A STEM-CELL THERAPY COULD PREVENT BLINDNESS



FALL 2017

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mericans today have many concerns and questions about their healthcare and what steps our government may take to impact health insurance coverage. Whether we end up with "Trumpcare," retain "Obamacare" or a hybrid version of both, UC Irvine Health stands ready to meet your needs and exceed your expectations. Our commitment to lead the region in improving individual and population health is stronger than ever. We remain our region's leader in complex care,

including cancer care, neurosciences and in meeting the growing demand for gastrointestinal expertise at the new H.H. Chao Comprehensive Digestive Disease Center.

Complex care also extends to our expertise in maternal-fetal medicine. Despite advances in perinatal care, America still has maternal mortality rates that are among the highest in the developed world. The UC Irvine Health maternal-fetal medicine experts are heading efforts to improve treatment across the country for common conditions that often endanger the lives of expectant women. You can read about our leadership in this important field on page 6 of this issue of *Live Well*.

This issue also highlights exciting stem cell research that provides hope for thousands of people suffering from the debilitating eye condition retinitis pigmentosa. When California voters had the foresight in 2004 to approve the California Institute for Regenerative Medicine, the science had not yet matched the sky-high promises touted for stem cell therapy. That's no longer true, as Dr. Henry Klassen's work reflects the wisdom of the voters and the irreplaceable value of academic medical centers such as UC Irvine Health.

Too many people suffering with epilepsy do not take advantage of the latest treatment options. On page 18, you will hear from one of our patients, whose experience with the condition worsened during pregnancy and became even more perilous after childbirth. Fortunately, she found Dr. Jack Lin, a UC Irvine Health neurologist, who helped stabilize her epilepsy.

If you look around, you will see us in your community. On page 14, we highlight our involvement across Orange County, and on page 16 we show you ways to take advantage of UC Irvine Health expertise without visiting the doctor's office. We will continue to look for ways to elevate the health of Orange County residents and anyone who seeks our help.

UC Irvine Health

VICE CHANCELLOR, HEALTH AFFAIRS CHIEF EXECUTIVE OFFICER, UC IRVINE HEALTH Howard Federoff, MD, PhD

CHIEF COMMUNICATIONS OFFICER Gregory Harrison

ASSISTANT MARKETING DIRECTOR Daphne Tam

PUBLIC INFORMATION OFFICER John Murray

MANAGING EDITOR Marcida Dodson

DESIGN, EDITORIAL & CONTRIBUTORS Moon Tide Media

ART DIRECTOR Angela Akers

EDITOR Shari Roan

DESIGNER

Kelsey Elliott

COVER PHOTOGRAPHY Michael Der

BRAND PUBLISHER Hannah Lee

If you have comments or questions, please contact: UC Irvine Health Marketing & Communications 333 City Blvd. West, Suite 1250 Orange, CA 92868 714-456-5496

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

Sincerely,

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Dr. Howard Federoff Vice Chancellor, UC Irvine Health Affairs CEO, UC Irvine Health

YOU MAKE THE DIFFERENCE

One of the great joys in life is the arrival of a healthy newborn. When this routine event becomes complicated — during pregnancy or in the delivery room — a university medical center offers unmatched options for care. From premature birth to active aging, UC Irvine Health is discovering and delivering innovative approaches to help our community live well.

Clinical advances like the ones you'll read about on the following pages — and may have experienced in your own life — are fueled by the generosity of people like you. If you would like to make a gift to thank a health professional, honor the memory of a loved one or establish a lasting legacy, visit ucirvinehealth.org/giving or call 714-456-7350. Learn how you can help transform healthcare.

STEM CELL THERAPY HOLDS HOPE OF TREATING A FORM OF BLINDNESS

WRITTEN BY SHARI ROAN | ILLUSTRATED BY KELSEY ELLIOTT

t's one of the hardest conversations an eye doctor can have with a patient: "You're going to become blind." But that's the bottom line for retinitis pigmentosa (RP). The inherited eye disease is incurable. Symptoms typically first appear during childhood, but many people go blind by age 40.

However, research by a UC Irvine Health ophthalmologist has generated hope that a treatment to preserve vision may be within reach. Dr. Henry Klassen has launched a Phase 2b clinical trial to test the safety and efficacy of a stem cell therapy to stop the disease progression. It's a major step forward in a Food and Drug Administration-approved stem cell-based clinical study.

His research may have far-reaching impact as stem cell therapy offers a promising approach for a number of devastating diseases. Klassen's research was accelerated by support from the state's stem cell agency, the California Institute for Regenerative Medicine. The study is a high point in Klassen's two-decade guest to find a treatment for RP. Even during medical school, he was intrigued with the idea that tissues in the central nervous system the brain, spine, retina - could be coaxed into repair after damage. He focused on RP, which is caused by the deterioration of light-sensing cells in the eye called rods and cones.

"What was amazing about RP was how severe it is and yet how precise the lesion is. The fundamental problem is the rods and cones are going away," says Klassen, associate professor and director of the Stem Cell and Retinal Regeneration Program.

Eventually technology caught up with Klassen's dream of developing an RP treatment. Late one night, while studying in Europe, Klassen received a call from a colleague who said he'd successfully implanted stem cells into the retina of a laboratory rat. Klassen hopped on a plane to see the research for himself. Stem cells are immature cells that can both divide and differentiate into other tissues.

"I took one look down the microscope, and it was so stunning and unexpected," Klassen says. "I dropped everything and said, 'This is what I'm going to work on.' I was all in."

The therapy now under investigation involves progenitor cells, which have begun the differentiation process from stem cells but are still immature, that were developed in Klassen's lab at the UC Irvine Sue & Bill Gross Stem Cell Research Center. His colleague, Dr. Jing Yang, prepares the cells for each patient and brings them to the treating physician. At the Gavin Herbert Eye Institute, Dr. Barry Kuppermann injects the cells into the vitreous of the eye the gel-like substance that makes up much of the inner eye — of RP patients.

Studies so far show that the stem cells secrete growth factors that rescue damaged retinal cells and slow disease progression. They may also prompt the growth of new rods and cones to replace dying retinal cells and possibly reverse the course of the disease.

"The initial goal was to slow the progression," Klassen says. "But we had to start the clinical testing in people who were already severely affected. We're excited that some of the patients reported that they were getting better. That was more than we expected."

RP affects 1.5 million people worldwide and is considered a rare, orphan disease. The FDA has granted Klassen and his colleagues a Regenerative Medicine Advanced Therapy designation, which allows for an expedited review of promising therapies.

Klassen, who ran the mile in track during high school, knows the final steps can be the most thrilling and the most taxing. "We've come a long way," he says. "We know that we have to get over the finish line."



To support Dr. Henry Klassen's research, visit connect.uci.edu/rpcure



TAKE ADVANTAGE OF OPEN ENROLLMENT

Most health insurance plans offer open enrollment periods each fall. With all of the discussion emanating from Washington, D.C. about health insurance, you may be confused about your options for 2017. Take time to choose wisely, says Dr. Regan Chan, a UC Irvine Health family physician.

"Life happens; things change. Assess whether your current health plan is meeting your needs," Chan says. "Make yourself aware of your options, and not just the bottom line — the costs. Look at the way your provider delivers care."

Consumers who choose plans that include UC Irvine Health will have access to an extensive primary care network, specialists and top facilities, he says.

"The nice thing about an academic health setting is that our experts have seen it all. They are at the forefront of education and clinical trials. Those things may not be available in other settings."

CHAO FAMILY GIFT FUNDS ENDOWED CHAIRS

The UC Irvine Health Chao Family Comprehensive Cancer Center — Orange County's only National Cancer Institute-designated comprehensive cancer center — has honored two renowned cancer physician-researchers with endowed chairs. They are made possible by a \$5 million gift from Chao family siblings Allen Chao, Agnes Kung, Phylis Hsia and Richard Chao and their spouses. The donation also provides for pioneering work on blood cancers and cancers with hereditary links.

"An endowed chair is among the highest academic honors a faculty member can receive," says Dr. Howard Federoff, vice chancellor of UC Irvine Health Affairs. "In the medical arena, the endowment can have global impact by providing time and resources for clinical research and trials. We are indeed grateful to the Chao family for their gift enabling this recognition of two talented physicians whose work could very well lead to major breakthroughs in cancer care."

Van Etten, director of the Chao Family Comprehensive Cancer Center, was awarded the Chao Family Endowed Director's Chair in Cancer Research & Treatment. He is recognized internationally for groundbreaking research on chronic myeloid leukemia that spurred the development of molecularly targeted drugs to treat this disease. Previously, a hematopoietic stem cell transplant (HSCT) had been the main treatment option for these patients.

O'Brien is the cancer center's associate director for clinical science and medical director of the Sue & Ralph Stern Center for Cancer Clinical Trials & Research. She oversees and coordinates clinical cancer research across UC Irvine Health and was named to the Chao Family Endowed Chair for Cancer Clinical Science. Her extensive expertise in clinical cancer research includes leadership roles in clinical trials that led to approval of many new treatments for chronic and acute lymphoid leukemias.

Research funded by the chairs will focus initially on supporting infrastructure for a new UC Irvine Health program in HSCT as a therapy for blood cancers such as leukemia, multiple myeloma and lymphoma. The program would provide Orange County residents access to this critical treatment method close to home and lead to studies designed to improve HSCT outcomes.

UC IRVINE MEDICAL CENTER CITED AS ONE OF "AMERICA'S BEST HOSPITALS"

For the 17th consecutive year, U.S. News & World Report has recognized UC Irvine Medical Center as one of "America's Best Hospitals." The annual ratings acknowledge hospitals that excel in treating the most challenging patients. This year, UC Irvine Medical Center was recognized for excellence of geriatric and senior health services, ranking the specialty 49th among similar programs nationally.

UC Irvine Medical Center is the only Orange County hospital consistently rated among America's best by *U.S. News.* It is ranked 11th in California and sixth in the Los Angeles region. In addition to its

2017-18 nationally ranked specialty, *U.S. News* rated many UC Irvine Health programs as high performing, including cancer, gastroenterology and GI surgery, nephrology, neurology and neurosurgery, orthopedics, pulmonology and urology.

The UC Irvine Health senior health services team is led by Dr. Lisa Gibbs, Orange County Medical Association's 2017 Physician of the Year and a national leader in geriatric care.

Of more than 4,500 hospitals evaluated, only 146 were rated nationally in at least one of 16 specialty categories. Since 2001, *U.S. News* has listed UC Irvine Health programs in gynecology, geriatrics, cancer, digestive disorders/gastroenterology and GI surgery, nephrology, orthopaedics, urology and ear, nose and throat among the top 50 nationwide.

HERE'S A GUIDE TO OPEN ENROLLMENT:

- Know your dates. For people buying insurance from the Covered California health insurance exchange, open enrollment begins Nov. 1 and ends Jan. 31. For Medicare recipients, open enrollment begins Oct. 15 and ends Dec. 7.
- Read any notices sent to you from your current health insurer regarding changes to the 2018 plan. If your employer offers meetings or classes about your 2018 insurance options, attend a meeting and ask questions.
- Look at your costs for the previous year and try to anticipate what medical costs you may incur in the coming year. Calculate what you might pay for your portion of insurance premiums, deductibles, co-payments (for example, doctor's office and emergency room visits) and co-insurance (the percentage of costs paid by the health plan after you've met your deductible). Don't forget to consider prescription drug co-payments or coinsurance.
- The federal Affordable Care Act has not been repealed for 2018. That means you must sign up for health insurance during open enrollment if you don't already have it or you will have to pay a penalty fee. To continue your health coverage in 2018, consult with the Covered California website at www.coveredca.com
- During open enrollment, you can change your plan and select new doctors. If you want to remain with your current physician, check with your 2018 plan to make sure your doctor is in the plan's network.
- If you're age 26 or younger, you can stay on your parent's plan.
- Learn about health savings accounts and flexible spending accounts if your employer offers these. Consider whether any of these programs would help you save money.
- Consider whether you need dental or vision insurance and what those plans will cost.

For more information, visit ucirvinehealth.org/oe2017



It's pretty tough to do well in school if your vision isn't good. The Eye Mobile for Children program provided by the UC Irvine Health Gavin Herbert Eye Institute is working hard to make sure young children in Orange County get off to a good start in school by seeing well.

The Eye Mobile for Children — dubbed "Seymour," after the program's motto, "Seymour today, see more tomorrow" — visits preschools, transitional kindergarten programs and community health sites to provide vision screenings. Children who do not pass the initial screening are scheduled for an in-depth eye exam with a pediatric optometrist or ophthalmologist and may receive a prescription for eyeglasses. All services and eyeglasses are free. Parents are welcome to attend the visit.

So far, the eye mobile team has performed more than 3,200 screenings, conducted 881 complete eye exams and provided 598 pairs of eyeglasses to children. The team sometimes discovers other vision disorders such as amblyopia (lazy eye) and can refer children for additional care.

UC Irvine Health pediatric ophthalmologist Dr. Robert Lingua received a \$1.5-million grant from First 5 California (which draws from the state cigarette taxes to fund programs for children through age 5) to launch the eye mobile and provide services for the first three years of operation. Eyeglasses are funded through a gift from the Lon V. Smith Foundation, and the program also receives support from The Nicholas Endowment. Additional funding is being sought to ensure the program's continuation.







For more information about the Eye Mobile for Children, contact 949-824-6363.

MATERNAL-FETAL EXPERTS SMOOTH THE WAY FOR EVEN THE MOST CHALLENGING PREGNANCIES.

Baby,

WRITTEN BY TRAVIS MARSHALL PHOTOGRAPHED BY MICHAEL DER

amila Jackson thought she would never have children. In her early 30s, the mortgage underwriter from Diamond Bar developed uterine fibroids, a type of benign tumor that grows in the muscles of the uterus. To treat them she underwent uterine artery embolization, which reduces blood flow to the uterus and makes pregnancy nearly impossible. "Back in 2012, the doctor told me I wouldn't be able to have kids," Jackson, now 37, says. "When I got pregnant four years later, it was a big surprise."

Because of her medical history, Jackson's obstetrician-gynecologist realized she would need specialized care beyond the capabilities of most community hospitals, so Jackson was referred to the maternal and fetal medicine (MFM) experts at UC Irvine Medical Center — the only facility in Orange County that offers specialized care in one location for both mothers and babies. From the moment Jackson met Dr. Jennifer Jolley, her new obstetrician, she knew she was in good hands. "Dr. Jolley gave me such amazing support and personal care," she says. "If I could, I would go to her for an earache."

SPECIALIZATION AND COLLABORATION

Like all her colleagues in the UC Irvine Health high-risk pregnancy program, Jolley is a perinatologist — an ob-gyn with specialized training in caring for mothers and babies in high-risk pregnancies. But what's unique about UC Irvine Health is that each perinatologist also maintains her or his own subspecialty interests. Some specialize in caring for specific medical conditions of the mothers, while others are experts in diagnosing and treating fetuses in utero or multiple gestations. They all work collaboratively to ensure the safety of both mother baby, sometimes even before conception, to after delivery.

"Together we represent a wide range of expertise," explains Dr. Carol Major, director of the Division of Maternal and Fetal Medicine at the UC Irvine School of Medicine. "My expertise is in diabetes in pregnancy while Dr. Tamera Hatfield excels in caring for pregnancies complicated by various malignancies. Dr. Afshan Hameed is board-certified in both perinatology and cardiology and has expertise to manage pregnant patients with complex cardiac issues. And Dr. Jolley and Dr. Manuel Porto specialize in prenatal diagnosis and fetal therapy."



A SPECIAL PLACE FOR THE TINIEST PATIENTS

For many women with high-risk pregnancies, carrying the baby for a full 40 weeks might not be possible. In some cases the baby may come early due to preterm labor. In others, the perinatologists may decide that delivering the baby early is the safest choice for both mother and child.

Premature babies and those who need ongoing medical care stay in a specialized facility called the neonatal intensive care unit (NICU). The NICU at UC Irvine Medical Center is one of the most advanced in the region. A Level III unit, it meets the most rigorous standards set by the state and is capable of caring for infants born as early as 23 weeks gestation. For these tiniest of preemies, the unit has a section designated the "petite suite."

"When babies are born extremely premature, before 28 weeks, they can face many challenges and they need constant specialized care," says obstetrician Dr. Jennifer Jolley. "Their lungs may not be fully mature, so they need respiratory support. They have a risk for a brain bleed that could lead to neurodevelopmental delays and have an increased risk for other complications with other organs."

For any baby staying in the NICU, safety and support is paramount to all — and that includes parents and loved ones. The 45-bed facility, which is staffed around the clock by dedicated primary care nursing teams, has private rooms where parents can visit 24 hours a day and sit in special "kangaroo" chairs that allow parents to hold their infant with skin-to-skin contact.

PREMATURE BIRTH RATES ARE NO LONGER FALLING

Significant progress has been made in the U.S. to lower the rate of preterm births over the past two decades. However, the rates have not fallen in recent years. Premature births are defined as those occurring before 37 weeks of pregnancy has been completed.

The percentage of preterm births among all live births in the U.S.



Dr. Judith Chung excels in managing women with multiple gestations, while Dr. Julianne Toohey has expertise in management of mood disorders in pregnancy.

This expertise in fields beyond pregnancy plays an important role in maternal-fetal medicine because high-risk pregnancies are often caused by complications with womens' pre-existing, chronic health issues.

"Modern medicine is getting very good at maintaining life for a long time," Major says. "Many of our patients are women with chronic medical conditions like heart disease, diabetes, or maybe they've had a kidney transplant or they're on dialysis. These are women who, in the past, might have been told they couldn't or shouldn't get pregnant. But now they can and do, and therefore they're faced with a whole new set of complications."

Subspecialization is also important for recognizing the potential for complications with mothers taking certain medications during pregnancy for pre-existing health issues. "If a woman has high blood pressure, we're not only going to help keep the condition under control, but we'll also look at the medications she is taking," Major says. "Taking ACE inhibitors for high blood pressure, for example, can put the fetus at risk. Knowing which medications are safe or should be avoided during pregnancy is essential."

SETTING LIFESAVING STANDARDS

In a perfect world, every woman would know whether she had risk factors that might complicate her pregnancy and would consult a high-risk pregnancy specialist, like those at UC Irvine Medical Center, before getting pregnant. Of course, that's not how it usually happens. In fact, even women who get all the standard prenatal tests and exams may not realize they have certain risk factors before a problem develops.

Placenta accreta is one of those problems. It happens when the placenta embeds itself into the uterine wall. If a placenta accreta isn't detected before a woman gives birth, it can cause potentially life-threatening hemorrhage — uncontrolled blood loss — during delivery. Many standard labor-and-delivery departments aren't equipped with the resources needed to effectively deal with a severe hemorrhage when it does happen. This is why hemorrhage is currently the leading cause of maternal death in the United States.

Major says the best way to keep women safe is by diagnosing accreta before they deliver, and making sure those who do have the condition deliver their babies at a tertiary care center, such as UC Irvine Medical Center, with quick access to a large blood bank, surgical backup and interventional radiology. Doctors know that accreta can develop when there's scar tissue in the uterus from a previous C-section or other surgery, but otherwise it's hard to predict. Recognizing accreta on an ultrasound requires specialized expertise.

In addition to being a place where women with placenta accreta can give birth safely, UC Irvine Medical Center is also a participant in a state program called the California Maternal Quality Care Collaborative (CMQCC). Through this program, UC Irvine Health perinatologists are spearheading national efforts to establish standards for recognizing and treating placenta accreta as well as preeclampsia — another hard-topredict condition that is caused by high blood pressure during pregnancy. UC Irvine Health's Hameed led the collaborative's cardiovascular committee, which developed the standards that has helped make California's program a model for the rest of the nation.

"We're teaching community hospitals how to manage hemorrhage, how to stabilize patients and possibly transfer them to a facility like ours," Major says. "With the CMQCC, we have been able to create standards — hemorrhage protocols, blood pressure protocols. And as a result, maternal mortality in the state has since dropped by 50 percent in certain groups of high-risk patients."

NAVIGATING INTERCONNECTED RISK FACTORS

Jackson was referred to the UC Irvine Health high-risk pregnancy program because of her history of fibroids, but Jolley ultimately diagnosed a number of other inter-related risk factors.

"Jamila had increased risk for placenta accreta due to her previous uterine arterial embolization, plus gestational diabetes, chronic hypertension and fetal growth restriction (small baby)," Jolley says. "Then at 33 weeks, we diagnosed her with preeclampsia, which has an increased risk of developing in women with high blood pressure and diabetes."

At that point, Jackson was admitted to the hospital for round-the-clock monitoring. She ended up being admitted to UC Irvine Medical Center's perinatal unit for four weeks until her baby was born. "We wanted to give her baby the longest possible time in utero to mature," Jolley says. During her stay the hospital staff set up space for the baby's father so he could be with her the whole time.

"My boyfriend stayed 30 days in the hospital with me, and I just had so much support," Jackson says. "I had to take my hands off the wheel and let someone else guide it, and everyone was so sweet."

In February, Jackson gave birth to a baby girl named Zoe. "Jamila was so calm and remained optimistic during her hospitalization," Jolley says. "We knew all along she would need a cesarean delivery due to the location of her residual fibroids, and we were lucky she did not have placenta accreta to further complicate delivery." Despite being born three weeks early, Zoe arrived healthy and happy, and Jackson took her home after just three days of recovery.

"Now that we're home, I love having all my family over to hang out and cook and spend time with Zoe," Jackson says. "Family time is just so valuable now. I couldn't be happier with my experience at UC Irvine Medical Center."



What is a high-risk pregnancy?

A pregnancy is considered high-risk if either the mother or baby or both are at an increased risk of a health problem. Women with high-risk pregnancies are referred to a specialist who can help manage the pregnancy to prevent problems. Pregnancy risk is often related to existing health problems, age, lifestyle factors or conditions that arise during pregnancy. Women who have had previous complications during pregnancy may also be referred to a high-risk pregnancy specialist. UC Irvine Health provides such specialists, called maternal-fetal medicine specialists or perinatologists, and provides a full range of services including vaginal delivery of twins in appropriate cases.

Existing conditions:

High blood pressure, heart conditions, diabetes, kidney disease, autoimmune disease, cancer, thyroid disease, infertility, obesity, HIV or AIDS and other chronic conditions

Ige: Adolescents, first-time pregnancies in women over age 35

Lifestyle factors: Alcohol or drug use, cigarette smoking

Conditions that arise during pregnancy:

Twins or other multiple gestation pregnancies, gestational diabetes, preeclampsia and eclampsia

Source: UC Irvine Health; National Institutes of Health





THINKING ABOUT DEMENTIA

DR. CLAUDIA KAWAS HAS DEVOTED HER CAREER TO UNDERSTANDING AGING AND THE BRAIN.

WRITTEN BY SHARI ROAN PHOTOGRAPHED BY REMY HAYNES

ne of the most unique and fruitful studies on aging began in 2003 under the direction of Dr. Claudia H. Kawas, a geriatric neurologist, and her UC Irvine Health colleagues. The 90+ Study is the longest continuing research effort focused exclusively on the health and lifestyles of Americans in their 90s or older. The study of 1,600 residents of Laguna Woods has shed light on possible clues to healthy cognition and memory during aging.

Successful strategies to help seniors live full, productive lives can't come soon enough. The number of Americans 65 and older will double in the next 45 years. *Live Well* talked to Kawas, co-director of the study, about memory disorders and her research.

ARE WE ANY CLOSER TO UNDERSTANDING WHAT IS NORMAL, AGE-RELATED MEMORY LOSS AND WHAT CONSTITUTES DEMENTIA?

We would like to be able to say what is normal and what is dementia. But I think normal to dementia is a spectrum. We treat it binary — you're either normal or you have dementia. I think, in a way, that approach clouds our thinking. Instead, what happens is that as people age they have a range of change in their cognitive abilities.

IF SOMEONE IS CONCERNED ABOUT WHAT IS NORMAL AND WHAT ISN'T, IS IT BEST TO CONTACT HIS OR HER DOCTOR FOR AN EVALUATION?

Reach out to doctor and get a reasonable evaluation. If nothing else, cognitive testing will help us understand a lot more when we see you six or 12 months later because we have that baseline test. In large measure, the definition of dementia is the loss of abilities from a previous level and the rate at which you lose those abilities.

DO YOU THINK WE'LL SEE MORE EFFECTIVE TREATMENTS FOR ALZHEIMER'S DISEASE IN THE NEAR FUTURE?

I think we've got a lot more things going on that are potentially good leads in combating Alzheimer's disease. There are a lot of studies right now that have to do with affecting amyloid (an abnormal build-up of protein) in the brain. It's going to take a few years to get results of those studies. If removing amyloid helps improve cognition, that can really catapult us to a treatment approach. If the studies are negative, though, it will also teach us a lot.

ACCORDING TO YOUR RESEARCH, WHAT HELPS PRESERVE MEMORY AND COGNITIVE FUNCTION AS WE AGE?

One of the things we've learned is that a healthy lifestyle matters. Exercise, social engagement, a good diet that is not too high in fats and has a variety of fruits and vegetables and fish — all of those things matter. It's just that no single one of those things makes a big difference. Taking a pill with vitamin E isn't the same as eating a good diet.

HAS THE RISK OF DEMENTIA CHANGED IN RECENT YEARS?

Over the last 10 to 20 years, the age-specific risk for dementia is going down compared to what it was before. What this means is that the risk of dementia for an 80-year-old today is lower than the risk was for an 80-year-old 20 years ago. Why is that happening? It definitely isn't because of any pharmaceutical cure. I think it has to do with healthier lifestyles.

In the past 20 years we've become more attuned to healthy lifestyles and dietary concerns. Education is strongly related to dementia risk, and the educational levels in many places have improved over the last two or three decades. Also our management of vascular dementia risk factors — such as blood pressure and blood sugar — has improved.

WHAT HAS YOUR 90+ STUDY TAUGHT YOU?

This is the hardest study I've ever done but the most fun. It's also the most interesting and surprising in terms of results. We've learned that 40 percent of 90-year-olds who don't have dementia still have a significant amount of Alzheimer's pathology (amyloid) in their brains. Yet they continue to have good cognition. This tells us that amyloid can be present and still be tolerated, if we knew the secret, and that something may be causing Alzheimer's disease other than amyloid.

We also know that 20 to 50 percent of individuals who are demented have no pathology — evidence of disease — in their brains. It will be important to figure out what is causing dementia in these individuals.

FOR PEOPLE WHO HAVE MEMORY DISORDERS NOW, WHY IS THE UC IRVINE HEALTH MEMORY DISORDERS PROGRAM AN IMPORTANT RESOURCE?

This program gives people access to an academic medical center where specialty-trained professionals understand the full spectrum of cognitive disorders and patients have access to a workup as well as treatment and management. Most physicians and primary care doctors don't have the time to work with patients who have memory complaints. Unfortunately, there's no blood test that makes it quick. The people at the UC Irvine Health Memory Disorders Program are highly trained and board-certified in their specialties — and all have had additional training in memory disorders. At present there are only about three places in the U.S. that have an accredited geriatric neurology fellowship program. We're one of them. In addition, the doctors in the program are actively doing research and can help patients and their families get access to participate in research, including experimental treatments and other clinical trials. ■



O & A

KEY FINDINGS FROM THE 90+ STUDY

People who drank moderate amounts of alcohol or coffee lived longer than those who abstained.

People who were overweight in their 70s lived longer than normal or underweight people did.

More than 40 percent of people aged 90 and older suffer from dementia, while almost 80 percent are disabled. Both are more common in women than men.

About half of people with dementia over age 90 do not have sufficient neuropathology in their brain to explain their cognitive loss.

People aged 90 and older with an APOE2 gene are less likely to have clinical Alzheimer's dementia but are much more likely to have Alzheimer's neuropathology, such as amyloid, in their brains.

For more information, visit ucirvinehealth.org/longevity

BACK IN THE SADDLE

It takes an expert medical team to care for patients with challenging head and neck cancers.

WRITTEN BY NANCY BRANDS WARD PHOTOGRAPHED BY SHANE O'DONNELL hen John Tremblay underwent surgery at UC Irvine Medical Center to remove a rapidly growing cancer from his tongue, the five-hour wait felt more like 48 hours to his wife, Connie, and son, John Jr. That was only part of the ordeal. A second surgeon took over to reconstruct the tongue, using tissue taken from Tremblay's left arm. That operation took six more hours.

Connie had complete confidence in the UC Irvine Health doctors, yet still she worried. "There was a constant fear of 'What if?'" she recalls.

She need not have worried. The surgery, which took place in September 2016, was a success. Dr. William Armstrong, chair of the Department of Otolaryngology — Head and Neck Surgery, and his colleague, Dr. Tjoson Tjoa, a specialist in head and neck cancer surgery and microvascular reconstruction, set the 51-year-old father of three from Cypress on a path to recovery.

Although his doctors are pleased that Tremblay is cancer-free and recovering faster than many, that doesn't mean the ordeal has been easy. He was hospitalized for two weeks and was initially dependent on a feeding tube and a tracheostomy tube in his neck for breathing.

"Tumors in the head and neck are very personal and can be very debilitating," Armstrong says. "They affect a lot of what makes us human — speech, swallowing, breathing and sometimes taste, smell and appearance."

"TUMORS IN THE HEAD AND NECK ARE VERY PERSONAL AND CAN BE VERY DEBILITATING."

The difficulty of these cancers — together with the effects of surgery, radiation and chemotherapy — require the expertise of a multidisciplinary team that offers many services beyond just surgery, chemotherapy and radiation. At the UC Irvine Health Chao Family Comprehensive Cancer Center, leading-edge care is delivered under one roof by a team that includes anesthesiologists, medical oncologists, otolaryngologists, pathologists, plastic and reconstructive surgeons, radiation oncologists, radiologists, dental surgeons, speech pathologists, experts in voice and swallowing, as well as dietitians, case managers and social workers.

While head and neck cancers represent only 4 percent of all cancers in the United States — some 65,000 — the incidence is increasing. Most head and neck cancers begin in the squamous cells that line the moist, mucosal surfaces of the mouth, nose and throat. Removal of such tumors often causes changes in oral tissue that leads to dental problems and difficulties eating and swallowing. The pain resulting from treatment can be severe.

UC Irvine Health gives patients whatever help they need to alleviate discomfort and preserve health. Prior to treatment, patients may be referred to a dentist for preventive care and to be fitted for mouth guards that protect the teeth from radiation.

During cancer treatment and recovery, specialists can help with speech and nutritional concerns. Physical therapy is sometimes recommended and social workers help coordinate care.

"With a lot of state-of-the-art-cancer care, we're giving very advanced and sometimes physically intensive treatments," Armstrong says. "Having the ancillary services in one place allows people to get through the treatment, to get more effective treatment and ultimately have better outcomes."

Keeping patients and families informed and supported is part of the package of care. "Cancer diagnoses open up a huge box of questions for patients and their families, such as how it happens, what the prognosis is, what surgery entails and what to expect from radiation and chemotherapy," Tjoa says. "We want to provide as much information as possible."



John Tremblay, left, and Dr. Tjoson Tjoa finished strong at the UCI Anti-Cancer Challenge: Cycle & Run for the Cures.

That's why Tjoa is using iBook technology to develop educational videos and interactive diagrams about head and neck cancers and surgeries. He aims to make the materials widely available on the internet within a year. Early diagnosis and prevention of head and neck tumors is also a priority, Tjoa says. At least 75 percent of head and neck cancers are caused by long-term tobacco and alcohol use. Human papillomavirus (HPV) infection, which is known to cause cervical and anal cancer, is also a significant cause of head and neck cancer. To prevent these cancers, the U.S. Centers for Disease Control and Prevention recommends that boys and girls receive HPV vaccinations before they become sexually active — at age 11 or 12 (or as young as 9).

A brick mason with his own business, Tremblay has undergone physical therapy in order to return to work. Just four months after his surgery, the avid bicycle rider was back in the saddle. In June, he rode in the inaugural UC Irvine Health Anti-Cancer Challenge: Cycle & Run for the Cures. And his doctor, Tjoa, joined him.

"We just did 32 miles," says Tremblay, who rode 75 miles the month before to support pediatric cancer research in his seventh Tour of Long Beach. "Dr. Tjoa became a bike rider in this challenge. I'm proud of him." ■

THE ANTI-CANCER CHALLENGE IS A HIT

The Anti-Cancer Challenge is a community movement to raise awareness and funds for cancer research at the UC Irvine Health Chao Family Comprehensive Cancer Center and our pediatric research affiliate, CHOC Children's. More than 6,000 people attended the 2017 inaugural event on June 10 and June 11, with 2,000 people participating in cycling rides across Orange County or a 5K run/walk through Angel Stadium. The event raised more than \$600,000. In addition to the weekend event, nine-time Grammy Award winner Sheryl Crow will perform for 5,000 people at the Anti-Cancer Challenge Celebration Concert, to be held Oct. 21 at the UC Irvine Bren Events Center. The concert caps the inaugural Anti-Cancer Challenge series of events. Tickets will be available to the general public for purchase soon. For information, visit **anti-cancerchallenge.org**



Dr. Robert Bristow, chair of the Department of Obstetrics & Gynecology; Dr. Michael Stamos, dean of the UC Irvine School of Medicine; and Dr. Howard Federoff, CEO of UC Irvine Health and vice chancellor, UC Irvine Health Affairs, rode for cures. E A CONSTRUCTION OF THE CASE

Family Comprehensive Cancer Center, addresses the crowd on June 10.



Sheryf Crow

Join Grammy award winner Sheryl Crow for a concert to celebrate UC Irvine cancer research.

Saturday, Oct. 21, 2017 UC Irvine Bren Events Center

Anti-Cancer Challenge proceeds go to lifesaving research at the UC Irvine Health Chao Family Comprehensive Cancer Center and our pediatric cancer affiliate, CHOC Children's Hospital of Orange County.

Get tickets at anti-cancerchallenge.org

#iamanticancer

UC



14 LIVE WELL

BURN SURVIVORS'

Dr. Victor Joe, director of the UC Irvine Health Regional Burn Center, left, chats with a burn survivor. Hundreds of survivors and their families attended the annual summer picnic on Aug. 17. The center treats the county's most serious burn injuries and is the only American Burn Association-verified burn center in Orange County.



KIDNEY WALK

A UC Irvine Health team joined the Orange County Kidney Walk, sponsored by the National Kidney Foundation, on May 21 at Mason Regional Park, Irvine.



MS WALK

Enthusiastic walkers gathered on April 29 at UC Irvine for Walk MS. Far right: Erin Fromm, MS, UC Irvine Health nurse navigator.



'PAINT THE TOWN PURPLE TO END EPILEPSY'

"Paint the Town Purple to End Epilepsy," this year's LEAD OC Epilepsy Gala, was held June 8 at Balboa Bay Resort in Newport Beach. The event benefited the Epilepsy Foundation of Greater Los Angeles County to support the training and development of a new adult-pediatic epilepsy neurosurgery specialist at UC Irvine Health and CHOC Children's.



Dr. Sumeet Vadera (left), Dr. Lilit Mnatsakanyan (next to Vadera), and Dr. Jack Lin (right) were among the specialists from the UC Irvine Health Comprehensive Epilepsy Program who attended the LEAD OC Epilepsy Gala.



CDDC GRAND OPENING

The grand opening of the renovated H.H. Chao Comprehensive Digestive Disease Center was held Aug. 19 on the UC Irvine Medical Center campus. The three-story building was designed for the comfort of patients and their familes and to provide a wide range of on-site treatments.

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. Where indicated, classes are offered in both Spanish and English. All classes are held at UC Irvine Health locations throughout Orange County.

Please note: There is a small fee to park at UC Irvine Medical Center and UC Irvine Douglas Hospital.

LOCATIONS:

- UC Irvine Medical Center 101 The City Drive South, Orange
- UC Irvine Douglas Hospital 101 The City Drive South, Orange

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

Nov. 9, Feb. 15 | 11 a.m.-12:30 p.m. UC Irvine Medical Center Neuropsychiatric Center, Room 101

BREASTFEEDING

Oct. 5, Nov. 2, Dec. 7, Jan. 4, Feb. 1 | 6-9 p.m. UC Irvine Medical Center Library 2nd floor, Classroom 2105

DIABETIC DIET

Oct. 2 | 4–6 p.m. UC Irvine Medical Center Library 2nd floor, Classroom 2103

DIABETES MANAGEMENT SERIES (three classes) Oct. 3, 10, 17 | 4-6 p.m.

UC Irvine Medical Center Building 53, Room 121

DIABETES OVERVIEW

Nov. 7 | 4–6 p.m. UC Irvine Medical Center Library 2nd floor, Classroom 2103

DIABETES OVERVIEW, SPANISH Oct. 18 | 5-7 p.m. UC Irvine Medical Center Neuropsychiatric Center, Room 101

HEART FAILURE

Nov. 13, Feb. 12 | 2-3:30 p.m. UC Irvine Douglas Hospital 3rd floor, Room 3005

HEART HEALTHY DIET (cholesterol)

Nov. 13 | 4–5:30 p.m. UC Irvine Medical Center Library 2nd floor, Classroom 2103

HIGH BLOOD PRESSURE

Sept. 13 | 6-7:30 p.m. UC Irvine Medical Center Neuropsychiatric Center, Room 101 Nov. 15 | 6-7:30 p.m. UC Irvine Medical Center Library 2nd floor, Classroom 2103

JOINT REPLACEMENT, HIP OR KNEE

Every Monday, except on holidays Sept. 11, 18, 25 | 2–3 p.m. Oct. 2, 9, 16, 23, 30 | 2–3 p.m. Nov. 6, 13, 20, 27 | 2–3 p.m. Dec. 4, 11, 18 | 2–3 p.m. Jan. 8, 22, 29 | 2–3 p.m. Feb. 5, 12, 26 | 2–3 p.m. UC Irvine Douglas Hospital 3rd floor, Family Room 3001

MEDITATION FOR HEALTH SERIES (four classes)

Sept. 11, 18, 25, Oct. 2 | 6:30-7:30 p.m. Nov. 6, 13, 20, 27 | 6:30-7:30 p.m. UC Irvine Douglas Hospital Conference Room 3005

MEDITATION FOR HEALTH

SPECIAL TOPIC: BREATHING Oct. 16 | 6:30-7:30 p.m. UC Irvine Douglas Hospital Conference Room 3005

MEDITATION SPECIAL TOPIC – BODY SCAN RELAXATION Dec. 4 | 6:30-7:30 p.m. UC Irvine Douglas Hospital Conference Room 3005

NEWBORN CARE

Oct. 20, Nov. 17, Dec. 15, Jan. 12, Feb. 9 | 6-9 p.m. UC Irvine Medical Center Building 56, Room 113

PREPARED CHILDBIRTH (five classes)

Sept. 6, 13, 20, 27, Oct. 4 | 7–9:30 p.m. Sept. 7, 14, 21, 28, Oct. 5 | 7–9:30 p.m. Oct. 18, 25, Nov. 1, 8, 15 | 7–9:30 p.m. Oct. 19, 26, Nov. 2, 9, 16 | 7–9:30 p.m. Jan. 3, 10, 17, 24, 31 | 7–9:30 p.m. Jan. 4, 11, 18, 25, Feb. 1 | 7–9:30 p.m. UC Irvine Medical Center Building 56, Room 113

PREPARING FOR SURGERY – MIND, BODY AND SPIRIT

Sept. 18, Oct. 2, 16, Nov. 6, 20, Dec. 4, 18, UC Irvine Douglas Hospital, 4th floor, Room 4843. In 2018, sessions will be held the first Monday of the month, except on holidays, beginning: Jan. 2, Feb. 5 | Noon-1:30 p.m. UC Irvine Douglas Hospital, Room 305

PREVENT STROKE

Sept. 12, Nov. 14 | 4–5 p.m. UC Irvine Medical Center Library 2nd floor, Classroom 2114

STOP SMOKING (five classes)

Oct. 2, 9, 16, 23, 30 | 5:30-6:30 p.m. UC Irvine Medical Center Library 2nd floor, Room 3102

UC Irvine Health has on-demand video libraries to help you learn about your health. To obtain an internet access code, call Patient Education at 714-456-8434.





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.

SUPER SATURDAY 2017

Oct. 21 | 10 a.m.-1 p.m.

UC Irvine Manchester Pavilion parking lot 200 S. Manchester Ave., Orange The 7th annual Community Health Fair will offer free flu shots to attendees age 9 and older (limited quantities). We also offer screening tests for diabetes and high blood pressure. Talk to healthcare providers and learn about healthcare services, such as safe senior driving from a DMV official, the free Independence At Home service, dental health, Alzheimer's disease and more. Free refreshments will be provided as well as drawings for prizes.

SAVE THE DATE: GAVIN HERBERT EYE INSTITUTE COMMUNITY LECTURE SERIES

Jan. 29, 2018 | 7 p.m.

Learn how diabetes affects eyesight and how to keep your eyes healthy at the first of the Gavin Herbert Eye Institute's 2018 community lecture series. The free lectures are held at the institute, 850 Health Sciences Road, Irvine. To RSVP or learn more, contact ghei@uci.edu or 949-824-7243.

NEWPORT BEACH LIBRARY SERIES

Make a date to learn more about your health. Back by popular demand, a new series of monthly presentations by UC Irvine Health physicians will take place at the Newport Beach Library. The schedule for the 2017-18 lecture series will feature: Sept. 25 – Sleep disorders and psychiatry, Dr. Ruth Benca Oct. 23 - Men's health, Dr. Faysal Yafi **Nov. 27** – Colon health and inflammatory bowel disease, Dr. Nimisha Parekh and Dr. Sunhee Park Jan. 29 - Population health, Dr. Howard Federoff Feb. 26 - Integrative medicine, Arvin Jenab, ND March 26 – Eye care, Dr. Sumit Garg and Dr. Marjan Farid April 23 – Clinical trials, Dr. Daniela Bota and Dr. Henry Klassen May 21 - Back pain and spine surgery, Dr. Shalini Shah and Dr. Amer Khalil

All presentations are free and begin at 7 p.m. at the Newport Beach Library, 1000 Avocado Ave., Newport Beach. Seating is limited. Audience members have the opportunity to talk with the doctors after the presentations.



SUPPORT GROUPS

ART FOR THE SOUL 714-456-5812

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

BRAIN TUMOR EDUCATION/SUPPORT GROUP 714-456-5812 BURN SURVIVORS SUPPORT GROUP 714-456-7437

HEART FAILURE SUPPORT GROUP 714-456-5887

INFLAMMATORY BOWEL DISEASE SUPPORT GROUP 714-456-7057

KOREAN WOMEN'S SUPPORT 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) 714-456-2846

TRIGEMINAL NEURALGIA ASSOCIATION SUPPORT GROUP 714-730-1600

YOUNG ADULT CANCER SUPPORT GROUP 714-456-7057

Learn more about our support groups online at ucirvinehealth.org/events or call the numbers listed.



YOU CAN LIVE ON HOPE

n April 7, 2013, Megan Davis gave birth to a beautiful baby boy and named him Nolan. The Orange County woman, now 37, was diagnosed with epilepsy during college. Her seizures were controlled with medication. But during pregnancy her condition worsened and became even more perilous after childbirth.

Davis consulted with Dr. Jack J. Lin, director of the UC Irvine Health Comprehensive Epilepsy Program, who provided testing and treatment to help bring the seizures under control.

Davis, who writes a blog about her experience inmegansshoes.com — is now an avid epilepsy awareness advocate. She recently helped expand the Epilepsy Foundation's Care+Cure fellowship program to UC Irvine Health and CHOC Children's. She is also working on bringing epilepsy awareness, care and research opportunities to Orange County.



Pregnancy was one of the most incredible times of my life. Yet it was also the scariest. After not having a seizure in several years, I began having a type of seizure called tonic-clonic due to the hormone fluctuations in my body. Then post-pregnancy, clusters of five to 45 partial seizures a night set in.

Dr. Lin told me: 'You cannot live on an anecdote, but you can live on hope. We can always have hope. We must always have hope.' He told me that after I had spent six days in the UC Irvine Health epilepsy-monitoring unit.

I was feeling dispirited. My head throbbed, and my heart hurt. I cried – wondering where my journey might lead me. I was full of fear and empty of hope. But Dr. Lin explained the success he has had with other patients using a new drug. I think he recognized my pessimism and the familiar feeling of disappointment he must so often see in patients when the answers are not clearly present after a long, emotionally and physically draining week of epilepsy testing.

But when he said those words, I found myself thinking, 'Wow, how lucky am I to be treated by someone who - after years of research and seeing patients - still believes in the possibility of controlling and eventually curing this disease?'

After he left my room, I lay in bed thoroughly inspired and rejuvenated. 'We must always have hope,' I repeated to myself. He's right. I'd laughed when he said it and teased him about this poetic and philosophical side to my doctor that I hadn't seen before. He chuckled and reiterated his belief.

It may seem like an insignificant exchange, but when you battle the invisible without reprieve, the hope one tries so hard to maintain slowly cracks and begins to crumble ... piece by piece. Yet I knew Dr. Lin's words weren't empty and intended to placate. He believed. I found new sustenance for my battle.

Since then we've managed to lessen my seizures dramatically and improve my guality of life tremendously. And during rough patches, I think about the sustenance of hope and my conversation with Dr. Lin that day. We must always hope.

I'm so grateful for the impact he's had on my life and health. If he believes, so can I.





To watch a video about Megan Davis' treatment, visit ucirvinehealth.org/megandavis

It's time to choose a physician who's right for you

Open enrollment is the perfect opportunity to choose a doctor trained to meet your personal health needs.

Our UC Irvine Health primary care providers offer you:

- Personalized care for you and your family
- Services at convenient locations
- Same-day appointments, urgent care and walk-in care
- Access to more than 500 specialists who are part of Orange County's only academic medical center

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ucirvinehealth.org/choose 【 844-227-3824





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UC Irvine Medical Center has been recognized as one of America's Best Hospitals for the 17th consecutive year. See page 4.

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Thanks to you

You came by the thousands to walk, run and ride to end cancer, raising more than \$600,000 at our inaugural UCI Anti-Cancer Challenge event (*page 14*) in June.

We at UC Irvine Health are proud to be part of a caring community that stands with us to fight cancer (*page 12*), to derail the dementia epidemic (*page 10*) and tackle so many other threats to health.

Together, we are helping others live well.

Want to do more to transform medicine?

Call 714-456-7171 or visit ucirvinehealth.org/giving



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