

CENTER FOR NEURO-ONCOLOGY



capita**health**

capitalneuro.org

EXPERT CARE FOR THE MOST COMPLEX CASES

The Center for Neuro-Oncology, part of Capital Institute for Neurosciences, is a tertiary referral center for the diagnosis and treatment of cancer involving the brain and spine. The Center for Neuro-Oncology excels at treating all aspects of brain and spine cancer, and our compassionate and individualized care is just as integral as the advanced treatments we provide.

Patients at Capital Health have access to an experienced and caring team of physicians, nurses and staff dedicated to neuro-oncology, our patients, and their families. The center is housed in our state-of-the-art facilities that provide all of the resources necessary for highly specialized care. In addition to providing advanced, neuro-oncologic and neuroscience care, the Center participates in clinical trials to help fight and find cures for cancer.

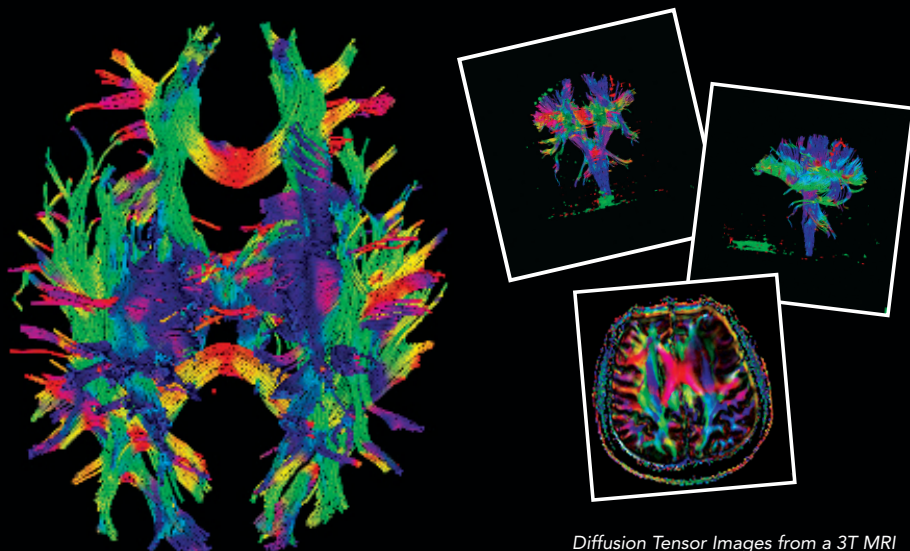
The Center for Neuro-Oncology works closely with referring physicians to facilitate rapid and thorough evaluations and recommendations for patients and their families. The Capital Institute for Neurosciences and the Center for Neuro-Oncology are the region's referral center for surrounding hospitals as well as other physicians. We provide expedited appointments for new diagnosis, primary evaluations, as well as second opinions for all types of brain or spinal tumors.



What We Treat

The Center for Neuro-Oncology at Capital Health is a referral center for the treatment of all types of neuro-oncologic disease including:

- ... **Primary brain and spinal tumors**, tumors that start within the brain or spinal cord (such as **glioblastoma multiforme [GBM]**, **astrocytomas**, **oligodendrogliomas**, **low grade gliomas**, **ependymomas**) and other intra/extra-axial tumors including **meningiomas**, **CNS lymphoma**, **colloid cysts**, **intraventricular tumors**, **hemangioblastomas**, **medulloblastoma**, **ependymomas**, and **pineal region tumors**. Some of these are benign, or non-cancerous, and others are malignant meaning they are cancerous.
- ... **Metastatic brain and spine tumors** are tumors that occur when cancer spreads to the brain or spine from another part of the body. Also referred to as secondary cancer, metastatic brain and spine tumors are much more common than primary brain tumors. Most frequently brain and spine metastases occur when cancer spreads from the lungs, breasts, colon, kidneys and skin.
- ... **Skull base tumors** (pituitary tumors, craniopharyngiomas, skull base meningiomas, vestibular schwannomas, among others) occur in a specific location of the brain located close to the skull base.



Diffusion Tensor Images from a 3T MRI study performed at Capital Health

ADVANCED CARE WITH A MULTI-DISCIPLINARY TEAM APPROACH

At the Center for Neuro-Oncology we bring together the extensive resources available in the Capital Institute for Neurosciences as well as the Capital Health Cancer Center.

Our approach relies on personalized, evidence-based, cancer treatment using a multidisciplinary approach developed by experts in the field. Our focus is providing the most effective treatment with an emphasis on maximizing our patients' quality of life.

In addition to our experts in neurosurgery, neuro-oncology, neuropathology, neuroradiology, medical oncology, and radiation oncology, we include nursing, rehabilitation therapy, nutrition, and supportive care services in our multi-disciplinary approach.

Our nurses have been awarded Magnet status four consecutive times and our neuroscience units are staffed by dedicated physician assistants and nurses who have been trained to work with our neuroscience patients. Our Cancer Center also provides a host of support services, including navigators, genetic risk assessments, nutrition counseling, rehabilitation therapy, social work, and palliative care supportive services.





WEEKLY MULTIDISCIPLINARY TUMOR BOARD

The Center for Neuro-Oncology at Capital Health is dedicated to providing patients with the most accurate diagnosis and most effective treatment options. This means bringing various specialties and experts to the table to develop a comprehensive strategy for each patient, based on their unique situation.

Every week a team of experts in neurosurgery, neuro-oncology, neuroradiology, neuropathology, radiation oncology, medical oncology, palliative care, and other team members including physician assistants, nursing, navigators, and therapists, meet for a multidisciplinary tumor board.

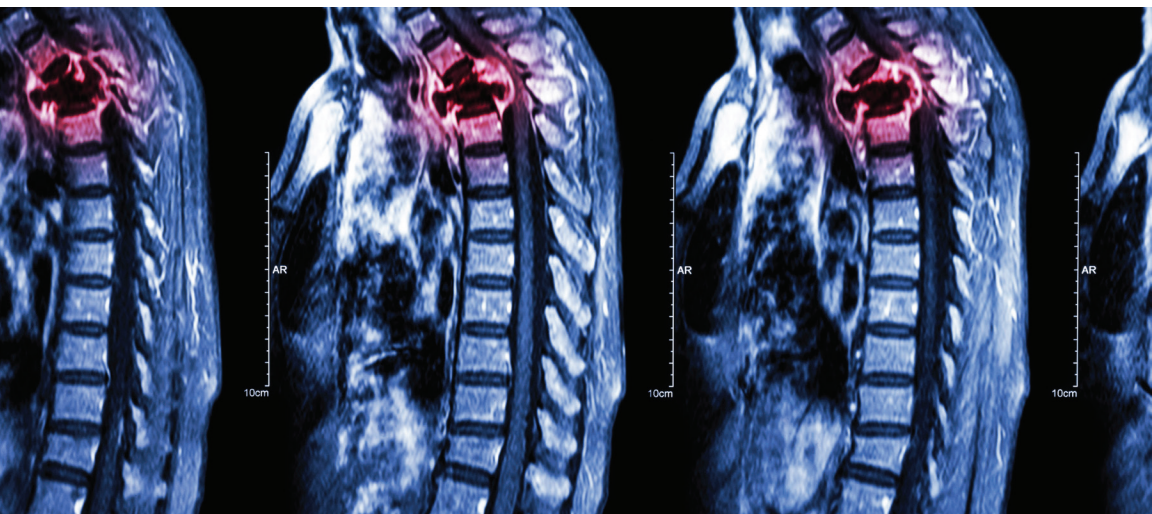
One of the only cancer centers in NJ with a weekly session dedicated to neuro-oncology, the tumor board allows for rigorous discussion of each patient.

Supporting the discussion is the most cutting-edge diagnostic information including the most advanced and latest imaging techniques (3T MR imaging, DTI, fMRI, MR spectroscopy, PET) read by experienced neuroradiologists; expert analysis of tumor pathology using modern molecular diagnostics by highly trained neuropathologists; and diagnostic/treatment plans developed using a multidisciplinary review of the most recent advancements in cancer.

The tumor board works together to make the most accurate diagnosis and develop a personalized treatment plan for the best possible outcome.

ADVANCED DIAGNOSTICS AND TREATMENTS FOR BRAIN AND SPINAL TUMORS

- ... Treatment for primary tumors (benign and malignant) and metastatic tumors, with treatment plans tailored and customized to the individual patient.
- ... Expertise in surgical, radiosurgery and medical treatments.
- ... Surgical options including open and minimally invasive MRI image guided approaches allowing for maximal resection while working to preserve function and quality of life.
- ... Awake craniotomies with speech and motor mapping.
- ... Minimally invasive, image-guided microscopic and endoscopic corridor-directed port surgery.
- ... Advanced imaging techniques to map and help avoid critical areas of brain function during complex brain surgery. This includes advanced white matter imaging utilizing Diffusion Tensor Imaging (DTI) and functional MRI (fMRI).
- ... Expert neuropathology review and molecular analysis of all tumor specimens for the most accurate diagnosis to guide critical treatment decisions.
- ... Radiosurgery treatment options, including CyberKnife® and TrueBeam® radiosurgery.
- ... Weekly multidisciplinary appointments available for patients needing comprehensive consults.
- ... Dedicated Neuro ICU with nurses and physician assistants trained to work with, and dedicated to, our neuroscience patients.





CYBERKNIFE® SYSTEM

The CyberKnife Robotic Radiosurgery System is an outpatient, non-invasive alternative to surgery for the treatment of tumors anywhere in the body including the brain and spine. The treatment — which delivers high dose radiation to tumors with extreme accuracy — offers hope to patients who have inoperable or surgically complex tumors, or who may be looking for an alternative to surgery. Patients are able to go home right after treatment, allowing them to continue with their daily lives.

What Makes CyberKnife® Unique?

Accurate — Enables clinicians to confidently treat tumors with minimal harm to surrounding healthy tissue by delivering high doses of radiation with sub-millimeter accuracy (within the width of a hair).

Flexible — Offers maneuverability and versatility that is unsurpassed by traditional radiation systems. By delivering radiation beams from virtually unlimited positions, the CyberKnife System can treat tumors anywhere in the body, from any angle.

Robotic — Continually tracks tumor position, detects any tumor or patient movement and automatically corrects the treatment delivery.

Beneficial — Provides a pain-free, non-invasive alternative for patients, including those diagnosed with previously inoperable or surgically complex tumors, or for patients who are looking for an alternative to surgery.



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