

Thank You to Our Nurses!

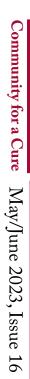
Nursing is a work of the heart, and the care that every single oncology nurse at USC Norris provides to our patients is invaluable. At USC Norris, we have over 150 oncology nurses in our clinics, day hospital, procedural areas, and in-patient units coordinating the countless aspects of patient care and advocating for our patients throughout their entire cancer journey. Oncology nurses help our patients and their loved ones through and beyond their cancer diagnosis, often forming lifelong relationships that continue years after their last treatment.

In celebration of National Nurses Week, that took place from May 6th to May 12th, we would like to say THANK YOU to our dedicated oncology nurses whose compassion can be as powerful as any treatment we provide. We truly could not provide the exceptional level of care that we do without every one of our phenomenal nurses.

Honors and Recognitions



USC Norris members Drs. Jennifer Tsui, Albert Farias, and Juliet Emamaullee received 2023 Mentoring Awards. The USC Mentoring Awards honor faculty members who contribute to an engaging, supportive, and inclusive academic environment through their mentorship of students and faculty.





Dr. Chanita Hughes Halbert, Associate Director for Cancer Equity at USC Norris, recently graduated from the Executive Leadership in Academic Medicine (ELAM) program. This program offers an intensive one-year fellowship of leadership training with extensive coaching, networking and mentoring opportunities aimed at expanding the national pool of qualified women candidates for leadership in academic medicine, dentistry, public health, and pharmacy. Congratulations!



We are so proud of Dr. David Freyer, member of the USC Norris Cancer Control Research Program, who has been awarded the National Cancer Institute (NCI) Director's Award under the Division of Cancer Treatment and Diagnosis, for co-leading the NCI National Clinical Trials Network (NCTN) Adolescent and Young Adult Working Group in developing and implementing NCTN adolescent to young adult cancer trials.



Dr. Evanthia Roussos Torres, member of the USC Norris Tumor Microenvironment Program, has been awarded the Rising Star Scientific Investigator Award by the Albert Einstein College of Medicine. This award honors a graduate who has been recognized as an outstanding investigator in the early career stage with accomplishments in the field of biomedical research. Congratulations!



Congratulations to Dr. Kai Chen, member of the USC Norris Translational and Clinical Sciences Program, for being selected as the Vice President-Elect for the Radiopharmaceutical Sciences Council of Society of Nuclear Medicine and Molecular Imaging (SNMMI). The council promotes and encourages basic research and applied technology in the radiopharmaceutical sciences and provides the SNMMI information relating to the radiopharmaceutical sciences.

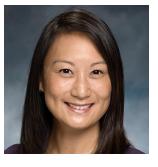
New Grants



Congratulations to Dr. Josh Neman, incoming Associate Director for Cancer Research Training and Education Coordination at USC Norris and Scientific Director of the USC Brain Tumor Center, who was awarded a \$50,000 grant to help cure pediatric brain tumors. His grant will fund work that will develop safer and more effective therapies for medulloblastoma, ultimately decreasing the suffering for pediatric patients on several fronts, increasing survival, and preserving their sensitive brains.



Dr. Julio Camarero, member of the USC Norris Translational and Clinical Sciences Program, was awarded the Melanoma Research Alliance Established Investigator Award to fund his work focused on the therapeutic targeting of Hdm2/HdmX E3 ligase in melanoma. Developing selective, potent, and affordable specific Hdm2/HdmX E3 ligase inhibitors will mark a new era in developing novel peptide-based therapeutics to prevent and treat metastatic melanoma.

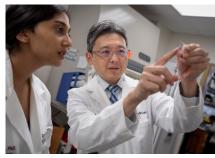


Dr. Jennifer Tsui was awarded a major grant by the National Institute on Minority Health and Health Disparities to fund research focused on assessing cervical cancer healthcare inequities in diverse populations. Co-led by Dr. Tsui and Dr. Adana Llanos at Columbia University, this study recruits from the Los Angeles Cancer Surveillance Program and the New Jersey State Cancer Registry. Other USC Norris contributors include Drs. Chanita Hughes Halbert and Lihua Liu.



Congratulations to Dr. Chanita Hughes Halbert who was awarded a two-year grant from Merck that will allow researchers at the USC Norris Comprehensive Cancer Center to develop and implement multilevel data driven strategies to engage patients and providers and identify NCI-supported trials to enhance participation in disparity populations.

Scientific Advances and Discoveries



USC research identifies biomarker that may predict treatment response to chemoimmunotherapy

Published in *Cancer Research Communications*, Dr. Fumito Ito, leader of the USC Norris Translational and Clinical Sciences Program, and his team have identified a biomarker that indicates which patients with non-small cell lung cancer will respond well to chemoimmunotherapy. The T-cell biomarker, which can be detected with a blood test,

could help identify early in the treatment process which cancer patients will benefit from the combination of chemotherapy and immunotherapy and which are unlikely to see results. For more information regarding this scientific discovery, click <u>HERE</u>.



By combining two different types of next-generation sequencing, we found a way to characterize and monitor patients'T-cells. Next, we plan to use this analysis in a larger cohort to see if patients with other cancers will respond in a similar way."

– Fumito Ito, MD, PhD



New USC study shows immigrant adults with liver cancer have higher survival rates than those born in the US

Published in the *Journal of the National Cancer Institute*, USC Norris members Drs. Kali Zhou, Lihua Liu, Mariana Stern, Wendy Setiawan, Norah Terrault, and Myles Cockburn identified a previously unrecognized disparity in survival after a diagnosis of liver cancer across all major racial/ ethnic groups, with immigrants having better survival compared to those

born in the US. This study is one of the first to robustly address birthplace as a predictor of overall survival for adults with HCC and provide important estimates of HCC survival by region of birth. To read the full publication, click <u>HERE</u>.

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Liver cancer is one of few cancers with increasing deaths. We identified a novel disparity by birthplace, whereby immigrants with liver cancer demonstrated better survival than their U.S.born counterparts. This was true across different racial/ethnic groups. This finding is important as liver cancer rates are rising among U.S.-born and understanding why immigrants have better outcomes may help us create strategies to improve the survival of those born here."

– Kali Zhou, MD



New study demonstrates the use of Artemis inhibition as a new therapeutic strategy for acute lymphoblastic leukemia

In collaboration with laboratories at the Children's Hospital Los Angeles, USC Norris members Drs. Michael Lieber, Yong-Mi Kim, Chih-Lin Hsieh, and Deepa Bhojwani demonstrated the use of Artemis inhibition as a new therapeutic strategy for acute lymphoblastic leukemia (ALL) and identified promising novel compounds for this Artemis inhibition.

Inhibitors of the enzyme Artemis would cause ALL cells to suffer sufficient and selective DNA damage to slow down the ALL cells without affecting normal cells. This strategy eventually may lead to less toxic therapies for ALL. To read the full publication, click <u>HERE</u>.

"

Our progress on a new strategy for acute lymphoblastic leukemia has taken its first major step. We need to complete several more key steps before we can bring this therapeutic approach to the point of helping patients, but we are optimistic. This project has been an excellent example of cooperation between USC Norris Comprehensive Cancer Center and Children's Hospital of Los Angeles and shows what can be accomplished with a well-formulated strategy plus the National Cancer Institute's Therapeutics Division support (NCI NExT Program)."

-Michael Lieber, MD, PhD



USC Norris researchers demonstrated myeloid-derived suppressor cells as a predictor of outcomes in breast to lung-metastasis

Myeloid-derived suppressor cells (MDSC), which are cells that have the ability to suppress immune responses and expand during cancer, infection, and inflammatory diseases, play a prominent role in the tumor microenvironment. Published in *Cancer Immunology Research*, USC

Norris members Drs. Evanthia Roussos Torres and Adam MacLean, demonstrated the importance of myeloid derived suppressor cell dynamics as a crucial predictor of outcomes in breast-to-lung metastasis and a possible therapeutic target. To read the full publication, click <u>HERE</u>.

"

A quantitative understanding of the tumor-MDSC interactions that influence disease progression is critical, and currently lacking. Our results illustrate the importance of MDSC dynamics as a crucial predictor of outcomes in breast-to-lung metastasis and a possible therapeutic target."

-Evanthia Roussos Torres, MD



Community Outreach and Engagement:

Our USC Norris Office of Community Outreach and Engagement (COE) serves as a bridge between our community and USC Norris scientists, driving catchment area-relevant research across the continuum from cancer prevention to the development of novel diagnostics and therapies to cancer survivorship. Over the past two months, our USC Norris/Lazarex Cancer Wellness Hubs pop-up has been present at both the Weingart East Los Angeles YMCA and the Anderson Munger Family YMCA in Koreatown. Additionally, our COE office hosted HPV vaccine clinic staff trainings at AltaMed clinics, and attended the 33rd Festival of Life and the Caravan of Hope, two events that celebrate all cancer survivors and raise cancer prevention awareness. Moreover, the USC Norris Comprehensive Cancer Center/Lazarex Cancer Wellness Hub participated in Take Action for Mental Health L.A hosted by the Los Angeles County Department of Mental Health. At all events, our COE office provided educational materials on cancer prevention, cancer screening tests, clinical trials, and other cancer-related information and resources specific to the needs of the community in a variety of languages.

Furthermore, on Saturday, June 17th, 2023, our COE Office, the Office of Community Initiatives at Keck School of Medicne of USC, as well as the Lazarex Cancer Wellness Hubs and CaRE2 programs, the Men's Cancer Network Inc., and the Los Angeles County Department of Public Health collaborated with Hammer and Nails Grooming for Men in West Hollywood to discuss men's health and cancer wellness, raise awareness of prostate cancer and screening methods, and offer free vaccinations.

USC Norris Cancer Research Day – May 11, 2023



The USC Norris Comprehensive Cancer Center is an innovative leader in the cancer field, setting a global standard for cutting edge research that is accelerating the ways in which we prevent, control, and cure cancer. On May 11, 2023, USC Norris hosted Cancer Research Day, an event showcasing the transformative and groundbreaking cancer research being conducted by our exceptional scientists, researchers, physicians, and learners to our USC scientific and patient community. Organized by Drs. Yves DeClerck and Josh Neman, the event was attended by approximately 200 people.

"As we reflect on the success of our first annual Norris Cancer Research Day conference, we are filled with renewed determination and a sense of shared purpose," said Dr. Neman. "The event has not only deepened our understanding of cancer and its cause, biology, and treatment, but also has fostered collaboration, inspired innovation, and provided a platform for meaningful dialogue. Armed with the knowledge and connections forged during the day-long conference and poster session, we at the USC Norris Comprehensive Cancer Center continue our collective pursuit of improving outcomes and transforming lives in the realm of cancer research and treatment for patients."

The morning sessions, chaired by Drs. DeClerck and Neman, started with a presentation on the USC/ CHLA Cell Therapy Program, a new initiative that drives the translation of early-stage research into commercially viable and scalable therapies that can reach thousands of patients in need. Next was a series of faculty presentations focused on the revolutionary and life-saving basic, translational, and clinical research being conducted at the cancer center.

The afternoon included an interactive poster session, which provided an opportunity for faculty, post docs, and graduate students to present on all of the exciting laboratory and clinical science that is ongoing at the cancer center. Posters showcasing the latest advancements in cancer research and care at the USC Norris cancer center filled the hallways and conference room of the lower ground floor in the Harlyne J. Norris Research Tower. The afternoon session ended with awards given to the three best posters, decided upon by a panel of judges.

This event was a powerful reminder of the immense progress being made in the fight against cancer.

33rd Festival of Life

USC Norris celebrates the courage and strength of their cancer survivors and families at the 33rd annual Festival of Life



The thundering sound of the USC Fight Song, piercing through the brass and percussion instruments of the USC Trojan Marching Band, signaled the beginning of the 33rd Festival of Life. The sound echoed throughout all of Pappas Quad at the Health Sciences Campus.

The event, held on the beautiful morning of Saturday, June 3rd, celebrated the strength, resilience, and tenacity of cancer survivors and their families. USC Norris Comprehensive Cancer Center and Hospital hosts this annual event, which



included moving speeches from cancer survivors and an awe-inspiring dove release.

In keeping with tradition, the Tree of Life was installed near the event check-in area, enabling attendees to honor loved ones who have survived, are currently battling, or have lost their lives to cancer by leaving uplifting words of survivorship. Additionally, patients and caregivers shared notes of appreciation with members of their support system from their cancer journey on the Festival of Life scroll.

W. Martin Kast, PhD, leader of the USC Norris Tumor Microenvironment Program and a professor of molecular microbiology and immunology, obstetrics and gynecology, and urology at the Keck School of Medicine of USC, served as master of ceremonies. The event included opening remarks by Steven Grossman, MD, PhD, the deputy director for Cancer Services at the USC Norris Cancer Center, and Joi Torrence-Hill, MHA, FACHE, the chief of hospital operations for the USC Norris Cancer Hospital.



"Surviving cancer is an extraordinary feat, one that demonstrates your unwavering strength, courage, and determination," said Torrence-Hill. "Your journey has inspired countless others and serves as a beacon of hope for those who continue to fight. We are celebrating YOU, your triumphs, and the immense significance of this milestone in your lives." Huyen Q. Pham, MD, a gynecologic oncologist and director of the Gynecology/Oncology Clinic at Keck Medicine of USC, and an assistant professor of clinical obstetrics & gynecology at the Keck School, also spoke about updated information on treatment advances and new cancer research. In addition, Dr. Pham shared his experiences as a physician.

Cancer survivors, including Jared Lipscomb, a leukemia cancer survivor, and Julie Clauer, a colorectal cancer survivor, shared their cancer journeys, inspiring all those in attendance with their bravery, resilience, and strength.

"I know survivorship looks different for everyone, and I know survivorship is a gift not everyone receives, but I do believe that the moment we get that diagnosis, we become survivors," said Lipscomb. "Getting through a single round of chemo or radiation makes us survivors. Being able to hold on one more day makes us survivors. If this community has taught me anything, it is that strength can be found when you least expect it. Today's celebration of survivorship is a reminder that each day is a gift, and I am so lucky and grateful to be here, alive and able to celebrate with all of you."



Led by Judy Stark, a twenty-two-year cancer survivor and volunteer at the cancer center and cancer hospital, and Awa Jones, chief nursing officer at the USC Norris Cancer Hospital, cancer survivors were invited to stand amid applause during the event as a show of celebration and support, a tradition that takes place every year. Cancer survivors ranging from twenty years or more to those who are just beginning their survivorship were honored and received a roaring round of applause from all in attendance. Additionally, everyone in attendance at the Festival of Life applauded the patients currently undergoing treatment at USC Norris Cancer Hospital in a heartwarming, inspiring display of community and support.

The conclusion of the event was signaled by the annual tradition of the release of the doves. During this moment, the Bayou Brass Band played "Reach Out and Touch (Somebody's Hand)" by Diana Ross. Doves are a symbol of hope, and by releasing the doves that day, attendees not only celebrated the cancer survivors and patients who battle their cancer every day, but also remembered those lost along the way.

"At USC we 'Fight On.' To all the cancer survivors out there, keep fighting on," said Dr. Kast in his closing remarks.

Faculty Spotlight



Bodour Salhia, PhD, leader of the USC Norris Genomic and Epigenomic Regulation Program, director of the Preclinical Models Shared Resource

As a translational scientist, Dr. Salhia utilizes her broad understanding of the mechanisms that underlie tumorigenesis to develop better ways of detecting and treating diseases like cancer.

Her current research focuses on developing improved models and treatments for brain metastasis, which is a brain tumor that originates from primary cancer and spreads to the brain, particularly from lung and breast cancer. Her lab conducts research on experimental therapeutics for brain metastasis, utilizing patient-derived xenografts and cell lines to identify novel treatment methods for this challenging disease.

continued on page 9 ...

"As a translational scientist, I frame and structure my research around unmet medical needs because I want to ensure that I am addressing problems with clinical significance," says Dr. Salhia. "My goal is for my research to fill existing gaps, such as ovarian cancer screening and risk assessment, and have a direct impact on patient care. Striving for that impact is my main goal and what drives me every day."

Another area of great importance that Dr. Salhia and her team are focused on is developing cell-free DNA methylation liquid biopsies for early detection and recurrence risk monitoring. Liquid biopsies are performed on fluids like blood instead of tissue. Dr. Salhia and her team are working on developing an ovarian cancer risk assessment liquid biopsy that can be used for diagnosis and screening. Dr. Salhia also serves as the research lead for the Eileen McGeever Breast Cancer Survivorship Program at USC Norris. The goals of this multi-ethnic program are to validate another cell-free DNA methylation liquid biopsy, but this time it focuses on detecting micrometastatic residual disease that may be undetected by mammograms or other imaging techniques and is likely to cause recurrence. The project also aims to study social and behavioral determinants of health in order to consider non-biological factors that may also contribute to a woman's risk of recurrence. The research team will conduct this study in a cohort of 1,000 women from different ethnic and racial backgrounds, leveraging the <u>USC Norris Population Research Core</u> and the <u>USC Norris Data Science Core</u>.

This research builds upon the work of Dr. Salhia and her team in The Bench with Bedside Initiative, an innovative program created by Dr. Salhia. It is a direct-to-patient recruitment approach that offers a translational approach to conducting cancer research. An important component of The Bench with Bedside Initiative is the focus on a new model of research, where patients and researchers build a closer relationship founded on transparency and ongoing engagement. This approach is being utilized within the Eileen McGeever Breast Cancer Survivorship Program.

"Approximately 10-15% of breast cancer patients will develop metastatic breast cancer, which is associated with over 90% of breast cancer-related deaths," says Dr. Salhia. "Determining a woman's risk of recurrence will reduce breast cancer mortality by providing physicians an opportunity to intervene with additional surveillance and treatment. It can also empower women to make important health decisions. Our study has the promise to deliver a personalized and holistic recurrence risk assessment that incorporates biological, environmental, social, and behavioral risk factors for breast cancer survivors across a multi-ethnic cohort."

The Patient Voice: Julie Clauer



1,903 days ago, Julie Clauer was living in Chicago, enjoying time with her family and newborn seven-month-old. She had always been healthy and there was no reason to believe that she had any major health issues. Additionally, she had no family history of anything. Suddenly, Julie started experiencing severe abdominal pain, and went to the emergency room where she was given a CT scan. A couple of hours later, the ER doctor came back with results Julie was never expecting. She was told she had stage four colorectal cancer that had metastasized to her liver. She couldn't believe it.

continued on page 10 ...

Once diagnosed, she immediately went into surgery for her colon. During her recovery, she had six weeks to find an oncologist who would guide her treatment plan moving forward. She and her husband visited seven oncologists located in Chicago and Los Angeles, as she had family here. The last oncologist she visited was Dr. Heinz-Josef Lenz at the USC Norris Comprehensive Cancer Center. From the moment Julie walked into Dr. Lenz's office, she knew she had found the right oncologist and her family moved to Los Angeles for her to be in his care.

"As soon as he left the room, we knew he was the one," said Clauer. "It was super clear that from a communication and philosophical standpoint, that he was the right match for me. I knew I was going to get that same first treatment, but if I wanted to have a chance for the future, as the prognosis was not good, I needed somebody who really was going to treat me as if I was in that survival group. And that's what he did."

When Julie was initially diagnosed, she was given a 12 percent chance of survival. Thanks to Dr. Lenz and her entire team of physicians and surgeons at USC, Julie has been able to combat her cancer for the last five years. She continues to undergo cancer treatment at USC Norris.

"Everything regarding my treatment at USC Norris has been remarkable," said Clauer. "And now, here I sit, five years later, being in that 12 percent. I know that if it hadn't been for the choices made along the way, that we made together, and the recommendations and care from Dr. Lenz, his nurse practitioner Taline Khoukaz, and my entire team at USC, including all my surgeons, radiation oncologist and nurses, I wouldn't be sitting here in that 12 percent, still thriving as a patient and a person in life."

Earlier this month, Julie spoke as a cancer survivor at the 33rd Festival of Life, hosted by USC Norris cancer center and hospital. Her strength, resilience, and tenacity inspired all those in attendance.

"I have a 'Thank You Cancer' list that currently has 92 items on it," said Clauer. "Don't get me wrong, I really, really dislike cancer, but this list includes so many good things that have been brought into my life as a result of being diagnosed. Whenever I get really frustrated about my diagnosis or I'm having a bad day, I'll refer to my list and think about something else that came into my life because of cancer. At the top of that list is the team at USC Norris."

Why Your Gift Matters



"The need to give. I have a very strong need to give," says Judy Glick, a retired special education teacher. **"There are so many negative things happening in the world, and I want to do good things."**

Judy worked as a teacher for over twenty years. She began her career teaching primary grades, which included kindergarten through third grade. However, after noticing a need in her community, she earned a master's degree in remedial reading. She became a special education teacher, helping her students' overcome challenges and reach their full potential until her retirement.

Similarly, ever since Judy was twenty years old, she has observed a need to support

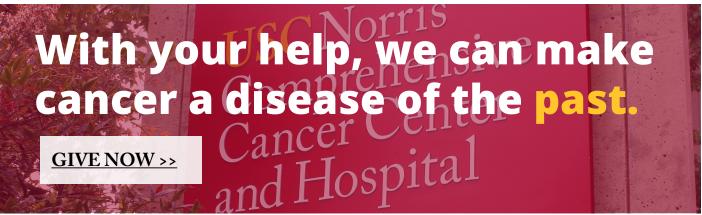
the advancement of cancer research due to the destructive nature of the disease on the human body. She gave her first gift to USC Norris to support Dr. Ite Offringa's lung cancer research, a disease that has impacted her family personally.

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Both of her parents had lung cancer, with one parent passing away as a result and the other surviving lung cancer after being diagnosed many years later. The Offringa lab studies the way in which the environment causes lung cancer by affecting the epigenome (the layer of information on top of the DNA that gives each cell type its unique identity). They have also developed a model to study the most common type of lung cancer, called lung adenocarcinoma, which arises in the air sacs of the lung. In addition, they are developing immunotherapy for small cell lung cancer, the most aggressive type of lung cancer.

"Dr. Offringa inspired my first gift. I was very impressed with her research, her dedication, and her fervor," said Glick.

Donors like Judy are vital in advancing cancer research forward. Thanks to Judy, Dr. Offringa has been able to utilize her support to accelerate innovative cancer research for lung cancer that will aid in the development of new drugs and therapies for the disease.



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To learn about the latest discoveries and news from USC Norris, please follow us on Facebook, Instagram, and Twitter. To connect with us, open your phone's camera app, face it towards the QR code, click on the link that appears, and click the "Follow" button located at the top.



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 <u>Minhaal.</u> <u>Nathani@med.usc.edu</u>

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