KANSAS CITY, MISSOURI

SAINT LUKE'S MARION BLOCH NEUROSCIENCE INSTITUTE

2025

Saint Luke's

MARION BLOCH
NEUROSCIENCE INSTITUTE

Saint Luke's Hospital of Kansas City
One of 50 hospitals in the world to earn
five consecutive Magnet Designations

American Heart Association
American Stroke Association
CERTIFICATION
Meets standards for
Comprehensive Stroke Center

Blue
Distinction
Center+
Spine

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CARLOS A. BAGLEY, MD, MBA

Dear Colleague,

Since being named director of Saint Luke's Marion Bloch Neuroscience Institute in 2023, I've seen a tremendous evolution of our practice. Surrounded by great leaders and great minds, we are positioning the Neuroscience Institute as a top regional referral center.

We're proud to be part of BJC Health System, which is made up of Saint Luke's in the West Region and BJC HealthCare in the East Region. This integrated organization positions our clinicians to deliver exceptional patient care, expand access to advanced treatment, and foster new relationships across the region. We anticipate this collaboration will propel our clinical programs and research initiatives to even greater heights.

This past year has been marked by substantial recruitment efforts. We have expanded our team with top-tier physicians, surgeons, and researchers, and are actively recruiting to continue strengthening our clinical expertise. This growth aligns with our goal to provide leading-edge neurological care.

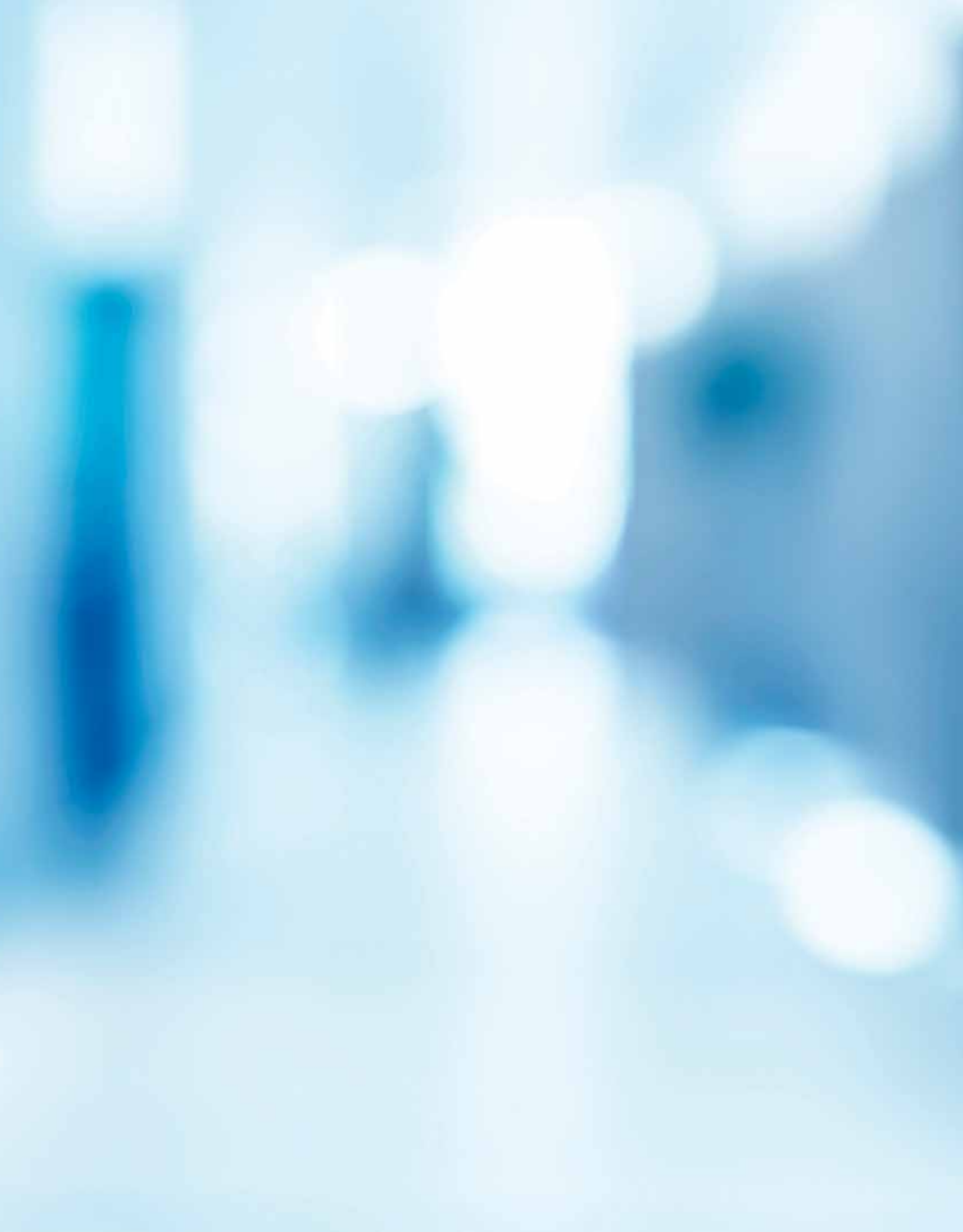
Within this book, our team is honored to share some highlights of our program, including:

- Again being named High Performing for Neurology & Neurosurgery by *U.S. News & World Report*
- Offering an Advanced Comprehensive Stroke Center, Level 4 Epilepsy Center, Spine Surgery Program designated as a Blue Distinction Center+, and advanced Neuro-Oncology Program
- Being generously supported by a $25 million grant from the Marion and Henry Bloch Family Foundation

The Neuroscience Institute remains at the forefront of research, education, and evidence-based medicine. Our robust research and clinical trial initiatives drive innovation, making Saint Luke's a national leader in neuroscience advancements. As an academic partner of the University of Missouri-Kansas City School of Medicine, we are dedicated to the education and training of the next generation of leaders in neuroscience. With the continued expansion of our clinical programs, research, and residency training, I am confident that the future of our Institute is brighter than ever.

To refer a patient to neurology, call 816-960-7600.
For neurosurgery, call 816-932-2700.

Carlos A. Bagley, MD, MBA
Director, Saint Luke's Marion Bloch Neuroscience Institute
Chief, Department of Neurosurgery
Chair, Saint Luke's Physician Group Neurosciences Division



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Saint Luke's Hospital
MARION BLOCH
NEUROSCIENCE INSTITUTE
Parking
DO NOT ENTER

SAINT LUKE'S MARION BLOCH NEUROSCIENCE INSTITUTE

At Saint Luke's Marion Bloch Neuroscience Institute, our experts are among the country's most accomplished at treating patients with complex brain, spine, and neuromuscular disorders. Specialists in neurology, neurointerventional radiology, neurosurgery, and neurological rehabilitation collaborate in a state-of-the-art facility. The Neuroscience Institute is committed to specialized, solution-driven neurologic centers, including:

Advanced Comprehensive Stroke Center
Accredited by The Joint Commission and leads the region in endovascular interventions and outcomes.

Parkinson's Disease and Movement Disorders Center
Among an elite group of hospitals pioneering innovative medical and surgical therapies to improve patients' quality of life.

Integrated Spine Program
Multidisciplinary and collaborative team recognized as a Blue Distinction Center+ for Spine Surgery by Blue Cross and Blue Shield.

Level 4 Epilepsy Center
Offers advanced diagnostics as well as state-of-the-art medical and surgical management for people living with epilepsy.

Neuro-Oncology Program
High-volume, brain tumor center with one of the region's only dedicated teams of neuro-oncologists and skull base surgeons who have fellowship training from world-class institutions.

Neuromuscular Program
A top referral center in Kansas City offering sophisticated diagnostics and fellowship-trained specialists.

Headache and Concussion Program
Multidisciplinary team offers specialized diagnostic and rehabilitation technology.

Saint Luke's Hospital Midwest Ear Institute
Offers a full range of hearing and balance services to children and adults.

Saint Luke's Memory Disorders and Behavioral Neurology Center
Offers specialty neuroimaging for accurate diagnosis, personalized treatment plans, and comprehensive support from a multidisciplinary team of cognitive neurology experts.

In addition, our general neurologists evaluate and treat the full spectrum of neurologic issues and diseases.

Cognitive Neurology
Provides advanced care for patients with neurodegenerative diseases affecting cognition and behavior, such as Alzheimer's disease, vascular dementia, and frontotemporal dementia.

Education and training programs

From the beginning, Saint Luke's Hospital of Kansas City was designated as a teaching hospital, instructing medical students in the art and science of clinical care. In 1990, Saint Luke's Hospital officially became a primary teaching hospital of the University of Missouri-Kansas City (UMKC) School of Medicine. Several Neuroscience Institute team members have clinical academic appointments at UMKC.

We are proud to be instrumental in training neurology residents from the UMKC Neurology Residency, internal medicine residents, and medical students from several other institutions.

COMMITMENT TO INNOVATION AND CLINICAL RESEARCH

Saint Luke's Marion Bloch Neuroscience Institute invests heavily in technology and clinical research to ensure our patients have access to the most innovative and effective treatments.

Our dedicated neurosurgical operating suites are outfitted with the latest technology, including:

- ROSA® robot for epilepsy surgery
- AIRO® mobile intraoperative CT scanner
- bk5000® ultrasound
- Brainlab Curve® Navigation
- StealthStation™ S8 surgical navigation system
- O-arm™ intraoperative 2D/3D imaging system
- Visualase® MRI-guided laser ablation
- ARveo digital augmented reality microscope
- 3D printing of high-quality models for surgery planning
- Two biplane suites

In addition, the Neuroscience Institute features a computed tomography suite; computed tomography perfusion scanning and angiography; 3T MRI; and video EEG monitoring. The 18-bed Neuroscience intensive care unit is staffed around-the-clock by dedicated specialists in intensive care medicine.

Clinical research and trials

Stroke research

Since the early 1990s, when Saint Luke's pioneered intravenous tPA, the clot-busting drug used to reverse strokes, the Saint Luke's stroke team has been involved in many of the major stroke intervention research trials. Early participation in trials testing mechanical devices led to our extensive experience in clot retrieval and made us leaders in acute stroke treatment.

Current StrokeNet clinical trials

Sleep SMART: Sleep for Stroke Management and Recovery Trial

Phase 3 blinded, controlled trial to test whether treatment of obstructive sleep apnea with continuous positive airway pressure is effective for secondary prevention and recovery after stroke.

SATURN: Statin Use in Intracerebral Hemorrhage

To determine the effects of continuation versus discontinuation of statins on the risk of ICH recurrence during 24 months of follow-up in patients presenting with a spontaneous lobar ICH while taking a statin drug.

Stroke

HEMERA Part III - carboxyHEMoglobin oxygEn delivery for Revascularization in Acute stroke

A randomized, Phase 1, contemporaneously controlled, multicenter study to assess the safety of PP-007 in subjects with acute ischemic stroke. The unique properties of PP-007 should improve microvascular perfusion of collaterals oxygenating the salvageable tissue, reducing ischemia/reperfusion injury and inflammation.

REVERXaL

A multinational, observational, longitudinal study to describe the characteristics, health care interventions, and health outcomes of patients with intracerebral bleeds in the presence of Factor Xa inhibitor treatment.

The REpeated ASSEssment of SurvivorS (REASSESS) in ICH

The REASSESS study will conduct long-term cognitive, functional, and neuropsychiatric performance assessments to determine if evacuation of spontaneous intracerebral hemorrhage (ICH) reduces the risk of later cognitive decline in the aging brain. The study will determine if surgical clot reduction performed in prior patients from minimally invasive surgery after ICH reduces the risk of progressive cognitive decline. The aim is to find a long-term benefit in survival and functional outcome from minimally invasive surgery, whether or not cognitive decline occurs.

Proximal Internal Carotid Artery Acute Stroke Secondary to Tandem or Local Occlusion Thrombectomy (PICASSO) Trial
A study of acute ischemic stroke patients with an intracranial vessel occlusion in the anterior circulation and extracranial proximal carotid occlusion or severe stenosis, within 16 hours of symptom onset. The purpose is to establish the efficacy of intra-arterial mechanical thrombectomy with extracranial proximal carotid artery acute stenting versus non-stenting approaches in patients with acute ischemic stroke.

Methinks Investigational Device – SMART-Large Vessel Occlusion
Study on the performance of a machine-learning algorithm recognizing and triaging large vessel occlusions (ICA, M1, M2 occlusions) using non-contrast CT scans.

ARPEGGIO
A randomized, multicenter study of the safety and neuroprotective capacity of Scp776 in subjects undergoing endovascular thrombectomy for acute ischemic stroke. The study aims to determine if a neuroprotective research drug used in patients having a thrombectomy will have better outcomes than those receiving the placebo.

BAYER® OCEANIC
A multicenter, international, randomized, Phase 3 study of the oral FXIa inhibitor asundexian for the prevention of a secondary ischemic stroke after an acute non-cardioembolic ischemic stroke or high-risk TIA. The study will evaluate if the oral FXIa inhibitor is superior to placebo and antiplatelet therapy in reducing the occurrence of another stroke.

Parkinson's Disease and Movement Disorders

Medtronic Deep Brain Stimulation (DBS) Therapy for Dystonia
(Humanitarian Use Device) Medtronic DBS Therapy delivers electrical stimulation to areas in the brain to help control symptoms of various movement disorders. Focused on patients diagnosed with chronic, intractable (drug refractory) primary dystonia, including generalized and/or segmental dystonia, hemidystonia, and cervical dystonia (torticollis).

Advanced Parkinson's Disease: An Open-Label Extension of Studies M15-736 and M20-339 Evaluating the Safety and Tolerability of ABBV-951
ABBV-951 (carbidopa phosphate/levodopa phosphate) is a soluble formulation of carbidopa and levodopa prodrugs that is deliverable by continuous subcutaneous infusion. This study is being conducted to assess the long-term safety, tolerability, and efficacy of ABBV-951.

Neuro-Oncology

RESTORE
A Phase 2 double-blind, randomized, prospective, placebo-controlled study of NanO2 TM combined with radiation and temozolomide in patients with newly diagnosed glioblastoma multiforme.

TTX-CINP-202 Tetrodotoxin (TTX) for Injection (Halneuron®)
A randomized, double-blind, placebo-controlled, multicenter, efficacy and safety trial of single cycle tetrodotoxin in the treatment of chemotherapy-induced neuropathic pain. To determine the efficacy of TTX at various time intervals post treatment in relieving moderate to severe chemotherapy-induced neuropathic pain (CINP) compared to placebo as measured by the numerical pain rating scale.

MOAB
A multicenter trial to identify optimal atezolizumab biomarkers in the setting of recurrent glioblastoma.

SERIL
Safety, tolerability, and efficacy of JCXH-211 in patients with recurrent or progressive high-grade glioma.

PuMP
Open-label study to evaluate the safety, tolerability, and efficacy of the oncolytic HSV1 MVR-C5252.

Comparison of Niraparib with Temozolomide
A study comparing niraparib with temozolomide in adult participants with newly diagnosed, MGMT unmethylated glioblastoma.

BY THE NUMBERS

OUR PATIENTS

2023 VOLUMES

40,731
OUTPATIENT

21,354
INPATIENT

OUR TEAM

17
NEUROLOGISTS

19
NEUROLOGY ADVANCED PRACTICE PROVIDERS

7
NEUROSURGEONS

10
NEUROSURGERY ADVANCED PRACTICE PROVIDERS

8
NEUROINTENSIVISTS

12
NEURO CRITICAL CARE ADVANCED PRACTICE PROVIDERS

12
CODE NEURO NURSES

11
NEURO REHABILITATION PHYSICIANS AND APPS

CARE MAP

SAINT LUKE'S MARION BLOCH NEUROSCIENCE INSTITUTE LOCATIONS

Saint Luke's Marion Bloch Institute Service Locations

Saint Luke's Marion Bloch Institute Regional Outreach Locations

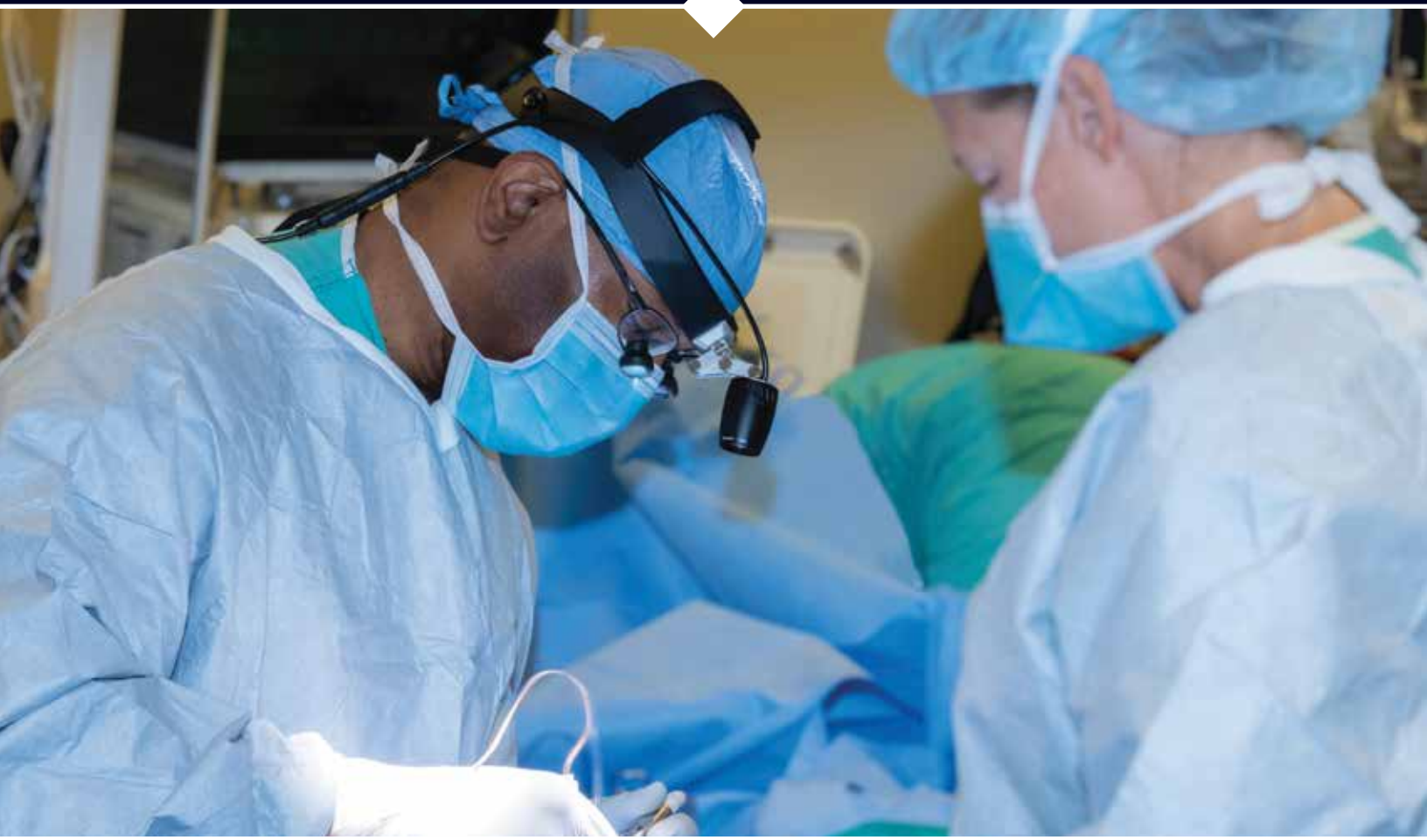
Saint Luke's Community Hospital
A division of Saint Luke's South Hospital

LEADERSHIP

CARLOS A. BAGLEY, MD, MBA
Director, Saint Luke's Marion Bloch Neuroscience Institute; Chief, Department of Neurosurgery; Chair, Saint Luke's Physician Group Neurosciences Division

Dr. Bagley is a fellowship-trained neurosurgeon specializing in spine. He earned his medical degree at the Duke University School of Medicine. Dr. Bagley completed a neurological surgery residency and spinal surgery fellowship at Johns Hopkins University. He received his Master of Business Administration from the University of North Carolina at Chapel Hill.

Dr. Bagley previously served as president of the Texas Association of Neurological Surgeons. He serves on the editorial review boards of numerous spine and neurosurgery journals, including *Evidence-Based Spine-Care Journal*, *Global Spine Journal*, and *Neurosurgery*. A leading clinical outcomes researcher, he is the author or co-author of more than 200 peer-reviewed publications in medical journals and is a frequent lecturer at national and international neurosurgical conferences.

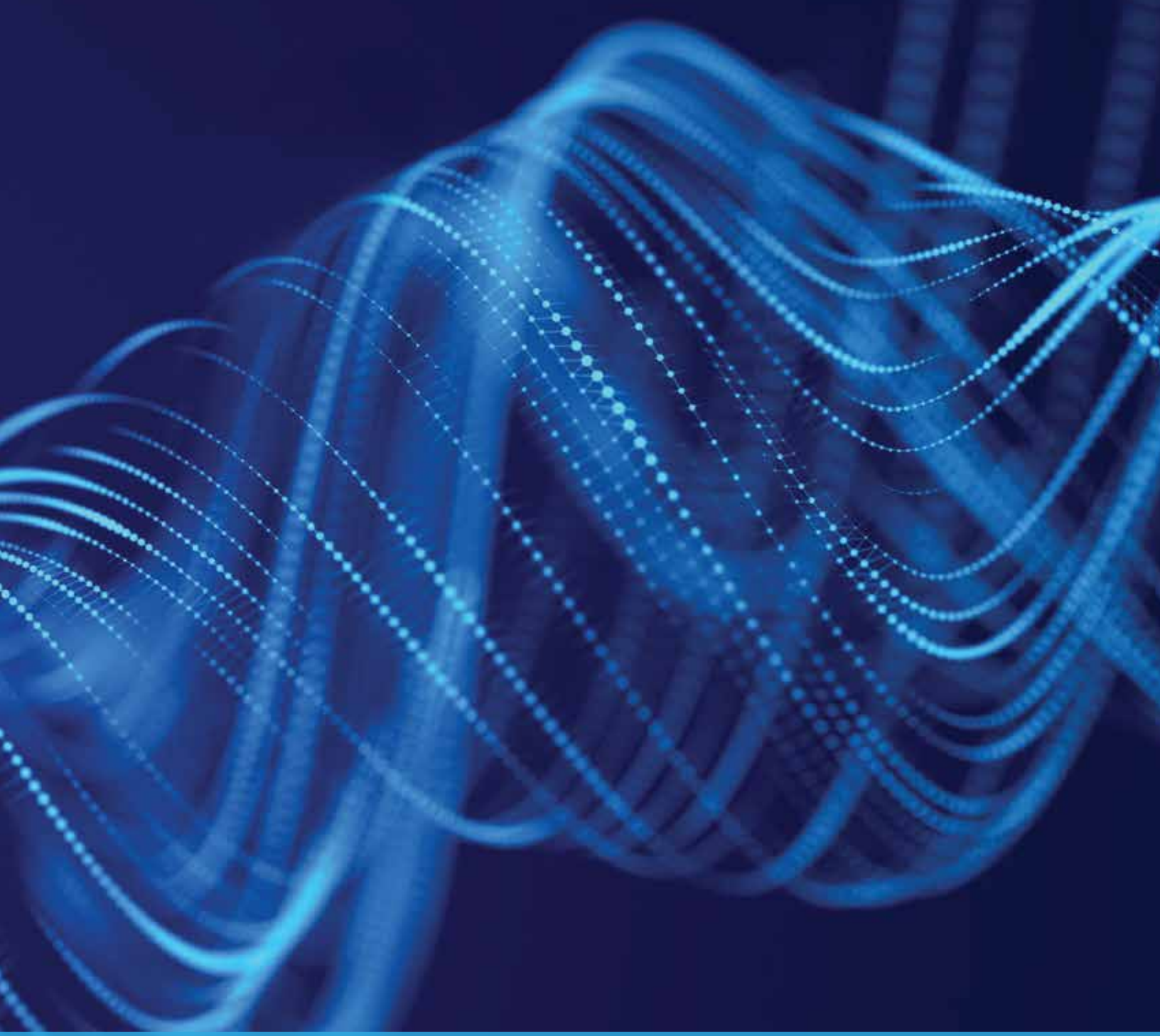


OUR VISION

The vision for Saint Luke's Marion Bloch Neuroscience Institute is to be recognized as a leader in neuroscience outcomes and to be a hub for innovation, training, and discovery across the region and country.

Neuroscience Institute experts use a multidisciplinary, patient-centered approach focused on improving the patient experience and outcomes.

As a hub for innovation and discovery, the Institute is at the leading edge of neuroscience for Kansas City and the Midwest.



PHYSICIAN OPPORTUNITIES

PHYSICIAN OPPORTUNITIES

SAINT LUKE'S: THE INTERSECTION OF INNOVATION AND HOPE

Saint Luke's has been pioneering medicine for more than 140 years. We are consistently ranked as one of the nation's best by *U.S. News & World Report*.

At Saint Luke's, our teams use innovations to help patients live better: leading-edge technology, state-of-the-art treatments, and trailblazing research.

But we go beyond being the first or the fastest. Every day, physicians, nurses, and staff turn innovation into hope.

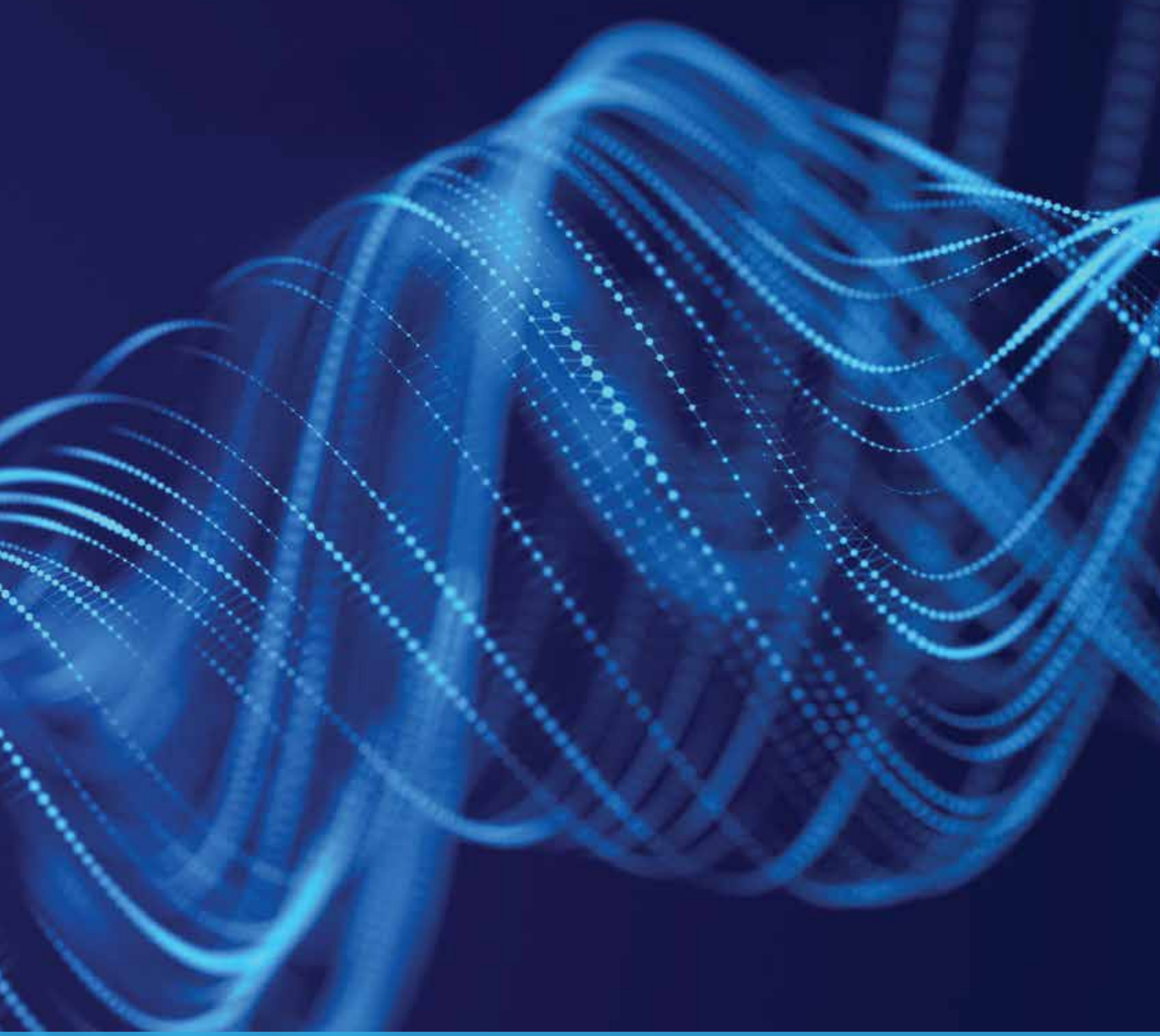
Our purpose: Improve the lives impacted by diseases of the nervous system with a patient-centered focus while providing personalized, compassionate, and coordinated care.

JOIN SAINT LUKE'S MARION BLOCH NEUROSCIENCE INSTITUTE

The Neuroscience Institute is among **the region's leading programs for research, education, and evidence-based medicine**. We are a tertiary referral center with expertise in treating challenging and complex cases.

- **Interested in joining our team?**
  Visit saintlukeskc.org/careers to contact a physician recruiter
- **Learn about working at Saint Luke's**

WEBSITE VIDEO



INSTITUTE HIGHLIGHTS

STROKE

KARIN OLDS, MD
Medical Director,
Comprehensive Stroke Program

Saint Luke's treats more strokes than any other hospital in the region. In 2023, Saint Luke's treated nearly 5,000 suspected strokes—on average one every two hours—and treated more than 1,300 ischemic strokes. Our Stroke Program is among the nation's leaders in total case volume for endovascular stroke-reversal treatments. Studies in medical literature continue to demonstrate that patient outcomes are better at high-volume institutions such as Saint Luke's Marion Bloch Neuroscience Institute.

In recognition of our dedication to offering the best care, we continue to receive national and regional commendations:

- The Joint Commission recognizes Saint Luke's Hospital of Kansas City as an Advanced Comprehensive Stroke Center
- Awarded the highest recognition by the American Heart Association/American Stroke Association's Get With The Guidelines® Stroke Gold Plus with Target: Stroke Honor Roll Elite Plus Advanced Therapy
- The Missouri Department of Health and Senior Services recognizes Saint Luke's Hospital as a Level I Time Critical Diagnosis Stroke Center

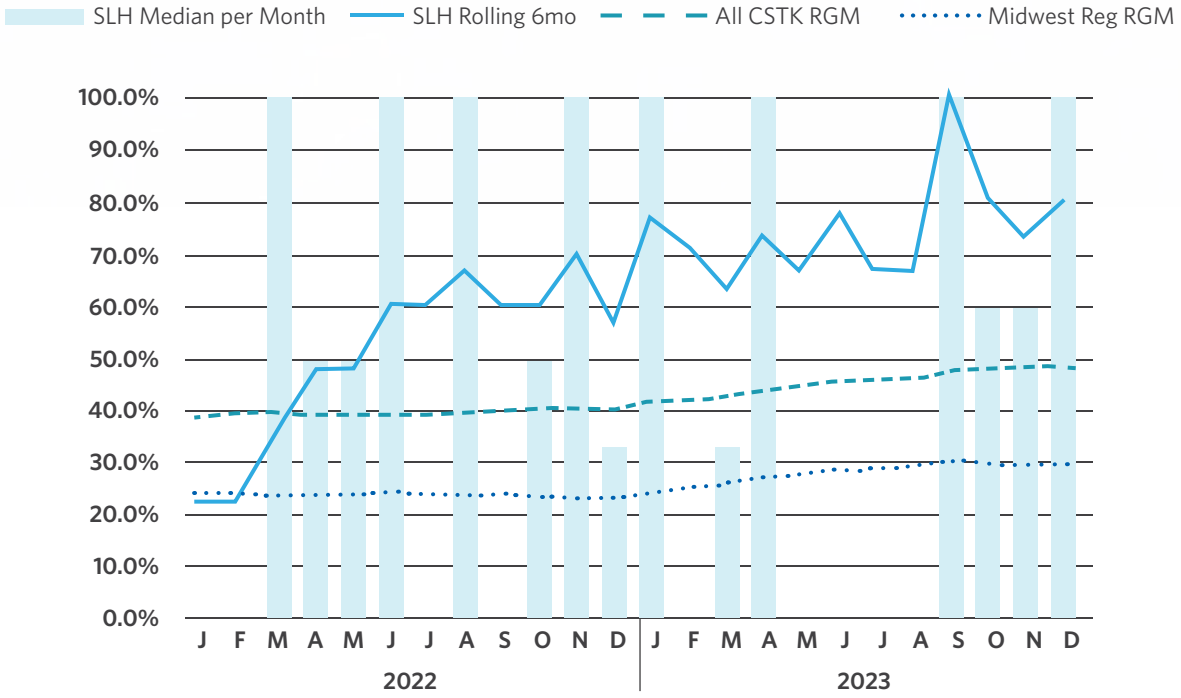
The strength of our stroke team is based on collaboration and the breadth of our expertise—emergency, neurology, neurointervention, radiology, neurosurgery, and intensive care.

American Heart Association
American Stroke Association
CERTIFICATION
Meets standards for
Comprehensive Stroke Center

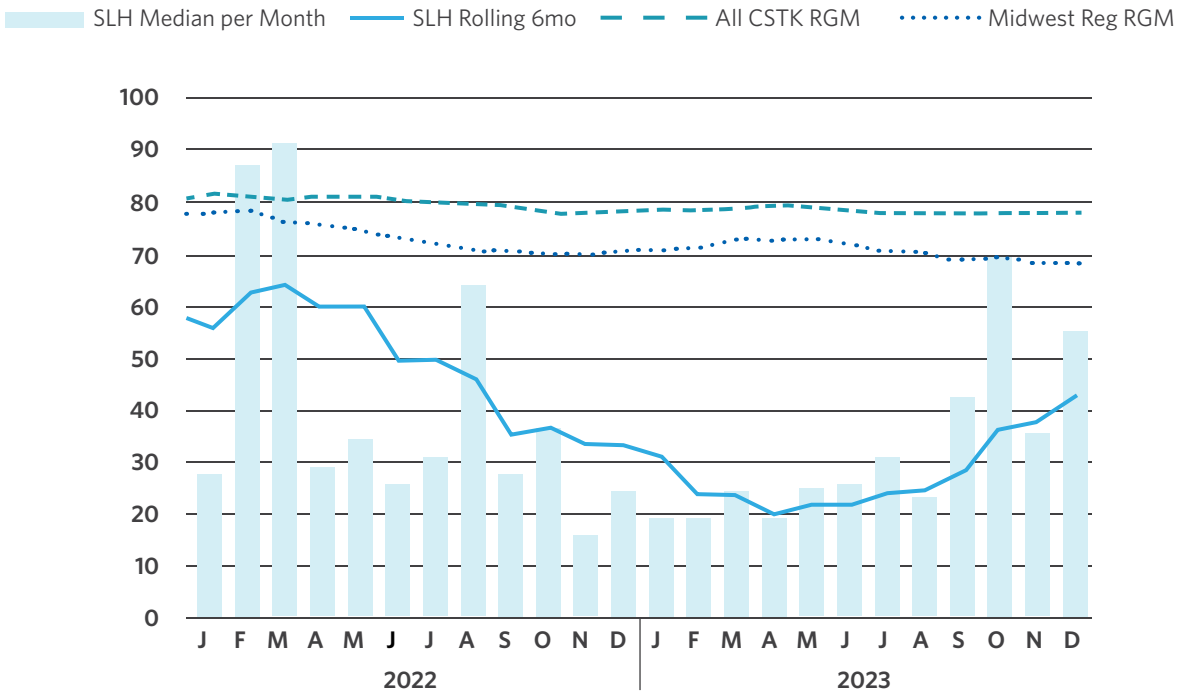
STROKE TREATMENT RATES	SLH 2019	SLH 2020	SLH 2021	SLH 2022	SLH 2023	REGIONAL 2023	NATIONAL 2023
IV Thrombolytic	21.6%	23.2%	22.7%	17.3%	20.7%	15.5%	16.7%
Endovascular	21.1%	20.7%	20.8%	23.34%	26.1%	7.5%	13.5%
Combined	42.66%	43.9%	43.5%	40.64%	46.8%	23%	30.2%

SLH = Saint Luke's Hospital of Kansas City

Saint Luke's Hospital *Percent* of Patients Who Receive IV Thrombolytics in 30 Minutes Compared to All Comprehensive Stroke Centers and Midwest Region Hospitals



Saint Luke's Hospital *Median* Door-to-IR Puncture Time (Groin) (min) Compared to All Comprehensive Stroke Centers and Midwest Region Hospitals



EMERGENCY CARE

Effective stroke care begins in the Emergency Department. Saint Luke's care model emphasizes fast, accurate emergency care for stroke and brain-injury patients. Many patients receive life-saving intervention within an hour of arrival to the Emergency Department. To ensure the best outcomes for stroke patients, the stroke team has implemented specific policies to reduce the door-to-thrombolytic and door-to-groin times. Rapid triage and treatment reduce disability and improve patient outcomes.

From the ambulance entrance, EMS crews wheel patients directly into the CT scanner room, where the stroke team is already assembled—saving more than a dozen valuable minutes.

The neuro nurse difference

One of our unique approaches includes Saint Luke's Code Neuro Nurses. These nurses receive additional training in stroke protocols and respond to any neurological emergency and evaluate critically ill stroke patients.

Code Neuro Nurses work closely with the staff from the Emergency Department, Neurology, and Neuro ICU to ensure stroke patients receive the best care. They are key to ensuring the fastest treatment times in the region, and are vital to achieving the excellent patient outcomes expected within Saint Luke's Stroke Program.

ENDOVASCULAR TREATMENT

Saint Luke's neurointerventional team is at the leading edge of cerebrovascular treatment, beginning with the first intra-arterial thrombolysis case 25 years ago to the recent development of stent retriever and large bore aspiration catheter technology.

Saint Luke's endovascular treatment rate is 26.1%, which is more than double the national average. Our team's expertise makes this high treatment rate possible. We are able to shift focus to imaging indicators of brain viability instead of a strict time window.

Our endovascular treatment rate is 26.1%—**more than double the national average.**

We have performed more than 1,500 cerebral thrombectomies since 2012. Studies continue to demonstrate that patient outcomes are better at high-volume institutions like Saint Luke's.

The strength of our team comes from the breadth of our training and expertise, which allows us to tailor our leading-edge cerebrovascular treatment modalities into a personalized plan for each patient.

CRITICAL CARE

The Neuroscience Intensive Care Unit is an integral part of Saint Luke's stroke and brain injury care. Our Neuro ICU team is committed to around-the-clock care of the Neuroscience Institute's highest acuity patients.

Our neurointensivist team collaborates with neurosurgery, neurology, and neurointerventional radiology to provide care to our complex and varied patient population. While focusing on acute neurologic care and monitoring, the intensivist team ensures that all patients in the ICU setting have comprehensive medical management.

SPINE

CARLOS A. BAGLEY, MD, MBA
Director, Saint Luke's Marion Bloch Neuroscience Institute
Chief, Department of Neurosurgery
Chair, Saint Luke's Physician Group Neurosciences Division

Blue Distinction Center+ Spine
Kansas City

Saint Luke's Integrated Spine Program treats all spine issues, from common to complex pathologies, with expertise that results in fewer complications and hospital readmissions. While the Spine Program offers the latest in minimally invasive surgical techniques, its primary strength lies in a multidisciplinary and collaborative philosophy with a holistic focus on spine wellness.

This collaborative philosophy includes neurosurgery, physical medicine and rehabilitation, pain psychology, and pain management to identify the source of the patient's pain and determine the best treatment—physical and/or occupational therapy, epidural steroid injections, medial branch blocks, trigger point injections, radiofrequency ablation, or surgery.

Multidisciplinary spine committee

The Spine Program's innovative, multidisciplinary spine committee is comprised of neurosurgeons, neurologists, neuroradiologists, physical medicine and rehabilitation physicians, sports medicine physicians, pain management physicians, advanced practice providers, nurse navigators, and physical therapists. This team meets weekly to review the care of patients with spinal pathology and to develop the best possible multidisciplinary treatment plans, including non-surgical and surgical treatment options.

We've continued to grow our program, including expanding the surgery center at Saint Luke's East Hospital to offer operative and non-operative spine treatments.

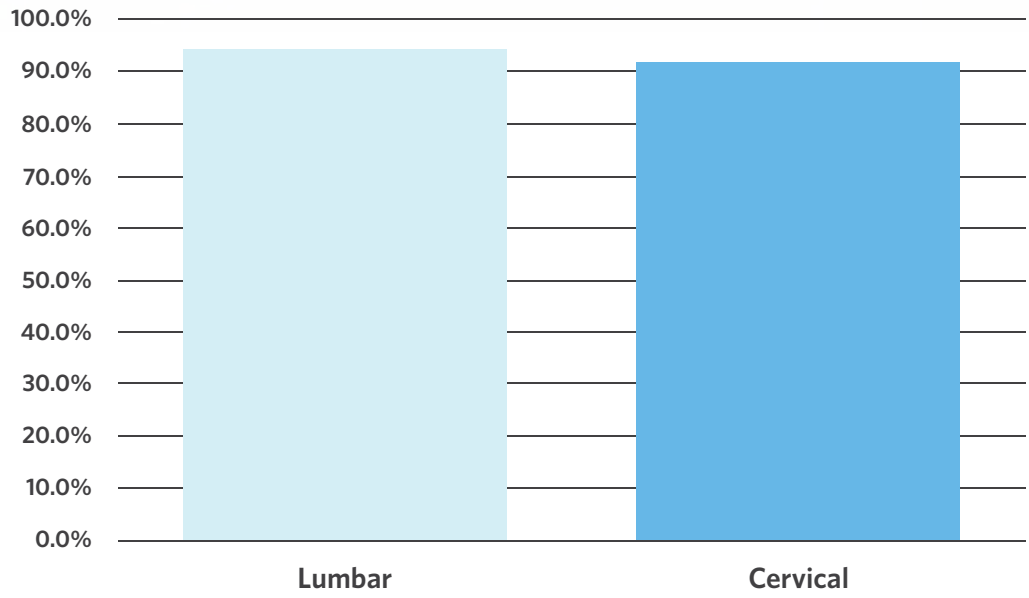
Comprehensive surgery options

Spine surgery is offered for appropriate patients who do not respond to conservative therapy and who continue to have diminished quality of life. The Spine Program offers:

- The **latest minimally invasive interventions** that reduce complications and promote faster recovery
- **Motion-sparing interventions** along with minimally invasive decompressions and traditional spine surgery
- **Multidisciplinary evaluation for patients with metastatic disease** to the spine

Spine Surgery Patient Satisfaction Scores 24 Months Post-Surgery

Percentage of patients who gave rating of 1 or 2



1 = Surgery met my expectations

2 = Surgery did not meet my expectations but I would undergo the procedure again for the same results

EPILEPSY

JOHN CROOM, MD, PHD
Medical Director, Epilepsy

RONALD FIELDS, MD

Saint Luke's is home to the region's longest continuously operating Level 4 Epilepsy Center for adults. We are committed to providing patients access to the full spectrum of diagnostic, medical, and surgical epilepsy innovations.

Sophisticated seizure analysis

The Epilepsy Center team uses state-of-the-art equipment to offer extensive diagnostic capabilities, including a 10-bed inpatient epilepsy monitoring unit with continuous EEG video monitoring. Using advanced radiological imaging with a 3T MRI, we can identify subtle structural causes of epilepsy. In partnership with the neurosurgery department, the Epilepsy Center has stereoelectroencephalography (stereo-EEG or sEEG) capabilities using the ROSA® surgical robot for electrode placement.

Comprehensive surgical treatment options

Our team has the medical and surgical expertise to support a personalized approach to achieve the best possible outcome for each patient, whether through medical management, neuromodulation, laser ablation, or resective brain surgery.

We were one of the first hospitals in the region to use the minimally invasive ROSA® surgical robot to implant electrodes in a patient's brain to localize areas where seizures emerge. To complement this minimally invasive localization strategy, Saint Luke's offers selective laser ablation of seizure onset regions of the brain to treat epilepsy. Some patients can be cured of epilepsy with a single day in the hospital and a single stitch.

Saint Luke's offers deep brain stimulation (DBS) implantation for epilepsy, an FDA-approved strategy for patients with poorly localized epilepsy who are not eligible for other surgical treatments. We also continue to offer neuromodulation standards, such as vagal nerve stimulation (VNS) and responsive neurostimulation (RNS) with the NeuroPace RNS® System, along with craniotomy for brain resection for appropriate patients.

EPILEPSY 2023 VOLUMES

3,356	1,448	1,876
OUTPATIENT CLINIC VISITS	TOTAL VIDEO EEG DAYS	ROUTINE EEGS CONDUCTED

NEURO-ONCOLOGY

SAMUEL A. GOLDLUST, MD
Medical Director,
Neuro-Oncology
Vice President, Research

JONATHAN BRESHEARS, MD
Co-Director,
Neurosurgical Oncology

TAREK EL AHMADIEH, MD
Co-Director,
Neurosurgical Oncology

Saint Luke's Neuro-Oncology Program provides comprehensive care for the full spectrum of pathology to patients in the Kansas City region and beyond. Our high-volume program develops leading-edge clinical trials, which are paramount to caring for patients with brain tumors and advancing the field.

Our multidisciplinary team of experts, including neurosurgical oncology, neuro-oncology, radiation oncology, neuropathology, and neuroradiology, meet weekly to collaboratively review tumor cases and develop treatment plans.

From radiation and chemotherapy, to minimally invasive surgery, to clinical trials, our neuro-oncology team uses every tool available to help our patients battle complex spine and brain tumors, such as glioblastoma and other aggressive tumors that frequently recur despite standard therapies.

Pituitary and skull base tumors

Saint Luke's skull base tumor program is uniquely equipped to handle tumors at any location in the anterior, central, or posterior/lateral skull base. Our multidisciplinary approach involves close collaboration among neurosurgery, ENT, radiation oncology, endocrinology, neuro-ophthalmology, oncology, pathology, and neuroradiology.

The anterior skull base surgical team includes a fellowship-trained skull base neurosurgeon and rhinologist, both specializing in expanded endoscopic endonasal approaches to the anterior and central skull base for treatment of pituitary tumors, meningiomas, craniopharyngiomas, esthesioneuroblastomas, chordomas, chondrosarcomas, and sinonasal malignancy.

For tumors arising in the lateral skull base, such as vestibular schwannomas and meningiomas, a skull base neurosurgeon and a neurotologist, both experienced with the treatment of these tumors, work as a team to care for patients. Our team also has extensive experience with stereotactic radiosurgery for skull base lesions, in both the primary and adjuvant setting. We are accruing clinical trials that are only available at the premier neuroscience programs in the country, giving our patients the best opportunity for treatment options.

PARKINSON'S DISEASE AND MOVEMENT DISORDERS

BROOKE HEFFERNAN, MD

KARL KNIGHTS, MD

With the full spectrum of treatments and expertise, Saint Luke's Parkinson's Disease and Movement Disorders Center is a top regional referral center for complex movement disorder cases.

Combining a thorough clinical evaluation with advanced diagnostics, our fellowship-trained movement specialists diagnose and treat all types of movement disorders. Our personalized treatment plans include comprehensive medical therapy from evidence-based use of generic medications to the newest specialty medications, both approved and those under investigation in clinical trials. We also specialize in leading-edge procedural and surgical options.

At the forefront of innovation

Brooke Heffernan, MD, and Karl Knights, MD, stay engaged with the latest advances in deep-brain stimulation technologies, exemplifying our commitment to patient-centered care. EMG-guided botulinum toxin therapy for dystonia and spasticity, for example, has proven to reduce pain and deformity, improve accuracy, and lead to better overall outcomes.

Saint Luke's was the first in the region to implant the FDA-approved Medtronic Percept™ deep brain stimulation (DBS) system. This innovative device not only delivers therapeutic stimulation but also senses underlying brain rhythms. The information gathered with this device reveals the pathological underpinnings of movement disorders.

Saint Luke's also was the first in the region to use CereTom®-assisted (asleep) deep brain stimulation. This technique minimizes the patient's stress, allows a shorter duration of surgery, reduces complication rates, and shortens hospital stays.

Beyond our clinical management, we are dedicated to caring for the whole person. We coordinate therapy, including our evidence-based rehabilitation programs, such as LSVT LOUD® and LSVT BIG®. And we connect patients with counseling and offer a Parkinson's support group. Since 2020, Saint Luke's has hosted and studied the benefits of art therapy classes for people with Parkinson's thanks to a grant from the National Parkinson's Foundation.

MULTIPLE SCLEROSIS

CAROLINA GARCIA, DO

Patients with multiple sclerosis (MS) receive comprehensive, patient-centered care at Saint Luke's. Our program is recognized as a Center for Comprehensive Multiple Sclerosis Care by the National Multiple Sclerosis Society.

Because treatments continue to rapidly advance, , the experience of our fellowship-trained experts and access to clinical trials is vital for each patient, giving them every treatment opportunity.

We offer a full range of services from treatment of acute episodes to long-term management, including:

- Rehabilitation to help patients achieve maximum functionality
- A variety of onsite education and emotional support services for patients and family members, including a social worker and therapist
- Access to novel and experimental therapies through multiple clinical trials

Recognized as a Center for Comprehensive Multiple Sclerosis Care by the National Multiple Sclerosis Society.

Multidisciplinary team

At Saint Luke's, we believe in treating the whole person. Our MS care team includes experts in:

- Neurology
- Neuro-ophthalmology and audiology
- Neuropsychology and physiatry
- Physical, occupational, and speech therapy
- Urology
- Social work
- Nursing
- Diet and nutrition

COGNITIVE NEUROLOGY

MEGAN BAUMGARDNER, DO
Medical Director,
Cognitive Neurology

Saint Luke's Cognitive Neurology program provides advanced care for patients with neurodegenerative diseases affecting cognition and behavior, such as Alzheimer's disease, vascular dementia, and frontotemporal dementia.

Developing partnerships with the Alzheimer's Association and Rippl, an organization that supports those with dementia, our neurologists connect patients with advanced practice providers (APPs), social workers, geriatric psychiatrists, and nurse navigators to access the right level of care.

Diagnostic and therapeutic advancements

Our Cognitive Neurology program stays at the forefront of diagnostic and therapeutic advancements such as PET amyloid scans and C2N Diagnostics™, offering tau and amyloid testing, as well as blood-based beta-amyloid and tau assays. These advanced biomarkers provide early detection of neurodegenerative diseases, particularly Alzheimer's.

Megan Baumgardner, DO, recently presented a case for the adoption of the anti-amyloid antibody donanemab to the Pharmacy and Therapeutics Committee, which has been approved for use with specific contingencies. Once available to patients, it can offer promising disease-modifying therapy that can slow cognitive decline by up to 60% in early-stage Alzheimer's.

Diagnostic and therapeutic advancements

Our team emphasizes early diagnosis of cognitive impairment. Providers should be aware of their patients' needs and refer those who exhibit early signs of cognitive impairment, such as trouble remembering recent events or repetitive questioning. The experts at Saint Luke's work with primary care physicians to underscore the value of early referral for these symptoms, working to shift the perception that nothing can be done for cognitive decline.

With early intervention, patients can benefit from the latest treatments that slow disease progression and improve outcomes.

NEUROMUSCULAR

NATHAN MCGRAW, MD
Medical Director,
Neuromuscular

With sophisticated diagnostics and fellowship-trained neuromuscular specialists, Saint Luke's Neuromuscular Program is a top referral center in Kansas City. We treat the full range of neuromuscular disorders, including the rarest to the most devastating conditions.

Our team provides comprehensive treatment for:

- Amyotrophic lateral sclerosis (ALS)
- Peripheral neuropathies
- Muscle disorders such as myositis and muscular dystrophy
- Myasthenia gravis

In partnership with the Myasthenia Gravis Association, Saint Luke's provides a clinic to support patients and families dealing with this rare, chronic condition.

Sophisticated diagnostics

Our experts offer a complete range of diagnostic tests and treatments for neuromuscular diseases including electromyography (EMG) and nerve conduction studies. Saint Luke's is a high-volume provider of EMG tests with specially trained EMG technicians available at several of our area facilities.

As part of nationally recognized Saint Luke's, our patients have access to high-quality and close-to-home physical, occupational, and speech therapy; physical medicine and rehabilitation experts; skin biopsies; and infusion and immunosuppressant therapies.

HEADACHE AND CONCUSSION

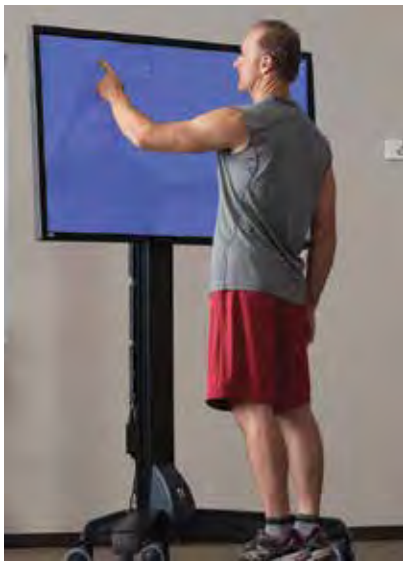
ROBERT REDDIG, MD
Interim Medical Director,
Headache

Saint Luke's Comprehensive Headache and Concussion Center uses a rehabilitative approach to treat a full range of acute and chronic post-concussion and cephalgias symptoms. Our multidisciplinary team includes:

- Physical, occupational, and speech therapists
- Neuropsychology and psychiatry experts
- Behavioral therapists

Saint Luke's offers specialized concussion rehabilitation technology, including Balance Masters®, Bioness Integrated Therapy System (BITS™), and Dynavision™.

Our headache experts provide a comprehensive approach to help patients maximize their quality of life and enjoy more pain-free time. Our pain management options include sphenopalatine ganglion blocks, Botox® injections, nerve blocks, and intramuscular injections in the clinic. Our behavioral health specialists offer non-pharmacologic therapies, including mindfulness meditation, cognitive behavioral therapy, and acceptance and commitment therapy.



HEARING AND BALANCE DISORDERS

ROBERT CULLEN, MD
Medical Director,
Midwest Ear Institute

Research and clinical trials have been at the heart of Saint Luke's Hospital Midwest Ear Institute since our founding, and this commitment gives our patients access to the most comprehensive treatment options available today.

We offer a full range of hearing and balance services to children and adults, including:

Cochlear implants

Our team is the most experienced in the region, implanting more than 2,000 implants. We treat all ages—six months to 95 years old.

Hearing aid program

We work with a variety of device manufacturers so our audiologists can find the best fit for each patient. All hearing aids are programmed by audiologists with doctorate-level degrees who are experts in verifying the appropriate device for each patient.

Vestibular and balance disorders testing

We offer the region's first, most comprehensive, and most sophisticated vestibular and balance disorders testing center. Patients undergo a thorough evaluation by our experts to help determine the best possible treatment.

Tinnitus program

We provide a variety of solutions for tinnitus—from sound therapy and combination hearing aid/sound generators to support groups.

Auditory processing disorder program

We offered the first program in Kansas City to diagnose and treat auditory processing disorder (APD). After 14 weeks, 70% of children who complete our APD therapy exhibit normal auditory processing skills.

Auditory brainstem implants

We are the first and largest provider of auditory brainstem implants in the region offering this solution to patients who need an alternative to cochlear implants.

REHABILITATION

CASEY MARTINEZ, MD
Chief, Rehabilitation Institute

Saint Luke's Rehabilitation Institute offers advanced inpatient rehabilitative care that combines the latest rehabilitation robotics technology with a multidisciplinary team of physiatrists and therapists with specialty training in neurorehabilitation and rehabilitation nursing.

The Institute delivers outstanding, acute inpatient rehabilitation care. Our state-of-the-art facility and suite of 17 advanced-tech robotic devices is located on the Saint Luke's South Hospital campus. We also have a 12-bed unit at Saint Luke's North Hospital–Smithville.

Our combination of leading-edge technology and personalized treatment is one reason more of our patients return home instead of going to a long-term care facility as compared to other facilities in the region. In 2023, we admitted more than 350 stroke patients and more than 100 spinal cord injury patients (traumatic and non-traumatic).

Patients at Saint Luke's Rehabilitation Institute are medically managed by physiatrists. Our physiatrists lead a multidisciplinary team of physical, occupational, speech, and music therapists; rehabilitation nurses; social workers; and psychologists who collaborate to develop a personalized plan, helping achieve the best possible recovery outcomes.

We treat patients who have had:

- Stroke
- Traumatic and non-traumatic spinal cord injury
- Multiple trauma
- Traumatic hip fractures
- Complex medical conditions and are deconditioning
- Progressive neurological disorders

Technology highlights

EksoGT™

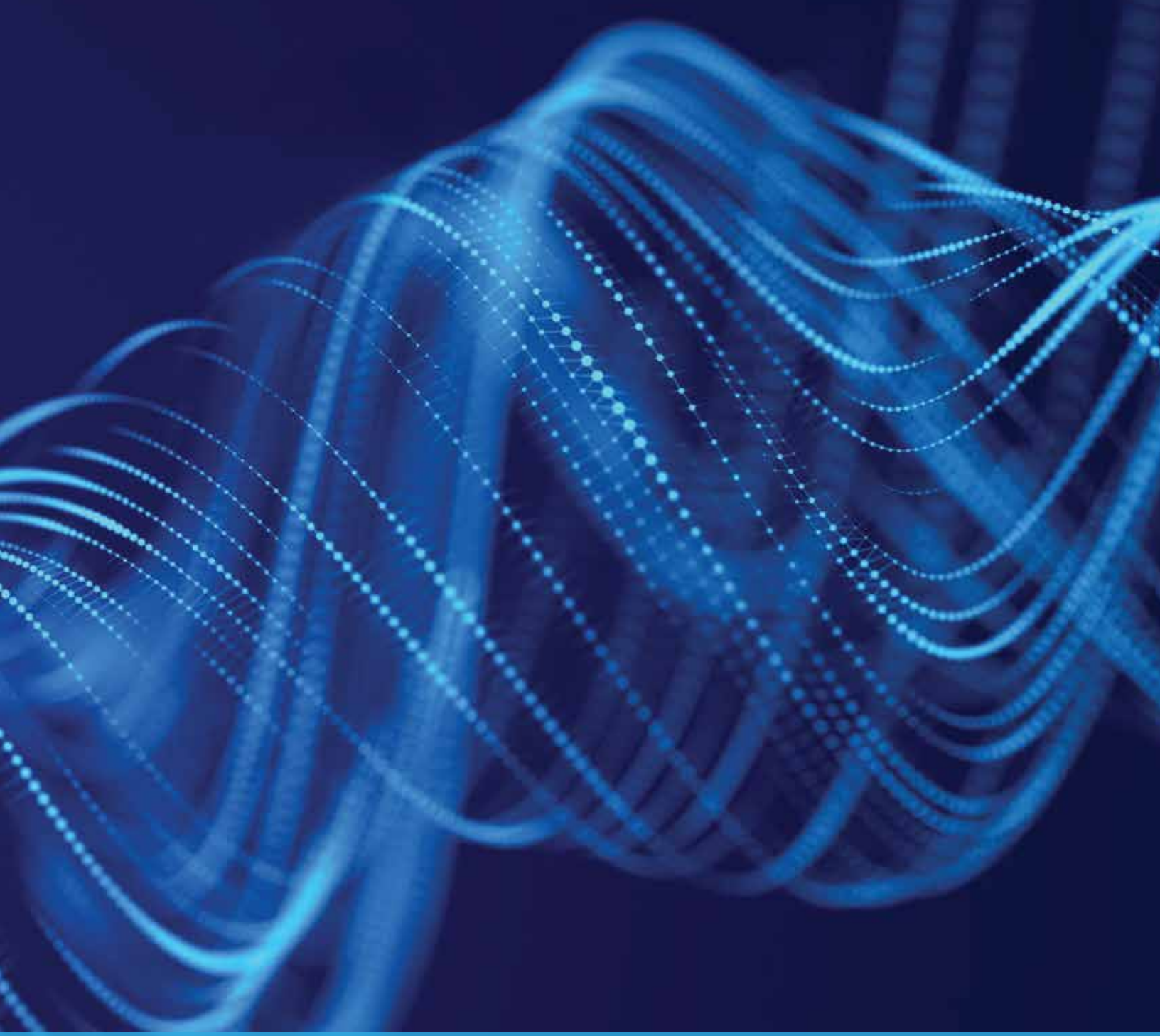
Designed specifically for patients recovering from stroke and spinal injuries, this full-body supportive exoskeleton has a motorized frame that adjusts to the patient's current level of strength and mobility, with controls that range from full support to partial graduated assistance.

EksoGT supports upright posture and teaches the wearer how to walk again and regain their natural gait. With postural trunk support as well as support at the knee, hip, and ankle, this device amplifies ambulation ability and allows for extended therapy sessions without fatigue.

Augmented reality

Augmented reality (AR) involves overlaying digital information, such as graphics or text, onto the patient's view of the physical world using camera-enabled devices. Mixed reality (MR) refers to merging the virtual and real worlds, allowing for real-time interactions between objects in both.

AR and MR offer several advantages, such as high repetition and intensity task specificity, objective feedback, greater user engagement, and improved motivation. Repetition of movement is a crucial aspect of stroke rehabilitation helping patients with motor re-learning and facilitating neuroplasticity.



NURSING EXCELLENCE

NURSING EXCELLENCE

SPECIALIZED TRAINING, PATIENT ADVOCACY, EVIDENCE-BASED PRACTICE

The expert care offered at Saint Luke's Marion Bloch Neuroscience Institute is possible in part because of our highly skilled nursing team. Each year, nurses at all levels of expertise are encouraged to grow and expand their skills. Saint Luke's partners with the American Heart Association/American Stroke Association to provide advanced neuroscience education to our nurses as well as those working in facilities across the region.

Saint Luke's encourages our nurses to work at the top level of licensure and achieve professional goals. Our nursing program is among a select few in the nation in which bedside nurses perform research, allowing them to recommend practical, evidence-based changes to enhance patient outcomes and improve quality of care. Saint Luke's commitment to and investment in nursing research contributed to Saint Luke's Hospital of Kansas City earning five consecutive Magnet Designations from the American Nurses Association beginning in 2004.

MAGNET RECOGNIZED
AMERICAN NURSES CREDENTIALING CENTER

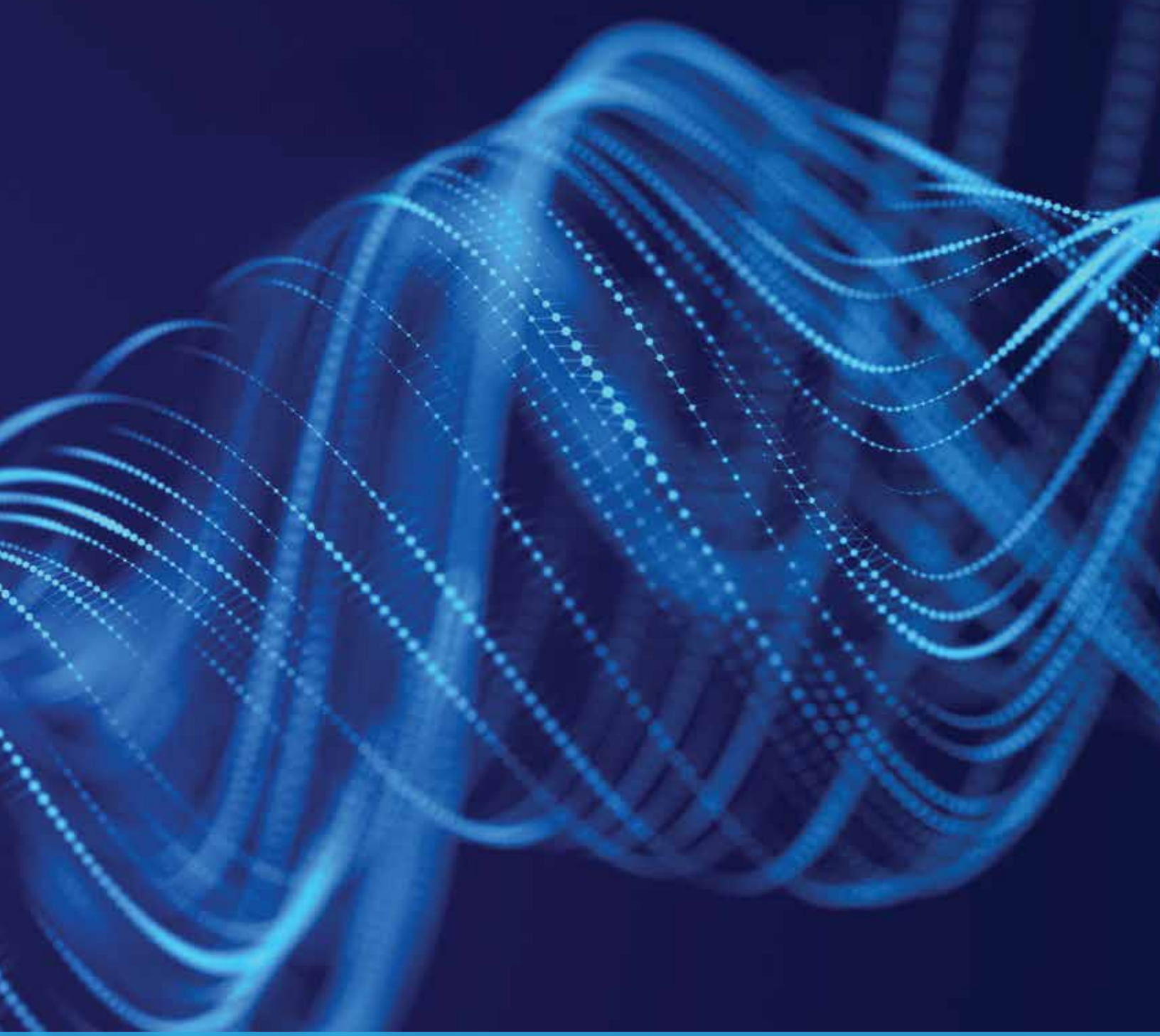
TRAINING TODAY'S NURSING GRADUATES TO BE TOMORROW'S EXPERT CAREGIVERS

New graduate nurses go through basic nursing orientation and attend a year-long residency program. Nurse training at the Neuroscience Institute follows Benner's model of education, which outlines levels of clinical competency: novice, proficient, and expert. This includes hands-on clinical experience at the side of a trained nurse preceptor.

New nurses who train at the Neuroscience Institute learn first-hand about the unique care needs of stroke patients. Nurses receive focused didactic stroke education and seizure and neurosurgery care. In the Neuro ICU, nurses receive additional training to manage traumatic brain and spine injury patients.

Interested in a nursing career at Saint Luke's?

careers.saintlukeskc.org/nurses



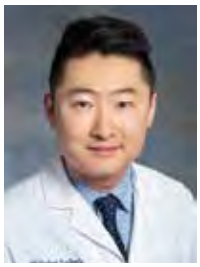
MEET THE TEAM

SAINT LUKE'S NEUROSURGERY

NEUROSURGEONS

Carlos A Bagley, MD, *Chief, Department of Neurosurgery*

Jonathan Breshears, MD



Yifei Duan, MD

Tarek El Ahmadieh, MD

Gurpreet Gandhoke, MD

Bartosz Grobelny, MD

Monir Tabbosha, MD

NON-OPERATIVE SPINE

Grant Langhofer, DO

NEUROSURGICAL ADVANCED PRACTICE PROVIDERS

Rachel Arrow, RN, APRN

Kaitlyn Demuth, PA-C

Lauren Gensch, PA-C

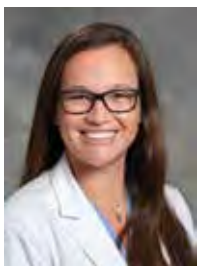
Michael Loree, PA-C

Megan Maloney, RN, DNP, FNP-C

Michelle Martin, RN, APRN

Kari Semmes, PA-C

Jamie Sloan, PA-C



Courtney Strubel, PA-C

Kevin Watson, PA-C

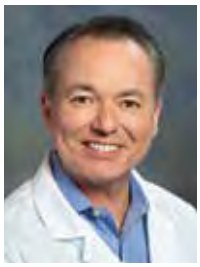
SAINT LUKE'S NEUROLOGY TEAM

NEUROLOGISTS


Firas Al Shakarchi, MD


Hashaam Arshad, MD


Megan Baumgardner, DO


John Croom, MD


Ronald Fields, MD


Carolina Garcia, DO


Brooke Heffernan, MD


Karl Knights, MD


Tobias Kulik, MD


Nathan Lightfoot, DO

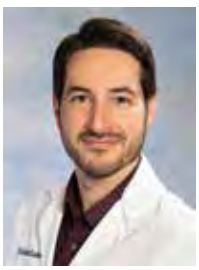

Nathan McGraw, MD


Karin Olds, MD


Robert Reddig, MD


Michael Schwartzman, DO


James Shay, MD


Kristopher Southard, MD


Michael Vesali, MD

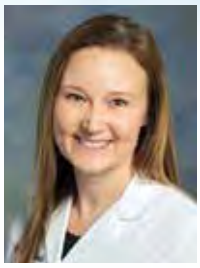
NEUROLOGY ADVANCED PRACTICE PROVIDERS


Maggie Aguilera, RN, FNP-C


Taylor Arends, PA-C


Amber Brenneman, RN, FNP-C


Leslyn Brouillette, RN, ANP


Sarah Brown, RN, ANP


Kelly Bush, RN, AGACNP


Jean Kaeberle, RN, FNP-C


Mallory King, RN, APRN


Patrick Kirk, RN, APRN


Samantha Kostelac, RN, DNP, FNP


Alexandra Kuenzel, RN, APRN


Arlene O'Shea, RN, APRN


Amy Poindexter, RN, ACNP


Jessica Ritz, RN, APRN


Sam Spangler, RN, FNP


Kathryn Taylor, RN, FNP-BC


Erin Tompkins, RN, ANP


Kelsey Wicker, RN, APRN


Shannon Williams, RN, APRN

SAINT LUKE'S NEUROSCIENCE TEAM

NEUROINTERVENTIONALISTS

Coleman Martin, MD
Medical Director

Naveed Akhtar, MD

Jared Halpin, MD

William Holloway Jr., MD

Joseph Loeb, DO

NEUROPSYCHOLOGY

Jonathan Wellman, PhD

Martin Zehr, PhD

Richard Archer, LCSW

VASCULAR SURGERY

Samantha Alsop, MD

Muzammil Aziz, MD

Anthony Grieff, MD

Karthik Vamanam, MD

SAINT LUKE'S NEUROSCIENCE TEAM

PAIN MANAGEMENT


Mark Bilezikjian, MD


Ty Concannon MD


Jennifer Elliott, MD


Andrew Frazier, DO


Emily Beerman, NP

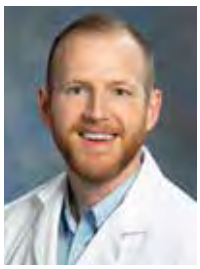

Bernadette Schwan, NP

OTOLARYNGOLOGY


Valerie Wood, MD

SAINT LUKE'S CRITICAL CARE TEAM

Andrew Schlachter, MD
Medical Director



Samuel Atherton, MD

Aaron Douglas, DO

Carole Freiberger-O'Keefe, DO

Amy Savage, MD

Erik Sembroski, MD

Michael Wasserman, MD

Sam Yang, MD

Paige Allen RN, APRN

Amy Bishop, FNP-C, APRN, RN

Renae Brines, CNP, RN

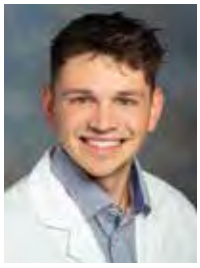
Gabriela Garza, PA-C, MMSPAS

Kristin Hickman, APRN, RN

Baylee Hitchens, FNP, RN

Regan Jacobson, APRN, RN

Laura Maberry, APRN, RN



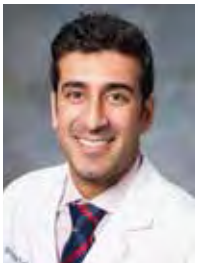
Alex Michalak PA-C

Michaela Parsel, APRN, RN

Katherine Salinas RN, APRN

Mara Wear, AGACNP-BC

SAINT LUKE'S BRAIN AND SKULL BASE TUMOR TEAM


Vidur Bhalla, MD


Justin Bond, MD


Jonathan Breshears, MD


Robert Cullen, MD


Tarek El Ahmadieh, MD


Samuel Goldlust, MD


Sean Gratton, MD


Susan Herzberg, MD


Thomas Muelleman, MD


Sunpreet Rakhra, MD


Chandrika Reddy, MD


Renato Sandoval, MD


Joseph Ursick, MD


Dorota Walewicz, MD

SAINT LUKE'S MIDWEST EAR INSTITUTE

NEUROTOLOGISTS

Robert Cullen, MD

Thomas Muelleman, MD

Joseph Ursick, MD

AUDIOLOGISTS

Kelsey Breedlove, AuD

Katie Frericks, AuD

Kristen Lewis, AuD, CCC-A

Morgan Nelson, AuD, CCC-A

Allison Peter, AuD

Hannah Prather, AuD

Casey Redding, AuD

Sarah Zlomke, AuD, CCC-A

SAINT LUKE'S REHABILITATION INSTITUTE

PHYSICAL MEDICINE AND REHABILITATION

Casey Martinez, MD
Medical Director

Lisa Hermes, MD

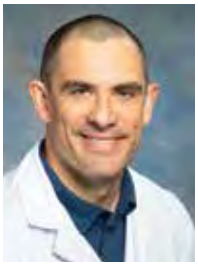
Venessa Lee, MD

Sam Miceli, DO

Brad Steinle, MD

Shuen-En Ho, PhD

SAINT LUKE'S PHYSICIAN MEDICINE & REHABILITATION ADVANCED PRACTICE PROVIDERS



Nathan Burditt, APRN, RN

Stephanie Day, APRN, RN

Kasey Dunn, APRN

Dawn Ferguson, APRN, RN

Madison Fugate, PA-C

SAINT LUKE'S ADMINISTRATIVE TEAM

Angela Barber, MSN, RN
Director, Neuroscience Service Line & Sleep Labs

Landyn Adebiy
Neuroscience Project Manager

Kareem Almekkawi
Clinical Research Fellow

Haley Ames
Nurse Navigator

Dana Bush
Manager, Spine Program

Debbie Consiglio
Data and Quality

Sophia Fike
Research

Santina Gunn
Neuroscience Nurse Educator

Katie Hammel
Nurse Navigator

Amanda Hardesty
Neurology Practice Manager

Helen Harrington
Neurosurgery Practice Manager

Megan Hibler
Nurse Navigator

Jeanine Jones
Clinic Nurse Manager

Christine Kennish
Research

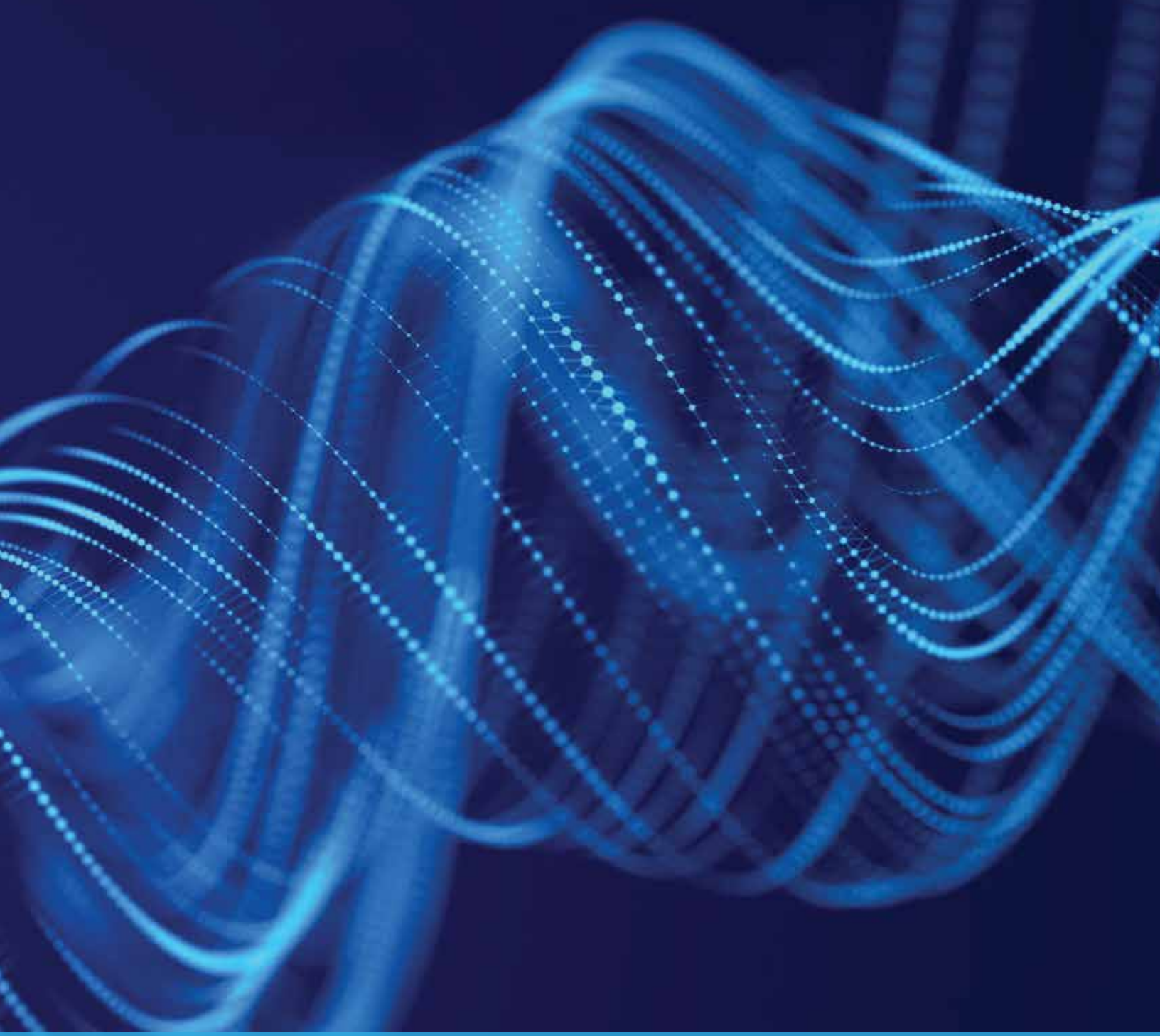
Matt Lammers
Manager, Stroke, Sleep Labs, and Neuro Epilepsy

Nathan Lindshield
Data and Quality

Adrienne Madrigal
Neurology Clinical Supervisor

Tom Modin
Neuroscience Outreach Coordinator

Debbie Summers
Research



PHILANTHROPIC SUPPORT

PHILANTHROPIC SUPPORT

THANK YOU, DONORS

Support from our community enables Saint Luke's Marion Bloch Neuroscience Institute to serve as one of the nation's leading neuro hospitals.

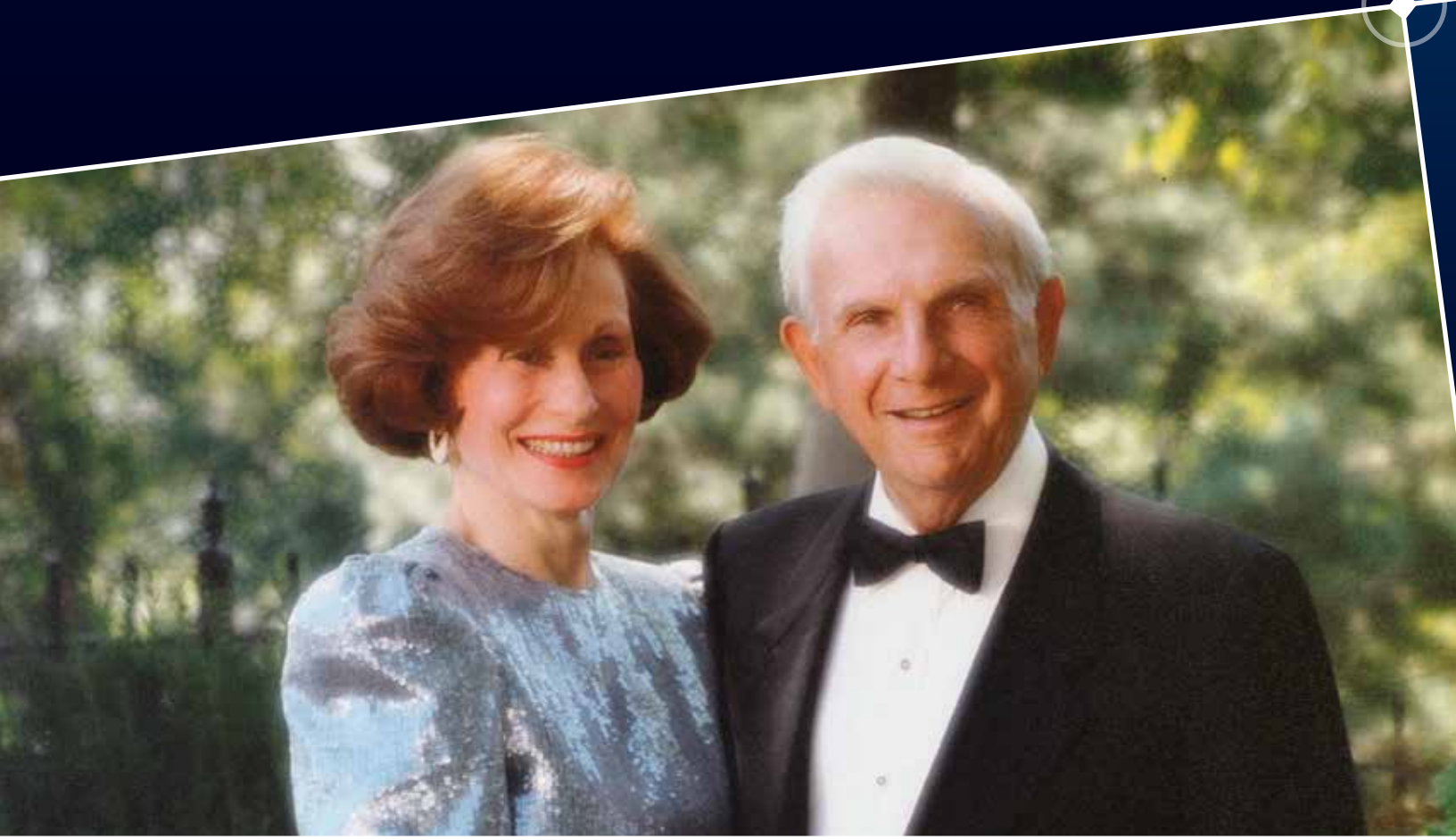
Saint Luke's Foundation works with grateful individuals to create philanthropic opportunities that greatly benefit Saint Luke's and our patients.

Our donors' generosity in support of our vision allows us to grow our nationally recognized programs, purchase leading-edge medical technology, and enhance our commitment to education and research.

In addition, philanthropy directly supports innovation at the Neuroscience Institute, enabling our researchers to investigate, identify, and provide safe, revolutionary technologies and state-of-the-art treatments.

Combined, these efforts contribute to our expertise and ability to provide first-rate patient care.

On behalf of our patients and their families, we are honored and thankful for our donors' support.

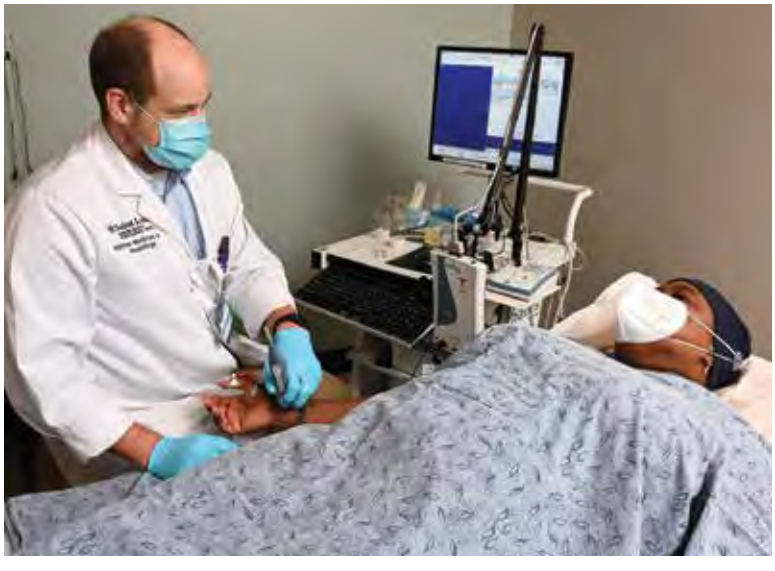


THE GIFT OF GRATITUDE

Saint Luke's has been honored to receive **$25 million from the Marion and Henry Bloch Family Foundation** to support expanded programming and internationally recognized outcomes research. In honor of their generosity and years of support, the Neuroscience Institute was renamed **Saint Luke's Marion Bloch Neuroscience Institute** in 2013.

◆ **Donate to Saint Luke's**
saintlukeskc.org/donate


ROSA



LOCATIONS

Saint Luke's Hospital of Kansas City
Kansas City, MO

Saint Luke's East Hospital
Lee's Summit, MO

Saint Luke's North Hospital–Barry Road
Kansas City, MO

Saint Luke's North Hospital–Smithville
Smithville, MO

Saint Luke's South Hospital
Overland Park, KS

Allen County Regional Hospital
Iola, KS

Anderson County Hospital
Garnett, KS

Hedrick Medical Center
Chillicothe, MO

Wright Memorial Hospital
Trenton, MO

Saint Luke's Neurology
Kansas City, MO
Lee's Summit, MO
Overland Park, KS

Cass Regional Outpatient Clinic
Harrisonville, MO

Saint Luke's Community Hospitals
A division of Saint Luke's South Hospital
Kansas City, KS
Leawood, KS
Roeland Park, KS

Saint Luke's™
MARION BLOCH
NEUROSCIENCE INSTITUTE

saintlukeskc.org/neuro
816-932-2261

CONTACT US

Stroke Transfer Team	**816-932-6200**
Brain and Skull Base Tumors	**816-932-5795**
Neurology Scheduling	**816-960-7600**
Neurosurgery Scheduling	**816-932-2700**
Saint Luke's Hospital Midwest Ear Institute	**816-932-1660**
Neuro-Oncology Scheduling	**816-932-3300**
Neuro Rehabilitation	**913-296-5199**
Integrated Spine Center	**816-932-2700**
Neurosciences Director	**816-932-2261**
Physician Recruitment	**816-599-9388**

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Saint Luke's™
MARION BLOCH
NEUROSCIENCE INSTITUTE

4401 Wornall Road
Kansas City, MO 64111

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saintlukeskc.org/neuro

BJC Health System

Saint Luke's is part of BJC Health System, one of the largest nonprofit health care organizations in the United States and the largest in the state of Missouri, serving urban, suburban, and rural communities across Missouri, southern Illinois, eastern Kansas, and the greater Midwest region. One of the largest employers in Missouri, BJC operates as BJC HealthCare in its East Region and as Saint Luke's in its West Region. BJC comprises 24 hospitals and hundreds of clinics and service organizations all committed to providing extraordinary patient care and advancing medical breakthroughs. BJC's nationally recognized academic hospitals—Barnes-Jewish and St. Louis Children's Hospitals—are affiliated with Washington University School of Medicine.