

COMMUNITY

for a **CURE**



Happy Holidays from the USC Norris Comprehensive Cancer Center!



Fifty years ago, the National Cancer Institute (NCI) designated the USC Norris Comprehensive Cancer Center as one of the nation's first eight comprehensive cancer centers. In the five decades since, our dedicated physicians and scientists have been leading the fight to make cancer a disease of the past. USC Norris has revolutionized cancer research, treatment, and prevention. Multidisciplinary teams provide the latest evidence-based care at USC Norris Cancer Hospital, a 60-bed hospital, as well as outpatient clinics throughout Los Angeles and Orange counties. Explore how USC Norris is igniting discovery for new ways to prevent,

diagnose early, and treat cancer for all people by clicking [HERE](#).

None of this would be possible without our exceptional faculty, staff, volunteers, and philanthropic friends who all play a vital role in making everything we achieve possible. We extend our heartfelt thanks and genuine appreciation to all of you for your tireless work, steadfast determination, and unwavering dedication, which inspire and drive our mission forward. We are deeply grateful for everything you do to make a difference in the lives of our cancer patients and their loved ones.

We extend our warmest wishes to you and your loved ones and hope you all have a joyous holiday season filled with warmth and moments of celebration. No matter the holiday celebrated in your home this season, we hope it is filled with peace, joy, and love. May the new year bring you success, happiness, and health.

The Patient Voice – Mars Robles



Mars Robles was an all-around athlete whose life took an unexpected turn in 2020 after what seemed like an ordinary day. He had just completed a challenging race, but the next day his right leg felt unusually sore and weak. Assuming it was a minor strain, Mars took the time to rest. A few months later, Victoria Vargas, his girlfriend, noticed a hard lump on that same leg. Believing it was a muscle spasm, she attempted to massage it out, but the pain was unbearable for Mars. Concerned, Victoria encouraged him to go the emergency room the next day, where Mars was referred to Dr. James Hu at the USC Norris Comprehensive Cancer Center. There, an MRI and full body scan revealed a devastating diagnosis: synovial sarcoma, a rare and aggressive type of sarcoma. He was 26 years old at the time.

Mars' treatment journey was grueling and relentless. He underwent multiple rounds of chemotherapy to shrink the tumor. Surgery was performed to remove the tumor, and once he recovered from surgery, he went to radiation. Despite aggressive intervention, the sarcoma proved persistent. Recurrences followed one after another, each more challenging to treat. Mars faced every setback with courage and positivity, but the disease continued to progress. Sadly, his cancer progressed to a terminal stage, and after a recent admission to the USC Norris Cancer Hospital, he returned home to spend his remaining time surrounded by loved ones and family. As a devout Jehovah's Witness, Mars found great strength in his faith during this cancer journey. Sadly, Mars Robles passed away on December 1, 2024.

When Mars was admitted at the USC Norris Cancer Hospital, he was told by his oncologist that based on his current bloodwork at the time, he had anywhere between two days and two weeks to live. After hearing this news, Mars and his fiancé Victoria decided to marry in the hospital chapel on Sunday, November 3, creating a moment of love and commitment amidst their shared sorrow. The hospital staff, particularly Diana Andrade-Dege along with their friend Angela Cho, came together with compassion and care to organize Mars and Victoria's wedding in the chapel and make sure every detail was perfect. Their efforts created a heartfelt moment, allowing Mars and Victoria to celebrate their eternal love surrounded by the warmth and support of those who cared for him. Their walk down the aisle became a beautiful moment that will stay with everyone who witnessed it. A beautiful tribute video was created by Viva Nelson and showcased at the wedding to honor their relationship over the last four years. Watch it [HERE](#).



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“As I sat there, I caught a glimpse of her through the stained-glass windows of the chapel doors, I could already see her beauty shining through, and it took my breath away,” said Mars. **“I couldn’t wait for those doors to open. When they finally did, and she stepped through, it was like a vision, she was more stunning than I could have ever imagined. Watching her walk down the aisle toward me, every step bringing her closer, and then standing together to exchange our vows – that was my favorite moment and one I will never forget.”**

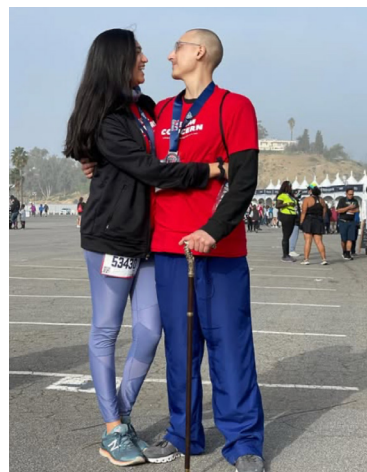


Mars and Victoria first met in the kitchen of his childhood home back in 2014. His brother Ivan was the spark that ignited their love story, planting the seed of connection that grew into the beautiful relationship they had. Before their relationship began, they were friends who crossed paths during a few serendipitous encounters and Super Smash Bros video game showdowns, never realizing what the future had in store for them. Everything changed at a race. After crossing the finish line, she saw Mars, and she felt a gravitational shift pulling her towards him. In that moment, her heart whispered, “He’s the one.” Their bond only deepened as they faced Mars’ diagnosis together, becoming a couple on July 25, 2020, after Mars’ first round of treatment.

Over the next four years, their relationship was a testament to their enduring love for one another and unshakable commitment.

“The moment that really stood out to me was when I rounded the corner, and I saw the look in his eyes,” said Victoria. **“In that instant I knew he saw me as the most beautiful wife. The expression on his face made it all worth it. I will never forget it. I will cherish every moment Jehovah gives us together, knowing our time together is precious.”**

Despite his own battle with cancer, Mars left an extraordinary impact at USC Norris through his selfless dedication as a volunteer and patient advocate. He spent countless hours offering support to fellow cancer patients, sharing his story to inspire hope, and helping others navigate the challenges that come along with a cancer diagnosis. Support groups were extremely helpful for Mars during his cancer journey, particularly the Adolescent and Young Adult (AYA) Cancer Program. The mission of this program is to improve health outcomes and quality of life of adolescents and young adults with cancer through supportive care and research that address their unique medical, physical, psychosocial, spiritual, financial, and legal needs. With the encouragement and support of the AYA Cancer Program, Mars was able to powerwalk two 5Ks over the span of two years, despite the surgery to remove his sarcoma having significantly affected his mobility. Additionally, through this program, Mars connected with Genevieve (Viva) Nelson and Dr. Jacek K. Pinski, who introduced him to the Institute for Arts in Medicine Program at Keck Medicine of USC and USC Norris, where he worked for some time. This program is committed to enhancing the role of healing through music, visual arts, technology, and language arts. Moreover, he was an active participant in the USC Norris Cancer Survivorship Advisory Council, which facilitates the journey from diagnosis to survivorship for cancer patients and their caregivers through advocacy, education, and support for the advancement of cancer research.



“Life is about living, even in the face of challenges,” said Mars. **“When you are undergoing cancer treatment, you’ll discover there are times to rest and times to rise. During the times right after treatment, listen to your body and your doctors and let yourself heal. But when the better days come along, don’t waste them, go out and live life to the fullest. Being diagnosed with cancer teaches you that time is precious and to make every moment count in the time you have left.”**

Mars’ legacy of resilience, compassion, and unwavering determination will continue to inspire everyone at USC Norris for many years to come, and his presence will be deeply missed by all who had the privilege of knowing him. Take a moment to watch this beautiful video, a heartfelt tribute celebrating the life of Mars Robles and his beautiful spirit. Click [HERE](#) to watch.

Rose Court Visits USC Norris



On November 21, the Pasadena Tournament of Roses 2024 Royal Court made its annual visit to USC Norris, with the six princesses and Rose Queen. The visitors included Queen Lindsay Charles, Westridge School, and princesses Lisette Parker, Maranatha High School; Saniyah Brunston, John Muir High School; Lara Georgian, Mayfield Senior School; Natalia Pradhan, Flintridge Preparatory School; Simone Ball, Arcadia High School; and Kate Kelly, La Cañada High School.

The Tournament of Roses Royal Courts have visited USC Norris for more than 20 years, offering the young women the opportunity to tour the USC Norris Cancer Hospital and learn from our clinicians and researchers.

Honors and Recognitions

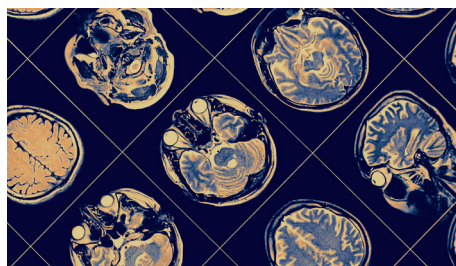


Congratulations to Dr. Charleston Chiang, member of the USC Norris Cancer Epidemiology Program and associate professor of Population and Public Health Sciences, who was selected as the recipient for the Dean’s Early Career Award for Excellence in Mentoring by the Keck School of Medicine of USC. Awardees are chosen for their exceptional dedication and impactful contributions across a range of disciplines. They embody the Keck School of Medicine’s unwavering commitment to clinical excellence, diversity, mentorship, and fostering a culture of inclusion within USC’s academic community. Learn more [HERE](#).



Congratulations to Drs. Heinz-Josef Lenz, Valter Longo, and Paul Thomas who were included in the Highly Cited Researchers list from Clarivate for 2024. The list identifies scientists who have demonstrated significant influence through publication of multiple highly cited papers during the last decade. See the full list [HERE](#).

Scientific Advances and Discoveries



USC Norris researchers uncover master switch that restores effectiveness of Tumor Treating Fields

Tumor Treating Fields (TTFields) use low-intensity electric fields to disrupt cancer growth and are approved for multiple cancers, including aggressive brain cancer such as glioblastoma. However, cancer stem cells can develop resistance to this treatment over time. Published in [*Cancer Research*](#), USC Norris members Drs. David Tran and Bodour Salhia have uncovered a key “master switch” behind this resistance involving two key proteins—EP3 and ZNF488. These proteins form a complex that allows cancer stem cells to survive and renew themselves, fueling resistance to TTFields. Remarkably, by blocking the EP3-ZNF488 axis, scientists can not only restore the effectiveness of TTFields in cancer cells that had previously become resistant, but also preemptively halt the development of resistance altogether. This discovery is not limited to glioblastoma, as the EP3-ZNF488 axis was also found in other cancers, suggesting the same resistance mechanism could be at work in various cancers, potentially offering a new target for improving treatment outcomes in many cancers.

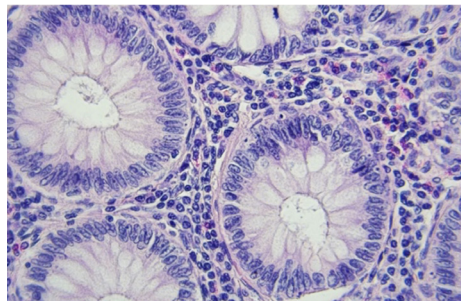
“A highly selective EP3 inhibitor DG401, developed for a non-cancer disease, has demonstrated safety in humans, suggesting potential safety for this approach in cancer patients. Thus, this study opens new avenues for immediate applications targeting this new cancer stem cell axis in glioblastoma and many other cancers.” said Dr. Tran.



First genome-wide comparison of vapers and smokers finds similar DNA changes linked to disease risk

In the most comprehensive study of its kind published in the [*American Journal of Respiratory Cell and Molecular Biology*](#), USC Norris member Dr. Stella Tommasi analyzed virtually the entire genome in the cells of study participants using a state-of-the-art genetic sequencing technique and discovered that vaping shows similar DNA changes to smoking—changes that are linked to the development of cancer. Even though vaping exposes you to fewer toxic chemicals than smoking, these DNA changes suggest it still poses significant health risks. Learn more about this study [HERE](#).

“Our findings indicate that the changes in DNA methylation observed in vapers may contribute to the development of disease, including cancer. These findings have significant implications for public health and tobacco regulation that aim to keep vaping products away from young people, who are a particularly vulnerable population,” said Dr. Tommasi.



New study explores new insights into innate resistance for immunotherapies in colorectal cancer

Traditional immunotherapies, known as immune checkpoint inhibitors, have transformed cancer care by helping the body’s immune system fight cancer like it does other diseases. Published in the *Journal of ImmunoTherapy of Cancer*, Dr. Heinz Josef Lenz, Deputy Director for Research Programs and co-director for the Rosalie and Harold Rae

Brown Center for Cancer Drug Development at USC Norris, found evidence that targeting CD47, a protein that is part of the innate immune system, could be a key step in fighting colorectal cancer. It is one of the first indications that targeting part of the innate immune system, combined with traditional immunotherapy drugs which work on the adaptive immune system, could be more effective in fighting colorectal cancer. Read more about it [HERE](#).

“Our research highlights CD47 as a pivotal player in colorectal cancer, not only evading immune detection but also driving tumor aggressiveness. These insights open new doors for therapies targeting the innate immune system in combination with existing treatments,” said Dr. Lenz.



Study demonstrates new precision combination therapy approach in non-small cell lung cancer cells and tumors expressing Onc-p53 alleles

Lung cancer is the second most common cancer in both men and women in the United States. Published in *Cancer Research Communications*, Drs. Jorge Nieva, Steven Grossman, and

Kranthi Chougoni revealed a breakthrough in treating non-small cell lung cancer (NSCLC) with p53 gene mutations. By targeting the stress these cancer cells are under, proteasome inhibitors (PIs) were 6 to 15 times more effective in killing them. Combining this with other treatments, like drugs that target cell suicide pathways and chemotherapy, showed even greater results. This research opens up the possibility of new treatments that could give patients better outcomes. This research could lead to life-saving therapies in the future.

“We discovered that the reason these drugs are so effective is because of something called oxidative stress—basically a type of damage caused by too much oxygen inside the cells. In the mutated cancer cells, this stress triggered a process that leads to their death. And by combining this treatment with other drugs, like a BH3-mimetic and chemotherapy, we saw even better results. This is an exciting step forward in understanding how we can target certain lung cancers more effectively,” said Dr. Nieva.

With your help, we can make cancer a disease of the past.

[**GIVE NOW >>**](#)

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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: <https://uscnorriscancer.usc.edu>