UAMS | University of Arkansas for Medical Sciences

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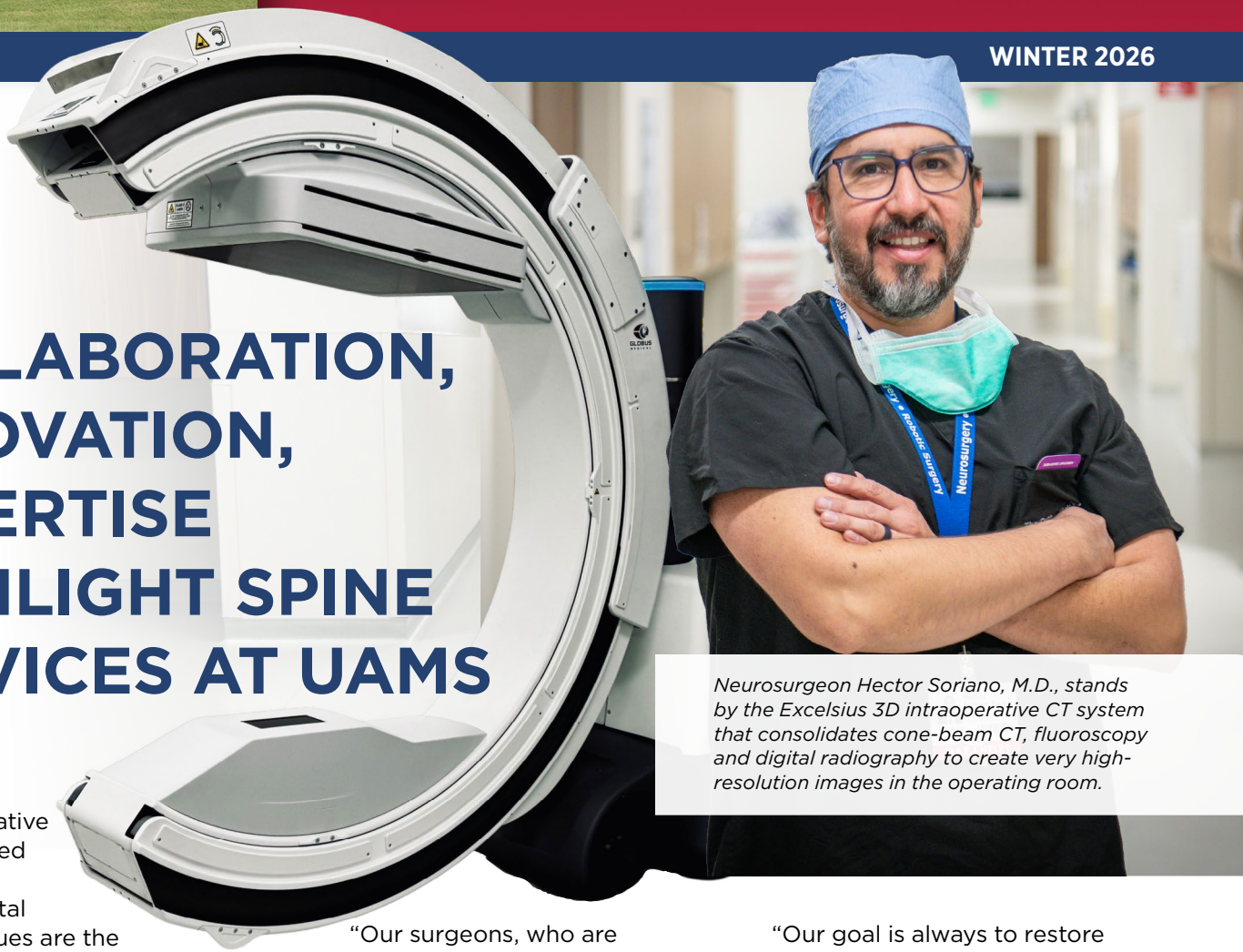
A Newsletter for Medical Professionals

WINTER 2026

COLLABORATION, INNOVATION, EXPERTISE HIGHLIGHT SPINE SERVICES AT UAMS



Neurosurgeon Hector Soriano, M.D., stands by the Excelsius 3D intraoperative CT system that consolidates cone-beam CT, fluoroscopy and digital radiography to create very high-resolution images in the operating room.

Both innovative and time-tested solutions for musculoskeletal and nerve issues are the backbone — so to speak— of spine services provided at the University of Arkansas for Medical Sciences (UAMS).

Whether resulting from trauma or a degenerative condition, our orthopaedic spine surgeons, neurosurgeons, sports medicine specialists and pain management specialists provide comprehensive care.

This might involve repairing a painful herniated disk, correcting a spinal deformity, removing a deeply embedded tumor or implanting a spinal cord stimulator to relieve chronic pain.

"Our surgeons, who are all fellowship-trained, offer all the latest treatment options, including anterior/oblique/lateral and posterior approaches to the spine, robotic technology and traditional methods of spinal fusion," said **David Bumpass, M.D**, an orthopaedic surgeon who co-directs the UAMS Health spine team with neurosurgeon **Hector Soriano, M.D.**

As part of the state's only academic medical center, the spine team has ready access to experts in numerous other medical fields, making it easy to collaborate when necessary to address all aspects of a patient's health — physical and mental.

"Our goal is always to restore function while minimizing pain and complications," Bumpass said.

The unique collaboration at UAMS between neurosurgeons and orthopaedic surgeons is one reason U.S. News & World Report recently listed UAMS among the top 10% of hospitals nationwide for orthopaedic and neurosurgery care, while simultaneously designating it a high-performance center for back surgery, especially spinal fusion.

The team was the first in Arkansas to receive The Joint Commission's Gold Seal of Approval for Certification in Spinal Fusion in 2023. At the same time, it maintains

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Cover story continued

a below-average complication rate while being the leading spinal cord deformity center in Arkansas and one of the top providers of robotic spine services in the United States.

In March 2024, UAMS had performed more than 500 spinal robotic surgeries since it began the program three and a half years earlier. The number is now approaching 750.

In robotic surgery, which is a form of minimally invasive surgery, surgeons use mechanized arms and real-time 3D images to precisely guide surgical instruments through small openings in the body into parts of the spine that were previously accessible only by slicing through muscles and tissue in an open procedure. This results in less trauma and faster recovery, less blood loss, less hospital time and less radiation.

UAMS is the only provider in Arkansas now using the Excelsius3D imaging platform, an intraoperative computed tomography (CT) system that consolidates cone-beam CT, fluoroscopy and digital radiography to create very high-resolution images in the operating room without the need for multiple imaging devices.

Endoscopic surgery is one of the many minimally invasive procedures that UAMS uses to treat conditions along the entire length of the spine, from the cervical to the sacral vertebrae. It uses a camera and tiny tools inside a pencil-wide tube inserted into an opening of less than 1 cm to reach, view from all angles and treat problems that would otherwise require open surgery.

Samuel Overley, M.D., an orthopaedic spine surgeon at UAMS, is one of very few surgeons in the region who perform the procedure, which requires rigorous training and expensive, high-resolution optics. He uses it to remove or trim herniated disc material that is pressing on nerves; widen a narrowed spinal canal by removing bone or tissue, thereby alleviating nerve compression; and treat arthritis or other issues in the facet joints.

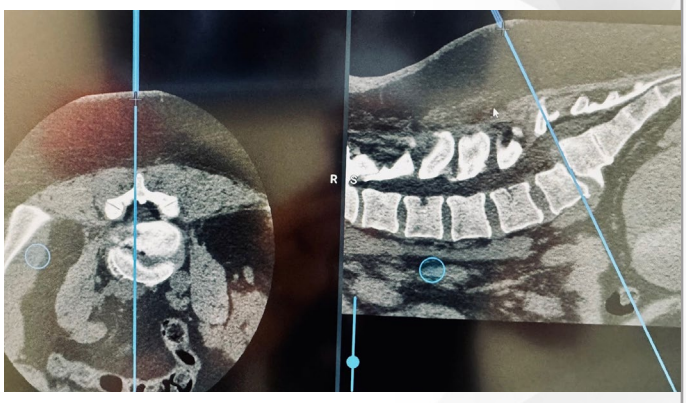
Another advanced procedure available at UAMS is motion preservation spine surgery, which replaces problem discs with artificial discs to maintain normal range of motion in the neck and back.

Meanwhile, UAMS neurosurgeon **Erika Petersen, M.D.**, is a national expert in high-frequency spinal cord stimulation for patients with refractory painful diabetic neuropathy. She led a national study that in 2021 revealed its significant benefits for patients who are resistant to other treatments.

"All of these advances have allowed us to exponentially increase our treatment options for the people of Arkansas," Soriano said.

UAMS provides spine surgery at the UAMS Medical Center on the Little Rock campus and at The Orthopaedic & Spine Hospital, a state-of-the-art facility, also on campus. Its 12 operating rooms include four dedicated to spine surgery.

To refer a patient for spine services at UAMS, send a fax to 501-686-7928 or call 501-526-0333.



(left to right) The Excelsius 3D robot in the operating room; A close-up look at the spine

WINTER 2026 Message from Dr. Krause

Dear Colleagues,

Katie McClanahan of Little Rock wouldn't be alive today if it weren't for an unusually fortunate turn of events that allowed her to receive a blood transfusion while she lay crushed by a giant tree toppled in an April storm.

McClanahan told her story in November when she thanked the UAMS Health trauma team who brought blood to the site nearly three miles away and administered the transfusion to her beneath the rubble of her damaged home.

She wants to spread the word about the urgent need in Arkansas for blood donations and a solution for making prehospital blood transfusions available in the field. Currently, only emergency response helicopters carry prehospital blood products.

According to Ben Davis, M.D., the UAMS trauma surgeon who brought blood to McClanahan after being notified by a colleague, "Blood loss is the leading cause of preventable deaths among trauma victims. If you're bleeding to death, every minute increases your mortality by 2%. If you are 50 minutes out from a hospital, which about half of Arkansans are, that means your risk of dying is doubled."

Without the transfusion, McClanahan wouldn't have survived long enough to reach UAMS, where she had life-saving surgery that also allowed her to walk again. With National Blood Donor Month now upon us, please help me spread her message and encourage those you encounter to donate blood as often as possible.

Michelle Krause

Michelle Krause, M.D.
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News to Know: Updates from UAMS

Surgical Oncologist Chad E. Cragle, M.D., Ph.D., Treats Liver, Pancreas, Biliary System

Arkansas native Chad E. Cragle, M.D., Ph.D., has joined UAMS as a surgical oncologist specializing in the treatment of cancers of the liver, pancreatic and biliary system.

Cragle, of Calico Rock, earned both his medical and doctoral degrees at UAMS, completed his general surgery residency at Virginia Mason Medical Center in Seattle and completed a fellowship in hepatobiliary surgery at the Medical Center of Chicago. He returns to UAMS from the Medical College of Wisconsin, where he completed another fellowship in complex surgical oncology and hepatopancreatobiliary (HPB) surgery – a highly specialized field focused on cancers and diseases of the liver, pancreas, gallbladder and bile ducts.

In addition to cancer treatment, the board-certified surgeon performs gallbladder removals and surgical treatment of benign diseases of the liver, bile ducts and pancreas. He also treats a wide range of solid cancers including gastric, neuroendocrine, sarcoma, melanoma and other skin cancers.

To refer a patient to him, send a fax to 501-603-1550 or call 501-296-1200.

Cardiologist Jorge Saucedo, M.D., MBA, Joins UAMS as Chair of Internal Medicine

Jorge Saucedo, M.D., MBA, a cardiologist, on Nov. 1 became the new chair of the UAMS College of Medicine Department of Internal Medicine.

"Dr. Saucedo is a highly regarded cardiologist who brings over 25 years of leadership experience to his new role at UAMS, where he started his career in 1998," said Steven Webber, M.D., dean of the college and executive vice president of UAMS. "As an accomplished physician, experienced clinician-investigator and seasoned administrator, he will provide strong vision and leadership for our Internal Medicine faculty, staff and trainees."

Saucedo was most recently chief of the Division of Cardiovascular Medicine at the Medical College of Wisconsin and director of heart and vascular clinical services at Froedtert Health System. The regional partnership recruited him in 2018, and he led the transformation and growth of the cardiovascular program into one of the highest quality destinations for care in the Midwest.

Bradley Houston, M.D., Joins UAMS Department of Urology

Bradley Houston, M.D., a board-certified urologist, has joined the UAMS Department of Urology. He earned his medical degree at UAMS in 2017, then completed a general surgery internship followed by a urology residency at the University of Tennessee Health Science Center in Memphis. He has expertise in kidney stone surgery, enlarged prostate (BPH), prostate cancer and robotic surgery.

Houston is accepting new patients at the UAMS Urology Clinic in the Premier Medica Plaza building at 10915 Rodney Parham Road in Little Rock.

To refer a patient to him, send a fax to 501-603-1539.

Deanna Cochran, M.D., Joins Longevity Clinic

Deanna Cochran, M.D., has joined the Thomas and Lyon Longevity Clinic in the UAMS Donald W. Reynolds Institute on Aging.

Cochran, who is also an assistant professor in the College of Medicine Department of Geriatrics, earned her medical degree at Meharry Medical College in Nashville, Tennessee. She completed her internal medicine residency at White River Health in Batesville and a geriatric medicine fellowship at UAMS. ***To refer a patient to her, send a fax to 501-603-1537.***

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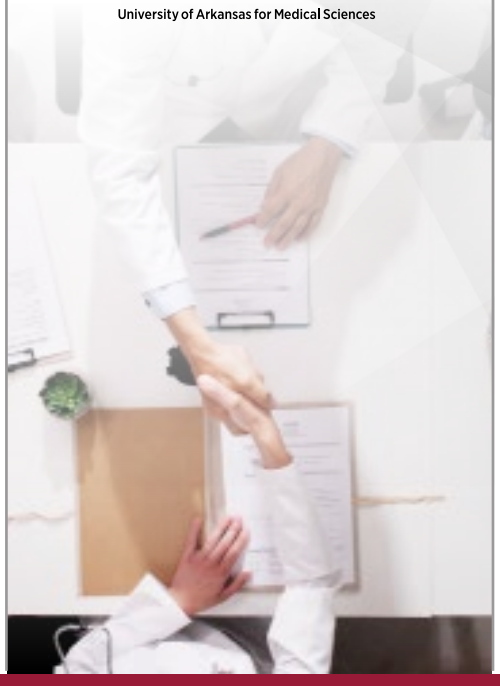


MEDICAL CASE STUDY:
INFERIOR VENA CAVA THROMBECTOMY AND RADICAL NEPHRECTOMY COMBINED WITH OPEN-HEART SURGERY AND BYPASS

Initial Contact & Assessment

In early October, a 57-year-old man without known medical problems arrived at the emergency room of a Fort Smith hospital complaining that he had been experiencing shortness of breath for about two weeks. An ER workup including scans revealed that he had an exceptionally rare and aggressive form of kidney cancer that had grown into the inferior vena cava, reaching the heart, inside the right atrium, creating a life-threatening condition.

CT angiogram showing kidney cancer on the right kidney with long tumor thrombus in the IVC extending to the right atrium.

Knowing that treatment would require the expertise of specialists in urologic oncology, the Fort Smith hospital reached out to the University of Arkansas for Medical Sciences (UAMS) in Little Rock, where experts in numerous specialties are always available and routinely work together to provide multidisciplinary care under one roof.

Over a period of days, the two hospitals worked together to coordinate a plan to airlift the patient to UAMS on Oct. 5. Meanwhile, meticulous preparations were made at UAMS to ensure that a large team of professionals representing several departments in the UAMS College of Medicine could carry out the multifaceted surgery over several hours, using the most advanced technology available. The team included surgeons specializing in urologic oncology, hepatobiliary diseases and cardiac conditions.

Procedures

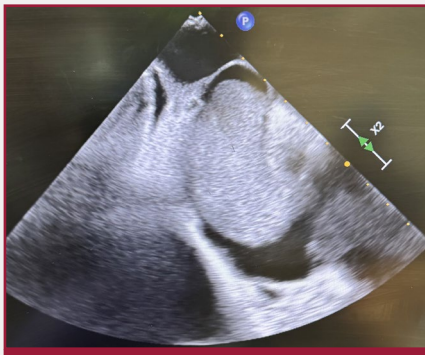
The Oct. 10 operation, coordinated and led by **Marcelo Bigarella, M.D.**, an assistant professor of urologic oncology at UAMS and an expert in complex kidney cancer and retroperitoneal surgery, lasted about eight hours.

It involved the removal of a large renal tumor that extended from the kidney vein through the inferior vena cava, the largest vein in the body, inside the liver, all the way into the right atrium of the heart — a condition known as a Level IV tumor thrombus, the most aggressive type of tumor thrombus. A tumor the size of a tennis ball was projecting into the heart chamber from the abdomen.

"These cases represent some of the most challenging scenarios in urologic oncologic surgery, requiring precise coordination between multiple surgical teams and subspecialties," Bigarella said.

To safely remove the tumor, the surgeons worked in tandem in a carefully orchestrated, daylong procedure.

Bigarella and his team led the abdominal portion, mobilizing the kidney and isolating the tumor's venous extension. The hepatobiliary surgery team, led by **Tsukasa Nakamura, M.D., Ph.D.**, provided critical expertise to mobilize the liver and gain access to the retrohepatic vena cava, ensuring complete removal of the tumor under optimal control. At the same time, a cardiac surgery team opened the patient's chest and placed him on cardiopulmonary bypass with a heart-lung machine and extracorporeal perfusion, followed by opening the heart to extract the portion of the tumor extending into the atrium. Complex cardiac anesthesia with real time monitoring of intraesophageal echocardiogram allowed the assessment of tumor integrity while managing massive transfusion protocol for the expected blood loss (>25 units of blood were given intraoperatively).



Real-time transesophageal ultrasound imaging during the procedure, showing the tip of the tumor thrombus occupying the right atrium.

"The complexity of this operation required the seamless coordination of more than 25 professionals inside the operating room alone, including anesthesiologists, perfusionists, surgical technologists, nurses and residents from multiple departments," Bigarella said. "Beyond the OR, the collaboration extended to the Intensive Care Unit (ICU), cardiology, OR leadership and hospital leadership, all of whom played vital roles in the urgent transfer, perioperative planning, monitoring and postoperative recovery."

Follow-up

The patient was discharged 10 days later and is now cancer-free, with full recovery of liver, kidney and heart function — a truly remarkable outcome.

Every step of the patient's journey — from preoperative imaging and cardiac evaluation to postoperative rehabilitation — reflected the high level of multidisciplinary integration that UAMS is uniquely positioned to provide.

As the patient recovers, he will continue to follow up with the UAMS Medical Oncology Clinic in the Winthrop P. Rockefeller Cancer Institute for adjuvant immunotherapy, to lower his chances of having a recurrence from the clear cell renal cell carcinoma.

The multidisciplinary team during the surgery includes a urologic oncology surgeon, a liver transplant surgeon and a cardiac surgeon with cardiac anesthesiologists, perfusionist dedicated ScrubTechs and OR nurses.

Discussion

This case represented a major milestone in complex cancer care. It not only underscores the technical excellence and teamwork within UAMS but also highlights the institution's mission to deliver advanced, patient-centered care to Arkansans facing rare and life-threatening diseases.

"Few centers in the country do this type of procedure, and we are happy to be one of them," Bigarella said. "I am happy with the successful outcome of the case, which allowed the patient to go home the week after his surgery."

In addition to Nakamura and the cardiac surgery team, Bigarella thanked transplant surgeon **Lyle Burdine, M.D.**, Ph.D., for helping coordinate the complex surgery and remaining continuously available; the UAMS Physician Call Center for ensuring the patient's timely transport to UAMS; **Aaron S. Wenger, M.D.**, a hospitalist who as chief medical officer on call worked around the clock to expedite a bed for the patient at UAMS; and anesthesiologists **Matthew Spond, M.D.**, **Thea Rosenbaum, M.D.**, **Mohamed Abdeldayem, M.D.**, and **Sarah Tingle, M.D.**, for coordinating the anesthesia needs during the complex situation.

"The successful completion of this surgery reaffirms UAMS' roles as the state's leading academic medical center and a regional referral hub for complex kidney and vascular tumors that require specialized expertise," Bigarella said.

Through such coordinated, high-stakes efforts, the UAMS team continues to expand the boundaries of what is surgically possible — offering patients renewed hope, extended survival and access to world-class care close to home.

Marcelo Bigarella, M.D.

Assistant Professor, Urologic Oncology
Department of Urology
UAMS College of Medicine
Urology Oncology Clinic,
Winthrop P. Rockefeller Cancer Institute

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University of Sao Paulo, Brazil

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Urology and Kidney Transplant,
University of Sao Paulo

Fellowships
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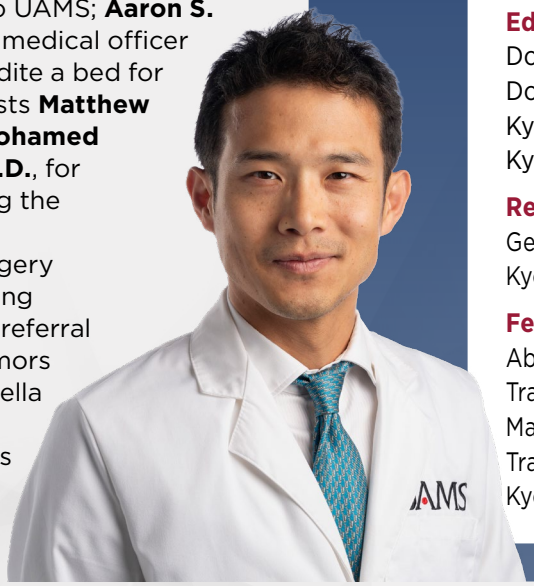
University of Wisconsin-Madison
Minimally invasive surgery,
Albert Einstein Medical Center
New York City



Tsukasa Nakamura, M.D., Ph.D

Assistant Professor
Division of Transplantation
Department of Surgery
UAMS College of Medicine

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Doctoral Degree
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Kyoto, Japan

Residency
General Surgery,
Kyoto Prefectural University of Medicine

Fellowships
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Transplant Surgery Research
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Transplant Surgery,
Kyoto Prefectural University

Simple Outpatient Procedure Alleviates Overactive Bladder, Urinary Retention, Fecal Incontinence

Patients who experience an overactive bladder, urinary retention problems or fecal incontinence may benefit from a simple outpatient procedure available at the University of Arkansas for Medical Sciences (UAMS) that provides a permanent solution for many.

Known as sacral neuromodulation, it involves the subcutaneous implantation of a small, thin device — a pacemaker, if you will — into a person's lower back during a minimally invasive procedure. Usually, the procedure is performed while the patient remains conscious but is under minimal or general sedation.

Jun Song, M.D., an assistant professor of urogynecology and reconstructive pelvic surgery in the UAMS Department of Urology, is one of several urologists at UAMS who regularly perform the procedure.

Song said he first makes two very small incisions — one near the spine in the middle of the lower back, and one to the side, in the upper buttock area— through which he implants the small device and a wire.

The device is always on, powered by a battery that lasts 15-20 years. It sends mild electrical impulses to the sacral nerves that control the bladder and bowel, helping restore their normal function.

Song explained that the device's constant stimulation doesn't overstimulate the bladder or bowel because it gently stimulates the nerves that control the organs, not the organs themselves. This helps restore normal communication between the brain and the bladder and bowel, resulting in symptom improvement.

Problems with overactive bladder, fecal incontinence or urinary retention are usually due to a problem with the nerve signals. Under normal circumstances, the signals are sent to the brain when a patient's bladder or bowel begin to fill, alerting the person to empty the bladder or bowel.

The FDA-approved device was first developed by Medtronic, and is now made by both Medtronic and Axonics, a medical device maker that is now part of Boston Scientific. Song said it has minimal interference with other devices, is MRI-compatible and is used for both men and women.

Before a patient can receive the permanent implant, he said, the patient must try out a temporary device for about a week to ensure that it will work for them.

"It works for the majority of people — over 75% of those who try it," he said.

Besides Song, other urologists at UAMS who implant the device include **Bruno Machado, M.D.**, **Brad Houston, M.D.**, and **Brian Langford, M.D.** To refer a patient to any of them, send a fax to 501-603-1539.

A Boston Scientific image depicting a spinal cord stimulator implantation.

PHYSICIAN PROFILE

TYLER MERRILL, M.D.
Assistant Professor
Department of Otolaryngology – Head and Neck Surgery
Director, Division of Rhinology and Endoscopic Skull Base Surgery
UAMS College of Medicine

What inspired you to become a doctor?
When I was 15, I was diagnosed with testicular cancer. Thankfully, I was cured with two surgeries. That experience was the first time I truly saw a physician as more than someone I visited for routine care—it showed me the profound impact a surgeon can have on a patient and their family. That experience ultimately inspired me to pursue medicine.

What do you like most about your specialty?
I enjoy caring for patients of all ages and having the ability to improve quality of life through both medical and surgical treatment. Many of my patients come in believing they simply have to live with chronic sinus problems, and it's incredibly rewarding to help them finally breathe better and feel better.

What makes you unique among your peers?
My fellowship training is what most distinguishes my practice. I completed an additional year of specialized training at the Cleveland Clinic focusing on advanced endoscopic sinus and skull base surgery. This training has allowed me to offer advanced sinus surgery for recalcitrant and complicated sinus disease. In addition, I routinely treat complex sinonasal, skull base and orbital tumors using minimally invasive endoscopic approaches. To my knowledge, I am currently the only ENT surgeon in the state performing expanded endoscopic skull base surgery.

Why did you come to UAMS?
I first came to UAMS as a resident after my wife and I matched here in 2018. During my training, I recognized that Arkansas was relatively underserved in advanced sinus care and endoscopic skull base surgery. That realization strongly influenced my decision to return and practice here.

What do you like about working at UAMS?
UAMS offers a truly collaborative environment. I work closely with neurosurgery, allergy/immunology, and other specialties to provide comprehensive, team-based care—especially for patients with complex sinus and skull base conditions.

What do you like to do outside of work?
I enjoy golfing and cooking, but most of all I love spending time with my wife and our three kids. Being from Cleveland, Ohio, I also spend a — sometimes disappointing — amount of time watching Cleveland Browns football.

How can doctors make a referral to you?
Referring physicians can fax a referral to 501-686-8644 attn Maddy Knox. Patients can contact the UAMS ENT clinic at 501-686-5878

UAMS

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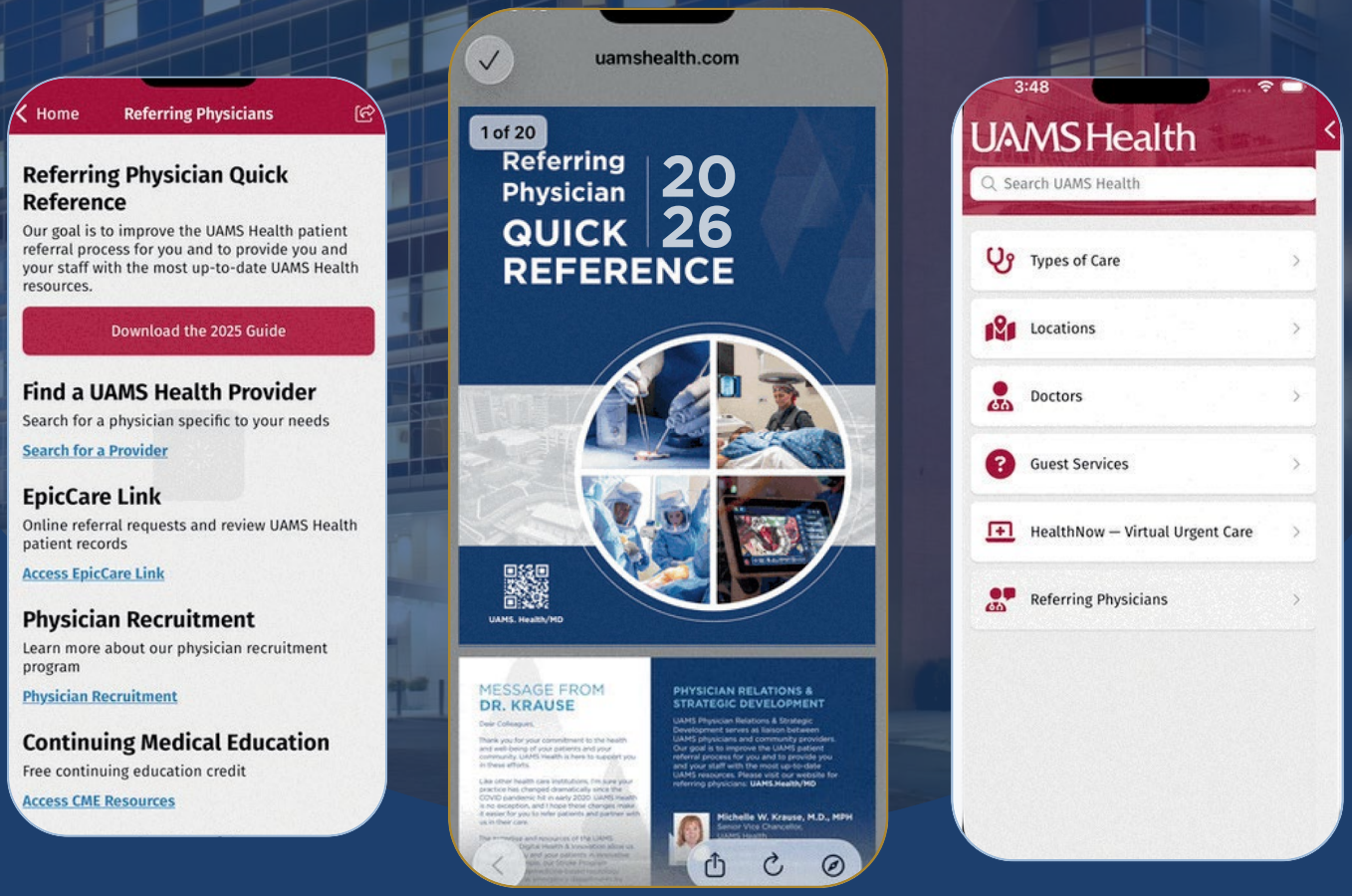
Now on the UAMSHealth Mobile App



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