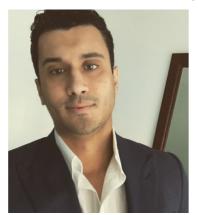
USC Norris Comprehensive Cancer Center
 March/April 2024, Issue 21

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The Patient Voice: Defying the Odds: Triumphs in the Face of Cancer



In June 2022, Eric Santos, a middle school teacher, received devastating news: he was diagnosed with colorectal cancer that had metastasized to his liver. When first diagnosed, his healthcare provider at the time gave him a grim prognosis, leaving him with little hope for survival. Thankfully, Eric decided to get a second opinion and was connected with Dr. Heinz-Josef Lenz at USC Norris in early July of that year. From the moment Eric met Dr. Lenz and his team, he knew he was in good hands and was filled with hope and a renewed strength to combat this disease.

"It was really the first time since getting my diagnosis that I had a feeling that 1) I could survive, and 2) if I was going to, Dr. Lenz would provide me with the best opportunity to live through this," said Eric.

His family and close friends formed a robust support network that played a pivotal role in helping him navigate his challenging treatment. After 14 rounds of chemotherapy, 5 rounds of radiation, and two surgeries to remove the primary tumor in the colon and the right lobe of his liver, he got the news every cancer patient hopes to hear: his scan in January 2023 showed no evidence of disease. He continues his care at USC Norris.



"My advice would be to go to USC Norris, because that's going to give you your best chance of survival," said Eric. "Especially in Southern California, that is the place to be."

9th Annual Quinn Brady Memorial Swing Against Cancer Golf Tournament



On April 8, 2024, the Annual Quinn Brady Memorial Swing Against Cancer Golf Tournament, which supports lifesaving cancer research at the USC Norris, took place at the La Quinta Country Club. Now in its ninth year, Bill and Lynn Poland, along with the phenomenal Swing Against Cancer Committee, chair the Swing Against Cancer Golf Tournament, where participants enjoy an afternoon of golfing, dining, and entertainment.

This year, the event raised over \$220,000, a new record for this event, bringing the total raised to date to more than \$1,390,000,

with all proceeds benefiting cancer research and the development of new cancer therapies at USC Norris.

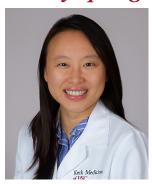
The most recent event featured hematologist Casey O'Connell, M.D., as the physician speaker who provided updates on her cutting-edge work at USC Norris, and a patient testimonial of a cancer survivor who received treatment at the Cancer Center.

The invaluable contributions of Bill and Lynn Poland, and the entire Swing Against Cancer Committee are immeasurable. Their unwavering dedication and passion for this event has been pivotal in advancing our mission to foster and integrate high impact research, education, community engagement, and personalized cancer care and make a cancer disease of the past. Click <u>HERE</u> to watch the capitvating video of the event.



Photo Credit: Shannon Wilsey

Faculty Spotlight



Kali Zhou, MD Translational and Clinical Sciences Program Member

Dr. Kali Zhou is a transplant hepatologist and Assistant Professor in the Division of Gastrointestinal and Liver Diseases at Keck School of Medicine at USC. She received her medical degree from Feinberg School of Medicine at Northwestern University, completed an internal medicine residency at the University of California, Los Angeles, and a T32 gastroenterology and transplant hepatology fellowship at the University of California, San Francisco, where she also completed a master's in clinical research.

"When I was in 2nd grade, I read a book about a girl who wanted to make the world a more beautiful place, so she scattered lavender seeds on the hills near her home. That story always stuck with me growing up and going into medicine was my way of making the world better," said Zhou. "One of the things I love about Hepatology is the wide spectrum of care we provide, from the sickest of patients in the ICU, to endoscopic procedures, to well visits after transplant. The day-to-day is always different, which keeps things interesting."

Her current research lies at the intersection of health disparities, spatial epidemiology, and liver disease/cancer, specifically with a focus on understanding how disparities are consistently driven by social barriers and social determinants of health. Her career goal is to develop effective, pragmatic, and efficient interventions that will ultimately improve equity and outcomes for patients with liver disease.

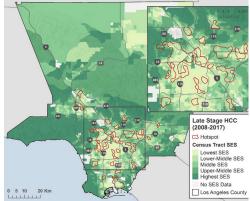
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"As a provider, it often feels that these barriers are not within our capabilities to overcome, but I believe we have a larger role than we think," said Zhou. "I hope my research can provide effective solutions to mitigate disparities and improve outcomes for my patients."

She is also grant funded to study the impact of immigration and acculturation on completing guideline-based hepatitis B virus metrics and to pilot a need-based Lyft-rideshare intervention to improve time to listing among liver transplant candidates.

"These patients must undergo frequent, rigorous testing to determine transplant candidacy, which can be extremely difficult to expeditiously complete among those who have unreliable transportation," said Zhou. "Providing them with Lyft rides might make this process easier and ease caregiver burden."

Moreover, in a study conducted by Drs. Kali Zhou and Myles Cockburn, they identified areas in LA County with the highest density of late-stage diagnoses of liver cancer, which they called "late-stage hotspots." They analyzed patients with liver cancer over a recent tenyear time period and mapped their location of residence across LA County. The most interesting finding was that these hotspots were largely concentrated in low-income neighborhoods. This discovery sparked the birth of The Liver Cancer Equity Project, which is led by Dr. Zhou.



"The Liver Cancer Equity Project seeks to answer the natural

follow-up question of why we are observing this geographic disparity," said Zhou. "We will build a multilevel dataset to explore specific contributors to our late-stage hotspots in order to develop an effective future intervention."

The Liver Cancer Equity Project is a study dedicated to understanding the complex reasons for more late-stage liver cancer diagnoses within Los Angeles County's low socioeconomic status communities. Patients with liver cancer will be asked to participate in the study and share information on their living conditions, healthcare access, and liver disease history through a detailed survey. The results will contribute to the development of effective and targeted intervention strategies to increase the early detection of liver cancer in at-risk adults living in the most disadvantaged communities.

THANK YOU TO OUR USC NORRIS VOLUNTEERS!



In honor of National Volunteer Week, we wanted to thank all the phenomenal volunteers at the USC Norris Comprehensive Cancer Center for their dedication, compassion, and time. Your volunteer work makes an extraordinary impact on the lives of our cancer patients and their families.

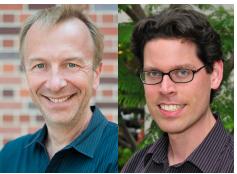
Honors and Recognitions



We're excited to announce that Dr. Chanita Hughes-Halbert, who is the Associate Director for Cancer Equity at USC Norris, is part of the National Cancer Institute (NCI) Center to Reduce Cancer Health Disparities (CRCHD) team of Cancer Equity Leaders (CEL). This diverse group of cancer leaders will reimagine and transform the future of cancer health equity. Learn about the other members of the CEL team, the CEL's objectives, and more by clicking <u>HERE</u>.



Drs. Casey O'Connell and Inderbir Gill, members of the USC Norris Translational and Clinical Sciences Program, were named Leaders of Influence: Top LA Doctors by the Los Angeles Business Journal. They were chosen based on a demonstration of impact made on the profession and on the Los Angeles community.





Congratulations to USC Norris members Drs. Peter Kuhn and Andrew MacKay for being named senior members of the National Academy of Inventors (NAI), a nonprofit member organization that encourages inventors in higher education. Election as an NAI senior member recognizes remarkable innovation producing technologies that have brought, or aspire to bring, real impact on the welfare of society. The honor also represents growing success in patents, licensing, and commercialization, while educating and mentoring the next generation of inventors. Learn more **HERE**.

Congratulations to Joi Torrence-Hill, chief of operations at USC Norris Cancer Hospital, part of Keck Medicine of USC, who was selected as a Los Angeles Business Journal Woman of Influence in Healthcare. The health care leaders listed in these pages were chosen by the Los Angeles Business Journal to be recognized for exceptional stewardship and achievement across the full spectrum of responsibility, exemplary leadership, the highest professional and ethical standards, and for contributions to the health and wellbeing of Los Angeles. Learn more <u>HERE</u>.



Congratulations to Dr. Ricky Bluthenthal, member of the USC Norris Cancer Control Research Program, and Dr. Peter Kuhn, member of the USC Norris Translational and Clinical Sciences Program, who were appointed as a Distinguished Professor and a University Professor respectively by the University of Southern California. The university selectively awards the Distinguished Professor title to those whose accomplishments have brought special renown to USC. The title of University Professor is selectively awarded based on multidisciplinary interests and significant accomplishments in several disciplines. Learn more **HERE**.

New Grants



USC Norris members Drs. Ite Offringa and Nicholas Mancuso received an Exploratory/Developmental Research Grant Award (R21) from the National Institutes of Health. Drs. Offringa and Mancuso have identified a small genetic difference (called a single nucleotide polymorphism or "SNP") that is rare in White/European individuals but is present in one third of Black/African American individuals. The SNP might affect the function of a protein involved in detoxification responses to tobacco smoke and may thereby affect the lung cancer risk of smokers carrying this SNP. If true, this will be important information supporting lung cancer screening and tobacco cessation efforts in the Black/African American community.



Dr. Dechen Lin, member of the USC Norris Epigenetic Regulation in Cancer Program, was awarded a major grant by the National Cancer Institute, to focus on the crosstalk between cancer metabolism and epigenetic regulation and study the primary forces transforming normal oral cells into head and neck squamous cell carcinoma (HNSCC) using advanced organoid technology and mouse models. His work holds the promise to fundamentally transform the understanding of cancer initiation of HNSCC, while simultaneously discovering novel intervention strategies and treatment targets for this cancer.



Dr. Kai Chen, member of the USC Norris Translational and Clinical Sciences program, was recently awarded R01 funding from the National Cancer Institute to spearhead research on advancing cancer cell proliferation PET imaging through droplet radiochemistry technology. Collaborating with experts in microscale radiochemistry, Dr. Chen aims to refine the synthesis of PET tracers tailored for imaging cancer cell proliferation. This breakthrough promises to facilitate PET tracer production on a large scale. Additionally, Dr. Chen plans to conduct preclinical investigations to evaluate the diagnostic and treatment response monitoring potential of these PET tracers across multiple cancer types, laying the groundwork for future clinical trials.

Scientific Advances and Discoveries



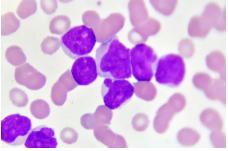
Large-scale study explores genetic link between colorectal cancer and meat intake

Published in the journal <u>Cancer Epidemiology</u>, <u>Biomarkers &</u> <u>Prevention</u>, a new study supported by the National Institutes of Health and led by USC Norris members, analyzed data on red and processed meat intake from 29,842 people with colorectal cancer and 39,635

people without cancer.

Drs. Mariana Stern and Jim Gauderman, members of the USC Norris Cancer Epidemiology Program, and their teams found that those who consumed more red or processed meat faced, respectively, a 30 or 40% increased risk for colorectal cancer. Using genome-wide data, they also identified two genes, HAS2 and SMAD7, that altered cancer risk levels based on red or processed meat consumption levels. Learn more about this study <u>HERE</u>.

"These findings suggest that there's a subset of the population that faces an even higher risk of colorectal cancer if they eat red or processed meat," said Dr. Stern.



USC Norris researchers find genetic variant contributing to disparities in childhood leukemia risk

Acute lymphoblastic leukemia (ALL), the most common childhood cancer, disproportionately affects children of Hispanic/Latino origin in the United States. Published in the journal <u>Cell Genomics</u>, Drs. Adam de Smith and Charleston Chiang, members of the USC Norris Cancer Epidemiology Program, revealed a key genetic variant contributing

towards the increased risk, as well as details about the biological basis of ALL. The variant, located on the IKZF1 gene, helps explain why Hispanic/Latino children face a higher risk of acute lymphoblastic leukemia and offers insights about what causes the disease. This work was done in collaboration with Dr. Vijay Sankaran, an associate professor of pediatrics at Harvard Medical School and attending physician at the Dana-Farber/Boston Children's Cancer and Blood Disorders Center. Read more by clicking <u>HERE</u>.

"Combined with the fact that around 30% of Hispanic/Latino people in the United States carry this gene variant, but it's basically absent in people of predominantly European ancestry, we think it's an important contributor to the increased ALL risk among this group," said Dr. de Smith.



Phase 2 results from the CheckMate 9X8 randomized clinical trial show promising results for new combination therapy in colorectal cancer

Published in the *Journal for Immunotherapy of Cancer*, Dr. Heinz-Josef Lenz, Deputy Director for Research Programs at USC Norris, and his team conducted a CheckMate 9X8 trial in which they found that Nivolumab plus standard-of-care therapy showed numerically higher

progression-free survival rates after 12 months, a higher response rate, and more durable responses in patients with metastatic colorectal cancer, compared with standard-of-care therapy alone, with acceptable safety. Further investigation to identify subgroups of patients with metastatic colorectal cancer that may benefit from nivolumab plus standard-of-care therapy versus standard-of-care therapy in the first-line setting is warranted.

"Even though the combination of chemotherapy and bevacizumab and nivo did not reach its endpoint, it did show some promising data in longer PFS and response rates. These data warrant further studies to identify patients who benefit the most from this combination therapy," said Dr. Lenz.



USC Norris member delves into the origin and future directions of retinoblastomas

Retinoblastoma is a childhood retinal cancer that occurs in approximately 6 of 100,000 live births, with 250 to 300 new cases per year in the United States and approximately 8,000 worldwide. Published in the *New England Journal of Medicine*, Dr. David Cobrinik, member

of the USC Norris Epigenetic Regulation in Cancer Program, provides an overview of studies performed in the past decade that have led to fundamental insights into carcinogenesis, cell-cycle regulation, the genetic basis of cancer, and tumor-suppressor genes, as well as to advances in therapy.

"Our growing understanding of the genesis of retinoblastoma may enable the development of improved therapies for recurrent and metastatic tumors, and deeper understanding may enable the prevention of retinoblastoma in children with a genetic predisposition," said Dr. Cobrinik



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Contact Us

Have something to contribute to Community for a Cure? Send it to Hinde.Kast@med.usc.edu

To learn more about giving to USC Norris, please contact Minhaal M. Nathani, Executive Director of Development, at Minhaal.Nathani@med.usc.edu

Learn more about the USC Norris Comprehensive Cancer Center on our website: <u>https://uscnorriscancer.usc.edu</u>