needed to make decisions about treatment and partnered with us as we figured out the best path forward."

Manting initially had to choose between having a biopsy to identify the tumor or having brain surgery to remove the tumor and then determining the subsequent treatment plan. The avid travelers, who had plans to visit Switzerland and Liechtenstein when they learned of her diagnosis, relied on the guidance of their care team, including neurosurgeon Yaron A. Moshel, MD, PhD, and neuro-oncologist Robert Aiken, MD – co-directors of the Glasser Brain Tumor Center – as well as radiation oncologist Joana S. Emmolo, MD, director of neurologic radiosurgery at Atlantic Health System.

While they could have waited a few weeks, they chose to defer their trip and proceed with surgery to remove the tumor. "We knew, without a doubt, that removing all of the detectable tumor would be the key to Manting's long-term survival and prognosis. However, it was even more important to do this without disturbing the surrounding functional brain tissue," explains Dr. Moshel. "The boundaries between the tumor and the brain are often invisible to the untrained eye, and even under a high-power surgical microscope. At the Glasser Center, we have an array of tools that enable us to safely remove brain tumors in their entirety."

These tools include interoperative fluorescent imaging of the tumor, 3-D navigation and brain mapping techniques. These were all factored into planning Manting's surgery and helped the neurosurgical team remove the entire tumor.

Manting and Shaun also had an ongoing discussion with Dr. Aiken about the specific type of chemotherapy to use in conjunction with radiation following surgery. It was an experience that stands out to them because of how supportive Dr. Aiken was during this process.

"Fortunately, treatment for her condition is quite effective and well tolerated," says Dr. Aiken.

"To eradicate any remaining tumor cells and prevent recurrence of the disease, Manting received six-and-a-half weeks of daily radiotherapy, precisely targeting the original tumor bed and at-risk regional tissues, as part of her initial treatment course," notes Dr. Emmolo. "She had such a positive attitude throughout her treatment and never let it slow her down."

After a year and a half, Manting graduated from treatment and is now being monitored with MRI scans every three months. However, she hasn't let her brain cancer, or her treatment, hold her back. She returned to work full-time – something important to her – five months after her diagnosis, continues to travel and says, for the most part, there's nothing she can't do physically or mentally.

"I consider myself extremely lucky because I really haven't been through too much of a hardship, all things considered. For me, it's important to stay positive and inspire others," says Manting, who participates in the Glasser Brain Tumor Center Support Group. Shaun also participates in the new Glasser Brain Tumor Center Caregiver Support Group. "We are very fortunate." "Yes, Manting's condition is serious. Yes, it's a forever thing, and we know our journey isn't over. But for now, everything has turned out way better than we could have imagined."



In her first trip overseas after surgery and radiation, Manting ventured to the Alps as she toured Switzerland, Austria and Liechtenstein.

NEW!

Caregiver Support Group

For more than 10 years, the Glasser Brain Tumor Center Support Group has been a source of hope, understanding and education for individuals affected by a brain tumor. Now, family members and close friends have a community dedicated to supporting them as caregivers with the new Glasser Brain Tumor Center *Caregiver* Support Group.

"A brain tumor diagnosis can throw an entire family into turmoil, and often it's the caregivers who pick up the pieces for everyone. We recognize that a support group just for caregivers can help lighten their load," says Robert Aiken, MD, co-director of the Gerald J. Glasser Brain Tumor Center.

Co-moderated by social worker Janet LeMonnier, MSW, LSW, OSW-C; nurse practitioner Angela Davis, APN; and semi-retired neurosurgeon and patient/family advocate, Brian D. Beyerl, MD, FACS, the Caregiver Support Group provides a safe space to share experiences and learn about how to best support loved ones who are battling brain tumors.

The meetings are tailored based on participants' input to ensure they address their areas of interest and concern. For example, knowing caregivers were looking for more information about community resources, the group recently hosted a guest speaker from the American Brain Tumor Association (ABTA) to present the various resources offered by the association.

"Caregivers are often exhausted, lonely and anxious about the future – and one of the most important things we can do is help ease their distress," says LeMonnier. "This group further extends the support our team offers our patients and their loved ones every day."



Glasser Brain Tumor Caregiver Center Support Group

ALL ARE WELCOME!

WHEN:

The first Tuesday of each month from 5:00 - 6:00pm

WHERE:

Online

CONTACT:

Janet LeMonnier at 908-522-5159 or Janet.LeMonnier@ atlantichealth.org for more information.

Leading the Cutting-Edge of INNOVATION



Robert Aiken MD

In addition to providing daily best-in-class medical care, Overlook Medical Center's Gerald J. Glasser Brain Tumor Center team participates in clinical trials that have potential life-changing impacts for our patients.

We interviewed renowned neuro-oncologist Robert Aiken, MD, co-director of the Glasser Brain Tumor Center and head of our neuro-oncology research and clinical trials program, to learn more.

Dr. Aiken, why is research so important?

Dr. Aiken: Being on the cutting edge of innovation enables us to bring groundbreaking medical advances not only to our patients, but to patients throughout the world.

Why do clinical trial sponsors request our involvement?

Dr. Aiken: They come to us because of our deep, multidisciplinary experience and expertise in the highly specialized field of brain tumor care – as well as our track record for delivering exemplary patient outcomes. Also, thanks to our industry relationships and boutique size, we are able to expedite trials by efficiently and effectively navigating the regulatory environment.

How has research changed over the course of the past 30 years?

Dr. Aiken: Research has come a long way. For example, we are moving away from broad-spectrum approaches that treat general malignancies to focused therapies that target individual tumor mutations. We're pioneering vaccines that train the immune system to destroy antigens, the markers of foreign substances. And we're looking at genetically manipulated oncolytic viruses that destroy tumors without damaging the brain.

What are some of the most promising current clinical trials?

Dr. Aiken: Currently, we are involved in potentially gamechanging trials including:

- SurVaxM, a cancer vaccine for newly diagnosed glioblastoma patients that stimulates the immune system to destroy cancer cells;
- Berubicin, an anti-cancer agent for the treatment of recurrent glioblastoma multiforme (GBM) that penetrates the blood-brain barrier, a network of blood vessels and tissue that is difficult to cross;
- NuvOx's NVX-108, an injectable drug that potentially enhances radiation therapy in the treatment of GBM;
- ONC201, a well-tolerated oral drug used to treat some children and adolescents with spinal cord and brain stem gliomas.

How are patients selected to participate in trials?

Dr. Aiken: Every trial is targeted to a specific treatment population, and every patient must meet certain inclusion and exclusion criteria. We work closely with our patients to determine if they are good candidates based on their individual situations. We weigh the benefits and risks, knowing that even if a drug does not reach development, it may deliver positive outcomes for participants.

How can patients learn more?

Dr. Aiken: To learn more about our clinical trials, patients and their loved ones can visit atlantichealth.org/neuroscience or contact us at 908-522-5768.

The Benefits of a Multidisciplinary Brain Tumor Clinic Every Expert Under One Roof

Being diagnosed with a brain tumor is a life-altering experience. For many, it means reevaluating fundamental aspects of life like the ability to work, drive, care for oneself and manage symptoms. The last thing a patient wants to think about is managing multiple visits with different doctors in diverse locations to get all the care they need.

The unfortunate reality is that many brain tumor centers have no "center," and care is fragmented amongst loosely affiliated offices. Each doctor's appointment isn't just a simple visit. It means driving to the office, finding a place to park, waiting in the waiting room, then in the exam room, leaving with unanswered questions and more.

At the Gerald J. Glasser Brain Tumor Center, we know how important it is for every patient to have a team supporting them each step of the way ... and our multidisciplinary clinics are a great example of this. From the very first visit, patients come to one office where a team of specialists come to them. Our teams collaborate to provide our patients with increased communication, improved treatment planning, decreased errors, reduced variability in treatment planning and no duplicate procedures. This – along with fewer visits, a focus on education and a robust menu of support services – results in enhanced patient experiences.

Let's look at two scenarios for a patient newly diagnosed with a glioblastoma.

In most centers, a surgeon removes the tumor and then refers the patient to another office to discuss chemotherapy with an oncologist and another office to talk about radiation

with a radiation oncologist. If they have a question about chemo during the radiation visit, they need to call the oncologist. A question about a surgical scar directed to the oncologist usually yields a response of "ask the surgeon."

Conversely, here, a newly diagnosed patient is seen by the neurosurgeon, who discusses the surgery and diagnosis. The neuro-oncologist and radiation oncologist visit the patient in the same room to review next steps in their treatment. If the patient forgets to ask the neuro-oncologist a question about the chemo, since we are all in the same clinic, we come back and provide the answer right away. And, because no two tumors are exactly alike, multiple doctors often come into the clinic together to visit the patient and develop a plan tailored to their specific situation.

At first glance, not all patients may seem like they need multiple doctors to manage their brain tumor. Take the example of a brain metastasis from another cancer. That patient likely has a medical oncologist who is already treating the original cancer. The patient may just need to review their surgery with the neurosurgeon and discuss radiation with the radiation oncologist. But what if, during the visit, they mention a new symptom that could indicate a seizure? In most centers, that means being sent to yet another office to see yet another specialist. Here, we believe waiting in one waiting room is more than enough. So, that patient would be seen by one of our neuro-oncologists – a specialist in treating brain tumors and associated complications like seizures – during the same clinic visit so they get immediate care.

Treating a brain tumor takes a great team of experts. That teamwork is what patients experience in our multidisciplinary clinic. Our unparalleled clinical collaboration – specialists working together under one roof for a common goal – gives our patients the highest quality care ... and the best possible outcomes.





About the Gerald J. Glasser Brain Tumor Center

The Gerald J. Glasser Brain Tumor Center brings the most comprehensive and innovative treatments to benign and malignant tumors of the brain, skull base, spine and spinal cord.

Our team of experts – including neurosurgeons from Atlantic NeuroSurgical Specialists – help patients and their loved ones navigate the journey from diagnosis through treatment. Every patient who visits the center has access to a panel of experts. The group meets regularly during a dedicated Tumor Board Review meeting to create a personalized treatment plan for all patients based on their clinical evaluation.

All this is possible thanks to the generous donation of the Glasser family's founding gift and support.



Tel: 908-522-5914 Fax: 908-522-5845

atlantichealth.org/braintumor

Overlook Medical Center

Atlantic Neuroscience Institute 99 Beauvoir Avenue, 5th Floor Summit, NJ 07901

Medical Arts Center (MAC) II 11 Overlook Road, Suite 180 Summit, NJ 07901

Morristown Medical Center

Carol G. Simon Cancer Center 100 Madison Avenue Morristown, NJ 07960

Chilton Medical Center

Collins Pavilion 97 West Parkway Pompton Plains, NJ 07444

NEW LOCATION

CentraState Medical Center

Statesir Cancer Center 901 W. Main Street Freehold, NJ 07726