

Nanotechnology, cancer immunotherapy, artificial intelligence, and precision medicine have the potential to address major obstacles to treating cancer and reshape the landscape of cancer medicine. At the Center for Precision Radiation Medicine (CPRM), our faculty make amazing strides toward the future of personalized cancer care every day.



State-of-the-art imaging technologies visually represent neural tracts in the brain, allowing researchers to evaluate their architecture and function.

UC San Diego Health

**Moore's Cancer Center
at UC San Diego Health**
3855 Health Sciences Drive
La Jolla, CA 92093

cancer.ucsd.edu

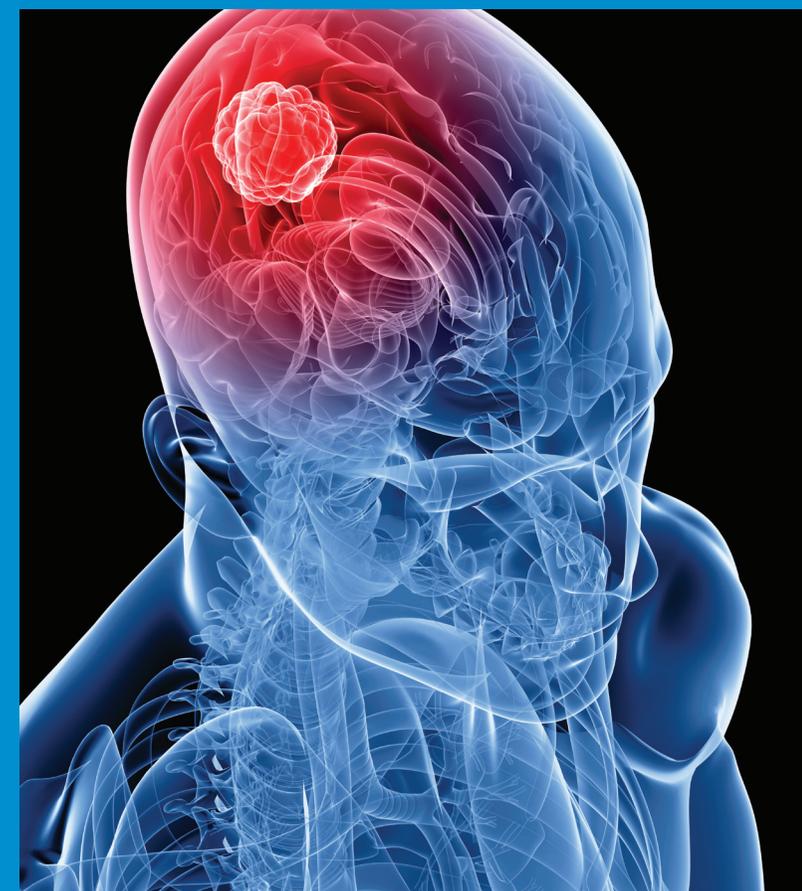
Your contribution to Moore's Cancer Center at UC San Diego Health also supports the Campaign for UC San Diego — our university-wide comprehensive fundraising effort to empower the next generation of innovators to blaze a new path toward revolutionary ideas, unexpected answers, planet-changing impact, and lifesaving discoveries.

The Campaign For UC San Diego

UC San Diego respects your privacy. If you would like to be removed from future UC San Diego Health Sciences fundraising communications, please contact us at optout-hsdev@ucsd.edu or 800-588-2734.

UC San Diego Health

Center for Precision Radiation Medicine



**HOW YOU CAN HELP ADVANCE PERSONALIZED
MEDICINE TREATMENTS AND TECHNOLOGIES**



Dear Friends,

At the Center for Precision Radiation Medicine (CPRM) within UC San Diego Altman Clinical and Translational Research Institute, we are developing and translating innovative precision cancer treatment. With your partnership, we can bring personalized, novel solutions to patients in San Diego, across the nation, and around the world.

The CPRM is home to internationally recognized faculty from across oncology and related fields. Our investigators lead visionary research programs, spearheading basic science and clinical research initiatives to assess and identify personalized approaches to cancer care. These efforts — and our partnerships with Moores Cancer Center at UC San Diego Health, UC San Diego School of Medicine, and other regional partners, including the California Protons Cancer Therapy Center — accelerate promising treatments from laboratory bench to patient bedsides, ensuring all patients have access to top-quality therapies.

We look forward to partnering with you as we work to deepen our understanding of cancer, facilitate forward-thinking education and care, and make novel, patient-centered treatments and world-class care possible for more patients.

Sincerely,

Loren K. Mell, MD

Director, Center for Precision Radiation Medicine
Professor and Vice Chair of Clinical and Translational Research
UC San Diego Department of Radiation Medicine
and Applied Sciences

What we do

Our visionary physician-scientists are leading groundbreaking investigations and collaborating with colleagues from across campus to accelerate forward-looking approaches and innovative treatments that bring new hope to patients and families here in San Diego and around the world.

Tailor-Made Cancer Therapy

Sunil Advani, MD, in collaboration with the late Nobel Prize-winning scientist **Roger Tsien, PhD**, received National Institutes of Health funding to develop a nanotechnology system that uses small molecules that bind to the surface of tumor cells to deliver targeted cancer therapies. These molecules can be selectively activated to increase treatment specificity and minimize side effects.

Slipping Past Checkpoints

Jyoti S. Mayadev, MD, and Dr. Mell are leading national multi-center clinical trials studying immunotherapy in combination with or as alternatives to chemotherapy to treat cancers caused by human papillomavirus. In addition, **Andrew Sharabi, MD**, is studying the process by which radiation stimulates T cell response through the release of activating tumor antigens when cancer cells die.

Intelligent Design

Kevin Moore, PhD, has developed a novel machine learning-based system called ORBITER, which uses an individual's medical history and that of other patients to identify the optimal treatment approach for each patient. Ultimately, such knowledge-based planning approaches could replace standard methods for predicting prognosis and developing treatment plans and enhance personalized cancer therapy on a global scale.

Connecting with Patients

James D. Murphy, MD, MS, created eContour, a sleek and user-friendly online tool designed to educate doctors in the effective delivery of quality, patient-centered care. And **Brent Rose, MD**, found that poor access to standard therapy leads to lower survival rates in underserved patients, including veterans, and is using creative approaches to bridge gaps and redefine care models for these communities.

Brain Trust

Jona Hattangadi-Gluth, MD, is exploring state-of-the-art restriction spectrum imaging to localize and spare memory pathways in the brain. And **Kevin Murphy, MD**, is advancing clinical trials into transcranial magnetic stimulation (TMS), which has potential for treating conditions including chemotherapy-induced cognitive decline, or "chemobrain," and radiation-induced brain injury.

You Can Make a Difference

The CPRM is leading the charge toward a cancer-free future, but philanthropic partnership is vital to continuing our momentum and reaching more patients. Your support can help advance visionary research initiatives, educate the next generation of cancer experts, and accelerate excellent clinical care.

To learn more or to support the CPRM, please contact Cassondra Randolph at clrandolph@ucsd.edu or **858-246-1685**.

ucsd.radmedicine.org/research-programs