









Chasing a Cure for One of the Deadliest Cancers

As a professor and chairman of the Cal State Los Angeles Mechanical Engineering Department, Darrell Guillaume spent his days explaining complex concepts. So, when he began losing control of his speech in early 2016, he knew something was wrong. "What I wanted to say didn't match the words that actually came out," explains the 59-year-old.

A CT scan in St. Jude's Emergency
Department revealed a mass on his
brain and emergency surgery the next
morning by a St. Jude neurosurgery team
confirmed the diagnosis—a glioblastoma
(GBM), an aggressive form of brain cancer
that offers a five-year survival rate of just
5 percent.

A dramatically different approach

Shortly after surgery, Darrell and his wife Andrea, a professor of education, met with David Park, MD, Medical Director, Oncology Services and a board-certified medical oncologist at the St. Jude Crosson Cancer Institute, who encouraged Darrell to consider an out-of-the-box treatment in addition to radiation and chemotherapy. The innovative treatment, called Optune, uses electrodes attached to the scalp to target glioblastoma cells with rapidly alternating sequences of low-intensity electrical frequencies. The result is the disruption of glioblastoma cells' ability to divide and multiply without impacting slower-growing healthy brain cells.

Early research shows an increase in threeyear survival rates from 16 to 21 percent, and at five years, a doubling of survival rates to 13 percent. "We decided that if Optune could add even a few months and allow me to see our son graduate from medical school, then we were all in," explains Darrell, who retired after his diagnosis.

Typically worn 18 hours a day, Darrell wears the device for more than 23 hours, removing it only to shower. "Dr. Park gave us some advice that changed our whole outlook," explains Andrea. He said, "If you're a betting man, don't bet on GBM. But if you're a player, then play to win."





The gift of time

Darrell not only saw his son graduate from medical school, he watched his second son get married, celebrated his 35th wedding anniversary with Andrea, and most recently, held his first grandchild. He and Andrea finished visiting all 50 states, went to Ireland, and walked over 4,000 miles together—all with Darrell wearing a bucket hat over his Optune device that makes it almost unnoticeable, except for a small group of wires extending to a battery inside a backpack. And according to Andrea, they're not done yet.

"Dr. Park is the hero of our story," she says, explaining that it's difficult to imagine a more knowledgeable or insightful physician. "Every single day is a gift."

A notoriously difficult cancer to treat, Optune represents the first advance in glioblastoma outcomes in over a decade. Experts at the St. Jude Crosson Cancer Institute are now researching its use in lung cancer with brain metastasis. "Optune offers an entirely different way of treating cancer," explains Dr. Park, who says that for some patients, like Darrell, it may even offer a cure. Remarkably, four years after his diagnosis, Darrell has no visible signs of disease.

But an across-the-board cure is still in the future. "Until then, we'll continue to search for improvements from every angle: from better surgical techniques to new immunotherapies and more successful targeted therapies," Dr. Park explains.

About the St. Jude Center for Neuro-Oncology

Within the award-winning St. Jude
Crosson Cancer Institute, surgeons
and specialists dedicated to a specific
diagnosis come together to create
highly-specialized programs in areas
from breast cancer to lung cancer—
offering our patients the most advanced
care available, close to home.

With highly-skilled experts in neurosurgery, neuro-oncology, neuroradiology, medical oncology, radiation oncology and oncology research our Center for Neuro-Oncology offers the full-range of medical, surgical and investigational advances.

To learn more about our program or to make an appointment call (714) 446-7181.

Advancing Cancer Treatment through Research

Ongoing research and clinical trials are creating breakthroughs in cancers once thought insurmountable—and St. Jude is a leader in bringing these benefits from the lab to the bedside. Through partnerships with some of the nation's top research consortiums, we offer patients from throughout Southern California access to many of the most promising and aggressive therapies available.

"Research at St. Jude has helped change the standard of care for cancers from lung to advanced breast cancer," explains William Lawler, MD, Director of Clinical Research at the St. Jude Crosson Cancer Institute, who says immunotherapies and targeted therapies are two of the most exciting improvements in cancer treatment in decades. "Yet only a small handful of these therapies have finished the FDA-approval process, most are available only through clinical trials."

St. Jude cancer experts are at the forefront of using next-generation sequencing technology to identify the cellular signature of an individual's cancer, often allowing patients to benefit from clinical trials that target the specific genetic mutation driving a tumor's growth.

Clinical trials currently underway include many cancer types and various stages of diagnosis. Below are a few of the open trials. For a complete list of current research trials and requirements, please call the St. Jude Oncology Research Department at (714) 992-3000 ext. 4332.

Bladder/Urothelial Cancer

Phase III, randomized, open-label, multi-center, global study of first-line durvalumab in combination with standard of care chemotherapy and durvalumab in combination with tremelimumab and standard of care chemotherapy versus standard of care chemotherapy alone in patients with unresectable locally advanced or metastatic urothelial cancer. NCT03682068. NILE.

Breast Cancer

Phase III, multicenter, randomized, open-label trial to evaluate efficacy and safety of ribociclib with endocrine therapy as an adjuvant treatment in patients with HR pos, HER2-neg patients. NCTO3701334. NATALEE.

Phase III trial to evaluate the efficacy and safety of MK-3475 (Pembro) as adjuvant therapy for TNBC with ≥ 1 cm residual invasive cancer or positive lymph nodes after neoadjuvant chemotherapy. *NCTO2954874*.

Phase III trial with Elacestrant Monotherapy vs. SOC for ER+/HER2- advanced breast cancer following CDK4/6 Inhibitor Therapy. *NCT03778931. EMERALD*.

Brain Cancer

Phase 2, open-label study of ABI-009 (nab-Rapamycin) in bevacizumab-naïve patients with recurrent high-grade glioma and in patients with newly diagnosed glioblastoma. *NCTO3463265*.

Lung Cancer

Phase III, multicenter, randomized, double blind, placebo controlled study evaluating the efficacy and safety of canakinumab versus placebo as adjuvant therapy in adult subjects with stages II-IIIA and IIIB completely resected non-small cell lung cancer (NSCLC). NCT03447769.

A study of neoadjuvant atezolizumab plus chemotherapy versus placebo plus chemotherapy in patients with resectable stages II, IIIA, or select IIIB non-small cell lung cancer. NCT03456063. IMpower030.

Open-label, multi-drug, biomarker-directed, multi-centre phase II umbrella study in patients with NSCLC, who progressed on an anti- PD-1/PD-L1 and platinum containing therapy. *NCTO3334617. HUDSON*.

Phase II randomized, multi-center, double-blind, global study to determine the efficacy and safety of durvalumab

plus olaparib combination therapy compared with durvalumab monotherapy as maintenance therapy in patients whose disease has not progressed following standard of care platinum- based chemotherapy with durvalumab in first line stage IV non-small cell lung cancer. NCTO3775486. ORION.

Prostate Cancer

Phase III study of Pembrolizumab (MK-3475)/Docetaxel/ Prednisone Versus Placebo/Docetaxel/ Prednisone in patients with chemotherapy-naïve metastatic castrationresistant prostate cancer (mCRPC) who have progressed on a next generation hormonal agent. NCT03834506.

Phase III study of Pembrolizumab (MK-3475)/Olaparib Versus Abiraterone Acetate or Enzalutamide in patients with metastatic castration-resistant prostate cancer (mCRPC) who are unselected for homologous recombination repair defects and have failed prior treatment with next-generation hormonal agent (NHA) and chemotherapy. NCT03834519.

Phase III trial of Pembrolizumab (MK-3475)/Enzalutamide Versus Placebo/Enzalutamide in patients with metastatic castration-resistant prostate cancer. (mCRPC) NCT03834493.

ST. JUDE MEDICAL CENTER

Health Education and Prevention

We offer health education classes to help you and your family live better, longer and healthier. Locations will vary and, unless noted, all classes are free. Space is limited and registration is required.

For information or to RSVP, visit stjudemedicalcenter. org/healthclasses or call (877) 459-DOCS (3627) unless another phone number is noted.

Heartburn, acid reflux, and GERD: Preventing the progression to cancer

Feb. 11 | 6 p.m.

Heartburn, regurgitation, difficulty swallowing, voice changes, cough, and wheezing (often mistaken for asthma) are all common symptoms of acid reflux or GERD. Left untreated, acid reflux can damage the esophagus and significantly increase your risk of esophageal cancer.

Join Nikolai Bildzukewicz, MD, FACS, one of Southern California's leading experts on new, minimally-invasive treatments for GERD, and learn what approaches are proving most successful in eliminating symptoms and preventing esophageal damage. Widely published for his innovation in the treatment of acid reflux, Dr. Bildzukewicz holds dual appointments at St. Jude Medical Center and Keck Medicine of USC where he serves as an Assistant Professor of Clinical Surgery.

What could acupuncture add to your health?

Feb. 12 | 6 p.m.

Studies have shown the effectiveness of acupuncture in safely reducing pain, including chronic back pain, arthritis, headaches and fibromyalgia pain. Current research is studying its helpfulness in treating inflammation, anxiety, depression, and other conditions.

Join Lauren Soojin Kim, L.Ac, Clinical Director of Wellness at the Jaseng Center for Integrative Medicine and an expert in acupuncture, to learn how this noninvasive treatment can help optimize the natural healing mechanisms of your body.

When your hands hurt

Feb. 13 | 6 p.m.

For some, the issue is hand pain. For others, it's fingers that sometimes "lock." Whether the problem is arthritis, carpal tunnel, overuse, trigger finger or another issue, join our experienced hand therapists to learn about today's best techniques and strategies to diminish pain while protecting the health of your hands.

Are you suffering from an undiagnosed hormone imbalance?

Feb. 18 | 6 p.m.

Hormone imbalances create a wide range of serious symptoms, including fatigue, depression, weight gain, irregular or painful menstrual period, infertility, acne, anxiety, brain fog and hair loss. Yet the imbalance often remains undiagnosed.

Join Rajsree Nambudripad, MD, a board-certified internist and integrative medicine specialist, to learn about estrogen-dominance, PCOS, insulinresistance, thyroid imbalances, adrenal fatigue, and other hormone-related conditions which often go unidentified and untreated.

Affected by chronic pain?

Feb. 19 | 6 p.m.

Whether you suffer from debilitating headaches, back and neck pain, nerve pain and fibromyalgia or some other form of chronic pain, come learn the holistic and multidisciplinary techniques that are helping to transform the hopelessness and helplessness of chronic pain.

Join our chronic pain experts to learn how evidence-based strategies—from biofeedback and aquatic therapy, to neuropsychology and medication interventions.

Living Successfully with CHF

Feb. 20 | 6 p.m.

If you've been diagnosed with Congestive Heart Failure, join Harry Peled, MD, a St. Jude board-certified cardiologist and published expert in improving CHF outcomes, to get the information you need to maximize your health.

From common misconceptions ("an ultra low salt diet is best") to what research says will allow you to recover faster and more completely, Dr. Peled will answer your questions and offer the facts you need—that too few have.

Could you benefit from pelvic floor therapy? Chances are, yes.

Feb. 25 | 6 p.m.

Millions of women are affected by incontinence, pelvic pain, and other pelvic floor issues and choose to "just live with it," assuming it's simply the price of having a baby or growing older. Come and learn how pelvic floor rehabilitation—a specialized form of physical therapy—is giving women back symptom-free, pain-free lives.

Avoiding America's number one killer —heart disease

Feb. 26 | 6 p.m.

Or maybe you've had a heart attack and want to regain your heart health? Research shows that a few simple tenants—move more, manage stress better, and eat wisely—are the keys to preventing

and stopping heart disease, as well as a laundry list of other chronic conditions.

Come learn from our cardiac rehabilitation experts what these three elements look like and how to add them to your life to gain your best heart health.

Brain health: protecting yourself from Alzheimer's

Feb. 27 | 6 p.m.

Research shows that a "brain healthy" approach to eating—called the MIND diet—can reduce your risk of Alzheimer's disease dramatically. In studies, the MIND diet lowered Alzheimer's risk by over half.

Jack Florin, MD, a board certified neurologist, will discuss new developments surrounding Alzheimer's and will team with a St. Jude registered dietitian to explain how you can use the MIND approach to eating to prevent cognitive decline and improve your brain health.

Atrial fibrillation: facts, treatment and you

March 3 | 6 p.m.

Join Brian Kim, MD, a St. Jude board-certified electrophysiologist and expert in heart arrhythmias, to learn how afib is diagnosed, when it requires treatment, common triggers, and how new treatment options compare to standard or conventional therapies.

From underlying conditions that can cause afib to what new research says about preventing its progression, Dr. Kim will offer the information you need to make more knowledgeable decisions.

Recovering from cancer? We can help.

March 4 | 6 p.m.

Whether you are still undergoing treatment, or completed it months ago, come learn about new evidence-based approaches that help cancer survivors successfully overcome fatigue, weakness, pain, insomnia, depression, incontinence and other common symptoms. Join one of our oncology rehabilitation experts to find out how you can recover more completely.

Saving your life, one pound at a time

March 5 | 6 p.m.

There are powerful health benefits to even small amounts of weight loss. Learn the health risks of extra pounds and what strategies are proving most successful in helping people lose weight and keep it off.

A registered dietitian and exercise physiologist will discuss common weight loss barriers, how people sabotage their own success, and the techniques St. Jude's nationally-recognized weight loss program, HMR, uses to create dramatic weight changes.



Rehabbing Injured Hearts

This year, nearly 800,000 Americans will have a heart attack and another 550,000 will receive a diagnosis of heart failure.

Surprisingly, the vast majority will ignore one of the best options for successfully recovering their health: a carefully-designed blend of exercise therapy, education and support called cardiac rehabilitation.

Numerous studies show those who participate in cardiac rehabilitation have lower rates of death and a higher quality of life, including more energy, lower rates of depression and a more successful recovery.

"The data is clear: cardiac rehabilitation helps people live longer and do better," explains Jesus Vera, MD, a board-certified interventional cardiologist at St. Jude.

"Research has even documented a direct correlation between the number of cardiac rehab sessions and a patient's outcome: mortality falls with each session completed."

Giving hearts and patients a better future

St. Jude's comprehensive cardiac rehab program is designed to improve the health of anyone who has experienced a cardiac event whether heart attack, heart transplant, stent placement, bypass surgery, heart failure, angina or valve replacement.

Covered by both Medicare and commercial health plans, patients participate in two or three sessions a week for 12 weeks. During each hourlong session, advance-practice cardiac nurses and exercise physiologists guide patients through EKG-monitored exercise. Nutritional coaching, medication and symptom education, and stress management are other components offered by a multidisciplinary cardiac rehabilitation-certified team.

"The gains in strength and well-being are impressive, but so are the gains in confidence and vibrancy," explains Maria Leopoldo, MSN, RN, CCRP, Clinical Coordinator, who says many patients report feeling better after completing the program than they did before their heart event. "So often, fear, anxiety and depression follow a heart attack or surgery, and patients begin to put themselves on the sidelines. We help people understand that yes, you can energetically step back into life—and we'll help you."

So why doesn't everyone take advantage?

Surveys show that awareness is the primary reason for not participating in cardiac rehabilitation: most people are unaware of the documented benefits. But a second obstacle is the "I can do it on my own" mindset which typically isn't successful. According to Maria, the emotional and psychological support provided by the cardiac team and other participants can play a significant role in rehabbing a heart.

"You're with people who have the same diagnosis, fears and challenges that you do," she says, explaining that participants often form friendships with staff and each other. "There is a level of expertise and encouragement here that simply isn't available in a gym."



After successful quadruple heart bypass surgery, Matt spent five days in the Critical Care and Cardiac Units before beginning his journey back to health with the help of Cardiac Rehabilitation. When he graduated from Cardiac Rehabilitation he celebrated with a tattoo that displayed his latest healthy heart rhythm strip. To watch Matt's story, go to youtube.com/stjudemedicalcenter or visit facebook.com/stjudemedicalcenter.

If you have experienced a heart attack, heart-related surgery, or been diagnosed with heart failure, we can help. To reach us, please call (714) 992-3000 ext. 3789.

Experts in Matters of the Heart.

From arrhythmias and heart disease, to valve disorders and hypertension, our award-winning cardiac experts continue to raise the bar for patients across Southern California.

Inside the St. Jude Medical Center Catheterization Lab, experienced electrophysiologists and interventional cardiologists are eliminating the need for open heart surgery. By threading a catheter through an artery to the heart, our experts are successfully treating even complex conditions—such as aortic valve replacement—through one small incision. This minimally-invasive approach is also being used to transform the treatment of atrial fibrillation: replacing surgery with a same-day procedure, while dramatically reducing complications and recovery times.

St. Jude is home to one of the state's most sophisticated surgical settings, including a hybrid cardiovascular suite that combines 4D technology with both minimally-invasive interventions and traditional open-surgery techniques in the same procedure. The all-in-one, diagnosis-to-treatment suite incorporates numerous imaging modalities, from dynamic CT imaging to a biplane digital angiography system, while allowing the successful treatment of complex or formerly inoperable conditions.

Our commitment to improving patients' lives has resulted in some impressive quality awards and distinctions, including being named one of America's 100 Best Hospitals for Cardiac Care by Healthgrades.















An allergic reaction to a commonly inhaled medication left 13-year-old Cera feeling like she had "been burned from the inside out"— and the pain continued to grow worse. Within a few months, the young swimmer, who was on her way to becoming nationally-ranked, found the feel of water against her skin to be unbearable. Even a car's air conditioner or a blanket became sources of pain.

The honor student lost the ability to go up the stairs to her bedroom, turn on the shower without help, or attend school. "She was consumed with pain," explains Cera's mom, Marisa, a middle school teacher. "She would lie on the floor sobbing, begging me to do something to stop her pain."

A difficult diagnosis

Cera was diagnosed with Complex Regional Pain Syndrome (CRPS), a chronic and often devastating condition in which the nervous system and immune system malfunction as they respond to an injury or tissue damage. Nerves misfire, sending constant pain signals to the brain and creating debilitating dysfunction, which for Cera included significant tremors in both hands.

The 8th grader was referred to the St. Jude Chronic Pain Program, a highly-respected outpatient program and one of the few with the multidisciplinary expertise to successfully treat CRPS in adults and children. The innovative, holistic eight-week program began addressing the physical, emotional and psychological effects of Cera's pain. Individualized physical and occupational therapy was combined with biofeedback, pain intervention techniques, support from a clinical psychologist, and medical management from a board-certified pain medicine physician.

As muscle function is lost, nerves become more sensitive, creating a feedback loop that amplifies and magnifies the pain. Three to four days a week, for several hours a day, Cera traveled to the St. Jude Centers for Rehabilitation and Wellness and worked with the pain management team to break the cycle of over-firing nerves, constricting blood vessels, inflammation, fear and pain.

A multifaceted, multidisciplinary solution

Activities from baking to aquatic therapy were used to help Cera learn new body mechanics, rebuild strength, and practice pain



control techniques. Simple tasks, from cutting paper to playing board games became exercises in how to problem-solve pain and how to use the mind-body connection to her advantage. "Cera's brain was telling her 'this is going to hurt," explains Vibhuti Dharia, Occupational Therapist and part of Cera's treatment team. "Fortunately, the brain learns from behavior. By helping Cera go back to the things she did before, while showing her how to minimize the pain, we began to break the cycle." Pacing, icing, stretching and biofeedback helped calm her body as she gradually increased her activity—until the pain no longer seemed as dangerous and the sense of helplessness became one of determination.

After the program ended, she was a different child—or to be more accurate—the child she had been. "She was smiling all the time and talking about the future," explains Marisa, who cried when she saw Cera once again walk up the stairs at their home. And the girl who had gone a year without being able to take a shower by herself, returned to swim practice. Four months later, she took second place in the USA Swimming Western Zone Championship at Coronado Bay, a 1000 km open water race.

"They gave my daughter's life back to her," explains Marisa. "It's hard to understand the gratitude we feel, unless you've seen a child brought out of a pain-filled existence to one of joy."

Changing lives

Within St. Jude's pain program, transformations like Cera's are common. From debilitating back pain and fibromyalgia, to headaches and abdominal pain, hundreds of patients ages 8-88 have learned firsthand why the program is so successful.

"Pain is an extremely complex, often poorly understood medical problem that profoundly affects everything you do," explains Arthur Zepeda, MD, a board-certified pain medicine expert at St. Jude who helped treat Cera. "Before reaching us, patients have often been to many doctors and suffered for years. Restoring these lives is our entire focus." The result is evident in the almost constant smile of a teenage girl.

For more information about the St. Jude Chronic Pain Program, please call (714) 578-8716.



A Walk Among the Stars Pushes 3D Mammography Goal to Finish Line

Thanks to the generosity of 700 donors, friends, sponsors and supporters, St. Jude's A Walk Among the Stars Gala & Fashion Show, benefiting the St. Jude Crosson Cancer Institute, raised a record-breaking \$580,000, making its 30th anniversary celebration a huge success.

Held last November at the Anaheim Marriot, the event achieved the final philanthropy milestone in St. Jude's campaign to fully equip its imaging centers with 3D mammography—the most accurate breast cancer screening technology available today.

With the \$4.1 million project goal now met, St. Jude will move forward on plans to install the remaining two of six 3D mammography units needed to serve all 30,000 women receiving mammograms each year at its facilities. Support from the community funded the first four units at its Kathyrn T. McCarty Breast Center, and the remaining two units will be installed at St. Jude Imaging Services, Yorba Linda.

"We are immensely grateful to our donors who have given us this tremendous advantage in both finding cancer at its earliest stage and reducing false positives which can result in anxiety-provoking callbacks," says Brad Silveira, Medical Director of the Kathryn T. McCarty Breast Center. "Giving every patient access to 3D mammography is not merely a step forward; it is a huge leap forward in our ability to treat and defeat breast cancer."

Since its inception in 1990, A Walk Among the Stars has raised more than \$2.7 million for cancer services at St. Jude. Community members Phyllis Amato and Angel Demman-Treinan conceptualized the idea of the unique fashion show where cancer survivors shine as the "star" models. Three decades later, this inspiring celebration of courage and survivorship continues to bring the community together in support of world-class cancer care that is close to home, and delivered with caring and compassion.

To view photos from the event, please visit St. Jude Memorial Foundation's Facebook page.

To learn more about St. Jude's latest philanthropy initiatives or events, please call (714) 992-3033 or email SJMF@stjoe.org.



HONOR YOUR DOCTOR

Expressing Gratitude for National Doctors' Day

Each day at St. Jude, more than 700 physicians treat patients as if they were treating their own family and friends. Their heartfelt care goes beyond good medicine—our doctors are dedicated to addressing the physical and emotional needs of every patient and family.

National Doctors' Day is an opportunity to express appreciation to your physician(s) for their relentless commitment to your health.

Now through March 30, celebrate your doctor by making a contribution in their honor and sending them a personal note of gratitude. Your special message will be shared with your doctor, letting them know how much you value their care and compassion.



National Doctors' Day

March 30, 2020

To honor a special doctor and support the continuation of exceptional care at St. Jude, complete the enclosed envelope, visit donate. stjudemedicalcenter.org/docsday, or call (714) 992-3033.

Upcoming St. Jude Memorial Foundation Fundraising Events

Neighbors Helping Neighbors Dinner

May 14, 2020

SUMMIT HOUSE RESTAURANT, FULLERTON

Learn how St. Jude's Care for Poor Program is increasing access to health care for vulnerable populations. Proceeds support health and wellness services for the underserved, homeless and frail elderly.

A Walk Among the Stars Gala & Fashion Show October 24, 2020

ANAHEIM MARRIOT, ANAHEIM

Join with more than 700 community friends for this 'starstudded' gala which celebrates courage and survivorship against cancer. Enjoy dinner, dancing and our signature fashion show featuring St. Jude cancer patients and survivors as the star models. Proceeds will support the lifesaving services of St. Jude's Crosson Cancer Institute.

To sponsor, attend or donate to any of these events, contact St. Jude Memorial Foundation at (714) 992-3033 or SJMF.Events@stjoe.org.

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