

# Neuro-Oncology

**UVA stands at the forefront of care for brain and spinal cord cancers. For the past two decades, we have honed our neuro-oncology program into the strongest in Virginia. Here, we offer patients leading-edge neuro-oncology care, utilizing the latest medical therapies, surgical techniques and imaging technology, combined with a robust, multidisciplinary team approach. The result is unparalleled neuro-oncological care that is saving and extending lives and improving quality of life for brain and spinal cord cancer patients across Virginia.**

Our translational research program is a cornerstone of neuro-oncology at UVA. Through our robust clinical trial program, our researchers and physicians are at the forefront of new and novel approaches to cancer treatment and therapy.

From the moment a patient enters our care, we consider all treatment and therapeutic options that may be brought to bear, including any new and novel therapies. This is a differentiator of our neuro-oncology program: we place all relevant options on the table from the very beginning. If a standard treatment is the most appropriate option, we will incorporate that therapy or intervention into the patient's individualized plan of care. If there is a new or novel therapy available that could better meet the patient's needs, we will include it as part of their care plan.

Our neuro-oncology care team includes medical and surgical neuro-oncologists, neuropathologists, neuroradiologists, neuropsychologists, nurses and social workers, all dedicated to neuro-oncology and focused on working together to deliver excellent care for our patients. Open communication is at the heart of this approach. Whether a patient is undergoing initial neuro-oncology treatment, an elective surgery or an urgent add-on surgery, the entire neuro-oncology team is aware of the patient's plan of care and considering all therapeutic options that could be appropriate. We hold regular neuro-oncology tumor boards to discuss patient cases as a team, where our medical and surgical neuro-oncologists collaborate with our neuropathologists, neuroradiologists and radiation oncologists to analyze tumor types and discuss all appropriate approaches to care.

When treating patients with primary and metastatic cancers of the brain and spinal cord, responsiveness is essential. We understand the importance of evaluating patients quickly and are typically able to see patients at our neuro-oncology clinic within one week of referral. We also understand the importance of keeping referring providers up-to-date on their patient's diagnosis and plan of care. We speak regularly with referring providers to keep them informed of their patient's care, and our integrated EpicCare Link system assists in this effort.

## Conditions Treated

Our robust, experienced team treats all types of brain and spinal cord tumors, using the latest medications, therapies, techniques and technology.

### Glioblastoma

Our neuro-oncologists are well-versed in the challenges of treating this glioma subtype. We consider all available avenues of treatment when assessing a patient diagnosed with a glioblastoma, including standard treatments, surgical resection and new and novel therapeutics. In some cases, emerging therapies — such as immunotherapy — can increase the return on surgical intervention.

If surgical intervention is indicated, our specialized surgical neuro-oncologists utilize minimally invasive techniques whenever possible, including laser interstitial thermal therapy (LITT), which requires incisions as small as 1 centimeter and no shaving of hair.

In the OR, our neurosurgical oncologists utilize the latest imaging technology, including intraoperative MRI to validate and confirm the extent of resection while the patient is still in the surgical suite. This technology also offers the ability to provide awake surgery when prudent for glioblastomas in sensitive areas of the brain.

### Brain and Spine Metastases

UVA is home to the Brain Metastases Clinic — the only clinic devoted to brain and spine metastases in the commonwealth of Virginia. This dedicated clinic allows our team to focus on the unique needs of patients with brain and spine metastases. Through this clinic, we are able to offer treatment plans for any type of metastatic issue of the central nervous system.

While traditional approaches to brain metastases centered on surgical intervention, our position at the forefront of new and emerging treatment options allows us to consider systemic therapies, which can be effective in some cases. These approaches can include medical therapies, such as chemotherapy; radiosurgery through our well-established Gamma Knife Center; and the latest techniques for surgical intervention.

### Primary CNS Lymphoma

We bring leading-edge technology to bear in our initial assessment of patients with suspected primary CNS lymphoma, utilizing stereotactic needle biopsies, performed through small incisions, to assist in diagnosis. If a patient's growth is found to be lymphoma, rather than glioblastoma, our team of neuro-oncologists create a coordinated plan of care based upon immunochemotherapy, taking into consideration all appropriate medical therapies.

### Meningiomas

We are a tertiary referral center for skull base and complex tumors (meningiomas, schwannomas) involving the venous sinuses and cranial nerves. In addition to surgical expertise, it is crucial that patients diagnosed with meningiomas are also evaluated from a pathology perspective to consider clinical trial options that may be open to them. Our access to the latest meningioma clinical trials allow us to offer these emerging investigational therapies to our patients. Our team considers numerous angles (surgery, radiosurgery, radiation, emerging clinical trials) for each skull base tumor patient we evaluate and tailors the approach based on our team's extensive experience. In addition, we utilize intraoperative MRI, advanced neuronavigation and electrophysiologic monitoring to ensure the best outcomes.

### Spinal Cord Tumors

Our team has extensive experience in the treatment of these rare tumors, which require a careful and thoughtful approach. Our skilled neurosurgeons play an integral role in the management of these tumors, and utilize a variety of surgical adjuncts to guide resection, including intraoperative fluorescein angiography and neurophysiologic monitoring.

### Additional Conditions

- Astrocytomas
- Ependymomas
- Hemangioblastomas
- Neurofibromatosis type 2 (NF2)
- Neurologic complications of cancer therapy
- Oligodendrogliomas
- Optic nerve gliomas
- Paraneoplastic disorders
- Vestibular schwannomas (acoustic neuromas)
- Von Hippel-Lindau (VHL) disease

## Our Team

Our team is comprised of physicians, researchers and support staff who are solely dedicated to providing the best possible neuro-oncology care for the patients of today and advancing the neuro-oncology field to provide better therapies for the patients of tomorrow.

### Ashok R. Asthagiri, MD

Neurological Surgery

### Camilo Fadul, MD

Neurology

### John Jane Jr., MD

Pediatric Neurological Surgery

### James M. Larner, MD

Radiation Oncology

### Edward Oldfield, MD

Neurological Surgery

### Benjamin W. Purow, MD

Neurology

### David Schiff, MD

Neuro-Oncology Center, Co-Director  
Neurology

### Mark E. Shaffrey, MD

Neuro-Oncology Center, Co-Director  
Neurological Surgery

### Jason P. Sheehan, MD, PhD

Radiosurgery  
Neurological Surgery

### Zhiyuan Xu, MD

Radiosurgery

### Neuro-Oncology Center

#### UVA Cancer Center

Emily Couric Clinical Cancer Center  
1240 Lee St.  
Charlottesville, VA 22903

Refer a patient: **800.552.3723**

Transfer a patient: **844.XFERUVA (933.7882)**

Learn more about the UVA Neurosciences  
and Behavioral Health Center:

[neurosciences.uvahealth.com](https://neurosciences.uvahealth.com)

# Clinical Trials | Neuro-Oncology

Several clinical trials are open for patients with glioma, meningioma, CNS lymphoma or NCSLC brain metastases.

Two of these trials were initiated by UVA investigators. Please note that chemoradiation may be administered at the patient's local facilities for these trials. However, prompt referrals are essential for enrollment due to the timeline requirements of the trials.

Also, please note that several neuro-oncology trials not mentioned below are in the process of opening at UVA, including the **INSIGHt trial** (NCT02977780) and a trial testing a mutant IDH1 inhibitor in participants with gliomas. You may consult with our providers at any time for an update on available trials.

## Newly Diagnosed Glioblastoma

**ICT-107-301** is a randomized phase III immunotherapy trial investigating maintenance temozolomide plus study drug, which consists of peptide pulsed dendritic cells, ICT-107, or a control made from autologous monocyte-enriched peripheral blood mononuclear cells (PBMC). Participants will need to be consented immediately after surgery to allow time for central HLA testing, pathology analysis and MRI review. These items will be checked during the trial screening phase and only HLA-A2+ participants will qualify. Following these tests and prior to radiation, subjects will undergo apheresis to isolate PBMCs, which will be used for synthesis of their study drug. After chemoradiation, eligible candidates will initiate study therapy, consisting of a four-week induction phase followed by a maintenance phase. More information on this trial can be found at [clinicaltrials.gov](https://clinicaltrials.gov) using the identifier NCT02546102.

UVA Principal Investigator | Camilo Fadul, MD  
Phone : **434.982.4415**

**Alliance A071102** is a randomized phase II/III trial studying how well temozolomide and the PARP inhibitor veliparib compare to temozolomide alone in treating participants with newly diagnosed glioblastoma. Subjects enrolled in the experimental arm will receive temozolomide PO OD on days 1-5 and veliparib PO BID on days 1-7 of every 28-day cycle. The study therapy does not begin until participants have concluded radiation therapy, which can be administered in the local community. More information on this trial can be found at [clinicaltrials.gov](https://clinicaltrials.gov) using the identifier NCT02152982. Please note this study is not currently enrolling, but is expected to reopen shortly.

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## Recurrent Glioblastoma or Anaplastic Glioma

**CLEE011XUS01T** is a UVA investigator-initiated pilot study examining the Novartis CDK4/6 inhibitor Ribociclib (LEE011) in participants with recurrent GBM or anaplastic glioma requiring surgical resection. Prior treatment with bevacizumab is allowed. This study will investigate the ability of the study drug to cross the blood-tumor barrier and inhibit CDK4/CDK6/Rb/E2F signaling in the tumor. Secondary outcomes include progression-free and overall survival. Study subjects will take Ribociclib for one to three weeks prior to their resection, so must enroll pre-operatively. Participants with retinoblastoma protein positive (Rb+) tumors will continue taking Ribociclib postoperatively until progression or study discontinuation. More information on this trial can be found at [clinicaltrials.gov](https://clinicaltrials.gov) using the identifier NCT02345824.

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## Brain Metastases from Non-Small Cell Lung Cancer (NSCLC)

**Novocure EF-25 METIS** is a pivotal, open-label randomized study of radiosurgery with or without Tumor Treating Fields for 1-10 brain metastases from NSCLC. The device being tested in the investigational treatment arm is very similar to the Novocure Optune device that is approved for GBMs. More information on this trial can be found at [clinicaltrials.gov](https://clinicaltrials.gov) using the identifier NCT02831959.

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## Progressive Meningioma

**ALLIANCE A071401** is a phase II trial investigating targeted therapies for treatment of qualifying progressive meningiomas. Pathology will be tested centrally for mutations that could indicate sensitivity to SMO or NF2 inhibitors. Participants with SMO positive tumors will receive the sonic hedgehog pathway inhibitor Vismodegib. Participants with NF2 positive tumors will receive the FAK inhibitor GSK2256098. Vismodegib and GSK2256098 may stop the growth of tumor cells by blocking some of the signaling pathways needed for cell growth. More information on this trial can be found at [clinicaltrials.gov](https://clinicaltrials.gov) using the identifier NCT02523014.

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## Recurrent CNS Lymphoma

**MC1281** is a phase I study of Pomalidomide and dexamethasone for treatment of relapsed/refractory primary central nervous system lymphoma and newly diagnosed or relapsed/refractory intraocular lymphoma. It is a phase I trial that aims to find the maximal tolerated dose and side effects of pomalidomide in this population. The study is also designed to determine the efficacy and survival related to pomalidomide therapy in the maximum tolerated dose (MTD) cohort. More information on this trial can be found at [clinicaltrials.gov](https://clinicaltrials.gov) using the identifier NCT01722305.

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