

WHEN THE BATTLE AGAINST
CANCER IS PERSONAL

PUTTING MEN AT EASE
IN THE DOCTOR'S OFFICE



UC Irvine Health

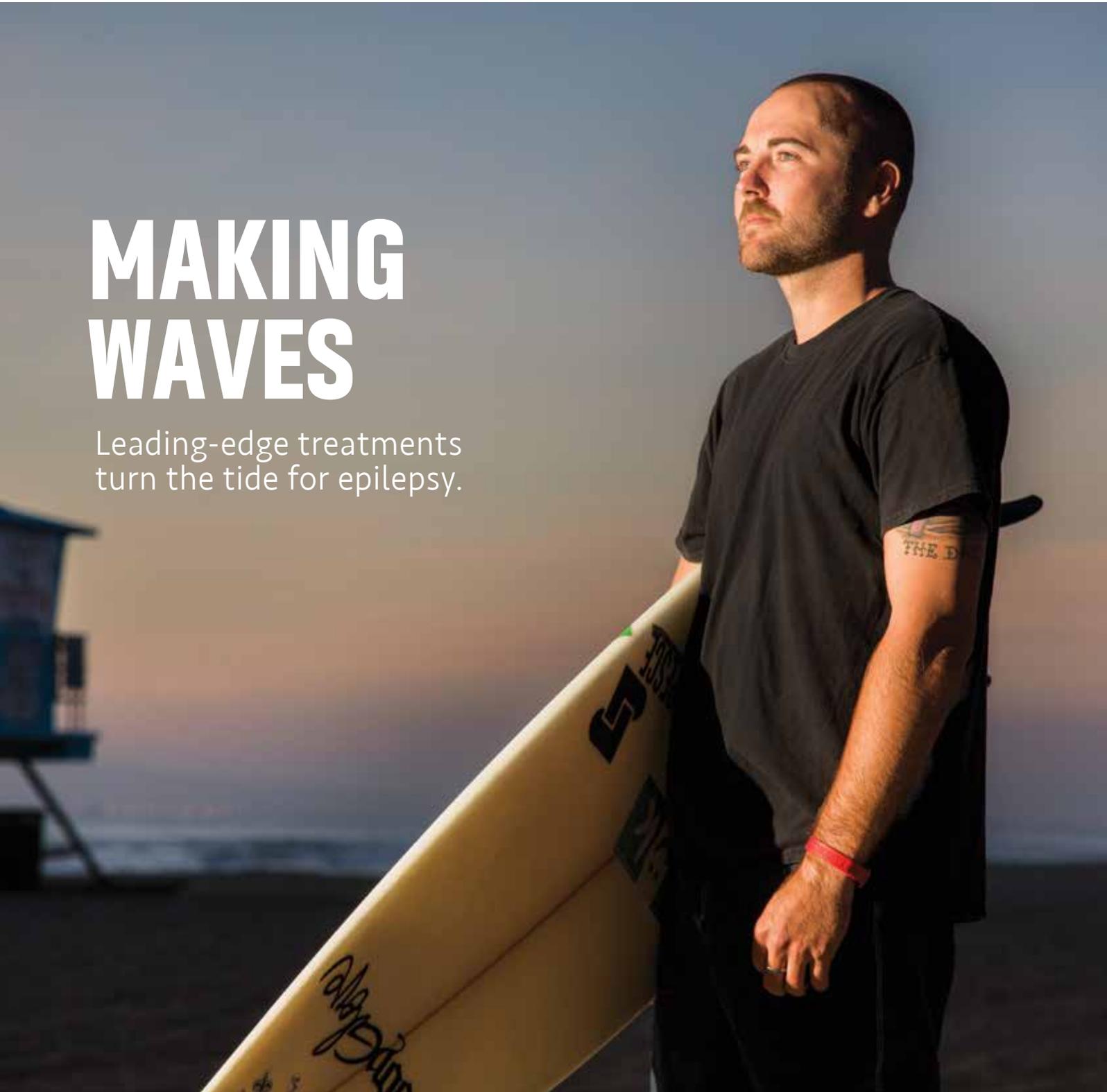
WINTER 2017

live well

SMARTER HEALTHCARE FOR SOUTHERN CALIFORNIA

MAKING WAVES

Leading-edge treatments
turn the tide for epilepsy.



WHERE THE END OF CANCER BEGINS



Everyone is affected by cancer, either as a patient or as a family member, friend or coworker of someone battling the disease. UC Irvine Health has launched a movement we call “The Anti-Cancer” to fight this disease with all the tools and tenacity we can muster.

In this issue of *Live Well*, you can read about our unique ability to offer Orange County patients the highest level of cancer care (page 12). We are the only National Cancer Institute-designated comprehensive cancer center in Orange County, and our researchers work side by side with doctors to give patients quicker access to the newest treatments.

For example, we offer more clinical trials in the promising field of cancer immunotherapy than anyone in the county (page 3). We’re also leaders in treating a dangerous form of brain cancer called glioblastoma. Two years ago one of our own colleagues, acclaimed ophthalmologist Dr. Roger Steinert, turned to us when he was diagnosed with glioblastoma. His story on page 18 illustrates the courage we witness daily among our patients.

It will take all of us — doctors, researchers, patients, their families and the community — to curb the toll of cancer. Later this year we will host our first annual Anti-Cancer Challenge (Anti-CancerChallenge.org). This peer-to-peer fundraiser at Angel Stadium will include a 5K run-walk, a kids’ bike ride, a stationary bike event and cycling races featuring four different routes around Orange County. Every dollar raised toward our \$1 million goal will support cancer research at the UC Irvine Health Chao Family Comprehensive Cancer Center — particularly novel, investigator-initiated cancer research, which is often considered too preliminary for the federal government to fund.

We believe the most innovative research will lead to the next generation of breakthroughs. Please join our effort. The Anti-Cancer Challenge will have an impact — and it’s going to be a heck of a lot of fun. ■

Sincerely,

Dr. Richard A. Van Etten
Director, Chao Family Comprehensive Cancer Center



UC Irvine Health

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The information contained in this magazine is not meant to replace the advice of your physician.

MAKE A DIFFERENCE

Whether someone you know is facing the challenges of cancer or severe seizures brought on by epilepsy, an academic medical center can provide breakthrough care that improves health. As Orange County’s only academic health system, UC Irvine Health makes smarter healthcare accessible to the community.

Your philanthropic support drives clinical innovations like the ones you’ll read about on the following pages, improving health for local residents and the world. If you would like to make a gift to thank a provider, honor the memory of a loved one or establish a lasting legacy, visit ucirvinehealth.org/give or call 714-456-7350. Learn how you can help transform healthcare.



BROADENING THE USE OF CANCER IMMUNOTHERAPIES

WRITTEN BY SHARI ROAN

For many decades, cancer treatment options consisted of surgery, radiation and chemotherapy. More recently, targeted therapies — drugs that home in on a specific molecular change involved in a cancer cell's development — have become available. Now a fifth line of attack, called immunotherapy, is emerging. Immunotherapies are treatments that prompt the body's immune system to mount an attack against invaders like cancer cells.

UC Irvine Health physicians and researchers have made immunotherapy treatment and clinical trials a priority, says Dr. Edward Uchio, UC Irvine Health urologic oncologist and surgical oncologist. "We have, by far, the most robust clinical trials program utilizing immunotherapy in Orange County," he says.

For now, many immunotherapies are investigational, meaning they are still being tested. However, some immunotherapy medications have been approved, including several drugs called PD-1/PD-L1 inhibitors used to treat melanoma and nonsmall cell lung cancer. PD-1/PD-L1 inhibitors, also known as checkpoint inhibitors, work by tweaking the immune system response to better attack cancer.

Normally the immune system has functions that cause it to brake, or shut off, so it doesn't attack healthy tissues. However, cancer can hide behind this mechanism. PD-1/PD-L1 inhibitors release the brakes so the immune system can attack cancer.

Many types of checkpoint inhibitor trials are offered at the Chao Family Comprehensive Cancer Center, including a Phase 3 trial under the direction of Dr. Sai-Hong Ignatius Ou, a medical oncologist specializing in lung cancer. The study compares treatment with a PD-1/PD-L1 inhibitor to routine surveillance in patients with locally advanced non-small cell lung cancer who have already completed chemotherapy or chemoradiation.

PD-1/PD-L1 inhibitors are being tested in a range of cancers and in patients with early-stage disease as well as those for whom other therapies have failed. Uchio is overseeing a study of patients with superficial bladder tumors not responding to standard therapy to see if treatment with a PD-1/PD-L1 inhibitor destroys the cancer. He also has similar trials involving use of a PD-1/PD-L1 inhibitors to decrease recurrence of aggressive kidney cancers, as well as an alternative treatment in advanced bladder, kidney and prostate cancers.

Another type of immunotherapy is often referred to as cancer vaccines. One of the approaches takes a patient's immune cells and mixes them with substances designed to trigger an immune system reaction. The vaccine is injected into the patient to prompt the immune system to destroy cancer cells.

Other vaccines utilize more standard technology like the standard flu vaccines given by primary care physicians. Uchio is treating men with early stage prostate cancer — that is often followed and not immediately treated (active surveillance) — with a specialized prostate cancer vaccine.

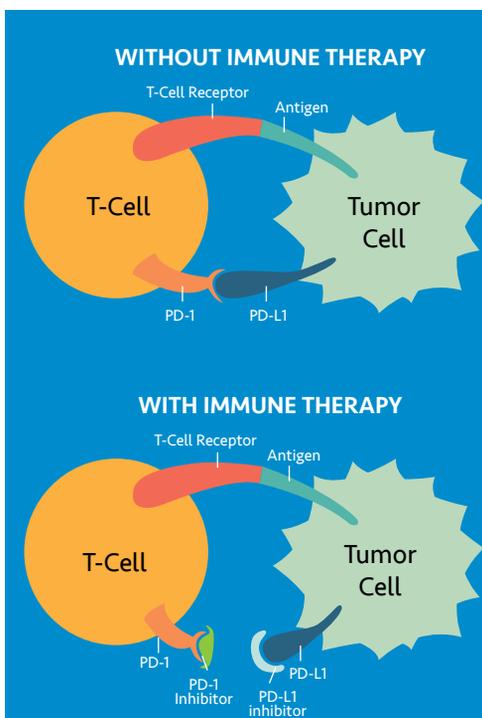
"We hope it can eradicate cancer before it becomes a problem," he says. "That is the Holy Grail: We diagnose cancer early and treat it and prevent it from becoming a larger problem in the future."

Yet another approach is called CAR T-cell therapy, which involves collecting a type of immune cell called T-cells from a patient's blood. The T-cells are genetically engineered to produce special proteins on their surface called chimeric antigen receptors (CARs). These receptors recognize a specific antigen (a protein) on the surface of the tumor cells. When the receptor binds to the antigen, it directs the T-cells to kill that cell. The CAR T-cells are grown in the lab and then infused in the patient, where they multiply and recognize and attack cancer cells that have the antigen on their surfaces.

Dr. Susan O'Brien, a hematologist-oncologist specializing in blood cancers, is overseeing a newly opened clinical trial using a type of CAR T-cell therapy called KTE-C19 in adults with precursor B acute lymphoblastic leukemia who have relapsed or for whom other therapies have failed. The study is the first CAR T-cell therapy clinical trial in Orange County.

Immunotherapies are not offered at all hospitals, in part because the older treatments can cause significant side effects. But the side effects of these newer treatments can be managed, and the benefits of these therapies almost always outweigh the risks, Uchio says. Increasingly, researchers are even testing immunotherapies used in combination with other immunotherapies or with chemotherapy, surgery, radiation or cryotherapy.

"The future of immunotherapy is to give all of these treatments together," Uchio says. "If we hit the cancer with therapy involving several different mechanisms of action, we think we can get a significant response." ■



One type of immunotherapy, called PD-1 inhibitors, prompt the body's immune system to recognize and attack cancer cells by tweaking the normal immunological process.

STEP 1

Tumor cells can produce PD-L1, a protein on the cancer cell that blocks the PD-1 protein in the immune cell from recognizing and attacking the cancer cell. Some cancer cells have large amounts of PD-L1.

STEP 2

PD-1 inhibitor medications release this blocking mechanism, allowing T-cells to recognize and destroy the cancer cell.

PD-1 serves an important function in a healthy immune system by keeping T-cells from attacking normal cells in the body. When PD-1 binds with PD-L1, it tells the body to leave that cell alone.

Source: American Cancer Society

Learn more about immunotherapy and other cancer treatments at ucirvinehealth.org/beaubiden



WHAT'S IN YOUR HOME FIRST AID KIT?



Kitchen burns and cuts from gardening tools are examples of the mishaps that routinely occur around the house and yard. Before you experience the next minor injury, make sure your household first aid kit is stocked and handy. Even with the easy accessibility of healthcare, it's smart to have a first aid kit, says Dr. Samuel Lin, a family medicine physician with UC Irvine Health Medical Group — Orange.

"Even if you have to go see a doctor, there are a lot of situations where you need basic care right away," he says.

For example, people with allergies may need an EpiPen or antihistamines immediately. If you get a chemical splash in your eye, you will benefit greatly by having an eyewash handy. For a cut, applying sterile bandages is better than grabbing a roll of paper towels.

If you have a kit at home already, make sure it's updated and that medications haven't expired. Some older kits contain ipecac syrup to induce vomiting when someone has ingested a poison or potentially dangerous substance. But ipecac syrup is no longer recommended, Lin says.

"It's not particularly effective," he says. "It does cause vomiting, but studies show it doesn't usually change the outcome. And in some cases if you ingest acid, you don't want substances to come back up." Instead call poison control: 800-222-1222.

You can order pre-assembled first aid kits online. Most kits contain instructions for how to apply basic first aid. Keep a first aid kit in your home and another one in your car. Include personal items, such as medications and phone numbers to your healthcare providers.

If you want to assemble your own kit, the Red Cross suggests including these supplies:

- Absorbent compress dressings, assorted-sized bandages, roller bandages, triangular bandages, adhesive cloth tape
- Sterile gauze pads
- Antibiotic ointment and hydrocortisone ointment
- Antiseptic wipe packets
- Aspirin (81 mg each)
- Blanket
- 1 breathing barrier (with one-way valve), also known as a CPR mask
- 1 instant cold compress
- Non-latex gloves (size: large)
- Scissors
- Oral thermometer (non-mercury/non-glass)
- Tweezers
- First aid instruction booklet

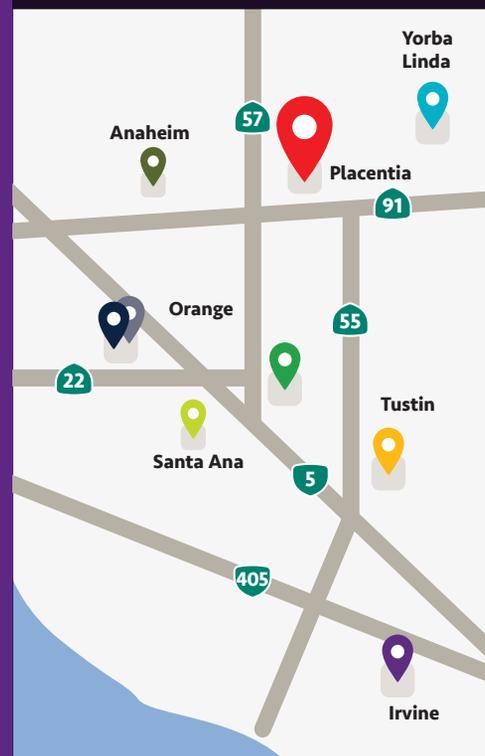


Do you know when to go to a hospital emergency room versus an urgent care clinic? Find out at ucirvinehealth.org/erurgentcare

PRIMARY CARE IN PLACENTIA

UC Irvine Health physician David Jesse has established a family medicine practice in Placentia at 1041 E. Yorba Linda Blvd., Suite 309. For appointments, call 714-996-5770.

UC Irvine Health primary care locations throughout Orange County:



MED SCHOOL FOR YOU

Healthcare is changing rapidly, and UC Irvine Health experts want to keep you informed of the latest developments and advances that could impact your well-being. A lecture and discussion series entitled Mini Med School 101 will kick off in March to present Orange County residents with the latest news in medical science, including a look at how UC Irvine Health is making a difference in our own backyard. The series of lectures will be held on Wednesdays, March 15 through April 12, 5 to 7:30 p.m., at the Arnold & Mable Beckman Center of the National Academies of Sciences & Engineering on the UC Irvine campus in Irvine.

Topics include dermatology, cancer biology and immunotherapy, memory, stem cell science and radiology. Top UC Irvine Health clinicians and researchers will teach each session. Presentations will include discussion of the latest treatments and a look at promising research, based on the weekly topic. The cost of the series is \$50.

Each lecture will be preceded by a 45-minute, small-group workshop on how to be a savvy healthcare consumer. Experts will offer advice on such issues as how to make the most of your healthcare visits and how to care for aging parents.



For more information on Mini Med School 101, visit ucirvinehealth.org/minimedschool



MEN: YOUR DOCTOR IS YOUR FRIEND

Men are much more reluctant to seek healthcare compared to women, according to numerous surveys. Data compiled in 2014 by the U.S. Centers for Disease Control and Prevention showed men are three times as likely as women to have gone without a visit to a doctor or other healthcare provider within the previous five years. A recent Cleveland Clinic survey found that almost 60 percent of men will not see a doctor even when they suspect they have a serious illness.

However, doctors are reaching out to men to reassure them that they have much to gain by seeking regular healthcare. Men may complain about taking time away from work for an exam. Or they think they are healthy and don't need annual checkups. Or they are embarrassed to talk to a doctor about health concerns. A good doctor will listen, identify a patient's individual needs and build a trusting relationship with the patient, says Dr. Faysal A. Yafi, assistant professor of urology and director of men's health at the UC Irvine Health Center for Urological Care.

Building that relationship starts with an annual exam. This checkup allows doctors to assess and monitor blood pressure, cholesterol and weight and offer any needed vaccines or cancer screenings. By catching trends early, such as gradually rising blood pressure, doctors can help men take steps to avoid bigger health problems down the road.

And if men are a little leery about cholesterol tests and blood pressure screenings, Yafi says, they're far more hesitant about seeing doctors for "below-the-belt" issues: erectile dysfunction, urinary problems, infertility and the other concerns that Yafi treats as a specialist. Men are often embarrassed about health issues that they feel might reflect on their masculinity and are understandably squeamish about the prospect of uncomfortable prostate or rectal exams.

The advent of Viagra and other medications for erectile dysfunction, however, has helped bring discussions about intimate subjects into the open, giving men hope for successful treatment. Once they've come in, Yafi says, men still don't tend to talk openly about their health problems as readily as women do. So he puts extra effort into drawing them out.

"Men who come to a men's health specialist have a story they want to tell," he says. "It's almost like therapy. I ask them open-ended questions and let them speak as much as they want."

FIRST COORDINATED PEDIATRIC GENDER DIVERSITY PROGRAM OPENS

UC Irvine Health has established the first program in Orange County dedicated to specialized, coordinated care for gender-expansive children and transgender youth. The clinic, located at UC Irvine Medical Center in Orange, is open to patients ages 3 to 21 and offers a range of services to support children or adolescents and their families. Care is coordinated between a pediatrician, pediatric endocrinologist, psychiatrist and a patient navigator. The clinic is Medi-Cal certified.

"The No. 1 problem for these patients in Orange County has been lack of resources and access," says Dr. Lynn Hunt, director of the Pediatric Gender Diversity Program. "The child and family often get no care, or they drive to Los Angeles or San Diego."

The program provides counseling for families who have questions about their children's gender-related behavior. "Certainly not all young children with gender-expansive traits become transgender adolescents or adults," Hunt says. "Each child, each family is unique. The families need support, and the kids need to be affirmed. It's important to have this behavioral health component."

Young adolescents can be treated with fully reversible medical therapies to delay puberty, which gives them more time to mature and explore gender identity. For teenagers and young adults who seek to transition, hormone therapy is available.

An estimated 0.5 percent of the adult population is transgender, Hunt says. The medical community is becoming more aware of the needs of children and adolescents with gender identity questions and those who are transgender, she says. The American Academy of Pediatrics is expected to release a policy statement on the care of these patients early this year.

"This is a population that historically has not received appropriate respect or attention and is not well-studied," Hunt says. "Families can sometimes be very hesitant and anxious. We can reduce that and normalize their experience."



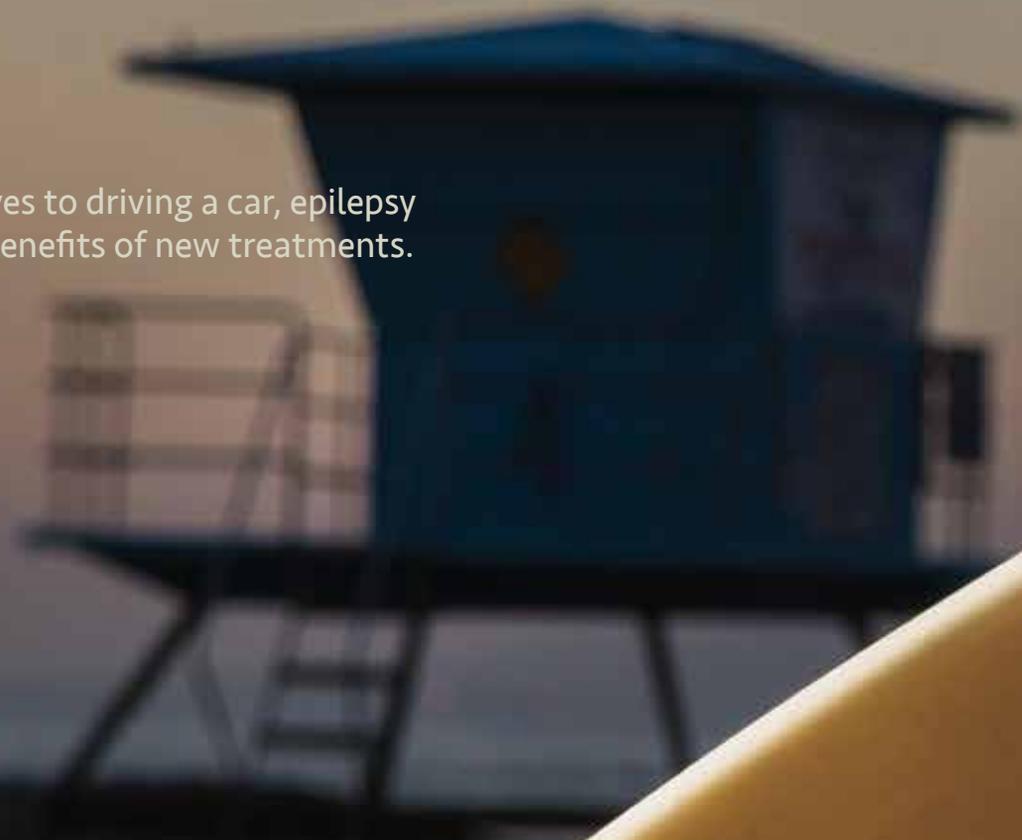
Has it been a while since you've been to the doctor? Don't wait any longer. UC Irvine Health has skilled, board-certified primary care physicians throughout Orange County, and they are now accepting appointments. Visit ucirvinehealth.org/chooseyourdoc

For more information on the Pediatric Gender Diversity Program, call 714-456-6025 or visit ucirvinehealth.org/genderdiversity

SO LONG TO SEIZURES

From riding the waves to driving a car, epilepsy patients enjoy the benefits of new treatments.

WRITTEN BY TRAVIS MARSHALL | PHOTOGRAPHED BY REMY HAYNES





The last time Corey Phillips went surfing, several years ago, he paddled into the lineup at his favorite spot in Huntington Beach with six of his friends. The Garden Grove native, now 26, had been surfing there since his father taught him to catch waves as a child.

However, just before his 21st birthday, he was diagnosed with epilepsy. After his diagnosis, a friend who worked with a popular wetsuit manufacturer gave Phillips a life jacket that would float him on his back if he fell unconscious, and he always wore it in the water.

That day while surfing in Huntington Beach, however, was the first time he truly needed the life jacket. When a grand mal seizure flung him from his board, a friend towed him to shore as he seized, unconscious. Phillips came to on the beach with no memory of what had happened.

“Ever since then, I’ve been scared to go back out,” he says. “I still go to Huntington to watch the waves, but I haven’t surfed in years.”

Yet, he’s confident he’ll be back in the water soon, thanks to the treatments he received at the UC Irvine Health Comprehensive Epilepsy Program. The program has a Level 4 designation (the highest level) from the National Association of Epilepsy Centers and is one of the leading facilities in the country for the treatment and research of this debilitating neurological condition.

WHAT IS EPILEPSY?

Epilepsy is a chronic disorder in which a part, or parts, of the brain have recurring abnormal activity that triggers seizures. In the U.S., around 1 percent of the population has epilepsy. Seizures can be mild, causing momentary space-outs, or they can be extreme with minutes-long, unconscious convulsions.

An epilepsy diagnosis can have devastating effects on people's lives. Seizures can happen daily or multiple times a day, at any moment, making it nearly impossible to work, go to school or live an independent life without the constant fear of crashing a car, drowning in the bathtub or otherwise injuring oneself or others.

There's also the risk of outright death following a seizure, especially among young adults with uncontrolled seizures. These incidents are called SUDEP (sudden unexpected death in epilepsy), and they appear to result from unusual heart rhythms or breathing problems triggered by the seizures. According to the Epilepsy Foundation, about 1 in 1,000 people with epilepsy die from SUDEP.

"It's important for family members to closely monitor the person with epilepsy after a seizure," says Dr. Jack Lin, director of the Comprehensive Epilepsy Program. "Early physical arousal seems to snap them out of these unusual breathing and heart rhythm patterns."

A BROAD RANGE OF TREATMENT OPTIONS

When patients are diagnosed with epilepsy, the first course of treatment is medication. There are dozens of anti-seizure medications depending on the patient and the type and frequency of the seizures, and many patients use more than one to find the best results. But for the 30 percent of people with epilepsy who don't see results with medication, surgical treatments may be the answer.

"This field is very exciting because there are new devices and new procedures being developed," says Dr. Sumeet Vadera, a UC Irvine Health neurosurgeon. "Epilepsy is one of the few disease processes in neurosurgery that we can actually cure. And with the latest advances we can treat even the most difficult cases quite well."

The Comprehensive Epilepsy Program offers some of the most advanced surgical treatments available. Patients need to have tried at least two medications without results before they can be considered a candidate for surgery.

The two most common surgical treatments for epilepsy that Vadera performs are temporal lobe resection and implantation of intracranial electrodes to locate where the seizures arise. Temporal lobe surgery is the most common because many patients have epilepsy caused by abnormal brain activity in the temporal lobe. This part of the brain affects memory but not motor function, so sections of it can be safely removed without significant risk to the patient, although some patients may have impairment with new memory function.

"The chance of being seizure-free after temporal lobectomy is 70 to 80 percent," Lin says.

"Many people, even some neurologists, have the wrong idea about what this surgery entails," Vadera adds. "The benefits far outweigh the risks of surgery. The part of the brain we're taking out is abnormal, so the goal is to make people better, not worse."

Phillips was evaluated by Dr. Lilith Manatsakanyan, a UC Irvine Health epilepsy specialist, who determined that his seizures originated from the temporal lobe. He underwent temporal lobe surgery twice. The first time, UC Irvine Health neurosurgeon Dr. Frank Hsu, chair of the Department of



After surgery dramatically curbed his seizures, Corey Phillips is eager to hit the waves again.

Neurological Surgery, removed a section of his left temporal lobe. But when Phillips began having seizures again six months later, he had the entire left temporal lobe removed.

"I completely trusted them, and they didn't give up," Phillips says of the UC Irvine Health team. "And the results have been amazing. I've been seizure-free now for more than eight months."

The results of surgery are frequently life-changing. Alonzo Ramirez, 45, had been plagued with seizures since childhood and even wore a medical information bracelet instructing bystanders not to call for paramedics should he collapse on the street.

"I would have a seizure at least once a week," says the Santa Ana man. "By the time the paramedics got me to the hospital, I was OK. I just started signing papers not to take me to the hospital."

Then about two years ago he met Manatsakanyan, who determined the origins of his seizures and suggested temporal lobe surgery. Vadera performed the operation and told Ramirez his seizures would likely be reduced by at least half. He has not had a seizure since the operation.

"It has changed my life," he says. "Now I'm thinking about my future. I would like to get a job and be able to drive. I ride a bike and have been taking buses for 33 years. I've been waiting to get a driver's license since 1979."

AN IMPLANT TO CONTROL SEIZURES

For patients whose seizures originate from two areas of the brain, or if the abnormal activity is in an area that can't be removed because it would damage motor function or speech, the NeuroPace® implant is a promising alternative.

"This NeuroPace device was approved by the FDA just three years ago. It's a battery and a sheet of platinum electrodes that we implant in the skull," Vadera explains. "We place these electrodes over the seizures, and the device uses an adjustable algorithm to recognize when a seizure is developing. Then it shocks that area of the brain to stop it from propagating. There are no nerve endings in the brain, so people can't even feel it happening."

The implant, about the size of a flash drive, contains a remote monitoring device that can send samples of seizure activity back to the doctor for evaluation and to make changes to the system settings for better seizure control. Unlike medications, the effects of the NeuroPace do not wear off.

"The device has different algorithms for pattern detection so we can change the parameters to detect the seizures better," Lin says. "We've found that patients feel a great deal of control over the device. When patients experience seizures, they can mark these events, and there's RAM storage so they can download the seizure data and send it to us."

A BETTER UNDERSTANDING OF THE BRAIN

Of course, before patients undergo brain surgery, there's a battery of tests to ensure they are good candidates for the procedures. "We're looking for where the seizures originate and whether they are generalized or focal seizures," Lin says. "We also need to make sure we have the correct diagnosis."

These tests range from noninvasive EEG monitoring on the surface of the skull to high-tech brain mapping using probes implanted on — or in — the brain to see which areas light up with abnormal electrical activity during seizures. Patients may spend days in the hospital, with the diagnostic equipment recording their brain activity as seizures occur in order to capture a clear picture of when and where they happen.

One valuable benefit of these tests is the opportunities they provide for neurological research. "These surgical patients have electrodes on the surface and deep inside their brains — something we could never ethically do with research subjects who don't have a medical need for the implants," Lin explains. "We can directly record brain-processing activities like emotion, memory and language."

The Comprehensive Epilepsy Program evaluates more patients than any other in the region, giving researchers like Lin a unique opportunity to work on the leading edge of neuroscience. He currently has a grant from the Department of Defense to decode language from brainwaves in order to produce a prosthetic implant for people who have lost the ability to speak after a traumatic brain injury or stroke. The result could be a device that turns thoughts into words, which is the topic of an upcoming paper Lin will publish in the journal *Nature*.

"With electrodes over speech areas of the brain, we've been able to decode patterns of neurons firing that allow us to extract speech," Lin says. "In one study we played Pink Floyd to the patients, and when we recorded the brainwaves they played Pink Floyd back to us."

For Phillips, the benefits of his treatment have been immeasurable. He's starting to get his old life back after years of not being able to work or go to school.

As for surfing, he's waiting for a special day to hang 10 at Huntington Beach. "I want to be at least a year seizure-free before I surf again," Phillips says. "So I told my father that Father's Day 2017 will be the first time I paddle out. I want my father, my uncles and my friends to all be out there with me." ■



WOMEN AND EPILEPSY: UNDERSTANDING THE ROLE OF HORMONES

Epilepsy affects 1 percent of the U.S. population, and those cases are evenly split among men and women. But women — and therefore half of all people with epilepsy — have unique challenges that intersect with their reproductive health, something many doctors are not fully aware of. UC Irvine Health clinical professor and epileptologist Dr. Mona Sazgar is a leading expert on women with epilepsy and co-editor of a recently published book, *Controversies in Caring for Women With Epilepsy*.

Q: Do women experience epilepsy differently than men?

Dr. Sazgar: "Women can suffer from a subtype called catamenial epilepsy, in which seizures cluster around a woman's menstrual cycle, likely due to hormonal fluctuations. Seizures may increase during ovulation or menstruation. Treatment needs to target the time of the seizure exacerbation, using both hormonal and non-hormonal options."

Q: What about pregnancy?

Dr. Sazgar: "There are a number of seizure medications that can cause serious birth defects in babies if a woman takes them while she's pregnant. So it's really important that women with epilepsy who are planning to get pregnant consult with someone knowledgeable in these issues."

Q: Do these concerns with medication make surgical interventions more likely?

Dr. Sazgar: "Women still need to meet all the same criteria to become a surgical candidate, but if a woman is a candidate, that certainly makes a stronger case for consideration of surgical options."

Q: Do a lot of doctors not understand these issues?

Dr. Sazgar: "Some physicians may be aware of the specific challenging issues in caring for women with epilepsy. Others may be aware but not comfortable counseling and treating. I think that's why we've become such a unique referral center for young and pregnant women with epilepsy."

Learn more about treatments for epilepsy
at ucirvinehealth.org/epilepsytrements



CONFRONTING OPIOID ABUSE IN OUR OWN COMMUNITY

The Orange County Collaborative on Prescription Drug Abuse aims to reduce overdoses and deaths.

WRITTEN BY LAUREL DIGANGI | PHOTOGRAPHED BY SHANE O'DONNELL

The amount of opioid painkillers such as oxycodone, hydrocodone and fentanyl prescribed in the U.S. has quadrupled since 1999 — as have the number of deaths attributed to them. Orange County is no stranger to these harsh statistics, and in 2015 UC Irvine Health helped launch the Orange County Collaborative on Prescription Drug Abuse, also known as SafeRx OC — a coalition comprising 19 organizations including health professionals, educators, health insurers, law enforcement officials and others. The current leader of this collaborative is Dr. Bharath Chakravarthy, a UC Irvine Health associate professor of clinical emergency medicine and public health in the Department of Emergency Medicine. We asked Chakravarthy to explain how the collaborative hopes to prevent abuse, avert deadly overdoses and create more treatment opportunities for people with addiction.

WHAT IS DRIVING PRESCRIPTION OPIOID ABUSE?

In the past, physicians had under-addressed pain. Now the pendulum has swung in the opposite direction, and we're overprescribing opioids. Also, culturally, when we seek medical attention we want a pill. That's not always the best answer. Another factor is the pharmaceutical industry. They're an amazing partner in our healthcare system, but they have their own interests.

WHAT DO PATIENTS WHO ARE PRESCRIBED OPIOIDS NEED TO KNOW?

Patients need to understand the proper usage and side effects of prescribed opioids and how to properly dispose of them. Also, certain patients — including the elderly and those prescribed sleep aids and other mood-altering drugs — are at a higher risk for overdose.



BY THE NUMBERS

Opioids are frequently prescribed pain medications that have exacted a high toll on society.

7.56

Opioid overdose deaths per 100,000
Orange County residents, 2014

9.05

Opioid overdose ED visits per 100,000
Orange County residents, 2014

8.91

Opioid overdose inpatient hospitalizations per
100,000 Orange County residents, 2014

517.38

Opioid prescriptions per 1,000
Orange County residents, 2015

Source: Dr. Bharath Chakravarthy

WHY WAS THE LOCAL COALITION ESTABLISHED?

There are countywide nuances in different parts of California. Each county needs to have its own network to share ideas and work together like a well-oiled machine so it can get things done. And we really can't tackle this beast by ourselves. That's why we're working with key stakeholders in the community.

HOW DOES UC IRVINE HEALTH PROVIDE LEADERSHIP IN THIS COALITION?

As an academic institution at the forefront of medicine, we have the expertise to help curtail this epidemic. Our goals center on three pillars. The first pillar is prescribing guidelines and practices. The second is harm reduction, or preventing deaths from overdose. And our third pillar is medication-assisted treatment.

WHAT IS THE COALITION DOING ABOUT SAFER PRESCRIBING GUIDELINES AND PRACTICES?

We're educating physicians and nurse practitioners who prescribe opioid medications, making sure they have the right information to prescribe the right pain meds for their patients. We've developed Emergency Department Safer Prescribing Guidelines, which have been adopted throughout the county in all emergency departments. Similarly we're refining outpatient guidelines based on national recommendations. Also, at UC Irvine Health and CalOptima, we're piloting a program that identifies and sends an educational letter to the top 10 percent of opioid prescribers in the county.

WHAT IS THE COALITION DOING ABOUT PREVENTING DEATHS FROM OVERDOSES?

We're working to educate more doctors about identifying high-risk patients and co-prescribing Naloxone. This is an extremely safe drug, like an EpiPen, that can either be injected or sprayed into the nose in case of an unintentional overdose. Suppose your mother was prescribed opioid pain medications after her hip replacement. And she is normally taking a muscle relaxant or sleep aid. The two — muscle relaxant and opioid pain medications — can have serious consequences. You suddenly notice Mom's not breathing properly, a sign of opioid overdose. After you call 911, you'd give your mother the Naloxone — and save her life. Naloxone is available over the counter for about \$60, but patients and caregivers can ask for a prescription if they prefer.

WHAT IS THE COALITION DOING ABOUT TREATMENT?

Addiction can happen to anyone taking opioids, no matter one's social status. We want to find patients with opioid use disorder who are ready to get help and refer them to treatment. We're also hoping to increase the number of providers treating these patients, in particular those with a special license to prescribe buprenorphine — an effective medicine to help patients stop the cravings and taper off. To that end, we're sending out a survey to all the medicine-assisted treatment programs to determine their barriers to effectively treating new patients. We're asking questions like, "Do you need more referrals, or are you treating patients at your capacity and need more facilities to accommodate them?" We hope this data will help us see what barriers are out there so we can come up with solutions. ■

Learn more about preventing opioid
abuse at ucirvinehealth.org/opioidabuse





IMAGINING A WORLD WITHOUT CANCER

WRITTEN BY SHARI ROAN | PHOTOGRAPHED BY KREMER JOHNSON

Each year UC Irvine Health treats thousands of people with cancer. They come to us because we're the only National Cancer Institute (NCI)-designated comprehensive cancer center in the county and one of only 47 in the United States. At the UC Irvine Health Chao Family Comprehensive Cancer Center we provide world-class care, pursue pioneering research that extends lives, train the next generation of cancer specialists and focus on the specific needs of our own community.

How does this happen on a daily basis? At TheAnti-Cancer.com, we've provided a look at people who are devoting their professional lives to curing cancer and at some of the amazing patients who inspire us. You can see for yourself — this fight is personal.

MICHELLE PEROZZI

Michelle Perozzi found a lump in her breast in the summer of 2015 and was diagnosed with stage II cancer. But Perozzi was one of a growing number of women with early-stage breast cancer who are candidates for coordinated, state-of-the-art breast cancer treatment that reduces treatment times from months to one or two weeks.

Dr. Alice Police, a surgical oncologist and medical director of the UC Irvine Health Pacific Breast Care Center, utilized three innovative treatment technologies: SAVI Scout®, MarginProbe® and Zeiss Intrabeam® IORT. SAVI Scout is a device that pinpoints the tumor location prior to surgery more precisely than the traditional guide-wire technique. MarginProbe is a system that helps a surgeon determine whether cancer cells remain on the margins of excised tissue during surgery. The system reduces the chances that a patient will require additional surgery. IORT is a means of delivering a concentrated dose of radiation in the operating room. IORT reduces post-surgical radiation treatments from dozens of sessions over six to eight weeks to a single treatment.

For Perozzi, breast cancer is just a memory. "I just felt like I was getting the best possible care," she says. "It was a good experience for a bad thing."

Read more about Michelle Perozzi at ucirvinehealth.org/michelleperozzi

UC Irvine Health
THE ANTI-CANCER

READ OUR STORIES

TheAnti-Cancer.com

DR. KENNETH CHANG

More than a decade ago, Dr. Kenneth Chang had just begun his career as a UC Irvine Health gastroenterologist when his father was diagnosed with colon cancer. “That’s when I really had an eye-opening experience,” he recalls. He recognized a gap between gastroenterology and cancer and foresaw the need for GI specialists who focus on cancer.

Eventually Chang became chief of gastroenterology and hepatology and executive director of the UC Irvine Health H.H. Chao Comprehensive Digestive Disease Center (CDDC). He created one of the first programs in the United States to integrate research in gastroenterology with leading-edge cancer diagnosis, prevention and care.

The CDDC is one of the few facilities in the nation to provide full-spectrum care specifically for disorders of the esophagus, stomach, liver, pancreas, small intestines, colon and rectum. Chang and his colleagues are also leading a campaign to make Orange County colon cancer-free by promoting screening. “It’s not crazy,” he says of the campaign’s audacious goal. “It’s simply what needs to be done. You have to put the idea out there. That’s the only way you can turn the impossible into the possible. That’s what we do here.”

Read more about gastroenterology and cancer at ucirvinehealth.org/kennethchang



ALLEN FREMONT

Allen Fremont is a physician, researcher and college professor. He knew from his training that it was bad when fluid from his chest was drained one day in 2010. The diagnosis was late-stage lung cancer, and Fremont was placed on “palliative care” — chemotherapy treatments intended to slow the cancer growth and offer a few more months of life.

But a short time later, Fremont was put in touch with Dr. Sai-Hong Ignatius Ou, an oncologist who was starting a small clinical trial for a drug aimed at a genetic mutation, called ROS1, that is found in only 1 to 2 percent of patients with non-small cell lung cancer. Fremont had the mutation. In January 2011 he began taking the drug crizotinib, and his tumors started to vanish.

In 2014 Ou published his research on crizotinib in the *New England Journal of Medicine*. The study showed 72 percent of non-small cell lung cancer patients with the ROS1 mutation responded to the drug. A photo of Fremont’s after-treatment “normal-looking” lung was published in the journal to illustrate the impact of the drug.

Watch a video of Allen Fremont at ucirvinehealth.org/allenfremont



DR. RICHARD VAN ETTEN

Cancer treatments are changing, and Dr. Richard Van Etten is helping lead the charge. He has devoted his career to understanding the genetic and molecular processes that drive cancer. Taking this approach, researchers hope to target those mechanisms, stop cancer and cure more people.

In 2013 Van Etten became director of the Chao Family Comprehensive Cancer Center and is helping to bring innovative cancer research and treatment to the people of Orange County. As an NCI-designated comprehensive cancer center, the center has undergone a rigorous peer-reviewed process conducted by the NCI and the National Institutes of Health.

Today Van Etten oversees a staff of physicians and researchers who offer leading-edge treatments and dozens of clinical trials, including one of the largest early-phase clinical research programs in Southern California. Because of these programs, patients can have access to promising experimental medicines well before they become available elsewhere.

Van Etten is also emphasizing community-based prevention and screening programs that can catch cancers at their earliest and most treatable stages. “I can see a clear way forward,” he says, “to making this the best cancer center in Southern California.”

Read more about Dr. Richard Van Etten at ucirvinehealth.org/richardvanetten



HEALTH HEROES

Local philanthropists Sue and Ralph Stern received the UC Irvine Health Hero Award in October in recognition of their transformational impact on healthcare in the community. The Sterns, whose generosity has made a difference for individuals and organizations across Orange County, partnered with UC Irvine Health's Chao Family Comprehensive Cancer Center to establish the Sue and Ralph Stern Center for Cancer Clinical Trials and Research in 2014.



LIGHT THE NIGHT & CONGENITAL HEART WALKS

UC Irvine Health employees participated in the Congenital Heart Walk on Sept. 18 at Irvine Regional Park and the Light the Night walk, benefiting the Leukemia & Lymphoma Society, on Sept. 24 at Angel Stadium.





CANCER SURVIVORS DINNER

The UC Irvine Health Chao Family Comprehensive Cancer Center hosted its annual holiday dinner party to honor the courage of cancer survivors on Dec. 8. Physicians, nurses, volunteers and patients joined in the potluck dinner and were entertained by aerial performing artists to celebrate the season and the journey back to health.

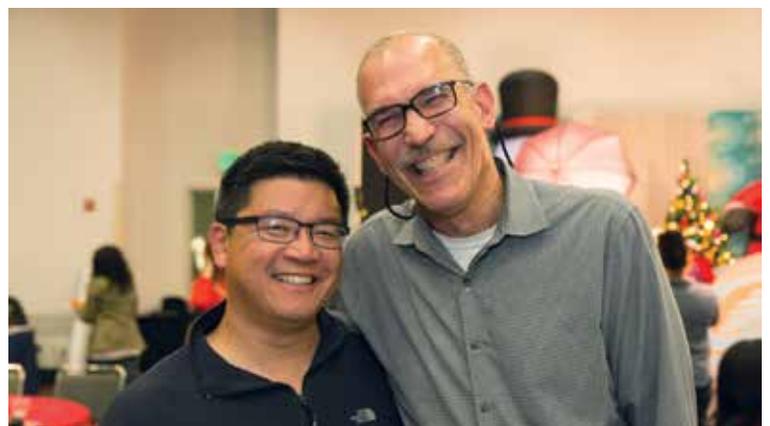
SUPER SATURDAY HEALTH FAIR

Orange County residents received free health screenings and flu shots and learned valuable information about nutrition and health at the UC Irvine Health annual Super Saturday Community Health Fair on Oct. 22.



HOLIDAY PARTY FOR BURN PATIENTS

The UC Irvine Regional Burn Center held a holiday party on Dec. 12 for burn survivors and their families. The center treats the county's most serious burn injuries and is the only American College of Surgeons-verified burn center in Orange County.



HEALTH CLASSES

Learn how to improve your health or prevent disease by taking a class! Most classes are free to all, but some have fees. Some classes are offered in Spanish. The classes are held at UC Irvine Health locations throughout Orange County.

LOCATIONS:

- **UC Irvine Medical Center**, 101 The City Drive South, Orange, above the Grunigen Medical Library in the second-floor classrooms. Parking in the medical center visitor structure will be validated.
- **UC Irvine Douglas Hospital**, 101 The City Drive South, Orange
- **UC Irvine Health-Tustin**, 1451 Irvine Blvd., Tustin
- **UC Irvine Health Family Health Center Santa Ana**, 800 Main St., Santa Ana
- **UC Irvine Health Family Health Center Anaheim**, 300 Carl Karcher Way, Anaheim

Registration is required. All classes are one session unless otherwise noted.

For more information, visit ucirvinehealth.org/events or call **877-UCI-DOCS (877-824-3627)**.

ADVANCE DIRECTIVE – ALSO OFFERED IN SPANISH

An advance directive lets your family and doctor know what your healthcare wishes are if you are unable to speak for yourself. Forms will be explained and provided at each session, and a notary public will be available at no extra cost. Bring a picture ID for the notary.

BREASTFEEDING

For pregnant women and their birth partners in the last trimester of pregnancy. Discussion includes milk production, how to breastfeed, avoiding problems and returning to work.

DIABETES

Topics include food choices, portions, carbohydrate counting and eating the foods you enjoy while following diabetes guidelines to keep your blood sugar at healthy levels.

DIABETES MANAGEMENT SERIES (THREE-CLASS SERIES)

Understand what diabetes is and how to manage it to prevent long-term complications. Topics include the disease process, short- and long-term complications, diet, meal planning, exercise and medications. A free glucometer will be given.

DIABETES OVERVIEW – ALSO OFFERED IN SPANISH

Learn the basic skills and information needed to manage diabetes. Topics include controlling diabetes through diet, exercise, medication and lifestyle changes. A free glucometer will be given.

HEART FAILURE

Learn what heart failure is, signs and symptoms, when to call the doctor and how to manage the condition through lifestyle changes. Also offered in Spanish to patients of UC Irvine Health family health centers in Santa Ana and Anaheim.

HEART HEALTHY DIET

Explore the link between diet and heart disease, including the “good” versus “bad” fats and nutrition guidelines for low-fat, low-cholesterol and low-sodium diets.

HIGH BLOOD PRESSURE

Learn how to better control high blood pressure through medications, diet, exercise and lifestyle changes. Also offered in Spanish to patients of UC Irvine Health family health centers in Santa Ana and Anaheim.

JOINT REPLACEMENT HIP OR KNEE

Are you having your hip or knee replaced soon? Learn exercises and activities to perform now that will help your recovery afterward. This class is scheduled before the Preparing for Surgery – Mind, Body & Spirit class so you can more easily attend both.

MEDITATION FOR HEALTH SERIES (FOUR-CLASS SERIES)

This class introduces the art of meditation and explains the various styles of meditation and how it helps promote good health and quality of life. No special clothing or equipment is required.

MEDITATION FOR HEALTH SPECIAL TOPIC: BREATHING

Basic, easy-to-learn breathing techniques can help you relax and reduce stress. Increase your awareness of your mind-body connection and achieve a deeper level of meditation and spirituality.

MEDITATION SPECIAL TOPIC: BODY SCAN RELAXATION

Body Scan has become popular in healthcare settings as an affordable alternative care method to help relieve short-term and chronic pain, promote relaxation and facilitate stress relief using visualization. It is suitable for the physically disabled.

NEWBORN CARE

For pregnant women and their birth partners in the last trimester of pregnancy. Learn about infant feeding, dressing, bathing, diapering, normal newborn appearance and signs and symptoms of illness.

PREPARED CHILDBIRTH (FIVE-CLASS SERIES)

Parents-to-be learn the skills they need for a successful and positive childbirth experience. Offered in conjunction with Santiago Canyon College Continuing Education.

PREPARING FOR SURGERY – MIND, BODY AND SPIRIT

Increase your understanding of anesthesia and learn relaxation techniques to promote wellness. Anesthesia, options, alternatives, risks and benefits will be discussed.

PREVENT STROKE

Learn what stroke is, what your risk factors are and how you can reduce them. This class is scheduled before the High Blood Pressure class, making it easier to attend both.

STOP SMOKING (FIVE-CLASS SERIES)

Learn how to be smoke-free. Topics include why you smoke and what to change so you can quit.

WELLNESS WEDNESDAY

This program is for anyone faced with the demands of caregiving in their personal or professional lives. Experts will lead you through techniques and strategies of self-care to take care of yourself and achieve your optimal well-being while you care for others.



SUPPORT GROUPS

ART FOR THE SOUL
714-456-5235

BARIATRIC SURGERY SUPPORT GROUP
888-717-4463 or 714-456-7800, ext. 1967

EVENTS

UC Irvine Health is proud to sponsor community events that support a variety of health conditions and challenges. Join a walk, attend a conference or listen to a lecture.

NEWPORT LIBRARY LECTURE SERIES

Join us for informative presentations by UC Irvine Health physicians speaking about health issues that matter to you. All begin at 7 p.m. at the Newport Beach Library, 1000 Avocado Ave., Newport Beach. Admission is free.

JAN. 30

Is a Shoulder Replacement Right for You?

Presented by Dr. Ranjan Gupta, orthopaedic surgeon

FEB. 27

Diagnosis, Management and Prevention of Coronary Artery Disease

Presented by Dr. Pranav M. Patel, cardiologist

MARCH 27

Colorectal Health

Presented by Dr. C. Gregory Albers and Dr. William Karnes, gastroenterologists

APRIL 24

Parkinson's Disease and Other Movement Disorders

Presented by Dr. Neal Hermanowicz and Dr. Nicolas M. Phielipp, neurologists

MAY 22

90+ Study and Memory Disorders

Presented by Dr. Claudia Helen Kawas, geriatric neurologist

GAVIN HERBERT EYE INSTITUTE COMMUNITY LECTURE SERIES

All lectures are free and are held at Gavin Herbert Eye Institute, 850 Health Sciences Road, Irvine. To RSVP or learn more, contact ghei@uci.edu or 949-824-7243.

JAN. 23, 7 P.M. & JAN. 27, 3 P.M.

Aging Eyes:

Keeping Eye Problems at Arm's Length

MARCH 6, 7 P.M.

Seeing Diabetes Clearly:

How it Affects Your Eyes

MAY 15, 7 P.M.

Screens, Smoke and Sensitivities:

Understanding the Causes of Dry Eye.

OTHER EVENTS

DONATE LIFE RUN WALK

APRIL 29, 7 A.M.

California State University, Fullerton, Intramural Field
800 State College Blvd., Fullerton
donatelifeoc.org

EPILEPSY WALK ORANGE COUNTY

APRIL 22, 8:30 A.M.

TeWinkle Park, 885 Junipero Drive, Costa Mesa
epilepsywalkoc.org

AMERICAN BRAIN TUMOR ASSOCIATION BT5K

MAY 21, 9 A.M.

Fairplex, 1101 W. McKinley Ave., Pomona
hope.abta.org

WALK MS

APRIL 29, 7 A.M.

University of California, Irvine campus
311 W. Peltason Drive, Irvine
nationallmssociety.org

ORANGE COUNTY HEART & STROKE WALK

MARCH 4

Angel Stadium of Anaheim
2000 E. Gene Autry Way, Anaheim
heartwalk.org

MARCH OF DIMES MARCH FOR BABIES

APRIL 30, 7 A.M.

600 Newport Center Drive, Newport Beach
marchforbabies.org

THE ANTI-CANCER CHALLENGE CYCLE & RUN FOR CURES

JUNE 10-11

Angel Stadium

2000 E. Gene Autry Way, Anaheim

Join us to help create a cancer-free world. All of the proceeds from the event go directly to lifesaving cancer research at the UC Irvine Healath Chao Family Comprehensive Cancer Center. The two-day event begins on Saturday, June 10, with the Anti-Cancer Challenge Festival, filled with events, exhibits and entertainment. On Sunday, June 11, there are bicycle rides for riders of all ages and abilities, and events are also planned for runners.

To learn more and to register, visit anti-cancerchallenge.org

BRAIN TUMOR EDUCATION/SUPPORT GROUP
714-456-8609

BURN SURVIVORS SUPPORT GROUP
714-456-7437

GRIEF SUPPORT GROUP FOR CHILDREN
714-456-2295

INFLAMMATORY BOWEL DISEASE SUPPORT GROUP
714-456-7057

KOREAN WOMEN'S SHARE AND CARE GROUP
714-456-5057

LOOK GOOD, FEEL BETTER
800-227-2345

MULTIPLE MYELOMA SUPPORT GROUP
800-452-2873, ext. 233

SUPPORT FOR PEOPLE WITH ORAL AND HEAD AND NECK CANCERS (SPOHNC-UCI-ORANGE)
714-456-5235

TRIGEMINAL NEURALGIA ASSOCIATION SUPPORT GROUP
714-730-1600

YOUNG ADULT CANCER SUPPORT GROUP
714-456-7057



ON MY MIND

Just over two years ago, on a late Monday afternoon, Dr. Roger Steinert felt a strange sensation on the right side of his body and, feeling poorly, left his office at the Gavin Herbert Eye Institute on the UC Irvine campus. By the time he arrived home he thought he was having a stroke. His wife, April, drove him to UC Irvine Medical Center's emergency room, and within hours he was facing a diagnosis that would change his life.

It wasn't a stroke. He had a type of brain cancer called glioblastoma. Steinert is a highly regarded ophthalmologist and has a celebrated career as the Irving H. Leopold Professor at UC Irvine, chair of the Department of Ophthalmology, founding director of the Gavin Herbert Eye Institute, and, at the time of his diagnosis, interim dean of the School of Medicine. But now he needed the help and support of his UC Irvine Health colleagues.



In retrospect, I should have figured out what was going on a little earlier. I acted more like a patient than a doctor. I was denying the symptoms I was having — unusual sensations that were small and intermittent. But on the afternoon of Dec. 1, 2014, I felt a strange feeling on my right side. I just wanted to go home.

By the time I was home I knew something was going wrong in my body in a major way. My wife, too, knew that something was wrong. I knew that every minute counted when someone is having a stroke, and within 45 minutes we were in the emergency room and had the diagnosis of a brain tumor.

Once I was diagnosed, I was told I had some options. Fortunately, for me, our neurological oncology surgical team includes Dr. Frank Hsu and Dr. Jefferson Chen. They used a device called BrainPath to navigate in my brain and remove the tumor with the smallest incision and least amount of cutting, which can be devastating in the brain. Then I saw Dr. Daniela Bota. She and her team have been watching me and guiding me through radiation and different kinds of chemotherapy. I have also been in a glioblastoma vaccine trial since June. So far that's working.

I was blessed that Dr. Bota is one of the leaders in this type of treatment. I didn't seek treatment at UC Irvine Health because I work here. I sought treatment from my colleagues because the best program for glioblastoma happens to be right here at UC Irvine Health. I'm incredibly grateful to get care near where I live. I had the confidence that the best people were right in the same place I work and where I try to help my own patients.

A few days after the surgery, I developed bleeding in the brain. Dr. Hsu suggested going back in and fixing it. He said, 'I know I can get you through this.' I said, 'Go for it,' because I had such confidence in him.

Everyone from the surgeons and doctors to the nurses and hospital staff were the best. I felt I was in the best possible hands. Now it's two years later, and I still go to work every day. What else am I going to do? I'm so grateful to have been given this much extra time. And I'm hoping for more!



— Dr. Roger F. Steinert



For more information, visit
ucirvinehealth.org/glioblastomas

THIS IS WHERE THE END OF CANCER BEGINS

Rise to the challenge for a cancer-free world
June 10-11, 2017
Angel Stadium, Anaheim, CA

100% of event proceeds go directly to lifesaving cancer research at the Chao Family Comprehensive Cancer Center.

Register today at
ANTI-CANCERCHALLENGE.ORG



RIDE



RUN



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THE **ANTI-CANCER**
CHALLENGE
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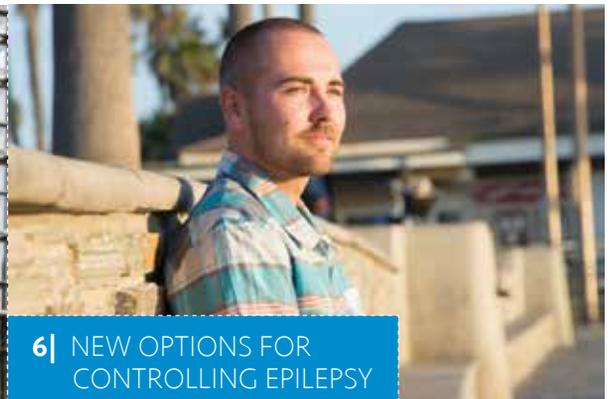


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