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**News Release
May 5, 2026**

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**UAMS Now Offering Histotripsy,
a Noninvasive Treatment for Liver Tumors**

LITTLE ROCK — The University of Arkansas for Medical Sciences (UAMS) is now offering, for the first time in Arkansas, a noninvasive treatment option for some patients with liver tumors.

Called histotripsy, the procedure uses focused ultrasound waves to destroy tumors without surgery, radiation, or incisions.

“With this technology, our specially trained doctors can target and destroy one or more tumors in a single, noninvasive outpatient procedure with little to no pain,” said Michelle W. Krause, M.D., MPH, senior vice chancellor of UAMS Health and CEO of UAMS Medical Center.

“This offers hope for patients with liver tumors — even those who are currently undergoing chemotherapy or radiation and those with tumors that are considered unresectable, meaning they cannot be safely removed through surgery,” Krause added.

During a histotripsy procedure, which takes about an hour while the patient is under general anesthesia to remain still, a machine directs high-intensity sound pulses toward one or more tumors. The alternating pressure created by the pulses creates a cloud of tiny gas-filled bubbles within the diseased tissue. As the “bubble cloud,” which is about the size of a grain of rice, moves through the tissue, it causes the targeted tumors to liquify. The liquid is then eliminated by the body over the following weeks and months.

Three physicians at UAMS have completed training in histotripsy: transplant surgeon Lyle Burdine, M.D., Ph.D.; interventional radiologist James Meek, D.O.; and surgical oncologist Sonia Orcutt, M.D.

Orcutt said the procedure appears to strengthen the patient’s immune system. She referred to the “abscopal effect” of cancer treatment, which occurs when radiation or

another type of local therapy causes tumors outside the treated area to shrink or disappear as well.

Even if only one lesion is treated, Orcutt said, the enhanced immune response may cause multiple lesions to respond without direct treatment themselves, which “has huge implications for patients with metastatic cancer that other liver-directed treatments do not have.”

“I saw this technology at a conference, and I knew right away this was something I wanted to bring to UAMS,” Meek said. “We have so many patients in Arkansas who can benefit from this treatment.”

UAMS is the first and only healthcare institution in Arkansas offering this technology, which is considered a safe and effective treatment for inoperable liver tumors.

Histotripsy had a 95.5% success rate in clinical trials, with nine out of 10 treated tumors remaining gone one year later. It received FDA approval in October 2023, following more than 20 years of development at the University of Michigan. The technology has also been used to treat patients at Johns Hopkins Medicine and the Cleveland Clinic, among other institutions across the United States.

“It’s approved for liver cancer now, but the hope is it will soon be approved for other cancers as well,” Meek said. In fact, trials are now underway to expand treatment to noninvasive renal and pancreatic tumors.

“Histotripsy is just one example of how UAMS is bringing ground-breaking technology to Arkansas,” Krause said.

Histotripsy may be used to treat primary liver tumors, which start in the liver, or secondary liver tumors, which start in a different organ and spread to the liver.

UAMS is the state’s only health sciences university, with colleges of Medicine, Nursing, Pharmacy, Health Professions and Public Health; a graduate school; a hospital; a main campus in Little Rock; a Northwest Arkansas regional campus in Fayetteville; a statewide network of regional campuses; and eight institutes: the Winthrop P. Rockefeller Cancer Institute, Jackson T. Stephens Spine & Neurosciences Institute, Harvey & Bernice Jones Eye Institute, Psychiatric Research Institute, Donald W. Reynolds Institute on Aging, Translational Research Institute, Institute for Digital Health & Innovation and the Institute for Community Health Innovation. UAMS includes UAMS Health, a statewide health system that encompasses all of UAMS’ clinical enterprise. UAMS is the only adult Level 1 trauma center in the state. UAMS has 3,553 students and 1,015 medical residents and fellows. It is the state’s largest public employer with about 12,000 employees, including 1,200 physicians who provide care to patients at UAMS, its regional campuses, Arkansas Children’s, the VA Medical Center and Baptist Health. Visit www.uams.edu or www.uamshealth.com. Find us on [Facebook](#), [X \(formerly Twitter\)](#), [YouTube](#) or [Instagram](#).

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