



BRAIN TUMOR TEAM SERVES PATIENTS WITH TEAMWORK, TECH

When brain tumor patients come to UAMS for a second opinion, they're really getting a third, fourth and sixth opinion – sometimes more.

That's because the UAMS Neurosurgical Oncology Team tackles brain and spinal tumors using a multidisciplinary approach. The brain tumor team consists of three neurosurgeons, two radiation oncologists, an interventional



neuroradiologist, a neuropathologist, a neuro-oncologist and several neuroradiologists and specialized nurses. **Shirley Ong, M.D.**, is the only fellowship-

trained neuro-oncologist in the state. The group's brain tumor board meets weekly to discuss cases, taking advantage of their collective areas of expertise to offer truly individualized care. Certain complex neurosurgical cases are done in combination with otolaryngology or orthopaedic surgeons. Spinal tumor patients are considered as well, with the participation of UAMS' complex spine surgeons.

"We often see patients who have been told they need an open brain surgery. They're frightened, they come to us for a second opinion, and frankly, a standard open microsurgical approach is not always the best or only



option," said **J.D. Day, M.D.**, professor and chairman of the Department of Neurosurgery. "Because we work as a team, we are able to help

patients find the treatment that is best for them, rather than a one-size-fits-all approach."

When selecting the course of care, the brain tumor team has several resources to consider at UAMS that are unique in the state, in addition to their expertise in microneurosurgery.

Laser Interstitial Thermal Therapy (LITT) — To provide LITT, the neurosurgeons use ROSA (Robotized Stereotactic Assistant) Robot to precisely implant a laser fiber into the tumor, which is thermally ablated while the surgeon watches in real time on an MRI. ROSA has a robotic arm that allows for high dexterity and incredible precision, improving accuracy, and minimizing

the risk of pain or infection. UAMS is the only medical center in Arkansas with a ROSA Robot. *Treatment candidates — Metastatic and primary brain tumor patients.*

Gamma Knife — UAMS continues to have the only Gamma Knife Center in the state. Gamma Knife radiosurgery uses up to 192 beams of radiation focused with extreme accuracy on the tumor. Using the latest diagnostic imaging and

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specialized 3D treatment planning software, the neurosurgeons and radiation oncologists design a customized treatment plan that directs the radiation beams to the tumor. This precision results in mitigating against damage to surrounding tissues. *Treatment candidates — Benign and malignant brain tumors and metastatic brain tumors, especially tumors that are surgically inaccessible or otherwise not indicated for a surgical approach.*

Upgrades to Varian TrueBeam STx Linear Accelerators — UAMS has two of these powerful linear accelerators, which deliver precision external beam radiation with ultra-high dose rates. UAMS is the first in the state to upgrade the capability of these accelerators. The ExacTrac Dynamic X-ray 6D system allows precise delivery of radiation to the tumor with extreme accuracy and can make dynamic adjustments during treatment. The new update matches the accuracy of the Gamma Knife technology, but significantly reduces treatment times. *Treatment candidates — Benign and malignant brain tumors and metastatic brain tumors, especially tumors that are not ideal for traditional surgery.*

Awake Craniotomies — UAMS is the only center in the state to offer awake craniotomy to enhance the safety of brain tumor surgery. With the help of a neuroanesthesiologist, the patient is awake during key parts of the surgery to ensure preservation of important functions like speech and motor skills. *Treatment candidates — Benign and malignant brain tumors close to or involving functional parts of the brain.*

Tissue Banking — The team has implemented tumor tissue banking under the direction of Day and **Analiz Rodriguez, M.D., Ph.D.**, director of neurosurgical



oncology. Consenting patients give a sample of their brain tumor for genetic analysis. In some cases, the results indicate a recommended treatment path. In other cases, the information is retained and compiled with similar data to be analyzed for trends and possible treatments with the help of the UAMS Department of Biomedical Informatics. The Rodriguez laboratory is developing the ability to utilize patient-derived xenografts (PDX), cultured tumor cells from the patient, for the purpose of personalized treatment solutions based upon the specific characteristics and genetics of the tumor.

Clinical Trials — Patients can also be connected with clinical trials. Rodriguez and **Fen Xia, M.D., Ph.D.**, chair of the Department of Radiation Oncology, are both researching novel treatments for glioblastoma. Day's



research focuses on innovative surgical techniques for difficult-to-access locations, like deep brain surgeries using BrainPath technology and minimally invasive approaches. These surgical techniques are only practiced at a handful of institutions in the nation.

“We do all of these things with the patient in mind,” Day said. “Whether it’s an expert opinion from our brain tumor board or the most appropriate technological tool, the intent of our brand of individualized medicine is to ensure the patient leaves our care in the best shape they can, so that their life is altered by neurologic compromise as little as possible.”

For new brain tumor and new spine tumor referrals, call 501-686-5270. For spinal metastasis, call the UAMS Physician Call Center at 501-686-6080 or 866-UAMS-DOC for the on-call spine surgeon. ■



Dear Colleagues,

Are you looking to expand your practice?

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The UAMS Physician Recruitment & Provider Placement Program has a team of placement specialists dedicated to serving the recruitment needs of our partner communities, UAMS and UAMS Regional Programs.

Our staff engages UAMS students and residents early and often to promote practice opportunities through communications, professional development training and field trips to partner communities. National and local internet job boards, social media platforms and regional job fairs are also utilized to find the best candidates for your practice.

Find detailed opportunities and register on the job board at medjobarkansas.com. Contact Carla Alexander at 501-686-7934 or carla@uams.edu for details on the MedJobArkansas Plus Contract.

Sincerely,

Mark T. Jansen, M.D.
Medical Director
UAMS Physician Relations & Strategic Development

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Contact the UAMS Physician Assistant Program at anfairchild@uams.edu or 501-686-6115 to learn more.

News to Know: Updates from UAMS

UAMS Adds Transplant Clinic at Northwest Regional Campus

UAMS has added a kidney and liver transplant clinic at its Northwest Regional Campus to complement its services in Little Rock, improving convenience for patients who live in northwest Arkansas.

UAMS is the only center in Arkansas that offers adult liver or kidney transplantation.

"The goal is to provide the best care in our patients' own community, thereby making it easier for them to remain on track with the best outcomes," said **Lyle Burdine, M.D.**, surgical director for the solid organ transplant program at UAMS.



The clinic's current focus is providing follow-up care to patients after their transplants, but services will soon expand to include evaluations of patients in need of transplants.

The clinic is at 1125 N. College Ave., Fayetteville. To make a referral, call 501-686-6640.

UAMS Launches Institute for Digital Health, Innovation

UAMS has established the Institute for Digital Health & Innovation.

Curtis Lowery, M.D., professor of obstetrics and gynecology, has been appointed director of the institute. Previously he was chair of the Department of Obstetrics and Gynecology in the College of Medicine and medical director of the Center for Distance Health.

This new institute will utilize technologies in UAMS' clinical, educational and research missions, with the aim of improving health and well-being.

Lowery has received numerous awards and has been



recognized nationally for his pioneering work in distance health. He helped establish ANGELS, a Medicaid-funded, telehealth program for high-risk pregnancy patients and Arkansas SAVES, a similar program for stroke patients. He also founded the Center for Distance Health, a technology-based partnership between the College of Medicine and Regional Campuses that connects more than 60 hospitals and clinics across the state with telemedicine, continuing medical and health education, public health education and evaluation research through interactive video.

Fifth Parkinson's Symposium Set

UAMS is hosting the fifth annual Parkinson's Symposium from 1-5 p.m. April 7 on the 12th floor of the Jack T. Stephens Spine & Neurosciences Institute.

This event is open to patients, caregivers, family members, neurosurgeons, neurologists and anyone interested in learning about Parkinson's disease, treatment options, research initiatives and living with Parkinson's disease.

For more information, call 501-686-5270.

Scott Dickson, M.D., Named President of Family Physicians — Arkansas

Scott Dickson, M.D., residency program director at the UAMS Northeast Regional Campus in Jonesboro, recently became the president of the Arkansas Chapter of the American Academy of Family Physicians.



Dickson has served on the Arkansas board of AAFP for more than four years.

At the Northeast Campus, Dickson served for eight years as assistant residency director before being named residency director in 2009.

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CONSULT

Quiz of the Month

QUESTION

According to the latest recommendations of the U.S. Preventive Services Task Force, which of the following is true for women of average risk?

- A: Cervical cancer screening should begin at age 21 with cervical cytology alone, then every three years until age 29.
- B: For women age 30-65 years, screening with cytology or high risk HPV testing every five years is recommended.
- C: Routine testing should continue until age 70 for women with a cervix.
- D: Cervical dysplasia almost always progresses to cervical cancer.

ANSWER

(Continued from page 3)

G. Richard Smith, M.D., Named Psychiatry Chair

G. Richard Smith, M.D., has been named chairman of the Department of Psychiatry in the College of Medicine and director of the Psychiatric Research Institute at UAMS.



Smith served as chairman of

the Department of Psychiatry from 2001 to 2013, during which he oversaw the design and construction of the Psychiatric Research Institute, which opened in 2008. He was named dean of the UAMS College of Medicine and executive vice chancellor in 2013, a position he held for two years before stepping down to become a professor of psychiatry, medicine and public health. He joined the UAMS faculty in 1981.

Studies on Depression in Pregnancy, Amputation Pain Enrolling Participants

A study at UAMS is testing whether exercise for pregnant women with depression could become an evidence-based

treatment and alternative to antidepressant medications.



Ten pregnant women with depression are needed for the study, which is led by **Shona Ray-Griffith, M.D.**, at the Women's Mental Health Program in the UAMS Psychiatric Research Institute.

For more information, call 501-526-8525.

In addition, people with frequent and recurring pain from an amputated leg are being enrolled in a UAMS research study of a device designed to reduce amputation pain.



Led at UAMS by **Erika Petersen, M.D.**, a neurosurgeon and researcher, the study is part of a clinical trial being conducted at

sites across the United States. For more information, call 501-398-8622.

T.W. Morris III, M.D., Joins UAMS as Neurosurgeon

T. W. Morris III, M.D., has joined UAMS as a neurosurgeon and treats patients in the UAMS

For a list of new
physicians, visit

UAMShealth.com/MD

Neurosurgery Clinic in the Jackson T. Stephens Spine & Neurosciences Institute. He is



an assistant professor in the UAMS College of Medicine's Department of Neurosurgery. Morris' main clinical interests are

the surgical treatment of benign and malignant brain tumors, aneurysms and vascular anomalies, skull base surgery, and radiosurgery. He also treats patients with degenerative or traumatic spine conditions. Morris recently completed his residency training at UAMS. To make a referral, call 501-686-5270.

UAMS PHYSICIAN RECRUITMENT & PROVIDER PLACEMENT PROGRAM

The **UAMS Physician Recruitment & Provider Placement Program** has a team of placement specialists dedicated to serving the recruitment needs of our partner communities, UAMS Regional Campuses and UAMS faculty. Physician/provider opportunities are available in all specialties throughout Arkansas.

FEATURED JOBS

Obstetrics/Gynecology Opportunities: Forrest City and Harrison have immediate openings for a board-certified/board-eligible OB/GYN physician.

Geriatrics Opportunities: Whether you are looking for an academic or private practice opportunity, we can connect you to one of the many geriatric openings throughout Arkansas.

Transplant Hepatologist Opportunity: The UAMS College of Medicine is seeking a transplant hepatologist for the Liver Transplant Program.

Recruitment services contact:

Carla Alexander: 501-686-7934 or carla@uams.edu

For a complete listing of job descriptions and opportunities, visit: MedJobArkansas.com

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Radiation Oncology Expands Treatment Options

The UAMS Department of Radiation Oncology is employing advanced technologies, updated evidence-based protocols and interdisciplinary medicine to improve services for patients.

Positioning technology

The Varian PerfectPitch 6 degrees of freedom couch provides optimal patient positioning, corrections for any misalignment, and comfortable support during treatment.



“The PerfectPitch has a greater range of motion along its six axes than traditional radiation couches,” said **Sanjay Maraboyina, M.D.**, a radiation oncologist and assistant professor in the Department of Radiation

Oncology. “It also stores positioning data, so we can accurately and efficiently reposition the patient for targeted radiation in the same area over time, which improves patient outcomes.”

Patient positioning is critical for accurately targeting tumors and reducing unwanted exposure to nearby critical organs, which is especially important for treatments to the brain.

Short-course radiation

Options for shorter courses of radiation are improving patient care.

For example, the traditional course for prostate cancer was 45-plus treatments over eight to nine weeks. Instead, UAMS Radiation Oncology offers five-plus treatments of the higher dose over 1.5 weeks.

Maraboyina said the new approach has resulted in higher cure rates and patient satisfaction.

Teamwork

UAMS’ radiation oncologists are working in interdisciplinary teams to improve patient care.

For example, the Department of Urology offers a new option for men undergoing radiation therapy for prostate cancer. The SpaceOAR Hydrogel is injected between the rectum and the prostate and makes it less likely that the rectum will be exposed to radiation.



“For the patient, the gel injection is minimally invasive, remains in place throughout their treatments and then slowly dissolves,” said **Rodney Davis, M.D.**, professor and chair of the Department of Urology. “It provides an extra level of reassurance for our patients.”

**To make a radiation oncology referral, call 501-526-6155.
To make a urology referral, call 501-526-1000. ■**

PHYSICIAN PROFILE

NIRVANA MANNING, M.D.

Associate Professor
Department of Obstetrics and Gynecology
Women’s Health Clinical Director



What inspired you to become a doctor?

My parents say I wanted to become a doctor from a young age. I would play doctor to my younger brother and place him in slings and makeshift casts — whether he liked it or not. In college, I wavered because I also love business and the structure it demands. In the end, medicine won. My true love has always been to help people, and becoming a doctor allowed me to do that in a way that I found rewarding.

What do you like most about your specialty?

I love that I can follow my patients through all walks of life, from the student that I want to ensure takes care of herself as she goes off to college, to the young mother, to the woman who has completed childbearing and is headed into menopause. Every life stage has its unique set of challenges, and I enjoy navigating that with my patients.

How are you working to improve medicine?

In addition to my clinical duties, I have also taken on more administrative responsibilities at the hospital, which has allowed me to see the other side of medicine. I work hard behind the scenes to ensure we have all the tools to take the best care of our patients all day, every day.

Why did you come to UAMS?

I did my medical school here and stayed for residency. I am in my 12th year and wouldn’t change a thing.

What are your clinical specialties?

I do all aspects of obstetrics and gynecology, from general annual exams, to prenatal and deliveries, as well as dealing with issues related to the peri-menopausal and menopausal stages.

How can doctors make a referral to you?

501-686-8000 or 501-526-1050

MEDICAL CASE STUDY

Squamous cell carcinoma removal with carotid involvement

INITIAL CONTACT

A 86-year-old male patient presented to UAMS with a neck mass that had been growing rapidly for two months near his right ear.

One year previously, the patient had been treated at a different facility for a skin cancer in the same area. His squamous cell carcinoma was removed and the wound was covered with a skin graft.

The initial examination by head and neck oncology surgeon **Emre Vural, M.D., FACS**, and CT scans indicated that the patient was a good candidate for surgery. However, the tumor was growing so rapidly that at the time of the initial surgery attempt, Vural found the tumor had spread and was attached to and enveloping the carotid artery, the main blood supply to the brain. Vural closed to consult with the patient, family and vascular surgeon **Mohammed Moursi, M.D.**

ASSESSMENT

Moursi examined the patient and provided a consultation, and Vural discussed the options with the patient and his family.

Because of the involvement of the carotid artery, it was a high-risk surgery for stroke. The only way to completely remove the tumor was to remove the carotid artery. In addition, not replacing the artery after removal could lead to catastrophic stroke.

Moursi proposed replacing the carotid artery with a vein from the patient's thigh. Additional risks associated with this approach include narrowing or leakage of the grafted vein.

Other risks associated with the larger scope of the surgery included dysphasia, hoarseness and reduced motor control of the tongue, due to the additional involvement of the vagus nerve and hypoglossal nerve.

However, left unchecked, the rapidly growing tumor could

have caused the same complications, growing into the carotid, rupturing it and causing catastrophic stroke. Radiation or chemotherapy might have slowed the tumor's growth rate, but would not have stopped it.

The patient opted for the team surgery with Vural performing an extended radical neck resection and flap repair and Moursi replacing the carotid artery with a vein graft.

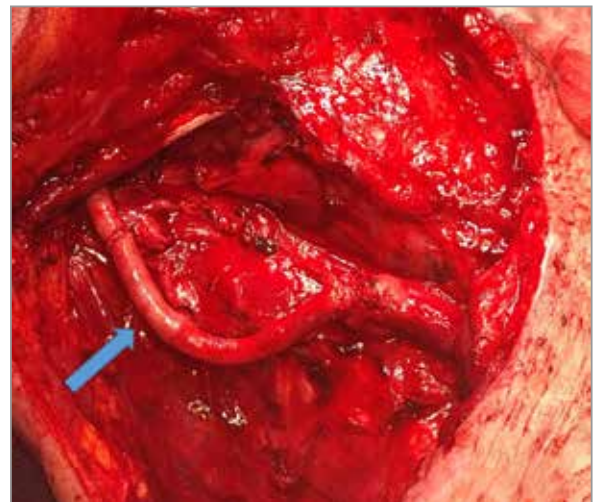
PROCEDURES

During the operation, Vural removed the sternocleidomastoid muscle, spinal accessory nerve and internal jugular vein. He removed the squamous cell carcinoma, which was based in the patient's lymph nodes but was also adhering to the patient's skin from the undersurface and attached to the carotid artery, vagus nerve and hypoglossal nerve. He isolated the section of tumor that was involved with the carotid artery and suspended it.

Moursi prepared the vein graft from the patient's thigh so that it was exposed and ready for harvest. They gave the patient a blood thinner. They then clamped the carotid artery before the tumor and after the tumor, on the heart side and the brain side of the tumor. Moursi took the carotid artery out with



The tumor involved with the carotid artery



The resected and repaired carotid artery with the nerve graft in place



The resected tumor and lymph nodes

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The closed site with flap from the chest

the tumor, leaving two ends of the carotid artery to work with.

Moursi placed a shunt inside the vein graft and then put the shunt inside the artery in one end and then the other side in the other end. They allowed blood flow to travel through the shunt, with the vein on the outside of the shunt. Then Moursi sewed each end of the vein to each end of the artery, removing the shunt just before the last stitch.

The success of the graft was confirmed intraoperatively by ultrasound.

Vural resumed his work, covering the large skin and neck defect left by the extended radical neck dissection with a flap of healthy tissue — muscle, skin and original blood supply — from the patient's pectoralis major muscle.

FOLLOW-UPS

The patient was discharged after drain removal five days after surgery.

At his two-week checkup, the wound was healing nicely and the flap was completely viable.

The patient was experiencing the expected outcomes of dysphasia and some limitation in tongue mobility due to the removal of the vagus and hypoglossal nerves.

He was otherwise neurologically intact, without any signs of stroke.

The patient's next steps will be to undergo radiation and chemotherapy.

Both Vural and Moursi are board-certified, fellowship-trained surgeons. While this particular set of circumstances was rare, both noted they frequently work on high-risk, complicated cases in an interdisciplinary fashion. Working together and with other specialties prepares them to handle unexpected cases like these.

To make a referral to the UAMS Head and Neck Cancer Clinic, call 866-826-7362 or 501-296-1200. ■

Mohammed Moursi, M.D.



**Professor
Chief of
Vascular and
Endovascular
Surgery
Division of
Vascular Surgery,
Department of
Surgery**

UAMS College of Medicine

Education

Medical school, University of Michigan, Ann Arbor

Residency

General surgery, University of Michigan

Fellowship

Vascular surgery, University of Michigan

Emre Vural, M.D., FACS



**Professor
Department of
Otolaryngology
UAMS College of
Medicine**

Education

Medical degree, Ankara University School of Medicine, Turkey

Residency

Otolaryngology — head and neck surgery, Ankara University School of Medicine

Fellowship

Head and neck surgery, UAMS

Facial plastic and reconstructive surgery, UAMS

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APRIL 2
Point-of-Care Testing in Arkansas
Shahryar Ahmadi, M.D.
Department of Orthopaedic Surgery

APRIL 9
Effect of Breastfeeding on Maternal Health: Short- and Long-Term Impact
Misty Virmani, M.D.
Department of Neonatology

APRIL 16
Imaging Workup of Patients with TIA/Stroke
Martin Radvany, M.D.
Department of Radiology

APRIL 23
Breast Cancer Update
Daniela Ochoa, M.D.
Department of Surgery

APRIL 30
Professional Development Ethics 101 – An Orientation to Ethical Issues in Health Care
Manisha Singh, M.D.
Department of Nephrology

MAY 7
Advances in Neuroendovascular Treatment of Cerebrovascular Disorders
Mudassar Kamran, M.D.
Department of Radiology

MAY 14
An Introduction to Culinary Medicine
Gina Drobeno, M.D.
Department of Pathology

MAY 21
IVC Filters, Past and Present
David Strain, M.D.
Department of Radiology

MAY 28 – MEMORIAL DAY – NO LECTURE SCHEDULED

JUNE 4
Indications and Safety of Contrast in CT and MRI Evaluation
Rohan Samant, M.D.
Department of Radiology

JUNE 11
LGBTQ+ Key Concepts for Care
Alexandra Marshall, Ph.D., MPH, CPH, CES
Department of Behavioral Health and Health Education

JUNE 18
Sickle Cell Update
Collin Montgomery, APRN
Sickle Cell

JUNE 25
Professional Development Organizational Governance