THE MAGAZINE OF **UC DAVIS COMPREHENSIVE CANCER CENTER** VOL 29 NO 2 / SUMMER 2026

SYNTHESIS

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Dear Reader,

Welcome to the summer edition of Synthesis magazine. This issue reflects a season of new beginnings, bold ideas and a deepened commitment to the patients and communities we serve.

The spirit of progress begins with new leadership. In this issue of Synthesis, you will meet Mark Rosenblatt, who joined UC Davis Health this year as vice chancellor of human health sciences. This role is something of a homecoming. He began his academic career at UC Davis in 2005 as an assistant professor of ophthalmology and vision science, balancing research in Davis with patient care in Sacramento.

Innovation is a constant thread throughout this issue. One powerful example is the newly established Endowed Professorship of Neurosurgical Research, made possible by a generous $1.5 million anonymous gift. The professorship has been awarded to Laura Marcu, whose work in light-based and biophotonic technologies holds promise for improving cancer care and treating other complex diseases. This support will accelerate scientific discovery and help move new technologies from the lab to the bedside — where they can make a real difference for patients.

The spirit of discovery also shines through in our story that explores how cells constantly mend broken DNA. This major scientific advancement could lead to more effective treatments for cancer and genetic diseases, reminding us that even the smallest processes in our bodies can have enormous implications for health.

Several features in this issue focus on transforming cancer care through precision approaches. Cancer center scientists are testing “smart” nanotechnology designed to deliver cancer drugs directly to tumors while sparing healthy tissue. This work is underway in our Center for Experimental Therapeutics in Cancer and reflects our drive to make treatments more effective and gentler for patients.

We also take a closer look at breast cancer care, an especially important topic as rates continue to rise — particularly among women younger than 50. You’ll learn how we are expanding breast cancer care by helping patients move more quickly and compassionately from diagnostic imaging to treatment.

Colorectal cancer rates are also increasing among adults under 50, and we speak with Dr. Ankit Sarin about the newest strategies for prevention and early detection in younger patients.

Radiology advancements continue. UC Davis Health is now home to the region’s first photon-counting CT scanner, offering clearer images with less radiation. Patients receiving radiation therapy can benefit from another new technology – the Accuray Radixact System – delivering more personalized and precise treatment. Together, these advances underscore our focus on patient-centered care.

Clinical trials remain essential to progress. This issue highlights a new trial for patients with high-risk non-Hodgkin lymphoma, offering hope for those who need better options. One particular patient reminds us why this research matters.

Finally, we share the moving story of Tyson Duncan and the enduring legacy his family created through a new fund to support pediatric oncology patients and families when they need it most.

Thank you for your continued trust, support and giving. It fuels discovery, compassion and hope. Enjoy this summer issue of Synthesis.

Sincerely,

Primo “Lucky” Lara Jr., M.D., F.A.S.C.O.

DIRECTOR, UC DAVIS COMPREHENSIVE CANCER CENTER

BREAKING BARRIERS TO **BEAT CANCER**℠

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Front cover image: Photo-illustration of Dr. Marcu, based on photography by Wayne Tilcock.

Mark Rosenblatt takes the helm at UC Davis Health

Vice Chancellor Mark Rosenblatt meets with UC Davis Comprehensive Cancer Center's Director Primo "Lucky" Lara Jr. and Physician-in-Chief David Tom Cooke.

Mark Rosenblatt became the new vice chancellor for Human Health Sciences this year. It could be considered a "homecoming."

Rosenblatt started his academic career at UC Davis in 2005 as an assistant professor of ophthalmology and vision science, where he split his time between research in Davis and clinical care in Sacramento.

Rosenblatt said his return to UC Davis Health fills him with a sense of rooted purpose. "I'm so pleased to be back at UC Davis," he said. "It feels like coming home."

Before rejoining UC Davis, Rosenblatt served as the G. Stephen Irwin executive dean at the University of Illinois College of Medicine, the chief executive officer of the University of Illinois Hospital and Clinics, and a distinguished professor of ophthalmology and visual sciences at the University of Illinois Chicago.

"UC Davis Health truly stands apart because of the UC Davis Comprehensive Cancer Center," Rosenblatt said. "A cancer diagnosis is frightening, but it brings tremendous comfort to our community to know there is a cancer center here at home that has the stamp of approval from the National Cancer Institute. We are committed to growing our impact as a place where patients find both world-class care and advanced biomedical science."

Rosenblatt is an internationally recognized clinician-scientist. He still leads groups of scientists investigating the mechanism of corneal peripheral nerve regeneration following injury, and the use of nanoengineered biomaterials in stem cell delivery to the ocular surface. His research is widely published, including more than 225 original manuscripts, review articles, book chapters and abstracts.

Rosenblatt is continuing his research at UC Davis after moving his lab here from Chicago.

Rosenblatt is a graduate of the University of Miami Miller School of Medicine's Honors Program in Medical Education and the combined M.D./Ph.D. program, receiving his Ph.D. in biochemistry, cell and molecular biology.

Frederick J. Meyers receives two prestigious academic recognitions


Frederick J. Meyers

Frederick J. Meyers recently received two prestigious honors from the Association for Clinical and Translational Science (ACTS), recognizing his long-standing leadership and impact in the field. Meyers is a distinguished professor of the Department of Internal Medicine, Hematology and Oncology. He was previously director of the Clinical and Translational Science Center (CTSC) training core. He continues in his role as associate director of the comprehensive cancer center's Office of Education, Training and Workforce Development.

Meyers was named a recipient of the 2026 ACTS Distinguished Educator: Mentorship Innovation Award. He was also inducted into the inaugural cohort of the Fellows of ACTS (FACTS) program. Both were awarded to Meyers in April at the ACTS 2026 Translational Science conference in Milwaukee, Wis.

ACTS presents its annual Translational Science Awards to recognize investigators for their outstanding contributions to the clinical research and translational science field. Individuals are nominated by their colleagues and peers.

"I was so delighted to learn of Dr. Meyers' selection for these well-deserved honors," said Vice Dean for Research Kim E. Barrett, who nominated Meyers. She is also a distinguished professor with the Department of Physiology and Membrane Biology. "Dr. Meyers has inspired all of us at UC Davis School of Medicine with his career-long dedication to effective mentoring at all levels that continues beyond his retirement. In particular, his creation of our Academic Research Careers for Medical Doctors program will ensure a pipeline to sustain the impacts of academic medicine," Barrett said.

Launched this year, the FACTS program is a premier membership distinction that recognizes individuals who have made substantial contributions and demonstrated sustained service to clinical and translational science. Induction into the inaugural FACTS cohort highlights Meyers' enduring leadership, scholarly contributions and commitment to strengthening the translational research community.


Frederick J. Meyers accepted awards from Allan R. Brasier.

In addition, the 2026 Distinguished Educator: Mentorship Innovation Award recognizes Meyers for his exceptional contributions to education and mentorship. Together, these honors underscore his pivotal role in advancing translational science, fostering the next generation of investigators and strengthening academic medicine through innovation and mentorship.

Miquell Miller (left) and Janai Carr-Ascher (right) provided welcome remarks at symposium.

Ralph de Vere White Symposium spotlights young cancer researchers

The future of cancer research was on full display at Aggie Square during the Ralph de Vere White Symposium for Early-Stage Investigators in Cancer in April.

The day-long event highlighted cancer research conducted by the younger generation: students from high school, as well as undergraduate and predoctoral scholars. They were joined by more seasoned postdoctoral scholars, research staff, residents and fellows who shared their latest findings.

"The Ralph de Vere White Symposium gives early-stage investigators invaluable opportunities to sharpen their ideas, build confidence and form meaningful connections," said cancer center Director Primo "Lucky" Lara Jr. "It also strengthens the pipeline of innovative, patient-centered cancer research for the future."

The annual event was renamed in 2024 in honor of Professor Emeritus Ralph de Vere White, former director of the cancer center. De Vere White was instrumental in obtaining the National Cancer Institute designation for UC Davis Health as a "comprehensive" cancer center.

Welcome remarks were provided by Janai Carr-Ascher and Miquell Miller, UC Davis Comprehensive Cancer Center assistant directors for the Office of Education, Training and Workforce Development.

The keynote address by Christopher Lucchesi, an assistant professor in the Department of Urologic Surgery, featured his personal story as a cancer survivor to illustrate how to sustain a commitment to research and patients.

Students competed in presentations with winners receiving $500 in cash. Presentations were judged on scientific innovation, significance and ultimate potential for clinical impact, as well as scientific communication skills.

Oral presentation winner

Winners: **Conner Suen and Asneh Singh, undergraduate students**

Mentor: **Christopher Lucchesi**

Title: **"A Functional-Digital Precision Oncology Platform Integrating AI Histology and 3D Bioprinted Tumoroids to Predict Therapeutic Response"**

Poster presentation winner

Winner: **Mira Miles, project policy analyst**

Mentor: **Shehnaz Hussain**

Title: **"Inflammation and Occupational Exposures in the California Firefighter Cancer Research Study (CAFF-CRS)"**

The annual symposium was organized by the Office of Education, Training and Workforce Development.

First onco-nephrologist to join the cancer center

Shuchi Anand, a nationally renowned nephrologist with highly specialized expertise in kidney conditions in patients with cancer, has joined UC Davis Comprehensive Cancer Center. She is the first "onco-nephrologist" at UC Davis Health.

Anand is an adult kidney specialist who focuses on caring for patients with kidney concerns during cancer diagnosis, treatment and survivorship. She also treats patients with kidney diseases associated with multiple myeloma and related plasma cell disorders, as well as electrolyte disturbances that can arise during cancer therapy. Nationally, she is a founding board member of the American Society of Onco-Nephrology and serves on the organization's Position Statement Committee.

"Dr. Anand brings highly specialized expertise at the intersection of cancer and kidney disease," said David Tom Cooke, physician-in-chief of UC Davis Comprehensive Cancer Center. "Her ability to manage kidney side effects related to chemotherapy and immunotherapy, including immune checkpoint inhibitor–associated nephrotoxicity, significantly enhances the multidisciplinary care, and unique value, we provide to our patients."

The advancement of immunotherapy including checkpoint inhibitors, which use the body's immune system to attack cancer, have greatly improved survival rates in cancer patients. However, prolonged use of immunotherapy, and other novel therapies, sometimes has negative side effects. For some patients, the immune system becomes too active and mistakenly attacks healthy organs — including kidneys.

Anand prioritizes spending time with patients to explain all available therapeutic options, including standard treatments and emerging therapies still in development. By aligning medical recommendations with each patient's individual lifestyle, overall health and personal priorities, she works collaboratively with patients and hematology-oncology colleagues to select the most appropriate care plan.

"In cancer care, kidney health is often a critical factor in determining which treatments are safe and effective for a patient," said Anand. "I place tremendous value in creating a true partnership with my patients, so we can approach complex decisions together from a place of trust and respect."

Anand received her bachelor's degree in economics from Carleton College in Northfield, Minn., in 2002. She earned her medical degree from Washington University School of Medicine in St. Louis in 2006 and later completed a master's degree in epidemiology at Stanford University School of Medicine in 2013. She completed her internship and residency in internal medicine at Brigham and Women's Hospital in Boston, followed by a nephrology fellowship at Stanford University.

To schedule an appointment with Anand, please call **800-770-9261** or **916-734-5959**.

Cancer news via podcast!

Check out the Beat Cancer podcast, offering in-depth discussions of the science, research and advancements taking place at UC Davis Comprehensive Cancer Center. Learn about the latest cancer news including prevention, screening and treatment, and discover how we are breaking barriers to beat cancer in our community and beyond. Find Beat Cancer on the cancer center website or your favorite podcast platform.

Would you like a topic covered? Email us at **beatcancer@ucdavis.edu**.

Jonathan Riess named director of Early Phase Therapeutics


Jonathan Riess

Jonathan Riess has been appointed director of early phase therapeutics at UC Davis Comprehensive Cancer Center. He will assume responsibility for leading early clinical development and first-in-human cancer trials. In this role, Riess will oversee phase 1 strategy, trial design and execution, supporting translation of preclinical research into clinical evaluation. His appointment reflects the growing importance of rigorous early phase development to ensure safety, proper treatment dosing and proof the emerging therapies being tested are effective.

"Dr. Riess brings exceptional clinical expertise and national leadership in cancer research to this critical role," said UC Davis Comprehensive Cancer Center Director Primo "Lucky" Lara Jr. "His experience leading innovative clinical trials and his deep understanding of translational science will strengthen our ability to move promising cancer therapies safely and efficiently from the laboratory to our patients."

Riess is also director of thoracic oncology. He specializes in lung cancer and other thoracic cancers (mesothelioma and thymoma). He also serves on the Non-Small Cell Lung Cancer/Malignant Pleural Mesothelioma/Thymomas and Thymic Carcinomas Panel for the National Comprehensive Cancer Network.

His research interests encompass novel diagnostics, targeted therapies and immunotherapies in lung cancer and other thoracic malignancies. He is a National Institutes of Health-funded investigator and the past recipient of several awards, including the National Cancer Institute (NCI) Cancer Clinical Investigator Team Leadership Award. The honor is given to researchers who are working to improve the lives of people with cancer through extensive involvement in NCI-funded collaborative clinical trials and whose leadership, participation and activities promote clinical trials and research.

Jonathan Moomey to lead expansion of satellite oncology services


Jonathan Moomey

Jonathan Moomey has assumed a newly established position as clinical director of satellite oncology services. In this role, he will oversee the expansion of cancer care outside of the main cancer center on the Sacramento campus. This will include infusion centers at the Rocklin, Folsom, C Street and Rancho Cordova clinics.

Moomey has been serving in an interim role since early 2025, successfully advancing the infusion service line and improving cancer care in the region.

"Jonathan's leadership has been instrumental in expanding services and improving patient access, most notably by more than doubling patient volume at the Rocklin infusion site," Vice President of Oncology Services and Cell/Gene Therapy Andrew Bresnahan said.

Moomey joined UC Davis Health in 2018 and soon became the first nurse manager of the bone marrow transplant program.

In 2020, he stepped into the role of manager of ambulatory services, providing clinical oversight for the Rocklin, Roseville and Auburn regional clinics.

Outside of work, Moomey values time with his wife and children, traveling to the beach and making family memories at Disneyland.

National recognition elevates UC Davis Health **for its premier lung cancer care**

Cardiothoracic, thoracic, and pulmonary medicine and surgery team (left to right) Luis Gody, David Tom Cooke, Lisa Brown and Chinh Phan.

UC Davis Comprehensive Cancer Center has been recognized as a GO2 for Lung Cancer Center of Excellence, highlighting its strong commitment to high-quality, patient-centered lung cancer care for the region.

Each year, nearly 230,000 Americans are diagnosed with lung cancer, and many learn of their diagnosis only after the disease has advanced. This late detection is a reason lung cancer remains the leading cause of cancer deaths in the United States. But there is good news: Low-dose CT screening can find lung cancer early, when it is most treatable and even curable.

This national designation recognizes the cancer center for following evidence-based screening guidelines, providing coordinated follow-up care and supporting patients through every step of the screening and treatment process.

Recognizing high standard of care

Founded by patients and survivors, GO2 for Lung Cancer is focused on increasing survival for those at risk, diagnosed or living with lung cancer.

"UC Davis Comprehensive Cancer Center is dedicated to providing patients with the highest quality care," said cancer center Physician-in-Chief David Tom Cooke. "Low-dose CT screening is currently the only proven method to detect lung cancer at the earliest, most treatable stage. We are thrilled to be part of this elite group, setting an example for responsible screening practices across the country."

According to GO2, institutions that earn the designation in lung cancer screening are committed to the principles of patient-centered communication and decision making. They implement screening in accordance with current evidence and clinical guidelines developed by professional bodies such as the American College of Radiology and the National Comprehensive Cancer Network. They also coordinate patient follow-up, diagnostics and transition to treatment through a multidisciplinary clinical process.

"Through the collaborative efforts of Dr. Heather Leisy, working in population health and accountable care, and Dr. Jonathan Riess, lead of our Lung Cancer Integrated Service Line, and many others, we now screen over half of our eligible patients," Cooke said.

Cancer center earns additional recognition

Along with its newly awarded designation as a Center of Excellence in Lung Cancer Screening, UC Davis Comprehensive Cancer Center is also recognized by GO2 as a Center of Excellence in:

- Cancer Care, for demonstrating access to standard cancer services within medical, radiation and surgical oncology and pathology.
- Incidental Pulmonary Nodules, for providing a structured program that captures incidentally found lung nodules from imaging, with a standardized process for patient follow-up and reporting across the health system.
- Biomarker Testing and Precision Medicine, for ensuring access to guideline-directed molecular and immune biomarker testing, including next-generation sequencing, to identify targeted and immunotherapy treatment decisions.

Who is eligible for a low-dose CT lung cancer screening?

Eligible participants:

- Are between the ages of 50 and 80.
- Smoked "20-pack years" and either still smoke or quit within the past 15 years. "20-pack years" equals smoking a pack a day for 20 years or two packs a day for 10 years.

How to schedule

Patients interested in receiving a low-dose lung cancer screening should contact their doctor for a referral. To make an appointment at UC Davis Health, call **916-734-5959**.

New endowed professorship will expand impact of light-based technologies in cancer care and other diseases


Laura Marcu

Laura Marcu, professor in the Departments of Neurological Surgery and Biomedical Engineering and a co-leader of the cancer center's Biomedical Technology Program, has been appointed to the Endowed Professorship of Neurosurgical Research. This distinguished appointment is made possible by a $1.5 million anonymous gift. It provides funds for scientific discovery and development that have the potential to significantly improve the lives of patients.

"I am deeply grateful for this endowment. It will enable transformative research, accelerate clinical translation and expand the impact of emerging light-based or biophotonic technologies in patient care," Marcu said.

Pioneer in biophotonic technologies

Marcu is the founding director of the National Center for Interventional Biophotonic Technologies (NCIBT) at UC Davis. The center is funded in part by the National Institutes of Health.

At NCIBT, Marcu is building on her pioneering work in medical applications of light-based technologies, particularly Fluorescence Lifetime Imaging (FLIm). FLIm is a pen-like device that surgeons can use to scan and highlight unhealthy tissue in real time to treat cancer and heart disease.

First developed in an engineering lab by Marcu and her team, FLIm is one of the most advanced clinical fluorescence lifetime imaging systems in the world. It's currently being used at UC Davis Health — with great accuracy and success — to collect data and prove its value for widespread use.

Targeted approach for cancer and other diseases

Marcu's lab is advancing the use of FLIm across several medical specialties, with the goal of giving clinicians clearer, real-time insights into tissue health. Their work currently focuses on surgical oncology, cardiovascular diagnostics and regenerative medicine.

FLIm allows surgeons to detect abnormalities in tissue while operating on a tumor. Because tumor cells have different optical properties than healthy tissue, their fluorescence changes under the device's light, helping surgeons more accurately identify cancerous areas.

Cancerous tissue behaves differently from healthy tissue at a molecular level, and FLIm can detect those differences instantly. By integrating FLIm into surgical tools, surgeons can better distinguish tumor margins while operating. This helps ensure that cancerous tissue is fully removed while sparing as much healthy tissue as possible. This precision is especially critical in cancers where margins are difficult to define, such as head and neck cancer and brain cancer.

Marcu's research has also advanced the concept of an "optical biopsy." Instead of removing tissue for lab analysis and waiting days for results, FLIm provides immediate feedback in the operating room or clinic. This capability supports faster clinical decisions, reduces repeat procedures and may lower the physical and emotional burden on patients.

FLIm technology is integrated into transoral robotic surgical system to detect cancerous tissues

Bridging the gap from bench to bedside

The intersection of engineering and medicine has always been at the core of Marcu's work.

"There can be a language barrier between engineers and clinicians who have different ways of thinking and doing things," said Marcu. "Working in a clinical environment taught me how to communicate with physicians and surgeons, and that helped me bridge between scientific and medical communities."

Marcu's research in FLIm and other imaging systems demonstrates this interdisciplinary expertise and the importance of developing tools that translate from the research lab to patient care.

"I have always enjoyed connecting ideas across disciplines and interacting with people who have come from different domains and perspectives," Marcu said. "This is what stimulates creativity and technological innovation with impact on patient care."

Expanding impact through philanthropy

Located at the new Aggie Square, the NCIBT is the first center of its kind at UC Davis. It is critical to the dissemination and future commercialization of a range of optical spectroscopy and imaging technologies. It's also critical for training the next generation of scientists.

Endowed chairs and professorships are among the university's highest faculty honors and are created through donor support. Their invested funds generate enduring resources that empower professors to advance research, mentor students and drive innovation that benefits society.

"Philanthropy is very important because it provides the flexibility needed to accelerate the translation of technologies such as FLIm from discovery at the benchtop to clinical applications, and ultimately to the broader population," Marcu explained. "Through this endowment, I am hoping to better emphasize the role that the NCIBT can play, not just institutionally but nationwide, and expand its visibility and impact."

Scientists test "smart" nanotech to target cancer tumors with more precision


Kit S. Lam

UC Davis Comprehensive Cancer Center scientists are testing "smart" nanotechnology that could transform cancer treatment by delivering drugs directly into tumors while sparing healthy tissue. The research is being conducted at the cancer center's new Experimental Therapeutics Laboratory.

The lab team has designed transformable nanoparticles (ultrafine particles) that travel through the body as tiny particles and then reshape into nanofiber networks when reaching the cancer sites. These fibers cling to tumors but naturally fade away much more quickly in healthy organs, creating a built-in targeting system.

The work is led by Distinguished Professor Kit S. Lam with the UC Davis Health Department of Biochemistry and Molecular Medicine and the Division of Hematology and Oncology. The research recently received a boost from a prestigious $3.1 million National Institutes of Health (NIH) R01 research project grant. R01 federal grants are given through the NIH's National Cancer Institute to mature research projects that have strong preliminary data.

"This NIH (NCI) grant opens the door to accelerating this whole new way of treating cancer," said Lam. "Instead of flooding the entire body with medicine, we can now 'park' these nanoparticles at the tumor sites and activate treatment only when we choose to."

Once the nanoparticles form a web of tiny fibers around a tumor, researchers can deliver therapeutic molecules using a highly specific "click chemistry" reaction. This refers to chemical reactions that are fast, efficient and reliable.

This second step allows clinicians to add medicines on demand that can augment the anti-tumor effects of the immune system. Examples include small-molecule drugs, toxins and immune-boosting molecules or proteins.

The nanoparticles can stay in the tumor areas for up to a week, Lam said, but they fade from healthy organs like the liver and lungs within just two days.

"That gives us a unique advantage," Lam said. "We can use this long-lasting presence in tumors to introduce cancer-fighting treatments only when and where we want them."

Phased-in approach to pursuing drug development

The UC Davis team refers to this as a two-component, two-step strategy:

- Step one: The nanoparticles locate the tumor and transform into a long-lasting molecular framework.
- Step two: Doctors administer therapeutic agents that lock onto the drug delivery system and begin working within the tumor microenvironment.

Main goals

The project includes three major goals:

- Design and refine nanoparticles that target receptors found in cancers such as non-small cell lung cancer.
- Use advanced imaging to understand how the nanoparticles behave in living systems.
- Test the safety and effectiveness of this approach in preclinical cancer models.

If successful, the technology could dramatically change how oncologists deliver effective treatments, reducing side effects and increasing precision.

"This platform gives us the flexibility to deliver multiple treatments in sequence or combination for whatever the patient needs at that moment," Lam said. "Our goal is to create a robust, long-lasting immune response that helps the body fight the cancer on its own."

$2 million grant fuels UC Davis fight against pancreatic cancer

Pancreatic cancer research is getting a boost at UC Davis Comprehensive Cancer Center, thanks to a $2 million funding infusion.

The Mark Foundation for Cancer Research announced the grant recently. It's part of the launch of a new coalition of leading organizations dedicated to promoting early detection of some of the deadliest cancers. The focus includes pancreatic, ovarian and esophageal cancers, all of which have poor long-term survival rates.

Pancreatic cancer has been a research priority at UC Davis Health. UC Davis' Julie L. Sutcliffe will lead one of six research teams for the coalition. Sutcliffe is co-director of the UC Davis Center for Molecular and Genomic Imaging and a professor of medicine and biomedical engineering. Her team includes researchers Brian M. Wolpin and Andrew J. Aguirre at Dana-Farber Cancer Institute, and Laura D. Wood at Johns Hopkins Medicine.

Sutcliffe's team is responsible for developing special imaging tools to help doctors find early changes in the pancreas — even before cancer fully forms. Using PET scans, they hope to detect tiny warning signs and early stages of pancreatic cancer so patients can get care sooner.

The research focuses on developing small, safe radioactive tags that light up cells to detect precancerous cell changes called pancreatic intraepithelial neoplasia (PanIN). The research will look at microscopic changes in the cells that line the small tubes (ducts) of the pancreas. These cells can sometimes slowly develop into pancreatic ductal adenocarcinoma (PDAC), which starts in the cells that line the ducts of the pancreas. It is the most common type of pancreatic cancer.

"This grant gives us a powerful opportunity to move pancreatic cancer research forward," said Sutcliffe. "PanIN lesions have not been visible with conventional imaging, and the ability to noninvasively detect and monitor PanIN allows us the opportunity to intercept PDAC at its earliest stages. Ultimately, our goal is to bring new options and real hope to patients who urgently need better outcomes."

Sutcliffe's team and five others from across the nation are sharing $12 million in funding from the Mark Foundation for Cancer Research and its coalition partners: American Association for Cancer Research, Lustgarten Foundation, Break Through Cancer and The Honorable Tina Brozman Foundation (Tina's Wish).

Each team is responsible for pursuing a research project aimed at overcoming the most pressing obstacles in early detection of cancer.

Pancreatic cancer researcher Julie Sutcliffe is co-director for the UC Davis Center of Molecular and Genomic Imaging.

Sutcliffe is recognized internationally for her translational research efforts in the field of radiotheranostics. She leads several clinical trials at UC Davis using radiopharmaceuticals developed by her team to detect and treat cancer. She is a fellow of the Society of Nuclear Medicine & Molecular Imaging, a fellow and a past president of the World Molecular Imaging Society and a fellow of the American Institute of Medical and Biological Engineering.

Cancer patient back to **restoring power and his life**

New cancer clinical trial available at UC Davis treats utility lineman's aggressive non-Hodgkin lymphoma

Joeseph Tuscano with Bryan Mazza.

A new clinical trial started at UC Davis Comprehensive Cancer Center is testing a fresh approach for people with high-risk diffuse large B-cell lymphoma (DLBCL). The hope is that the new sequence of highly targeted therapy may give patients with the fast-moving and high-risk form of non-Hodgkin lymphoma a better chance at beating the aggressive cancer.

High-risk DLBCL can be difficult to treat, and many patients relapse even after standard therapies. That is why clinical trials like the one available at UC Davis are so important.

"This is a group of patients at high-risk for relapse, and they need better options," said Joseph Tuscano, the doctor who initiated the clinical trial. "We're trying to combine the best of targeted immunotherapy with the strength of chemotherapy to create a more effective plan."

Local foothills lineman and father of three enrolls

Bryan Mazza is one of the first to benefit from Tuscano's clinical trial. The 39-year-old father of three lives in the former gold-mining town of El Dorado. After spending a decade traveling the country as a utility lineman, he settled into the foothills with Pacific Gas & Electric. Mazza specializes in power line restoration and often hikes or even snowshoes to get to power poles, which he then climbs for repairs. It is a physically taxing job, but he loves it.

In August 2023, Mazza had back pain that would not go away. He wondered if it was from a strained muscle.

"It was worse when sleeping or after eating a big meal," Mazza explained. "I went to the local urgent care and was told I might be suffering from gallstones, so they recommended I get an ultrasound."

A patient at Marshall in Placerville, Mazza was scheduled for an ultrasound there. It showed possible kidney cysts. Follow-up imaging with a contrast abdominal CT scan was scheduled.

Worsening symptoms led to ER visit

Before the appointment, Mazza's back pain suddenly became worse. He didn't feel well. His wife, Jessica, whom he credits for saving his life, insisted he go to the Marshall emergency room. He did so, he said, only to appease her.

A CT scan showed multiple masses on his kidneys and nodules on his lungs.

At the doctor's appointment following the hospital visit, Mazza said he could see on the doctor's face that he was about to be told something he did not want to hear.

"My only thought was how I was going to tell my wife and kids," Mazza said.

Teaming up to take on cancer

Biopsy results showed it was stage four DLBCL, a cancer that develops from blood cells. It grows rapidly and is an aggressive form of non-Hodgkin lymphoma.

Fortunately, as a UC Davis Cancer Care Network affiliate, Marshall immediately gave Mazza access to Joseph Tuscano at UC Davis Comprehensive Cancer Center, an expert in the disease.

Because the cancer was spreading rapidly, Tuscano personally called Mazza the evening Marshall sent the referral. He explained that he had a new clinical trial he thought could really increase Mazza's chances of successfully fighting his cancer.

"I'm a big believer in science, so I was willing to enroll," Mazza said.

Bryan Mazza's wife Jessica accompanied him to a recent follow up exam with Jospeh Tuscano.

A two-pronged attack

Tuscano said he wanted to give Mazza's cancer a "one-two punch," with immunotherapy striking the cancer first, followed by chemotherapy to wipe out any remaining cells. The hope is that it will have a better chance of long-lasting results.

"I liked Dr. Tuscano's candor," Mazza said. "He didn't sugarcoat anything. He told me I faced an uphill battle. But because of my age and other reasons, he said he felt the clinical trial plus the chemotherapy would save my life, and it did."

Tuscano gave Mazza two targeted drugs: loncastuximab tesirine and rituximab. These medicines find and attach to specific proteins primarily on lymphoma cells, making it easier to destroy them.

Next: personalized chemotherapy plan

After the targeted medicines, Mazza received a well-known chemotherapy combination called DA EPOCH R. It includes several drugs, all delivered intravenously.

"The aggressive chemo protocol meant I had to stay five days at UC Davis Medical Center every three weeks for six treatment cycles," Mazza explained. "It did a number on me, but the nurses and everyone on the cancer floor known as Davis 8 were amazing."

Mazza and other patients in the trial undergo lab tests and imaging, which allow Tuscano's team to closely watch how well the cancer is responding.

Fortunately, because of the relationship between Marshall and UC Davis, Mazza had coordinated care that allowed him to get his frequent blood tests and dressing changes to his infusion port close to home at Marshall's Cancer Center in Cameron Park.

"It really helped me save time, and it was much more convenient because I live an hour from Sacramento but only 15 minutes from Cameron Park," Mazza said. "I even drove myself most of the time."

Getting his strength back

By April 2024, Mazza was in remission but weak during his recovery. He had lost his hair and some muscle mass. Regardless, he was starting to think about what he needed to do to get ready to return to his physically demanding job.

"I decided to walk a half mile, then a mile, and before I knew it, I was starting to jog. So, I signed up for a 5K run, which was a few months away," Mazza said. "That became my goal: to enter a race."

By then, Mazza was back on the job but still enjoying running. So, in November, he entered a half marathon (13.1 miles) in scenic Apple Hill, near his home. He trained by himself and ran the race by himself.

But that wasn't enough for Mazza. By conquering cancer, he felt he could conquer just about anything, so he entered the American River 25-mile Endurance Run. Again, he was alone in the race but not alone in his cancer fight, because Jessica and all three of his children were at the finish line to help him celebrate.

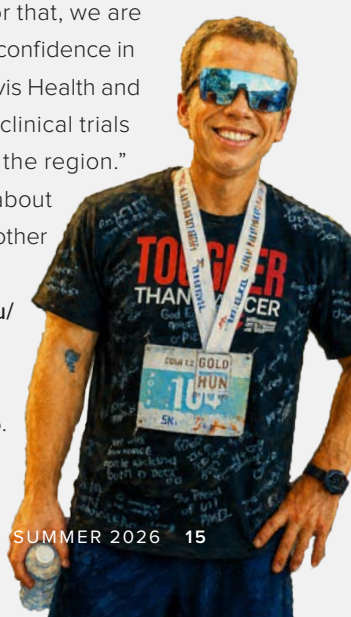
This year, Mazza completed a 50-mile ultramarathon. He credits Tuscano with being a positive force as he recovered from treatment.

> *"I liked Dr. Tuscano's candor. He didn't sugarcoat anything. He told me I faced an uphill battle. But because of my age and other reasons, he said he felt the clinical trial plus the chemotherapy would save my life, and it did."*
>
> –BRYAN MAZZA

Looking ahead

"Every advancement starts with research," Tuscano said. "Our goal is simple: Give patients a better chance at long-lasting remission. But we need patients like Mazza to be willing to participate in clinical trials. For that, we are grateful he put his confidence in our team at UC Davis Health and the leading-edge clinical trials we are bringing to the region."

To learn more about enrolling in this or other clinical trials, visit **health.ucdavis.edu/patients-visitors/clinical-trials/** or call **916-734-0565**.



Expert cancer care close to home: 2 new UC Davis Health clinicians join Marshall Cancer Center

Photo caption: Hematologist and oncologist Deepthi Busayavalasa and Nurse Practitioner Jennifer Aldred, joined Marshall Cancer Center through the UC Davis Cancer Care Network.

UC Davis Comprehensive Cancer Center continues to strengthen its commitment to bringing world-class oncology care closer to patients' homes through the UC Davis Cancer Care Network (CCN). This is reflected in the arrival of two highly experienced clinicians, Deepthi Busayavalasa and Jennifer Aldred, now serving patients at Marshall Cancer Center, a CCN affiliate.

"Our affiliation with UC Davis Health allows us to expand advanced cancer services locally, ensuring our community has access to trusted oncology expertise without having to travel far away," said Marshall President and CEO Siri Nelson.

Deepthi Busayavalasa: Broad expertise, personalized care

Deepthi Busayavalasa, a board-certified hematologist and medical oncologist, joined UC Davis Health in February 2026 and now provides care to El Dorado County patients through the CCN at Marshall Cancer Center. She specializes in the treatment of solid tumors and blood disorders. Busayavalasa offers patients access to advanced cancer treatments and clinical trials available only at academic institutions such as UC Davis Comprehensive Cancer Center.

Prior to joining UC Davis Health, Busayavalasa practiced at the Mercy David M. Sindelar Cancer Center – South St. Louis in Missouri. She cared for a diverse population of patients with complex oncologic and hematologic conditions. Her clinical approach emphasizes thoughtful diagnosis, individualized treatment planning and clear communication — ensuring patients feel informed and supported throughout their care journey.

Busayavalasa earned her medical degree from Rangaraya Medical College in India and completed her internal medicine residency at Advocate Christ Medical Center in Illinois. She went on to complete a fellowship in hematology and oncology at Saint Louis University School of Medicine. Her training and experience enable her to bring both depth of expertise and a compassionate perspective to patients receiving care close to home.

Jennifer Aldred: Nurse practitioner

Joining Busayavalasa at Marshall Cancer Center is Jennifer Aldred, a nurse practitioner specializing in hematology and medical oncology. With more than a decade of oncology experience, Aldred brings a rich and varied clinical background that includes roles as an infusion nurse, radiation oncology nurse practitioner and medical oncology nurse practitioner.

Aldred previously practiced at UC Davis Comprehensive Cancer Center. Her move to Marshall Cancer Center was driven by her desire to serve her local community and expand access to high quality cancer care in El Dorado County. As a local resident, she is deeply invested in supporting patients and families facing a cancer diagnosis.

Focused on individualized, patient-centered care, Aldred supports patients through every stage of their cancer journey — from diagnosis and shared decision making to treatment, survivorship and follow-up. She is also passionate about community education, cancer prevention and early detection. Aldred expands access to clinical trials so patients can benefit from innovative therapies without traveling far from home.

Aldred earned her Bachelor and Master of Science in nursing from Samuel Merritt University and her Doctor of Nursing Practice from the University of Connecticut.

A stronger future for cancer care in El Dorado County

Together, Busayavalasa and Aldred represent a powerful addition to the Marshall Cancer Center oncology team. Their presence underscores the CCN commitment to delivering advanced, compassionate cancer care.

"At UC Davis Health, we believe every patient deserves compassionate, expert cancer care close to home. We are proud to team up with Marshall Cancer Center to support patients and families in El Dorado County with trusted, high-quality oncology services," said Yulia Thorpe, director of the UC Davis Cancer Care Network.

How UC Davis Health is using AI to improve the quality of colonoscopies

UC Davis Health is using artificial intelligence (AI) to improve the quality of colonoscopy procedures, better track how doctors are performing and reduce patients' risk of developing colorectal cancer.

Colonoscopies are a key tool in preventing colon cancer because they allow physicians to detect and remove precancerous polyps before they become cancerous. While increasing access to screening is important, the quality of each procedure is just as critical.

"Not all colonoscopies are equal," said Juan Carlos Garcia, medical director of gastroenterology clinical services at UC Davis Health. "The goal isn't just to perform a colonoscopy, but to perform a high-quality colonoscopy that detects precancerous lesions early."

One of the most important measures of colonoscopy quality is the adenoma detection rate (ADR). ADR represents the percentage of procedures in which a physician finds adenomas, a common type of precancerous polyp.

Research shows that for every 1% increase in physician's adenoma detection rate, their patient's risk of developing colorectal cancer after a colonoscopy drops by about 3% and dying from colorectal cancer by approximately 5%.

"The data clearly shows that early detection leads to better outcomes," Garcia said. "Our goal is to identify areas for improvement and make sure patients receive the highest-quality care possible."

Closing gaps in data with AI

Until recently, accurately tracking ADR required manual data entry. After each colonoscopy, pathologists had to manually flag findings such as tubular adenomas in the electronic medical record. This extra step sometimes led to missing or incomplete data, making consistent performance measurement difficult.

To address this challenge, gastroenterologists at UC Davis Health implemented an AI-supported tool within Epic, the health system's electronic medical record. The tool automatically analyzes pathology reports and identifies the number of detected adenomatous polyps. By removing the need for manual input, the system produces more accurate, complete and reliable data.

"This tool allows us to measure performance in real time," Garcia said. "It ensures nothing is missed and gives us a more accurate picture of how well we are doing — as individual physicians and as an institution."

Clinical and patient benefits

The tool is designed to support quality improvement. Physicians can view their own detection rates and compare them with national benchmarks and department averages. When a physician's detection rates fall under approved benchmarks, the department works collaboratively to identify opportunities for improvement. These may include changes to technique, withdrawal time or equipment, while taking into consideration patient factors such as age and cancer risk.

For patients, higher-quality colonoscopies mean a lower chance of developing colon cancer after a screening.

"As an academic medical center, we are always advancing care through research and innovations," explained Garcia. "This tool improves patient safety and helps generate insights that can improve care."

Colorectal cancer is now the No. 1 cancer killer in adults under 50

UC Davis Health Chair of Colorectal Surgery, Ankit Sarin, answers questions

A new American Cancer Society study shows colorectal cancer is now the leading cause of cancer death in adults under 50 and is the only major cancer where mortality is still rising in younger adults. The recent death of "Dawson's Creek" actor James Van Der Beek at 48 highlights the risk for younger adults.

Ankit Sarin is chief of the UC Davis Division of Colorectal Cancer Surgery. Here, he answers common questions about colorectal cancer and how to detect it early, when it's most treatable.

Why is colorectal cancer becoming more common among younger adults?

Unfortunately, colorectal cancer is now the number one cause of cancer-related death in Americans under 50. To put that in perspective: Overall cancer deaths in people under 50 have dropped 44% over the past three decades. Colorectal cancer is the alarming exception. It is the only major cancer where death rates are rising in younger adults.

This is a major shift compared to previous generations. If you were born around 1990, your risk is dramatically higher compared to someone born in 1950:

- Two times the risk of colon cancer.
- Four times the risk of rectal cancer.

Ankit Sarin

We don't have all the answers yet, but evidence points to a combination of environmental exposures, dietary changes (particularly the rise in ultra-processed foods), sedentary lifestyles, obesity and shifts in the gut microbiome. Importantly, many younger patients have no family history at all, which is why awareness is so critical. Today, 1 in 5 colorectal cancer cases occurs in someone under 55.

Is colorectal cancer more dangerous in younger people?

The cancer itself is not necessarily more aggressive, but younger adults tend to be diagnosed much later — often because they don't expect their symptoms to be cancer. And sometimes because doctors don't either. The result is devastating: 60–70% of adults under 50 are not diagnosed until the cancer is already at an advanced stage.

When colorectal cancer is caught early, at a localized stage, over 90% of patients survive. That survival rate drops dramatically with advanced disease. James Van Der Beek had spoken publicly about initially dismissing changes in his bowel habits as dietary. That is a story we hear repeatedly from young patients. Early detection truly saves lives.

Recently, actress Catherine O'Hara died of a pulmonary embolism after being diagnosed and treated for rectal cancer. What is the difference between colon and rectal cancer?

The main difference is location:

- Colon cancer begins in the upper section of the large intestine.
- Rectal cancer starts in the final few inches before the anus.

Both start as polyps, share risk factors and are detectable — and often preventable — through screening. Rectal cancer more commonly causes rectal bleeding or noticeable stool changes, while colon cancer may initially present with anemia, fatigue or abdominal pain.

Treatment can differ significantly. Rectal cancer often requires radiation and chemotherapy before surgery; colon cancer usually does not. Rectal surgery is more complex due to the tight confines of the pelvic anatomy. Catherine O'Hara's case also highlights an important complication: Cancer increases blood clot risk. Her death from a pulmonary embolism was a direct consequence of her rectal cancer.

Most importantly, standard colorectal cancer screenings catch both types. Screen early.

What is the best way to prevent colorectal cancer?

The most important step is to get screened starting at age 45. This is now covered by insurance with no copay. A colonoscopy doesn't just detect cancer — it prevents cancer by removing precancerous polyps before they ever become dangerous. It is one of the only cancer-screening tools that is both diagnostic and preventive.

To increase your chance of not getting colorectal cancer:

- Eat a diet rich in fiber and limit ultra-processed foods and red/processed meats.
- Stay physically active and maintain a healthy weight.
- Limit alcohol and avoid tobacco.
- Know your family history. If a first-degree relative had colorectal cancer, talk to your doctor about starting to screen earlier.

What are the symptoms to watch for?

Some symptoms can be subtle. Here are symptoms you should never ignore:

- Blood in your stool (bright red or dark).
- Persistent changes in bowel habits, including diarrhea, constipation or narrowing of the stool.
- Unexplained weight loss.
- Fatigue.
- Abdominal pain or cramping.
- Don't assume you're "too young." Know the symptoms, listen to your body and stay on track with screening. Colorectal cancer is highly preventable — and highly treatable when caught early. If any symptoms last more than two weeks, talk to your doctor.

When should screening start for colorectal cancer?

For average-risk adults, screening now begins at age 45. This was lowered from 50 by both the U.S. Preventive Services Task Force and the American Cancer Society in response to the sharp rise in early-onset cases. The screening is covered by insurance with no copay.

You should start even earlier if you are at higher risk:

- Age 40, or
- 10 years before a first-degree relative was diagnosed (whichever comes first)

Here is a sobering local statistic: California ranks 50th out of 50 states in colorectal cancer screening rates, with only 53% of eligible adults up to date. That is not a resource problem — it is an awareness problem. And it is exactly why conversations like this one matter.

Is a colonoscopy the only accurate way to detect colorectal cancer?

Colonoscopy is the gold standard because it does two things no other test can do simultaneously:

- Detects cancer early, when survival exceeds 90%.
- Prevents cancer by removing precancerous polyps during the same procedure.

But there are other effective options:

- FIT (fecal immunochemical test) — a simple stool test done annually at home.
- Cologuard — a stool DNA test done every three years at home.

The best screening test is the one you actually complete. Your doctor can help you choose the right option based on your risk and preferences. If a stool test comes back positive, a follow-up colonoscopy is needed.

UC Davis Comprehensive Cancer Center leads in treating complex colon and rectum cancers with the latest therapies for the best quality of life. To learn more or book an appointment, call **916-734-5959**.

First-in-region advanced CT scanner now deployed at UC Davis Health 48X Complex

Imagine getting a CT scan that shows clearer details, reduces radiation exposure and makes it easier for doctors to differentiate between tissues more easily. That's the promise of photon-counting computed tomography (PCCT), which is now available at the UC Davis Health 48X Complex.

The new photon-counting technology is the latest diagnostic tool deployed by the Department of Radiology. It is the first in the region.

At the heart of the innovation is a special material that can detect X-rays with incredible precision. The maker of the computed tomography technology, Siemens Healthineers, calls the ingredient the purest cadmium telluride crystal in the world. The crystals help directly convert X-rays into an electrical signal, which is then used to create an image. The energy of each X-ray is measured, so spectral information is available for every scan, and the images are contrast-rich with high spatial resolution.

"The photon-counting CT is breakthrough technology that could transform medical imaging," said Cardiothoracic Imaging Section Chief Ahmadreza Ghasemiesfe. "Instead of blending all the X-ray energy together like traditional CT, this technology counts each photon and measures its energy. That means sharper images and more information for diagnosis."

Another benefit is greater efficiency, which means less radiation exposure, and that's especially important for children and patients who need multiple scans.

"Think of it like upgrading from black-and-white TV to full color. We can see things we couldn't before, which helps us diagnose conditions earlier and more accurately."

–ELIZABETH MORRIS, CHAIR OF THE DEPARTMENT OF RADIOLOGY

What makes the new scanner different?

Traditional CT scanners measure the total energy from X-rays in a broad way, but PCCT takes a more precise approach. It counts individual photons and records their energy. This allows doctors to see more detail and even separate materials — such as calcium and iodine — in the same scan. It also produces clearer scans around difficult areas, such as metal implants or dense bone.

"Think of it like upgrading from black-and-white TV to full color," said Chair of the Department of Radiology, Elizabeth Morris. "We can see things we couldn't before, which helps us diagnose conditions earlier and more accurately."

Cardiothoracic Imaging Chief Ahmadreza Ghasemiesfe with the new photon-counting CT scanner at UC Davis Health's 48X Complex.

Taking cancer detection to next level

PCCT has already been adopted at UC Davis Health for heart imaging, helping doctors spot tiny plaques in arteries. Its use is also being explored for cancer detection. As the technology counts each photon and measures its energy, it delivers spectral data. This creates virtual contrast maps that highlight tumors more clearly and often eliminates the need for separate scans.

It captures ultra-high-resolution images, down to 0.2-millimeter slices. This enables radiologists to detect tiny tumors and early metastatic spread that conventional CT may miss.

"We're excited about its potential in personalized medicine," Morris said.

Patients who want more information on the photon-counting CT and other imaging options at UC Davis Health may contact the Department of Radiology at **916-734-0655**.

Cancer center leads the region with latest advances in radiation treatment

New technology delivers precision-focused, patient-centered therapy to improve outcomes

Patients being treated with radiation therapy at UC Davis Comprehensive Cancer Center can now access the latest technology. The Accuray Radixact System is the first in the region to offer the precise, efficient and personalized radiation therapy.

The new system was unveiled at a celebratory ribbon cutting earlier this year. Cancer center leaders showcased how Radixact delivers radiation in a continuous 360-degree pattern and uses CT imaging to guide treatment. This enables clinicians to shape radiation beams to each patient's tumor with great accuracy while reducing the risk of damage to nearby healthy tissue.

The upgraded Radixact platform supports a wide range of cancers, including those found in the brain, head and neck, lung, prostate and female reproductive areas.

The system's arrival follows a renovation of the UC Davis Department of Radiation Oncology treatment suite, located in the lower level of the cancer center's south building on the UC Davis Health Sacramento campus.

"This new technology is engineered to improve accuracy, reduce side effects and make treatments more efficient — often in less time," said Andrew Harrell, radiation oncology manager. "The Radixact has real-time motion tracking, advanced imaging before each session and sophisticated beam-shaping tools that allow radiation doses to match the unique characteristics of each tumor."

"What makes Radixact so impactful is its ability to adapt to a patient's ever-changing needs at the point of care," said cancer center Physician-in-Chief David Tom Cooke. "For example, if a tumor shrinks, changing the patient's anatomy during treatment, the system's built-in imaging allows the team to adjust immediately, ensuring optimal care throughout the entire course of therapy."

> The new system replaces the department's linear accelerator.

Construction started in May 2025. The Radixact system is now fully operational, and the cancer center is scheduling patients for treatment.

A ribbon cutting for the Accuray Radixact System was held Feb. 3, 2026.

Folsom Medical Care Clinic earns national lung cancer screening center designation

ACR accreditation highlights Department of Radiology's commitment to safe, high-quality lung cancer screening

The new imaging center at the Folsom Medical Care Clinic has been recognized by the American College of Radiology (ACR) as a Lung Cancer Screening Center. This recognizes the Department of Radiology's commitment to safe, high-quality and patient-focused lung cancer screening services.

With centers now at multiple locations, UC Davis Health continues to be the only health system in the Sacramento region with ACR-designated Lung Cancer Screening Centers.

Why is the ACR designation important?
"This recognition reflects our ongoing commitment to delivering the highest standard of care to our patients," said Department of Radiology Chair Elizabeth Morris. "Early detection saves lives, and this designation affirms that we are providing lung cancer screening services that meet nationally recognized best practices."

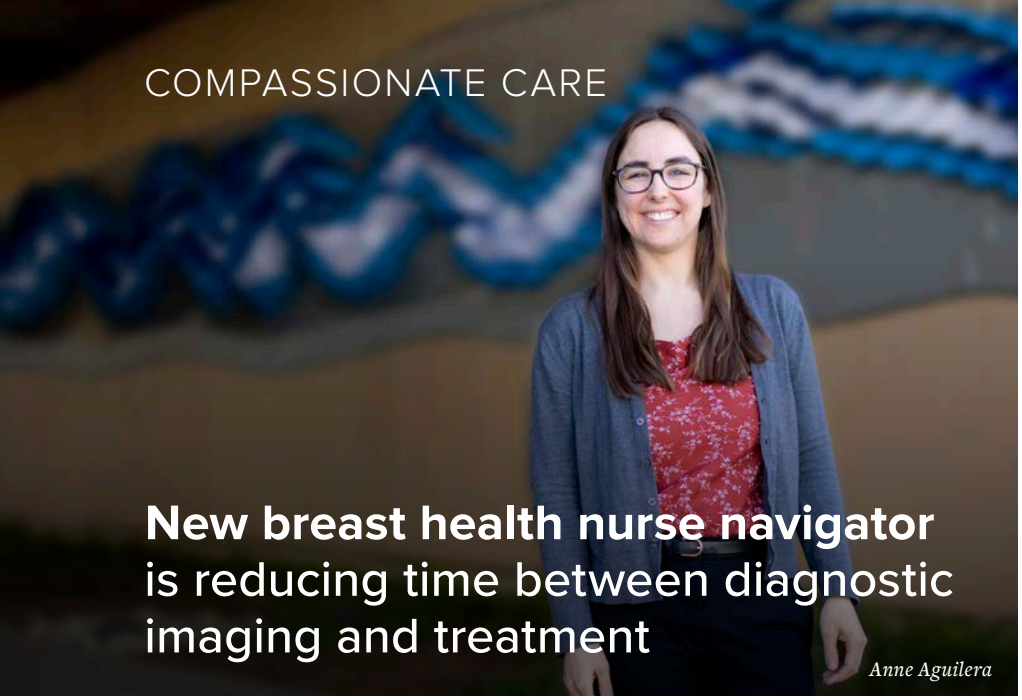
Being an ACR-designated Lung Cancer Screening Center means:

- An imaging program meets national standards for quality and safety.
- CT technology and screening protocols are thoroughly evaluated and continuously monitored.
- Patients benefit from a dedicated team focused on early detection — one of the most effective tools for improving lung cancer outcomes.

Commitment to ensuring quality and safety
"Lung cancer screening requires precision, expertise and advanced imaging technology," Morris said. "The ACR designation verifies that our protocols, equipment and staff training all meet strict national benchmarks designed to ensure accurate and reliable results."

The goal is to make lung cancer screening accessible, supportive and easy to navigate.

"This designation helps patients feel confident that they are receiving care from a team dedicated to early detection and compassionate service," said UC Davis Comprehensive Cancer Center Physician-in-Chief David Tom Cooke. Cooke is also founding chief of the Division of General Thoracic Surgery. "We are honored to receive this designation and remain committed to supporting our community with exceptional, patient-centered imaging care."



New breast health nurse navigator is reducing time between diagnostic imaging and treatment

Anne Aguilera

Care is improving for patients undergoing breast imaging. The Department of Radiology has added a dedicated breast health nurse navigator, Anne Aguilera. As a registered nurse who specializes in oncology and radiology, Aguilera is providing breast health education and support at some of the most emotionally challenging points in a patient's care.

"The addition of a breast health navigator represents a major step forward in how we support our patients during one of the most vulnerable points in their lives," said Department of Radiology Chair Elizabeth Morris. "This role will allow Anne to provide not only clinical coordination but also compassion, clarity and continuity."

One of Aguilera's primary responsibilities is reaching out to every patient scheduled for a breast imaging procedure. She gets in touch with those with abnormal findings who may not have direct contact with a radiologist. She also:

- Provides tailored information and educational material so patients know what to expect.
- Helps reduce patient anxiety through support and guidance.
- Identifies needs that could enhance comfort and safety, including interpreter services, anxiety medication and mobility support.

Emotional support and guidance

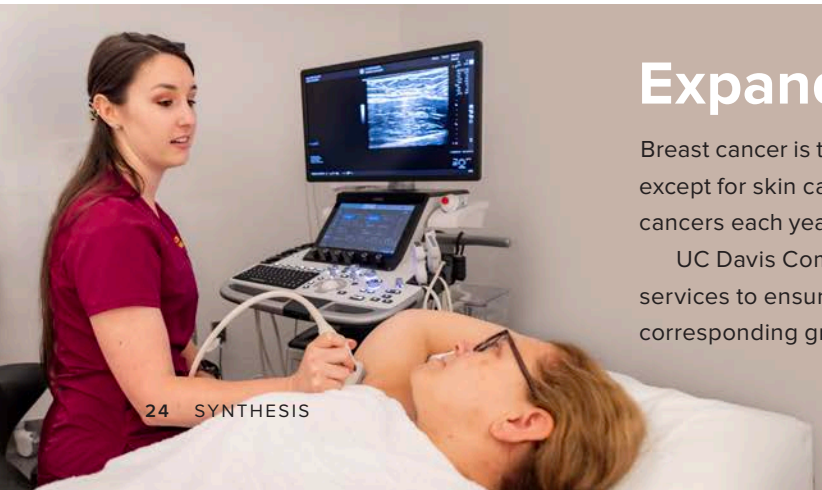
"What excites me most is the human connection this role restores," Aguilera said. "Before patients ever walk into the cancer center, they now have someone guiding them and educating them on their specific type of breast cancer and advocating for them. That early support makes a profound difference."

Many women find themselves in a distressing limbo after learning they have breast cancer but before they have met their oncology team. The navigator's involvement provides much-needed emotional grounding during this period. Her outreach offers early support, encouragement and a compassionate point of contact — helping close a critical gap in the patient experience.

"A breast cancer diagnosis involves many moving parts, and even small delays can feel overwhelming to patients," Aguilera said. "We want to ensure that imaging is completed quickly and thoughtfully, so patients can transition to breast surgery or medical oncology care without unnecessary waiting."

Preventing delays in cancer treatment

The navigator is monitoring all newly diagnosed breast cancer cases to ensure patients receive recommended breast MRI imaging before meeting with their surgeon or oncologist, ideally within two weeks of diagnosis. Understanding how far their disease has progressed is critical to guiding them to the next steps. This proactive approach helps prevent imaging-related delays in breast cancer surgery planning, ensuring patients move through the system as efficiently and safely as possible.



Expanding breast cancer care

Breast cancer is the most common cancer in women in the United States, except for skin cancers. It accounts for about 30% (or 1 in 3) of all new female cancers each year.

UC Davis Comprehensive Cancer Center is expanding its breast cancer services to ensure it can meet the growing population in the region and the corresponding growth in breast cancer diagnoses.

A clearer view of breast cancer: **Contrast-enhanced mammography**


Shadi Aminololama-Shakeri

UC Davis Health is expanding access to a next-generation breast imaging technique that gives a more detailed picture of potential cancer and with faster results.

The technology, called contrast-enhanced mammography, or CEM, has been implemented at UC Davis Health's new 48X Complex in Sacramento and the new Folsom Medical Care Clinic. The expansion is led by the Department of Radiology.

UC Davis Health was the first health system to offer the new technology in the Sacramento area when the advanced imaging was deployed at the UC Davis Health Placer Center for Health in Rocklin in 2025.

CEM combines traditional breast imaging with the use of intravenous contrast material to highlight areas of increased blood flow within breast tissue. These areas can be associated with malignancy, as cancerous tumors often develop new blood vessels to support their growth.

How contrast-enhanced mammography works

During the exam, an iodine-based contrast agent is administered intravenously. After injection, the mammography system captures images of the breast that are digitally processed, suppressing background tissue. This highlights areas where contrast has accumulated.

The resulting contrast enhanced images reveal functional information, such as increased vascularity, alongside detailed structural anatomy. This dual-energy technique helps radiologists identify suspicious lesions that may not be clearly visible on standard mammography alone.

Specific system installed

UC Davis Health has installed the Senographe Pristina mammography system at the three locations. Developed by GE HealthCare, it has the capability of producing both 3D images and contrast enhanced 2D images of the breast.

With 2D contrast enhanced imaging, doctors review standard mammogram images while also seeing where the contrast dye collects. This can reveal a specific area of concern.

With 3D imaging, also called tomosynthesis, the breast is scanned in many very thin layers. Similar to flipping through pages of a book, rather than looking at a single picture, it makes it easier to see through overlapping tissue and spot areas that might otherwise be hidden.

"Seeing how a finding responds to contrast dye, along with its appearance on a mammogram, gives us a clearer picture of what's going on," said Shadi Aminololama-Shakeri, chief of the Division of Breast Radiology. "This helps us better identify areas that may need follow-up and gives us greater confidence when assessing subtle changes, particularly in dense breast tissue."

Who benefits most from contrast-enhanced mammography

Contrast-enhanced mammography can be particularly valuable for women who require additional diagnostic evaluation beyond routine screening.

"Contrast-enhanced mammography is especially beneficial for women with dense breast tissue or individuals who cannot undergo breast MRI due to health reasons or because they have limited access," Aminololama-Shakeri said.

Contrast-enhanced mammography is also helpful for:

- Evaluating abnormal screening results
- Assessing the extent of known breast cancer
- Monitoring response to therapy.

Advancing breast imaging

By expanding contrast-enhanced mammography across its regional clinics, UC Davis Health is improving convenience for patients while increasing access to advanced imaging that supports more personalized and precise breast cancer detection and evaluation. This technology helps clinicians make well-informed decisions and enhances the overall quality of care.

Because the new mammography option also delivers faster results, it helps women stay on track with recommended breast imaging. Patients should first discuss this exam with their health care provider who can place an order, if needed. To learn more or to schedule an appointment for breast imaging services, UC Davis Health patients can call **916-734-0655 (option 2)**.

New study looks at pesticide exposure and bladder cancer risk among Hmong farmworkers

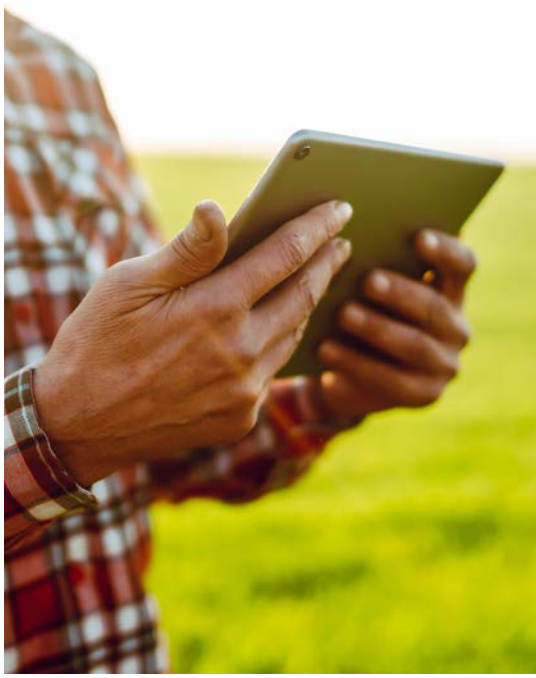
Hmong farmworkers in California's Central Valley are the focus of a new community-based research study examining how pesticide exposure may affect bladder health and cancer risk.

Paramita Ghosh, a biochemist, and Avery Braun, a urologist, both in the Department of Urologic Surgery, are leading the study. They hope to better understand the types and levels of pesticides used by small-scale Hmong farmers and the potential long-term health consequences of repeated exposure. Ghosh is also a professor with the Department of Biochemistry and Molecular Medicine.

UC Davis Comprehensive Cancer Center's Office of Community Outreach and Engagement (COE) has funded the unique year-long study as a joint venture with the First Church of God in Merced, which serves the local Hmong community.

Bladder cancer is a serious and often underdiagnosed disease that has been linked to certain chemical exposures, such as smoking, air pollutants and job-related chemicals, including pesticides. Small-scale farmers and workers may face unique risks due to frequent handling of pesticides and limited access to occupational health information. This project seeks to better understand those risks within Hmong farmers, a group that has historically been underrepresented in cancer research.

"Hmong are the most underserved population in Merced and their cancer burden is estimated to be six times greater than other ethnic groups," said First Church of God Assistant Pastor Nomtsia Xiong. "Any opportunity to develop a strategy to lower the cancer risk in our community is a great benefit to us."



Community partnership drives understanding

"This study is about listening as much as it is about learning," Ghosh said. "We want to understand what pesticides Hmong farmworkers are using, how often they are exposed, and how concerned they are about the effects on their health — particularly bladder health."

Pesticide use is often thought to cause neurological disorders and respiratory diseases — but it also affects bladder health. Ghosh said this is not talked about very much in the Hmong communities due to societal taboos regarding potentially embarrassing symptoms.

The project builds on earlier outreach conducted in collaboration with the COE and the First Church of God. Through this community partnership, the research team distributed a short questionnaire to Hmong farmers in rural areas of the Central Valley. The survey aimed to gauge both knowledge of pesticide exposure and potential indicators of bladder cancer within the community.

Early findings highlight areas of concern

While the initial response group was small, the findings highlighted important concerns. Of the eight individuals who responded, one person reported experiencing visible blood in the urine, a potential warning sign of undiagnosed bladder cancer. Other participants expressed strong interest in understanding the extent of their pesticide exposure and its possible health effects.

"The feedback from our first outreach highlights a meaningful opportunity for deeper engagement," Braun explained. "The community members are proactive about their health; they are ready to learn more and eager to connect with the right resources."

Based on these early insights, Ghosh's team and the First Church of God are proposing a collaborative research approach.

Hmong agricultural workers will not simply be research subjects, but active partners. The study aims to better understand community values, beliefs and priorities related to pesticide use and bladder health risks, including risk of bladder cancer, while also providing education and opportunities for dialogue.

Three-pronged approach to building the study's framework

1. Identify what pesticides are being used by small farmers and in what quantities.
2. Assess whether these pesticides may have harmful effects on bladder health.
3. Explore whether repeated exposure over time could contribute to the development of bladder cancer.

To achieve this, the research team will conduct a series of community workshops focused on pesticide use and its known health effects. These sessions will be followed by surveys or questionnaires designed to capture individual exposure histories and relevant health concerns. Importantly, the study also seeks to determine the feasibility of recruiting and retaining participants from the Hmong community, with the intention of developing a larger, more comprehensive study in the future.

"Our long-term vision is to build research that is culturally responsive and truly informed by the community," said Ghosh. "If we want to address cancer disparities, we have to start by understanding and respecting the lived experiences of the people most affected."

ASPIRE

ASPIRE: Historic study aims to understand cancer risk in Asian Americans

UC Davis enrolling Vietnamese and Hmong participants from Sacramento-area communities

Cancer is already the leading cause of death among Asian Americans, yet this group remains severely understudied in U.S. cancer research. The ASPIRE (Asian American Cohort Study), funded by the National Cancer Institute, is emerging as one of the most significant public health initiatives ever launched to understand cancer disparities among Asian Americans. Now the study has come to the Sacramento region.

Collaboration key to success of research study

UC Davis Comprehensive Cancer Center is one of 20 academic institutions across the country helping to recruit study participants.

The cancer center is working in collaboration with UCSF, which is leading the ASPIRE study on the West Coast.

"We are looking at whether factors such as stress, environmental factors and access to care may be impacting their chances of having cancer," said Moon Chen, UC Davis principal investigator for ASPIRE.

Chen's team launched its local recruitment campaign to the Vietnamese and Hmong communities in February at the Lunar New Year Têt Festival at Elk Grove Park. ASPIRE's bilingual/bicultural Vietnamese staff set up an information booth to talk about the study with festival visitors. Eligible participants were asked if they would like to enroll in the study.

To take part, participants must be:

- Asian or Asian American.
- Age 40-75.
- Never diagnosed with cancer.
- Currently living in the United States or a U.S territory.

Participants in the ASPIRE study will receive $25 for completing four surveys over 12 months. ASPIRE outreach staff will approach potential participants at gathering places for Asian Americans such as coffee shops, grocery stores and independent living units in the Sacramento area. Meanwhile, the Hmong Cultural Center of Butte County in Oroville will lead the effort to reach out to Hmong residents, who are more likely to live in rural areas and work in agriculture.

Rising up to meet a cancer research challenge

Asian Americans represent more than 30 ethnicities and speak more than 100 languages, yet research has historically combined them into a single category, masking critical differences. The ASPIRE study seeks to change that narrative.

ASPIRE is the first longitudinal cohort study focused on Asian Americans. The study plans to recruit 20,000 Asian Americans across six recruitment sites nationwide.

Unique cancers facing a diverse population

Despite perceptions that Asian Americans enjoy high socio-economic status and low disease burden, recent studies show rising rates of several cancers within this population. For example, nonsmoking Asian American women have disproportionately high rates of lung cancer, a phenomenon that remains poorly understood.

"We also know that certain subgroups of Asian Americans have higher risks of certain cancers such as cancers of infectious origins, which may explain why there are higher rates of gastric, liver and cervical cancers," Chen said. "There's another concerning new trend showing increasing rates of breast cancer among Asian American women younger than 50."

Chen added that these unexplained patterns underscore the need for a long-term, large scale study like ASPIRE.

By assembling the most comprehensive dataset ever collected on Asian American cancer risk, ASPIRE intends to deliver insights that will reshape national cancer prevention strategies. It also aims to empower communities, improve screening guidelines and inform culturally relevant public health interventions.

For more information about the ASPIRE study, please visit **aspirecohort.ucsf.edu** or call **916-734-9977**.

Free cancer screenings at **Oak Park Wellness Celebration**

UC Davis Health co-hosted the inaugural Oak Park Wellness Celebration this spring. The family-friendly community event on April 18 featured free head and neck cancer screenings and other wellness exams.

The celebration marked Head & Neck Cancer Awareness Month. UC Davis Health's Department of Otolaryngology partnered with University of the Pacific's Pacific Health Care Collaborative to organize the event.

Head and neck cancers are on the rise

More than 72,680 Americans this year will be diagnosed with head and neck cancer, which makes up about 4% of all cancers in the United States, according to the American Association for Cancer Research.

Head and neck cancers are types of tumors that develop in or around the throat, nose, sinuses, mouth or larynx (voice box). These cancers are more common in men than women.

"This is a devastating disease, but knowing the signs and symptoms to report can lead to earlier diagnosis, better outcomes and overall survival," said Beverly Garber, organizer of the free screening day and a UC Davis Health otolaryngology nurse practitioner. "Knowing how to detect and prevent this cancer is critically important. We hope to raise awareness by holding this free screening day."

Risk factors for head and neck cancer include:

- Alcohol use.
- Tobacco use.
- Human papillomavirus (HPV) infection.
- Poor oral health.
- Environmental and genetic factors.

Symptoms of head and neck cancer can include:

- Persistent lump in neck.
- Persistent sore throat or mouth sores.
- Difficulty swallowing.
- Hoarseness or voice changes.

Participants received dental and oral health screenings and a clothed physical exam of the head, face, ears, mouth and neck. UC Davis medical students, under the supervision of medical staff, performed the exams and asked participants questions about risk factors, symptoms and medical history. UOP dental students also gave free exams.

"We are excited about working with the University of the Pacific dental school on this important collaboration," Garber said. "Dentists and dental hygienists have become critical at spotting suspicious lesions in the mouth and referring their patients to UC Davis Otolaryngology and UC Davis Comprehensive Cancer Center oncologists for follow-up."

Free flu, HPV and COVID vaccinations were made available to eligible attendees, thanks to the Sacramento County Public Health Immunization Assistance Program.

Free resources for the community

Dental care kits were given to participants at the screening event. Health educators from UC Davis Comprehensive Cancer Center's Office of Community Outreach and Engagement hosted information tables and shared information about cancer prevention. Sacramento County Public Health educators provided education and resources on oral health, tobacco cessation and sexual health as well as information on how to receive the HPV vaccine. The CDC estimates 70% of all cancers of the throat (including tongue and tonsils) are due to HPV.

To learn more about head and neck cancer and UC Davis Comprehensive Cancer Center, visit this information page. UC Davis Health patients can schedule an appointment by calling **916-734-5959**.

UC Davis medical student Soroush Ershadifar and Otolaryngology fellow Anthony Sanchez perform a free head and neck cancer screening.

Unbreakable: The life and legacy that live on

Photos courtesy of the Duncan family.

When Tyson Duncan entered the world of cancer care, his family clung to one essential source of stability: a team of physicians, nurses and support staff who surrounded him with expertise and genuine compassion. They quickly became guideposts in an unpredictable landscape.

That's why, after their son died in 2024, Tyson's parents decided to establish a fund in his memory to help other families seeking care at UC Davis Comprehensive Cancer Center. Gifts to the Tyson H. Duncan Unbreakable Fund provide financial assistance to pediatric oncology patients and their families in need at the cancer center.

Cancer strikes twice, leading to one extraordinary fight

Tyson was diagnosed with Ewing sarcoma in early 2022 and later with secondary AML leukemia. His family said he faced each challenge with remarkable strength and grace, never complaining and inspiring everyone who knew him.

Tyson fought an incredibly brave battle, overcoming setback after setback with both physical and mental strength. His deep sense of loyalty guided him to protect his family and friends from knowing how much he suffered and struggled. He was a warrior to the very end of his days.

Luckily, the family lived close to the hospital, a convenience and a blessing that preserved Tyson's energy for the trials ahead. "We knew he would endure treatment challenges," his family said, "....and air travel or long commutes would be unnecessary with a premier comprehensive cancer hospital nearby."

> "Numerous questions arose, and we were able to rapidly speak to the team. We held the cancer center to the name 'comprehensive' and they delivered."
>
> –TYSON'S FATHER, GARRETT DUNCAN

Diagnosed at 21, Tyson was at the older end of pediatric medicine. He saw firsthand the youngest children in cribs and baby walkers, through young kids, teens and young adults trying to navigate cancer treatment. His family decided to establish a fund to honor his legacy as an unbreakable force who faced every challenge with courage and determination.

Through the Unbreakable Fund, Tyson's family carries forward his dream of helping children and families who are dealing with the challenges of treatment. For many, the financial

strain of cancer adds another layer of hardship to an already difficult journey. This fund honors Tyson's life by bringing hope and support to those who need it most. Support may include help with essential expenses such as travel, food and lodging during treatment. The fund is building toward endowment, and gifts will be used to make an immediate impact until the endowment level is reached.

The heart behind the hero

Tyson's story is far larger than any diagnosis. He was a bright, active, compassionate young man who filled rooms — and hearts — with his natural warmth. He grew up in Davis, attending Waldorf schools in both Davis and Sacramento. He later earned his associate degree from Sacramento City College before being accepted into the University of California to continue his studies. He loved sports, travel, his friends and his family. His loved ones said he was funny, artistic, respectful and fiercely loyal.

His father described him as a young man who seemed propelled by an internal fire from the very beginning. "He never walked, but he went straight from crawling to running. That's who that kid was," he said.

Tyson had a seriousness about him — an intensity paired with humor. "He was always serious, as many of you know if you played sports with him. Yeah, he could joke around. He had a sense of humor but was a pretty serious kid. He had places to be; he had agendas. He had things he wanted to do and wasn't going to waste a lot of time getting there," Garrett said.

Tyson carried that drive into every part of his life, even during treatment. He gravitated toward younger patients and their families, talking with children whose worlds had been upended and with parents who were learning how to stay strong. Their resilience deeply inspired him. In the middle of his second cancer, while most would be simply trying to get through each day, Tyson was focused on building something larger than himself: the foundation that would eventually become the Tyson H. Duncan Unbreakable Fund.

Lasting impressions

Those who knew him best remember that unshakable spirit vividly. His younger brother, Cameron, often saw Tyson as a kind of North Star. "That is just who Tyson was. He was always an inspiration to his peers," he said. "Even before he got cancer, but even more after because of his unbelievable strength and perseverance throughout his battles."

Coaches, friends and teammates echo the same sentiments. His basketball coach, Dean Stark, said, "I was always so blown away by his character."

His friend, Arron Chotzen-Jenner, noted that "Tyson made a lasting impression on whoever he met."

Garrett, reflecting on his son's friendships, said, "He surrounded himself with good humans and suffered no fools," a sign of the clarity with which Tyson approached life. Even after two cancers, relentless treatments and heavy setbacks, Garrett noted with deep admiration, "This kid was still unbroken after all that." And perhaps the most encompassing tribute: "He brought out the best in anyone paying attention. He fought all the way through."

Unbreakable, always

Tyson's life was shaped not by his cancer diagnoses, but by the qualities that defined him long before and long after: his steady courage, his generosity, his loyalty to others and the lasting impact he made on those around him.

Today, his influence continues through the fund established in his name, the memories held by family and friends, and the young patients who will benefit from the support he envisioned. In these ongoing contributions, Tyson's legacy endures — unmistakably and unshakably unbreakable.

Gifts by mail:

Please make checks payable to the UC Davis Foundation. In the memo line, please include: "Tyson H. Duncan Unbreakable Endowment."

Mail donations to: UC Davis Health Sciences Development and Alumni Relations.

Attn: Nebrisa Fish
PO Box 160186
Sacramento, CA 95816

Or donate online scanning this QR code

12th annual Crush Challenge returns Aug. 15th to support cancer research

Tickets are on sale for the Napa Valley food, wine and cycling event benefiting cancer research

Crush Challenge, the ultimate food, wine and cycling event in Napa Valley benefiting UC Davis Comprehensive Cancer Center, will take place Aug. 15. Over the years, the popular event has raised hundreds of thousands of dollars to help advance cancer center research into nontoxic treatment for lymphoma.

Hosted by the deLeuze Family Charitable Foundation and ZD Wines, the day starts at about 9:15 a.m. with a cycling event. Go to **crushchallenge.org** to register now for the ride through picturesque wine country.

Don't want to ride but still want to enjoy food and wine?
Purchase tickets online for the Food & Wine Garden in North Yountville Park. The all-inclusive experience includes samples from premium partners: 10 restaurants, 10 vintners and an ice-cold beer option for you to sip and savor your way through Napa Valley's finest.

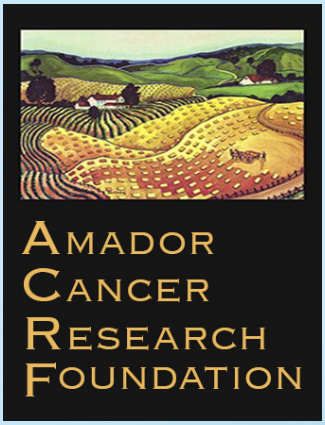
Entertainment includes dancing to a live band and a silent auction featuring top-tier wines and unique items.

The story behind the special fundraiser
Norman deLeuze, founder of ZD Wines, was the inspiration for Crush Challenge. Diagnosed with an aggressive cancer, the iconic Napa winemaker sought treatments beyond traditional radiation and chemotherapy with UC Davis oncologist Joseph Tuscano, who specializes in cancers of the blood. Money raised from the Crush Challenge funds Tuscano's research into nontoxic cancer treatment options.

Tuscano cycles with the UC Davis team. He's grateful for the growing interest in the Crush Challenge, which also raises awareness about the critical importance of cancer research.

"I see the faces of the victims of lymphoma and other blood cancers daily. But I also carry with me the kindness of those whose faces I will never see and yet they support us in this challenge to 'crush cancer.' I'm grateful because we cannot do it alone," Tuscano said.

A Toast to Hope: Fall Gathering at the Ranch raises funds for cancer research



A beloved Amador County tradition is back. The Amador Cancer Research Foundation will host its annual Fall Gathering at the Ranch on Sept. 26 at scenic Casino Mine Ranch in Plymouth. The event will raise funds to support leading-edge research at UC Davis Comprehensive Cancer Center. Last year's gathering brought in an impressive $60,000 and organizers hope to build on that momentum.

Proceeds from the fundraiser benefit the Christine and Helen Landgraf Memorial Fund, which awards annual research grants to UC Davis cancer researchers. The fund was established by John and Helen Landgraf in memory of their daughter, Christine, who died of Hodgkin's disease in 1971 at the age of 27.

In the wake of their loss, the Landgrafs committed themselves to making a difference for others facing cancer. What began in 1973 as a small, family-supported effort gradually grew into a lasting legacy to raise money for the Landgraf Award, annual grants given to cancer center researchers.

Guests at the Fall Gathering will enjoy wine, appetizers and the relaxed ranch setting while bidding on an array of silent and live auction items.

Watch for tickets to go on sale at **casinomineranch.com/events**.

St. Baldrick's creates shear shenanigans while supporting young cancer warriors

'Brave the Shave' raised $50,000 for pediatric cancer research at UC Davis Comprehensive Cancer Center

Every year around St. Patrick's Day is the annual St. Baldrick's Brave the Shave. This year's event raised $50,000 for pediatric cancer research at UC Davis Comprehensive Cancer Center.

Dozens joined the fight against childhood cancer by shaving their heads to stand in solidarity with young cancer warriors while raising money for cancer research. The event was held on March 14 at Westfield Galleria in Roseville, which plans to hold the event again next year.

Keaton's Child Cancer Alliance partners with the St. Baldrick's Foundation and Supercuts to raise money to support national pediatric cancer research, including local efforts at UC Davis Comprehensive Cancer Center.

The first St. Baldrick's head-shaving event took place on St. Patrick's Day 2000 as a challenge between three friends at a New York City bar. It has since grown into the world's largest charity funder of childhood cancer research. The name St. Baldrick's is a combination of the words "bald" and "St. Patrick's."

According to the St. Baldrick's Foundation, every two minutes a family learns the devastating news that their child has cancer. One in 263 children in the United States will receive a cancer diagnosis before turning 20 years old. While survival rates have improved due to research, for some children, there is still little hope for a cure.

"It is critical that we continue funding cancer research close to home," said Jessica Alonso, executive director of Keaton's Child Cancer Alliance. "This is why we are proud to contribute to the groundbreaking research at UC Davis Comprehensive Cancer Center."

St. Baldrick's FOUNDATION | CONQUER KIDS' CANCER

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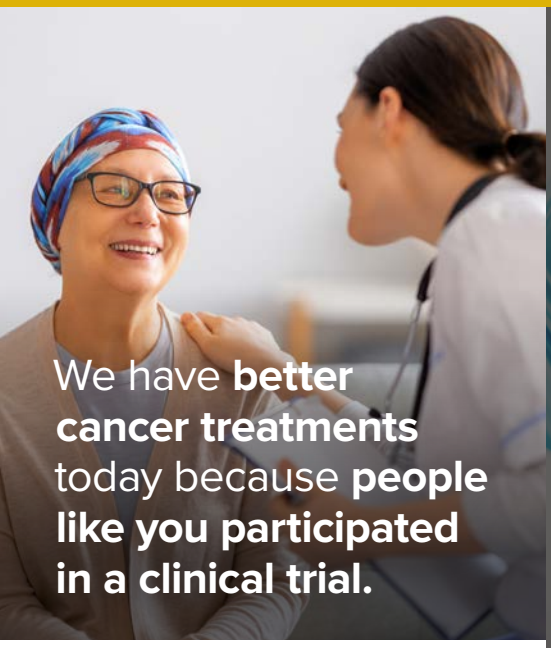

We have **better cancer treatments** today because **people like you participated in a clinical trial.**

If you're interested in exploring new treatment options, a clinical trial may be right for you. **Ask your doctor today about clinical trials.**

Breaking Barriers to Beat Cancer

UC DAVIS HEALTH | COMPREHENSIVE CANCER CENTER

NCI Comprehensive Cancer Center
A Cancer Center Designated by the National Cancer Institute

Synthesis — the art of bringing distinct elements together to form a cohesive whole — is the name of our magazine and our strategy as the Central Valley's only National Cancer Institute-designated comprehensive cancer center. Leveraging UC Davis strengths in innovative cancer models and technologies, precision therapeutics, transformative imaging and mitigation of cancer risks and disparities, we aim to reduce the cancer burden in our region and beyond. Uniting physicians, scientists and public health experts, we are committed to making cancer discoveries and delivering them quickly to patients so they have the best possible outcomes.

Synthesis — linking the best in cancer science to improve patients' lives — is our promise.