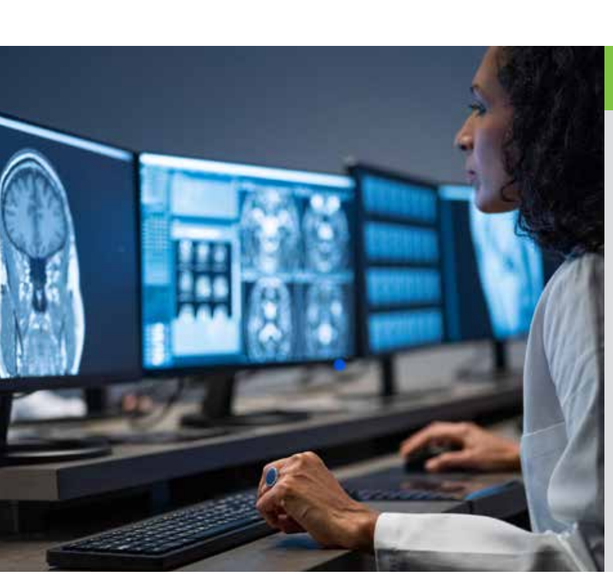
AdventHealth
2520 N. Orange Ave, Suite 200
Orlando, FL 32804



Care Navigation

Minimally Invasive Brain Surgery (MIBS)	407-303-7944
Spine Center	407-303-9102
Epilepsy & MEG	407-303-7520
Center for Sleep Disorders	407-303-1558
Parkinson's Outreach Center	407-303-5295
Alzheimer's Disease & Dementia	407-392-9237
Normal Pressure Hydrocephalus	407-303-3282
MS	407-609-7002
Neuromuscular	407-303-1123

Updates in Neurology and Neurosurgery
AdventHealth Neuroscience Institute • Fall 2022 • Volume IV, Issue I

Craig Brubaker, PhD
Vice President
AdventHealth Neuroscience Institute

AdventHealth Neurology and Neurosurgery: Expanding Programs and Increasing Quality

Healthcare has certainly experienced its share of challenges over the last two years. However, the AdventHealth Neuroscience Institute continues to execute on strategies that improve healthcare value to our consumers. This is demonstrated in a variety of ways: developing programs closer to where patients live, improving quality within services, leveraging new technologies and recruiting top-of-license subspecialty physicians.

- **In February '22, AdventHealth formalized its longstanding partnership with Orlando Neurosurgery**, the largest independent spine and brain health group in Florida, setting the foundation to expand the treatment of complex spinal disease, stroke, brain tumors, Parkinson's Disease, aneurism and more across Central Florida.
- **AdventHealth is proud to be one of seven international sites participating in the Davos Alzheimer's Collaborative.** The pilot sites will use simple digital cognitive assessment tools to detect the signs of the disease early and innovative blood biomarkers to help evaluate the cause of identified symptoms. The goal is to measurably increase rates of timely and accurate diagnosis to put people on the correct person-centered care pathways and mitigate the impact of Alzheimer's disease on the individual and their family.
- **AdventHealth Orlando, Celebration and Altamonte became the first hospitals in the state of Florida to earn DNV Spine Center of Excellence designation.** Continuing to hard wire quality standards like ERAS (enhanced recovery after spine surgery) are ways in which we can increase the value to our consumers.
- **AdventHealth Celebration received its Comprehensive Stroke Certification from DNV in May** after opening the 24/7 interventional radiology (INR) program in November 2020. AdventHealth has one of the lowest mortality rates for stroke care in the state of Florida.
- **AdventHealth opened its fourth neurosurgical program in the Central Florida Division at our Waterman hospital campus.** When possible, we are committed to keeping brain and spine services close to home for patients.
- **Our Celebration campus completed its 150th MRgFUS (magnetic resonance guided focused ultrasound)** case since the program launched in summer '21. This noninvasive brain surgery is part of our Functional Neurosurgery Program that treats essential tremors.
- **Our first elective INR procedures started at AdventHealth Daytona in spring '22, and in the fall, we will begin on a journey toward Comprehensive Stroke Certification.** This 24/7 service will provide timely and safe care for patients suffering a stroke in Volusia and Flagler counties.

Learn more in this issue about the arrival of additional expert neurologists and surgeons who will further our capability to treat subspecialty disease and complex cases. As always, our goal is to serve as the first choice for patients and referring physicians to achieve the best possible outcome for their most difficult surgical and medical cases. We appreciate your partnership and collaboration on this journey.

In This Issue

AdventHealth
AdventHealthNeuroInstitute.com

AdventHealth's New "Innovation Tower" to House Neuroscience Institute

AdventHealth's new, 12-story, 300,000-square-foot "Innovation Tower" is now open in Orlando and will serve as the new home of AdventHealth's Neuroscience Institute and Brain Health Program. The state-of-the-art facility will provide patients with greater access to neurosurgeons and an array of sub-specialized neurologists to treat a wide range of conditions. The new tower will also serve as the Florida headquarters for the Rothman Orthopaedic Institute. Grouping orthopedic and neuroscience specialists in a single building will allow better collaboration between the providers, yielding additional benefits to patients.

Valeria C. Baldivieso, MD
Geriatrician and Memory Care Specialist
AdventHealth Neuroscience Institute

AdventHealth Enrolling for Davos Alzheimer's Collaborative (DAC) Clinical Trial Focused on Increasing Early Detection and Accurate Diagnosis

AdventHealth is one of two sites in the U.S. and seven in the world to partner with the Davos Alzheimer's Collaborative (DAC) in groundbreaking research to measurably increase rates of cognitive screening, early detection and accurate diagnosis of Alzheimer's disease.

The study is piloting the use of the new PrecivityAD™ blood test to detect Alzheimer's related biomarkers and technology-enabled cognitive assessment tools in clinical practice. The PrecivityAD test uses a single blood sample and mass spectrometry to measure an individual's circulating levels of beta-amyloid peptides 42 and 40, and apolipoprotein E. Combining these measures with the patient's age, the test uses a statistical algorithm to calculate an Amyloid Probability Score (APS) to indicate the likelihood of beta-amyloid plaques in the brain, one of the biological hallmarks of Alzheimer's disease.

The main risk factor for developing Alzheimer's is age. There are over 6 million Americans already living with the disease, and with the aging Baby Boomer population, this figure is expected to grow to 8.5 million by 2030. Alzheimer's costs Americans an estimated $321 billion in care each year. Current screening measures are limited and what is available tends to be non-specific or expensive with many tests like amyloid PET imaging not covered by Medicare and insurance companies.

The aim of the DAC study is to create a cost-effective, global clinical pathway to help physicians, especially those working in primary care, to more quickly detect and effectively diagnose Alzheimer's cases. This would speed patient access to emerging treatments and innovations that could slow the onset and progression of the disease and ultimately, improve patients' quality of life for a longer period. Working in close partnership with primary care physicians, we want to build a system where screening for Alzheimer's becomes as easy and commonplace as checking for hypertension.

To qualify for this study, participants must be at least 65 years old and have not been diagnosed with dementia. They must first complete an online rapid digital cognitive assessment that was developed by Cogstate. Based on the results, those who qualify will undergo an in-person evaluation at the AdventHealth Translational Research Institute. This includes the PrecivityAD™ blood test as well as a Montreal Cognitive Assessment (MoCA).

Available in English and Spanish, the DAC study is open for enrollment at AdventHealth with a goal of identifying 720 patients to participate. **If you are a physician with patients who may be candidates for this clinical trial, please encourage them to visit BrainHealthFlorida.com to determine their eligibility.**

Chetan K. Patel, MD
Executive Medical Director, Spine
AdventHealth Neuroscience Institute
Section Chair, Robotics & Navigation, North American Spine Society

AdventHealth Neuroscience Institute First in Florida to Earn Spine Surgery Center of Excellence Designation from DNV

Neuroscience Institute's (NSI) spine surgery programs at Orlando, Altamonte and Celebration recently became the first in Florida and three of the first 16 in the country to earn Spine Surgery Center of Excellence certification from DNV, a worldwide, independent certification body. The DNV survey includes evaluation of 256 data points as well as an in-person survey. It focuses on evaluating processes across the continuum of care that contribute to positive outcomes and support performance improvement. Earning certification validates that a facility meets or exceeds standards of care in spine surgery.

Optimizing Spine Surgery Outcomes

Over the past three years, AdventHealth NSI developed and implemented a new multidisciplinary spine surgery pathway that was constructed based on an extensive review of available evidence and best practices along with implementation of an ongoing process improvement infrastructure. It focuses on addressing all of the modifiable risk factors that could impact a patient's surgical success.

The pathway involves the entire spine surgery care team and includes pre-surgical patient optimization and education, evidence-based perioperative care, and post-surgical communication and connection. The ultimate goal is to enhance the value of the spine care provided to patients by delivering better outcomes at a lower cost.

For example, recent evidence shows that malnutrition is an often underdiagnosed condition leading to poor outcomes in spine surgery patients. As a result, the AdventHealth NSI spine team implemented a regimen of nutritional supplements both before and after surgery to optimize surgical healing. In addition, to enhance convenience, increase attendance and mitigate patients' COVID-19 safety concerns, the team also now offers a virtual version of its spine pre-surgical education class.

AdventHealth NSI aims to deliver the best outcomes in the care of spinal pathology by objectively measuring and tracking the quality of outcomes and then implementing processes that allow the care team to deliver the best outcome for every patient, every time. DNV conducted a thorough audit of the program and its processes, certifying that this approach has indeed led to better outcomes.

Being part of DNV also provides the AdventHealth NSI spine surgery team with ongoing access to how quality is being defined and measured at other leading centers of excellence across the country as well as best practices they are deploying to improve outcomes.

Physician Relations Representative

For more information on any of the articles in this publication or to communicate directly with one of the physicians, please respond to:

Amber Parkins
Physician Relations
AdventHealth Neuroscience Institute

Amber.Parkins@AdventHealth.com

Indrani Acosta, MD
Vascular Neurologist
Medical Director, Stroke Program
AdventHealth Neuroscience Institute

AdventHealth Achieves National Recognition for Stroke Quality & Outcomes

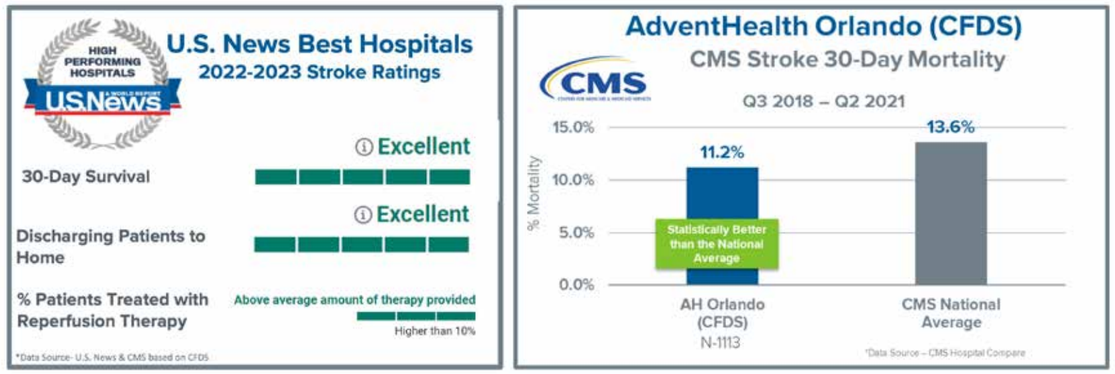
The AdventHealth Central Florida Division Stroke Program has recently earned several national accolades for its stroke mortality rates and outcomes.

These achievements are the result of a continuous, door-to-door quality improvement effort focused on stroke symptom recognition, early thrombolytic therapy (IV alteplase), prompt thrombectomy treatment, comprehensive hospital care management by nurses and technicians, and a specialized rehabilitation program focused on achieving the best possible patient outcomes.

Time is of the essence in achieving the highest quality stroke care, and the faster a patient's occluded cerebral artery can be recanalized, the greater the chances for complete symptom recovery and a return to normal daily life. More than 50% of AdventHealth's stroke patients are treated with thrombolytic therapy within 30 minutes of arrival.

All of this is only possible because of the ongoing hard work and expertise of a dedicated, multidisciplinary team that encompasses every department that touches a stroke patient at AdventHealth from emergency medical services and emergency room staff to rehabilitation.

AdventHealth Stroke Quality and Outcomes



American Heart Association
Stroke Get with the Guidelines
National Quality Awards

AdventHealth Research Institute Welcomes Kirk I. Erickson, PhD, as Director of Translational Neuroscience

With a special interest in the impact of physical activity on cognitive health and the development of dementia and Alzheimer's disease, Kirk I. Erickson, PhD, joined AdventHealth Research Institute in June 2022 as Director of Translational Neuroscience. He comes to this position from the University of Pittsburgh where he spent 14 years, most recently serving as a Professor in the Department of Psychology and the Center for the Neural Basis of Cognition.

Over the past decade, Dr. Erickson's research has primarily focused on translating molecular neuroscience to cognitive neuroscience in the areas of aging, exercise and neuroplasticity. His studies aim to determine if, how and what types of exercise could provide accessible, non-pharmaceutical intervention to improve cognitive function in late adulthood. He will continue this work at AdventHealth.

Currently, Dr. Erickson serves as a Principal Investigator or Co-investigator for several active National Institutes of Health (NIH)-funded clinical trials and plans to bring new clinical trial opportunities to the Central Florida community in the coming years. Some of his recent research efforts include the following studies:

- **Investigating Gains in Neurocognition in an Intervention Trial of Exercise (IGNITE)** — a Phase III, multi-site, randomized clinical trial examining whether a 12-month supervised exercise intervention improves brain and cognitive health in cognitively normal older adults.
- **Exercise, Brain, and Cardiovascular Health (eBACH) Study** — a randomized clinical trial to determine the effects of aerobic exercise on brain structure and function, as well as to determine how exercise-induced training effects relate to cardiovascular function via related brain changes.
- **A Multi-level Lifespan Characterization of Adult Depression and Effects of Medication and Exercise (MEDEX)** — a pilot clinical trial testing a model that predicts that enhanced neurotransmitter gamma-aminobutyric acid (GABA) function in reward and affect-regulation central nervous system (CNS) circuits mediates the antidepressant effects of exercise.
- **Rhythm Experience and Africana Culture Trial (REACT)** — a randomized clinical trial examining the benefits of African Dance as a method to increase physical activity behaviors in older adults.
- **Exercise Program for Cancer and Cognition (EPICC)** – a randomized clinical trial examining whether a 6-month aerobic exercise intervention improves cognitive and brain function in women recently treated for breast cancer.

In addition, from 2016-2018, Dr. Erickson served on the Physical Activity Guidelines Advisory Committee, a federal appointment by the Secretary of Health and Human Services. He chaired the Brain Health subcommittee and served as a member of the Aging and Leaders committees. He also served on the NIH National Institute on Aging (NIA) and National Academy of Sciences Panel on Prevention of Alzheimer's Disease in 2019 along with the NIA Reversibility Network and the NIH Panel on Heterogeneity of Response to Exercise. Dr. Erickson was named a Fellow in the Academy of Behavioral Medicine Research in 2016 and is a member of the Society for Neuroscience. He earned his PhD in psychology from the University of Illinois at Urbana-Champaign.

Recent Lectures by Kirk I. Erickson, PhD

American College of Sports Medicine (ACSM) Integrative Physiology of Exercise Conference
"Exercise, Brain, and Cardiovascular Health"
September 23, 2022
Baltimore, Maryland

Federation of Latin American and Caribbean Neuroscience Societies
Keynote Address: "Exercise: A Path to Improved Brain Health"
September 11, 2022
Held via Zoom in Belen, Brazil

European Congress of Sports Sciences
Plenary Session: "Effects of Exercise on Brain Health in Late Adulthood"
September 2, 2022
Seville, Spain

Exercise Is Medicine (EIM) Satellite Symposium
Keynote Address: "Fitness as a Brain Health Marker"
August 29, 2022
Cadiz, Spain

Anwar Ahmed, MD, FAAN
Movement Disorder Neurologist
Executive Medical Director Neurology
AdventHealth Neuroscience Institute

AdventHealth Designated a Huntington Disease Center of Excellence Partner Site by Huntington Disease Society of America

Mitesh Lotia, MD
Movement Disorder Neurologist
Director of Movement Disorder Program
AdventHealth Neuroscience Institute

Huntington's disease (HD) is a rare, genetic disease that causes the progressive loss of nerve cells in the brain which can result in abnormal involuntary movements, cognitive changes and psychiatric symptoms. While there is no treatment available to cure or reverse progression of the disease, comprehensive, multidisciplinary care can improve quality of life for HD patients. That is why AdventHealth established a Central Florida Center for Huntington's Disease in partnership with the University of South Florida in Tampa and the University of Central Florida in Orlando. We are pleased to share that this Center recently earned designation as a "Center of Excellence Partner Site" from the Huntington Disease Society of America (HDSA).

Because HD is an autosomal dominant genetic disease and there is a 50/50 chance of transmission to the next generation, a diagnosis impacts not only the patient, but their family members as well. According to the HDSA, there are approximately 41,000 symptomatic Americans and more than 200,000 at risk of inheriting the disease. Most people start developing symptoms between the ages of 30 to 50, but HD can also occur in children and young adults. Symptoms typically worsen over the course of 10 to 25 years and can impact a patient's ability to reason, walk and talk.

HD treatment focuses on symptom management to maximize function and optimize the patient's quality of life. AdventHealth's multidisciplinary HD team includes a movement disorder neurologist, psychiatrist, geneticist, social worker and physical therapist who work together to conduct comprehensive evaluations, customize individual treatment plans for each patient and family, and provide them with a community of care and support. Prior to establishment of the Center for HD at AdventHealth in Winter Park, Central Florida patients often had to travel for several hours to other academic institutions to receive this level of care. There are currently 55 HDSA Centers of Excellence throughout the country.

Nivedita Jerath, MD
Neurologist, Neuromuscular Division Director
AdventHealth Neuroscience Institute

Mild Late-Onset Sensory Neuropathy Associated with Heterozygous Missense GDAP1 Variants

Charcot–Marie–Tooth disease (CMT), a group of inherited neuropathies, affects approximately 1 in 2,500 people and typically appears in adolescence or early adulthood. CMT type 1A is the most common, accounting for approximately 60% of those with a genetic diagnosis. It is characterized by distal weakness, foot structural deformities, sensory abnormalities, areflexia and abnormalities in gait.

Genetic advances have allowed the classic CMT phenotype to be expanded and evaluated for idiopathic unexplained neuropathies. However, the rare forms of CMT still need to be better understood. This study explored the clinical features of heterozygous GDAP1 mutations by evaluating the clinical and electrophysiological findings of four subjects with a pathogenic heterozygous GDAP1 variant causing Charcot–Marie–Tooth disease 2K (CMT2K) and one additional subject with an uncertain GDAP1 variant and clinical findings of CMT 2K. The study evaluated these five subjects using clinical, laboratory, electrophysiological and genetic testing.

GDAP1 mutations can present in both heterozygous and homozygous forms. GDAP1 mutations are responsible for demyelinating intermediate and axonal recessive CMT and CMT 2K, a rare dominant axonal CMT. The majority of GDAP1 mutations are biallelic, giving rise to autosomal recessive CMT, which can present as either demyelinating, axonal or intermediate CMT. Although the homozygous presentation is typically very severe with early childhood onset, including motor and sensory involvement and possible vocal fold paresis, the heterozygous form seems much less severe with a late-onset mild sensory presentation.

Study findings showed that clinical features demonstrated no pes cavus, no significant weakness in the hands or feet, normal reflexes in four out of the five subjects, and mild to normal electrodiagnostic findings. The variant was associated with painful and numb feet with diminished sensation to pinprick.

This study suggests that GDAP1 variants may be associated with very mild, predominantly sensory Charcot–Marie–Tooth disease, warranting additional research for this type of the disease.

AdventHealth Neuroscience Institute Welcomes New Physicians

Justin De Prey, MD

Neurologist

Justin De Prey, MD, is a neuro-hospitalist at AdventHealth Daytona Beach and specializes in stroke care. He completed both his vascular neurology fellowship and neurology residency at the University of Florida. Dr. De Prey earned his medical degree from Medical College of Wisconsin.

Rana Abusoufeh, MD

Board-certified Neurologist

Fluent in Arabic and English, Rana Abusoufeh, MD, is an outpatient neurologist in DeLand and specializes in general neurology and epilepsy. She joined AdventHealth from Tulane University in New Orleans, Louisiana, where she served as Assistant Professor of Neurology and Vice Chair for Outpatient Neurology. Dr. Abusoufeh completed a clinical neurophysiology fellowship at Louisiana State University Health Sciences Center and a family medicine fellowship at University Hospitals of Cleveland. She completed her neurology residency at Case Western Reserve School of Medicine in Cleveland, Ohio.

Vijay Pandav, MD

Board-certified Neurologist and Vascular Neurologist

Vijay Pandav, MD, is a board-certified vascular neurologist who specializes in stroke and endovascular surgical neuroradiology at AdventHealth Daytona Beach. He previously served as the Medical Director for Interventional Neurology for Saint Francis Hospital Health System in Tulsa, Oklahoma. Dr. Pandav completed a vascular neurology and endovascular surgical neuroradiology fellowship at the University of Oklahoma Health Sciences Center and his neurosurgery residency at Southern Illinois University. He earned his medical degree from Topiwala National Medical College in Mumbai, India, and obtained a Master of Science in Public Health from the University of Southern Mississippi.

Saeed Sadrameli, MD

Neurosurgeon

Saeed Sadrameli, MD, is a board-eligible neurosurgeon at AdventHealth Celebration and specializes in minimally invasive spine surgery, spinal deformity and complex spine trauma. He completed his neurosurgery fellowship training at Texas Medical Center in Houston and his neurosurgery residency at Houston Methodist Neurological Institute. Dr. Sadrameli earned his medical degree from the University of Florida College of Medicine where he was inducted into the Alpha Omega Alpha Honor Medical Society and served as its president.

Ryan Moncman, DO

Board-certified Neurosurgeon

Ryan Moncman, DO, is a board-certified neurosurgeon at AdventHealth, specializing in spine surgery. He completed a complex spine surgery fellowship at the University of Pennsylvania and his residency at Philadelphia College of Osteopathic Medicine. Dr. Moncman earned his medical degree from New York Institute of Technology (NYIT) College of Osteopathic Medicine.

AdventHealth