

UVA Stroke Center

When stroke strikes, choose UVA.

Physicians frequently oversee the care of patients at a heightened risk of stroke, including those with:

- Hypertension
- Atrial fibrillation
- History of stroke

These doctors know that it is vital to educate their patients on the sudden onset of stroke symptoms, including:

- Numbness
- Weakness
- Blurred or reduced vision
- Difficulty talking
- Difficulty walking

It is equally important to educate these patients on the best hospital to choose in case of a stroke. For patients in Virginia, that's UVA Stroke Center.

We provide unparalleled stroke care, 24 hours a day, seven days a week. Each and every day, our rapid response and specialized intervention techniques save lives and preserve brain function for patients suffering from ischemic stroke, subarachnoid hemorrhage or transient ischemic stroke.

We care for patients in our 12-bed Nerancy Neuroscience Intensive Care Unit (NNICU) at UVA Medical Center in Charlottesville, and we partner with hospitals throughout Virginia through our Telestroke program.

Conditions Treated

In our 12-bed NNICU, we evaluate and treat patients with ischemic stroke, subarachnoid hemorrhage and transient ischemic stroke. Our expert team of stroke-dedicated physicians and nurses assess the best course of treatment. As soon as the patient's blood pressure levels are within a safe range, we can administer intravenous (IV) tissue plasminogen activator (tPA) to help dissolve the clot and follow up with procedures like an embolectomy.

Our team also specializes in the causes and treatment of stroke in young people, including the investigation of genetic factors and arterial dissection leading to stroke. When coagulation issues play a role, we also partner with experts in UVA Hematology to provide care for these patients.

Ischemic Stroke and Intracranial Hemorrhages

Ischemic stroke is the most common type of stroke, caused by a blocked blood vessel due to clots or atherosclerosis. Our IV tPA and embolectomy procedures can be effective treatments to lessen the damage caused by ischemic stroke. Intracranial hemorrhages can lead to hemorrhagic stroke, which can also be effectively treated with embolectomy and other surgical procedures.

Subarachnoid Hemorrhage and Cerebral Aneurysm

Ruptured or compromised blood vessels can cause subarachnoid hemorrhage or cerebral aneurysm, damaging the brain. While these conditions are often fatal, rapid treatment in an intensive care setting can limit bleeding and reduce damage to the brain.

Transient Ischemic Stroke

Reduced blood or oxygen to the brain can cause transient ischemic stroke (TIA). A TIA places patients at greater risk for an ischemic stroke, especially immediately following the transient ischemic incident. We work with TIA patients to quickly decrease the risk of another stroke through lifestyle changes, medication and surgery.

Neurovascular Conditions

We also evaluate and treat neurovascular conditions that can damage the brain, including:

- Arteriovenous malformations (AVM)
- Carotid artery disease

Advanced Care

UVA Stroke Center provides the highest level of care for stroke patients undergoing an acute stroke episode, as well as those who have recently suffered a stroke and require follow-up treatment.

Facts at a Glance

- 94 percent of patients who arrived at UVA Emergency Department within two hours of last known well and were eligible for treatment with tPA were treated by the three-hour mark
- Acute Stroke Intervention Team and inpatient Stroke Service staffed 24/7 by a board-certified vascular neurologist
- NNICU staffed 24/7 by a neurointensivist
- Endovascular treatment for stroke available 24 hours per day, seven days per week
- Received 2016 Get With The Guidelines-Stroke Gold Plus Achievement Award; made the Target: Stroke Honor Roll-Elite

We offer industry-leading interventional treatments for ischemic stroke like IV tPA and embolectomy, a catheter-guided procedure that removes the clot. We utilize innovative monitoring technology, including multiphase CT, allowing us to target the specific site of the stroke and formulate an individualized care plan.

UVA Medical Center also includes the Nerancy Neuroscience Intensive Care Unit (NNICU), dedicated to the care of neurologic disorders and staffed with a nursing team with expertise in neurologic critical care. Once stabilized and in recovery, patients with stroke and neurologic conditions transition to our neuro step-down unit, which includes heightened monitoring necessary for the continued care of these patients.

In addition, our Acute Stroke Team partners with hospitals across Virginia through our Telestroke program, providing our stroke expertise in the care of their patients. As part of this effort, UVA has led the development of iTREAT – Improving Treatment with Rapid Evaluation of Acute stroke via mobile Telemedicine – a mobile technology solution being researched that allows EMS personnel to correspond with our Acute Stroke Team in the evaluation and treatment of stroke patients.

Research

Our stroke research and clinical trials focus on three areas: interventional acute stroke clinical trials, Telestroke systems and preventative genetics.

Endovascular Therapy

In a new minimally invasive procedure, called a thrombectomy, UVA interventional neuroradiologists and endovascular neurosurgeons remove the blood clot causing a stroke, ending the stroke as soon as possible.

Subarachnoid Hemorrhage

UVA Neurology's stroke research also includes efforts focused on subarachnoid hemorrhage, including an R1 grant from the National Institutes of Health examining the role of immune and inflammatory mechanisms in subarachnoid hemorrhage in a basic science setting, with the aim of providing better interventional treatments.

Preventative Genetics

UVA Neurologists participated in the Stroke Genetics Network (SiGN) study, funded by the National Institutes of Health's National Institute of Neurological Disorders and Stroke. Its findings, published online by *The Lancet Neurology*, sheds light on a single gene linked to all forms of ischemic stroke. SiGN is believed to be the largest and most comprehensive review of the human genome to identify genes that predispose people to this form of stroke.

Cervical Artery Dissection

UVA Neurology has a special focus for patients suffering from carotid and vertebral artery dissection. Cervical Artery Dissection and Ischemic Stroke Patients (CADISP) is the largest registry of patients with cervical artery dissection in the United States and part of an international research consortium studying clinical and genetic associations of this disease. Results of this research recently appeared in *Nature Genetics*.

Clinical Trials

UVA Neurology physicians are overseeing and participating in a number of clinical trials that seek to measure the efficacy of interventional treatments for ischemic stroke. Currently enrolling trials include:

Stroke Hyperglycemia Insulin Network Effort (SHINE) Trial (NCT01369069; IRB-HSR 15959)

Description | This multicenter, randomized, blinded, Phase III clinical trial is comparing treatments in hyperglycemia in the acute stroke patient population. It has a target enrollment of 1,400 patients.

UVA Principal Investigator | Karen Johnston, MD, MSc
Contact: Sonya Gunter
Phone: **434.924.9664**

Platelet-Oriented Inhibition in New TIA and Minor Ischemic Stroke (POINT) Trial (NCT00991029; IRB-HSR 15057)

Description | This currently enrolling trial seeks to determine the most effective treatments for TIA and mild stroke in the acute setting.

UVA Principal Investigator | Nina Solenski, MD
Contact: Claire McKinley
Phone: **434.924.9271**

Improving Treatment with Rapid Evaluation of Acute stroke via mobile Telemedicine (iTREAT) (IRB-HSR 17744)

Description | Part of our Telestroke program, this Phase II feasibility and safety trial examines the use of a low-cost mobile telemedicine system for acute stroke evaluation during ambulance transport in rural EMS settings.

UVA Principal Investigator | Andrew Southerland, MD, MSc
Contact: David Catell-Gordon
Phone: **434.982.4234**

Our Stroke Team

Members of our multidisciplinary stroke team are on-site on the front lines of care at UVA Medical Center 24 hours a day, seven days a week, receiving and treating patients in the Emergency Department, Stroke Unit and NNICU.

A separate team staffs our Telestroke efforts around the clock, ensuring that when a suspected acute stroke case comes in to one of our partnering Telestroke hospitals, we are ready to provide the exceptional care that patient needs.

Our large team of dedicated, specialty-trained professionals includes:

- Board-certified vascular/stroke neurologists
- Neurocritical care-trained neurologists
- Interventional neurosurgeons
- Interventional neuroradiologists
- Pharmacists
- Stroke-Certified Registered Nurses (SCRN)
- Certified Neuroscience Registered Nurses (CNRN)
- Inpatient and outpatient occupational therapists at UVA-HealthSouth Rehabilitation Hospital

At our Stroke Unit, in our NNICU and in our Neuroradiology Department, our physicians partner with an expert nursing team. These specialized medical professionals are an integral part of our exceptional inpatient stroke care.

Nicole Chiota-McCollum, MD
Vascular and General Neurology

Avery Evans, MD
Interventional Neuroradiology

Mary (Lee) Jensen, MD
Interventional Neuroradiology

Karen Johnston, MD, MSc
Vascular and General Neurology

Kenneth Liu, MD
Vascular Neurological Surgery

Nina Solenski, MD
Vascular and General Neurology

Andrew Southerland, MD, MSc
Vascular and General Neurology

Dennis Vollmer, MD
Vascular and General Neurological Surgery

Bradford Worrall, MD
Vascular and General Neurology

Learn more about the UVA Neurosciences and Behavioral Health Center:

neurosciences.uvahealth.com

Refer a patient: **800.552.3723**

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