

It Takes a Village

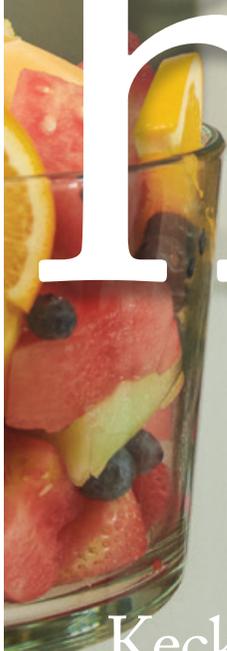
Comprehensive brain tumor care for a mother-to-be | Page 10

USC health

2023
ISSUE ONE

A PUBLICATION OF
KECK MEDICINE OF USC

Keck
Medicine
of USC
LIMITLESS™



Keck Medicine of USC

LIMITLESS POSSIBILITIES

No matter what dreams you may have on the horizon, our expert health care team is here to partner with you to realize your potential. That's what happens when deep expertise combines with truly personalized care. **Together we are limitless.**



[KeckMedicine.org](https://www.KeckMedicine.org)

© 2023 Keck Medicine of USC



Check In



Vitals

2-9

| Diversity in Clinical Trials | Transplant Milestones Celebrated |
| Deep Brain Stimulation | Hot Weather Safety | Meal Planning Tips |
| Meet Our Staff | Rapid Heartbeat Triggers | Faster Recovery After Surgery

Examinations

It Takes a Village

In a race against time, USC's Brain Tumor Center and a multidisciplinary care team worked to save a mother and her unborn child.

COVER STORY



10

Consultations

26-31

Gender-Affirming Care
New Quality Officers
A Better Endoscopy

Advancing Cell Therapy

Eco-Friendly Anesthesia

Keck Medicine of USC is one of only two university-based medical systems in the Los Angeles area. Its internationally renowned physicians and scientists provide world-class patient care at Keck Hospital of USC, USC Norris Cancer Hospital, USC Verdugo Hills Hospital, USC Arcadia Hospital and more than 80 outpatient facilities throughout Los Angeles, Orange, Kern, Tulare and Ventura counties.

Keck Medical Center of USC, which includes Keck Hospital and USC Norris Cancer Hospital, was ranked among the top hospitals nationwide on U.S. News & World Report's 2022-23 Best Hospitals and among the top three hospitals in Los Angeles and top five in California. The medical center was also nationally recognized among the top 50 in 8 medical specialties.

Editor-in-Chief

Kevin Joy

Art Director

Julie Matzaganian

Editorial Advisers

Sara Reeve, Jeana Rettig

Contributing Writers

Zara Abrams, Tina Donvito, Kate Faye, Hope Hamashige, Erin Laviola, Michael Juliani, Alison Rainey, Matthew Vasiliauskas

Photography

Ricardo Carrasco III, Kremer Johnson
Photography, Shutterstock

Printer

Lithographix

Clinical Trials

31

Labwork

32-34

Fast Food and Liver Disease

How EVs Affect Health

Blood Pressure Numbers

Vaping Dangers

Perspective

36

Locations

37

14 Care Next Door

One man's lifesaving cardiac surgery marks a new collaboration at USC Arcadia Hospital.



18

Onward and Upward

A living-donor kidney transplant brings renewed energy and a sense of adventure.



21 Early Action

Personalized breast cancer treatment supports a patient's journey to motherhood.



24 Big Step Forward

With a newly approved prosthetic leg option, better mobility becomes a way of life.



16 When Nature Calls Too Often



Continued on page 2

Find us online
[KeckMedicine.org/magazine](https://www.KeckMedicine.org/magazine)



Permission to reprint articles is available upon request. No artwork may be reproduced without the artist's consent.

Our mailing list comes from several sources. If you receive duplicate copies of this magazine, please send us all the label information and we will strive to eliminate the duplication. Direct inquiries to:

Keck Medicine of USC
Health System Marketing and Communications,
2011 N. Soto St., SST-2830
Los Angeles, CA 90032
(323) 442-2830

The content of this magazine is not intended to be a substitute for medical advice, diagnosis or treatment. Always seek the advice of your physician or other qualified health provider with questions you have regarding a medical condition.

Keck Medicine of USC complies with applicable federal civil rights laws and does not discriminate on the basis of race, color, national origin, age, disability or sex. Keck Medicine of USC does not exclude people or treat them differently because of race, color, national origin, age, disability or sex.

ATTENTION: If you speak Spanish, Chinese, Vietnamese, Tagalog, Korean, Armenian, Persian-Farsi, Russian, Japanese, Arabic, Punjabi, Cambodian, Hmong, Hindi or Thai — call (800) 872-2273 for free language assistance services.

ATENCIÓN: Si habla español, tiene a su disposición servicios gratuitos de asistencia lingüística. Llame al (800) 872-2273.

注意: 如果您說西班牙語、中文、越南語、他加祿語、韓語、亞美尼亞語、波斯語-波斯語、俄語、日語、阿拉伯語、旁遮普語、柬埔寨語、苗族語、印地語或泰語，請致電 (800) 872-2273 獲取免費語言協助服務。

Find us online
[KeckMedicine.org/magazine](https://www.KeckMedicine.org/magazine)



Vitals



Ricardo Carrasco III

Supporting Diversity in Clinical Trials

USC Norris Comprehensive Cancer Center has expanded its wide selection of cancer clinical trials to Keck Medicine of USC's Koreatown and Newport Beach ambulatory site locations.

Clinical trials are research studies that examine new medical procedures and treatments.

They give patients the opportunity to receive innovative care while also contributing to the search for new interventions and better understanding of diseases.

“You cannot deliver cutting-edge cancer care without clinical trials,” says Anthony El-Khoueiry, MD, phase I program director and associate director for clinical research at USC Norris. “They are the necessary bridge to getting new drugs approved, and they expand the options that patients have for treatment.”

The expansion is designed to address the needs of patients in Koreatown and Newport Beach.

At the Koreatown site, for example, offerings will initially place an emphasis on lung cancers and cancers of the gastrointestinal tract — with a Korean-speaking research coordinator and treatment teams on-site.

At Newport Beach, a full spectrum of cancer clinical trials will be available close to home for the diverse patient population residing across Orange County.

These efforts continue USC Norris' leadership in providing access to underrepresented patient populations.

3 in 5
Patients enrolled in therapeutic clinical trials at USC Norris belong to minority and underrepresented groups.

According to Dr. El-Khoueiry, about 60% of patients who enroll in therapeutic clinical trials at USC Norris belong to minority and underrepresented groups.

“The results of clinical trials are more valuable and applicable if they have diverse participants,” Dr. El-Khoueiry says, “because patients may harbor certain genetic variations that affect how they process specific drugs or how their immune systems react to the cancer or the treatment.”

Clinical trial enrollees at the Koreatown and Newport Beach sites will continue to have access to the full breadth of clinic trials at USC Norris' central location at Keck Medical Center of USC.

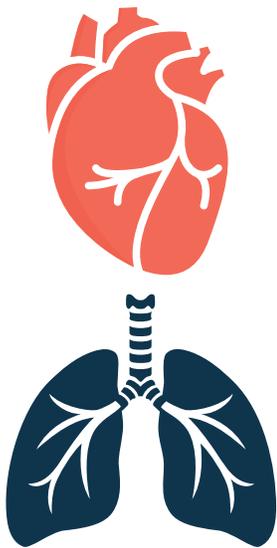
Learn more about Keck Medicine's clinical trials and studies at clinicaltrials.KeckMedicine.org

500 Hearts, 600 Lungs:

Transplant Milestones Celebrated

Keck Hospital of USC ended 2022 with a pair of milestones: its 500th heart transplant and 600th lung transplant.

“Whether we’re doing our 500th transplant or our first transplant, it’s all the same to us,” says Raymond Lee, MD, surgical director of mechanical circulatory support and heart transplant at Keck Hospital, who performed the 500th transplant last November on a 60-year-old male. “Each patient gets the same compassionate care.”



For heart transplants performed at Keck Hospital since July 1, 2019, 96.8% of patients have survived with functioning transplants one year after their surgeries, compared to a national average of 90.9%, data from the Scientific Registry of Transplant Recipients shows.

Keck Hospital maintains the highest one-year survival rate out of all heart transplant centers in California, according to the data.

Since performing its first heart transplant in 1993, the hospital has expanded the range of potential donors, taken on sicker recipients and served a wider geographic area.

For lung transplant patients, Keck Hospital remains “exceedingly above the national average rates of survival,” says Scott Atay, MD, surgical director of Keck Medicine of USC’s Lung Transplantation Program. These metrics are monitored by the United Network of Organ Sharing, the central agency that coordinates the nation’s organ transplant system.

Keck Hospital has offered lung transplants for about 25 years. In its early days, the surgery required cardiopulmonary bypass, which involved high-dose blood thinners and potential damage to the new lungs.

Now, with well-managed anesthetics, surgeons can often avoid that route by using extracorporeal membrane oxygenation (or ECMO), a technology that takes over the work of the heart and lungs to add oxygen to the blood and pump it throughout the body.

As a result, Dr. Atay says, patients “come out of the operating room far more stable and with fewer complications” — including the hospital’s 600th recipient, a 56-year-old male, whose double lung transplant was performed in December by thoracic surgeon Takashi Harano, MD.

“Our goal is to get lung transplant recipients back to a better quality of life and give them the ability to do the activities they love,” Dr. Atay says.

90.3%

One-year survival rate for adult allogeneic bone marrow transplants at USC Norris

Record-Breaking Survival Rates for Bone Marrow Transplant

As one of the top transplant centers in the country, the USC Norris Blood and Marrow Transplant and Cell Therapy Program has reached a historic high for survival rates.

While the national average for the one-year survival rate of adult allogeneic bone marrow transplants is 76.5%, the rate for USC Norris patients is 90.3%, according to the Center for International Blood and Marrow Transplant Research.

This survival rate is among the highest in the nation, and it follows many years of a one-year survival rate of 80% to 88%.

The USC Norris program was one of only 11 U.S. transplant centers that performed better than expected, and it is the only center that beat its expected survival rate by double digits.

Keck Hospital maintains the highest one-year survival rate out of all heart transplant centers in California.

Deep Brain Stimulation: 5 Things to Know

Medications alone are not always enough to control symptoms of movement disorders like Parkinson's disease and dystonia. About 20% of patients may qualify for an alternative therapy known as deep brain stimulation (DBS).

The intervention acts like a pacemaker, blocking abnormal electrical signals in the brain that cause uncontrolled movements. "DBS is a miracle in so many ways," says Xenos Mason, MD, a neurologist from Keck Medicine of USC. "You can see the effects of treatment instantaneously."

Who can get deep brain stimulation?

Neurologists consider patients who have tried all other options and evaluate whether their symptoms are suitable. Tremors, for example, are well treated by DBS, but freezing of gait is not.

"As diseases like Parkinson's progress, medications may start losing their effectiveness," Keck Medicine neurosurgeon Brian Lee, MD, PhD, says. "This is where we begin to consider DBS."

What happens during DBS surgery?

In the first of two procedures, a neurosurgeon inserts electrodes into the brain. Recipients are usually awake, "but we can also do the entire surgery inside the MRI scanner with the patient asleep," Dr. Lee says, noting that Keck Medicine's USC Deep Brain Stimulation Center is the only place in Southern California to offer this technique.

About two weeks later, a battery device called an implantable pulse generator is placed in the chest. A neurosurgeon connects it to the electrodes in the brain via wires under the skin. Most people feel no discomfort, Dr. Lee says, and the risk of a serious brain bleed or infection is rare.

How does DBS work?

A neurologist activates the treatment a few weeks after surgery. The implanted generator is wireless and encrypted; doctors can program and adjust it remotely.

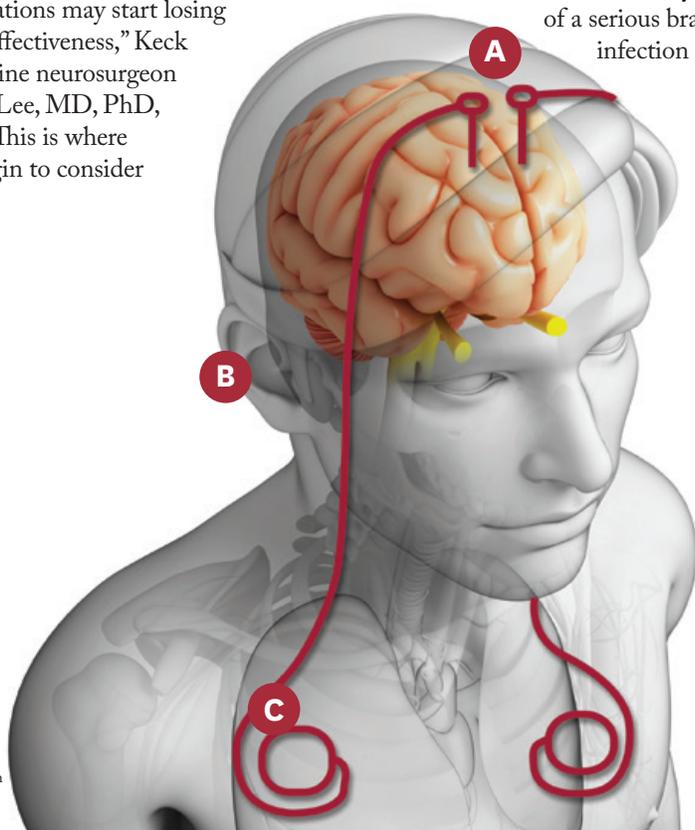
"The electrodes we placed in the brain have multiple contact points that deliver electricity," Dr. Mason says. The device operates continuously by sending pulses at programmed settings to control a patient's symptoms.

What is life like after DBS?

Patients will meet with their neurologist for 3 to 6 months to determine the most effective setting for pulse delivery. The chest implant requires a battery replacement every 3 to 5 years.

"Deep brain stimulation isn't a cure," Dr. Lee says, noting the device can still offer a long-term solution. "However, DBS can significantly improve a patient's quality of life and there are no physical limitations after surgery."

To learn more, call (800) USC-CARE or visit KeckMedicine.org/DBS



DEEP BRAIN STIMULATION: HOW DOES IT WORK?

- A DBS Leads** — Thin, insulated wires are inserted into the brain through small holes in the skull.
- B Extension Wires** — The wires are threaded under skin and down the side of the head and neck, then connected to the battery pack.
- C Implantable Pulse Generator (IPG)** — This pacemaker-like device is implanted near the collarbone and sends pulses to targeted structures within the brain to help control tremors and other abnormal movements caused by neurological disorders.

Class Notes

LEARN SOMETHING NEW WITH KECK MEDICINE OF USC

Infant CPR and Safety

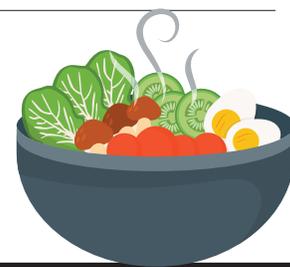
This two-hour class is for anyone who deals with infants on a regular basis. It follows American Heart Association guidelines to cover choking maneuvers, household and water safety, infant resuscitation and more.

Where: USC Verdugo Hills Hospital

When: Monthly, on Saturday mornings and Monday evenings

How much: \$30 to \$35

For more information, contact Teri Rice at (818) 952-2272 or Teri.Rice@vhh.usc.edu



4 Steps to Smarter Meal Planning

Meal planning allows you to eat more healthfully and to know what's in the food that you're eating. Michelle Smith and Rachel Keller, registered dietitians for the bariatric surgery program at Keck Medicine of USC, offer tips to get started.

Make a shopping list

Write down two to three healthful breakfast options and three to four lunch/dinner options. Look for recipes with grilled, baked, steamed, broiled, poached, stir-fried or roasted items.

Keep it simple

Consider making recipes that fit with your schedule, budget and pantry inventory. With a menu (and ingredients) at the ready, you're less likely to skip meals or order takeout.

Celebrate small victories

Even positive change can be stressful. After you reach a dietary goal, allow yourself to feel accomplished. Use that achievement as motivation to set more small goals over time.

Indulge occasionally

You can prevent feeling deprived by allowing yourself to include foods not on your plan in moderation. If you restrict too much, it will be hard to stick with your long-term goals.

Exercise Safely in Hot Weather

Whether you're running, biking or going for a power walk, it's important to take note of rising summer temperatures. Jennifer R. Boozer, DO, a family medicine physician at Keck Medicine of USC, shares simple ways to stay safe.

Q: How do you know if it's too hot to exercise outdoors?

A: Generally, when the heat index (how hot it really feels when relative humidity is factored in with the actual air temperature) is over 90 degrees Fahrenheit, there is an increased risk of serious heat-related illnesses. Avoid activity during severe heat or humidity.

Q: What are some tips to exercise safely in hot weather?

A: Try not to exercise outside between 10 a.m. and 3 p.m. — generally the hottest part of the day. Take a bottle or jug of water and drink every 15 minutes, even if you're not thirsty. Wear loose, light-colored clothing, sunglasses, a hat and sunscreen.

Q: How do you know if you're experiencing heat exhaustion or heatstroke?

A: Symptoms of heat exhaustion can include lightheadedness, passing out, headache, abdominal cramps, vomiting and diarrhea. With heatstroke, a person's temperature following collapse will exceed 104 degrees Fahrenheit, and they may experience disorientation, headache or irritability — and even altered consciousness or seizures.

Q: When should you seek medical help for heat-related illnesses?

A: Call 911, remove all equipment and excess clothing, and start cooling. Get the person into a cool spot and spray them with cold water or apply ice packs or wet towels around the neck, armpits and groin. Don't wait for paramedics to arrive — every minute counts.



MEET OUR STAFF

what's the
Word?

Eructate

verb

[ih-ruhk-teyt]

To burp or to belch.

The release can be a little embarrassing, but it usually means your digestive system is healthy. Consider seeing a doctor if burping becomes uncomfortably frequent or disruptive.

The reason? "It suggests a problem with the barrier between the stomach and the esophagus, so it's important to schedule an evaluation," says James Buxbaum, MD, a gastroenterologist at Keck Medicine of USC.

This problem can lead to chronic acid reflux (also known as gastroesophageal reflux disease, or GERD), esophageal damage, inflammation, hiatal hernia or other conditions. These conditions can be uncomfortable or even damaging, but treatments are available.

To make an appointment with one of our experts, call (800) USC-CARE or visit [KeckMedicine.org/digestive-health](https://www.keckmedicine.org/digestive-health)



Knowledge for New Parents

As coordinator of the Family Education Program at USC Verdugo Hills Hospital for almost three decades, Teri Rice has helped countless expectant parents prepare for childbirth — and she also oversees community classes such as babysitting training, CPR and more. Here's what motivates her to help others:



Ricardo Carrasco III

What does your job entail?

I coordinate about 200 classes a year at USC-VHH, most of them prenatal. I schedule the rooms and the instructors while ensuring their curricula, materials and everything else is ready. The true joy for me is communicating with patients. They know they can always call me with any questions or concerns. I love it any time a parent says, "Wow, I had no idea what to expect. Thank you for explaining it to me."

How has your role changed over time?

I started as a volunteer, speaking at preschools and churches to educate parents about the use of car seats. Then, with the blessings of the hospital, we started a car seat program where trained volunteers educated families and adjusted newborns into their car seats for their trips home from the hospital. I've been on the board of the Women's Council, a fundraising arm of the hospital, since 1987. Then my own children grew up, my current role became available, and I've been doing it for 26 years now.

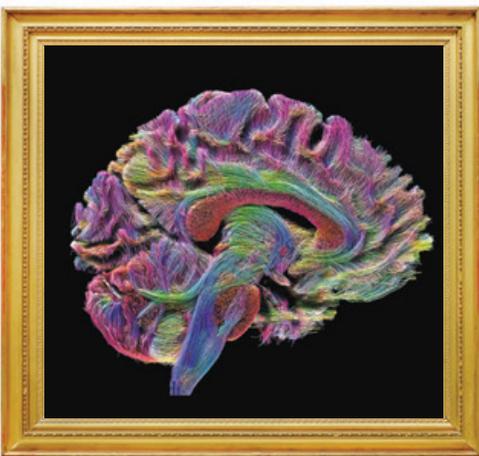
What inspires you about working with expectant families?

It is the best job ever to help these couples through their journey. We get to give them a baby at the end! I can't tell you how happy people are to have the guidance, especially after the last three years. We safely restarted on-site maternity classes in September 2020, and we're still the only hospital in the area currently offering them in person. This has been a great morale booster for expectant families. I like to think that, in this world where everything is automated and virtual, this is what I was meant to do.



The *Art* of Imaging

Many areas of medicine, from research to clinical diagnosis and treatment, use advanced technology to see things that the human eye cannot. These images can be beautiful as well as informative.



A three-dimensional MRI image reveals connectopathies, which are neurological pathways afflicted by miswiring or damage in the brain. These pathways are associated with neurodivergence, certain mental illnesses and Alzheimer's disease. (Image courtesy Arthur W. Toga, PhD, of the USC Laboratory of Neuro Imaging, USC's Mark and Mary Stevens Neuroimaging and Informatics Institute, and the Human Connectome Project)

5 Reasons Your Heart Skips a Beat

Heart palpitations may feel like your heart is skipping a beat, quivering or pounding. Often, the event is nothing to worry about — but the unusual feeling can also be the sign of a more serious medical condition.

That's why it is important to know common causes of arrhythmia (an abnormality of the heart's rhythm) and to seek medical care if necessary, says Andrew Zadeh, MD, a cardiologist from Keck Medicine of USC. He shared several scenarios to know:



1. Anxiety or stress

Heart palpitations often have non-heart-related causes. Feeling excited, nervous or anxious can interrupt your regular heart rhythm. Breathing exercises and relaxation techniques like yoga or tai chi may help.

2. Stimulants and medications

Caffeine, alcohol, nicotine and some medications — including over-the-counter decongestants — may cause palpitations. Illegal drugs can too. "Many of the patients I see who experience arrhythmia have triggers that increase the frequency of symptoms," Dr. Zadeh says.

3. Atrial fibrillation

The most common medical cause of arrhythmia is atrial fibrillation, or AFib, a condition that causes rapid, irregular heartbeat and increases the risk of stroke. Older adults and people with conditions like high blood pressure, obesity and diabetes are more likely to develop AFib.

4. Heart disease

Conditions involving the heart's valves, muscles or arteries — such as mitral valve prolapse, cardiomyopathy and coronary heart disease — can cause palpitations. Still, "these can easily be evaluated through tests, including electrocardiogram, echocardiogram or stress testing," Dr. Zadeh says.

5. Overactive thyroid

Too much thyroid hormone can increase your metabolism and cause palpitations. Fortunately, it is relatively easy to diagnose an overactive thyroid via simple blood tests, Dr. Zadeh says, noting that medications to treat thyroid disease are available.



The Big Question

Positive lifestyle changes can have big effects on your health, both today and for the long term. But the journey takes planning and patience. Two experts from Keck Medicine of USC weigh in on The Big Question:

How do I make healthful habits stick?



First, I recommend patients attach a new habit to something they're already doing. For example, taking a new medication could be paired with brushing their teeth. Many years ago, there was a drug company that put the name of their medication on toothbrushes. I thought that was clever.

Second, prioritize your new goals. Put a desired habit on your calendar and work everything else around it.

Once, an older patient of mine needed to make a follow-up medical appointment. But she said that the window we gave her was not acceptable because she had to exercise at that time. She had committed to that habit, and nothing was going to derail her!

It's also helpful when others can help hold you accountable. Whether it's an exercise buddy or a dietitian you consult on a regular basis, having a trusted partner can make a good habit stick.

Jennifer Boozer, DO
Primary Care Physician
USC Family Medicine



Keeping healthy habits is not just about willpower. You need to create an environment that makes it easier to be successful.

If you don't typically cook, a busy Monday night is probably not the best time to try. Instead, a Saturday might be better, when you have lots of time to attempt that new recipe or have a friend come over and you can do it together. I've told patients, "You want to make it more convenient to make something at home than to go through the drive-thru."

It's easy to want to change everything at once, but it's the small changes that add up. I recommend picking two or three things that you want to work on and mastering those first.

Remember: If you have setbacks, it's not a moral failure. What works for you is bound to be different from what works for a neighbor or friend. Allowing yourself the grace to know that is so important.

Allison Larraga, MS, RDN
Bariatric Program Manager
USC Metabolic and Bariatric Surgery Program

To make an appointment, call (800) USC-CARE or visit [KeckMedicine.org](https://www.KeckMedicine.org)

Faster Recovery After Surgery

A set of protocols known as Enhanced Recovery After Surgery (or ERAS) has been proven to reduce the length of hospital stays and the need for opioid medications. Michael Kim, DO, an anesthesiologist at Keck Medicine of USC, explained the four steps of ERAS and how care teams deliver them.

SEVERAL WEEKS BEFORE SURGERY

Patients learn about the ERAS framework prior to surgery, and they're encouraged by their Keck Medicine care team to prepare for the big day with proactive measures. These include physical activity, eating healthfully, avoiding alcohol and cigarettes, and creating an at-home plan for family and friends to help out during recovery.



Comfort and Safety



DURING SURGERY

Care teams are trained to deliver the highest level of comfort during and after surgery. An anesthesiologist may recommend a nerve block to numb the affected area, and surgeons will also use the smallest incisions possible. Both steps can help reduce post-surgical pain.

Recovery Guidance



AFTER SURGERY

ERAS protocol recommends non-opioid medications and breathing exercises for pain management. Keck Medicine care teams work to mobilize patients as early as possible and offer nutritional guidance. Lastly, patients receive a step-by-step action plan for recovering safely at home.

24 HOURS BEFORE SURGERY

Patients are not supposed to eat solid foods the night before surgery. Keck Medicine provides hydrating fluids and a carbohydrate-loading beverage on the day of the event to help build strength. The drink helps prepare your body for the stress of surgery.



Connect With Keck Medicine

JOIN US TO DISCOVER NEWS, TIPS FOR HEALTHY LIVING AND MORE AT:



Manage your health care in one easy spot with myUSCchart:
Visit myUSCchart.KeckMedicine.org



Examinations

It Takes a Village

BY KATE FAYE

Melody LaTorre was pregnant when she learned she had brain cancer. In a race against time, Gabriel Zada, MD, from Keck Medicine of USC's Brain Tumor Center, would call in maternal-fetal medicine specialists and an expert OB/GYN to save both mother and child.

Melody LaTorre and her husband Alberto had been trying to get pregnant. The spouses already had a young son, Malachi, and they wanted to grow their family.

When the couple learned Melody was expecting again after a miscarriage, they were overwhelmed with joy — and they vowed to monitor the pregnancy carefully.

Shortly into her second trimester, Melody, then 34, started experiencing strange symptoms. Her limbs were twitching, and her head was turning side to side on its own.

By week 20, Melody had developed foot drop, a condition in which the front of the foot doesn't lift properly when walking. It is almost always caused by a neurological problem, so Melody's chiropractor insisted she see a neurologist.

Melody complied, and her neurologist scheduled an MRI. As the South Pasadena couple drove home from the scan, they received a call to come back right away.

The news was frightening: Melody had a mass growing in her brain. And because the contrast dye used during MRIs can't safely be administered to pregnant women, they weren't able to tell exactly what the mass was.

Expert care finds answers

Soon after Melody's diagnosis, a family friend recommended that she meet with Arthur Toga, PhD, director of the USC Mark and Mary Stevens Neuroimaging and Informatics Institute.

Dr. Toga, who is also the director of the Keck School of Medicine of USC's Laboratory of Neuroimaging, referred Melody to neurosurgeon Gabriel Zada, MD, director of the USC Brain Tumor Center at Keck Medicine of USC.

"We were really grateful we didn't have to wait a long time," Melody says.

By the time Melody met with Dr. Zada, he had already looked at her MRI, but the unclear image was impossible to diagnose.

Dr. Zada took her back to Dr. Toga, who had a state-of-the-art MRI machine in his lab. The result offered more detail, revealing that Melody's mass was either a meningioma, which is a noncancerous tumor, or a cancerous glioma.

Still, it would take a surgical removal of the tumor to find out which one it was.

Swift, lifesaving action

A glioma is an aggressive tumor of the central nervous system that starts in the brain. It can occur at any age, and it's uncommon enough to be classified as a rare disease by the National Organization of Rare Disorders.

The exact cause of gliomas is unknown, but studies have shown that genetics and female hormonal fluctuations can increase one's risk.



Melody LaTorre and her son, Gabriel, enjoy a moment together in the kitchen.



Gliomas cause a host of critical symptoms, such as seizures, cognitive impairment, language problems and depression.

“Gliomas wind their way through the healthy brain,” says Frances Chow, MD, a neuro-oncologist at the USC Brain Tumor Center and an assistant professor of clinical neurological surgery and neurology at the Keck School.

“If there is any delay in treatment, the tumor can spread with deadly speed.”

Such urgency compelled Dr. Zada, who is a member of the USC Norris Comprehensive Cancer Center, to act sooner than he would have liked.

“It’s very hard to operate on pregnant women for brain tumors because you have to consider both fetus and mom,” Dr. Zada says. “Usually, we try to leave the baby in utero for as long as possible for the baby’s health. But Melody was getting worse.”

To help ensure the safety of Melody and her baby, Dr. Zada brought in Marc Incerpi, MD, a high-risk maternal-fetal specialist to consult on the surgery.

Successful surgery, new hurdles

Melody says she didn’t have time to be scared. She drew strength from a commitment to be there not only for her unborn baby, but also for her older son.

Alberto was afraid. He knew his wife’s surgery, a craniotomy, would be extremely delicate.

And it was. “The tumor came within a millimeter of Melody’s motor fibers,” Dr. Zada says. “Any damage to those and she could have had permanent paralysis. These surgeries are like walking on a high wire.”

Thanks to Dr. Zada’s keen eye and steady hand, the surgery was a success. Melody spent three days recovering in the intensive care unit.

Soon after, she received the official diagnosis: The tumor was, in fact, a glioma, and it would require immediate chemotherapy. But doctors couldn’t begin treating Melody’s cancer until the baby was born.

“While we prefer to perform preterm births closer to 32 to 34 weeks of gestation, we had to think outside of the box in this case,” Dr. Incerpi says. “We did not want to deliver too early, which would be dangerous for the baby.”

The mother's life was also at risk. Working with Laila Al-Marayati, MD, an OB/GYN who would perform the delivery, Drs. Zada and Incerpi made a shared decision to deliver Melody's baby at the 27th week of pregnancy so the cancer treatment could begin.

Healthy mother and baby

To help the baby's lungs develop as quickly as possible, Melody received a series of steroid shots. Then, her care team administered magnesium infusions to protect the baby's brain.

A Caesarean section would be necessary due to the baby being in a breech position, but he was born breathing on his own — a feat that Melody's doctors said was remarkable.

"The baby was vigorous and strong," Dr. Al-Marayati says. "Melody was even able to see him before he went to the NICU."

It didn't take long for Melody and Alberto to come up with a name. To honor Dr. Zada's lifesaving help, the couple decided on the neurosurgeon's first name, Gabriel.

Upon hearing the news, "I almost started crying," Dr. Zada says. "It was such a generous way to demonstrate her gratitude."

Patients who have recovered from brain cancer are never considered in remission, but Dr. Chow confirmed that there is currently no evidence of the disease in Melody.

"It wasn't an easy journey, but we're really grateful that we had the best care we could have received."

Melody LaTorre

"Melody has recovered tremendously well," says Dr. Chow, a USC Norris member who continues to monitor her patient's health. "She brightens our days by sharing photos and hugs from baby Gabriel, and Malachi wants to be a neurosurgeon when he grows up."

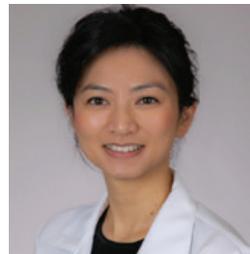
Adding to the family's joy is the fact that Gabriel, now a toddler, is in excellent health.

"It wasn't an easy journey, but we're really grateful that we had the best care we could have received," Melody says.

To learn more or to schedule an appointment, call (800) USC-CARE or visit KeckMedicine.org/BrainTumorCare



Gabriel Zada, MD



Frances Chow, MD



Marc Incerpi, MD



Laila Al-Marayati, MD

Your Partner in Brain Tumor Care

Gabriel Zada, MD, a Keck Medicine neurosurgeon and director of the USC Brain Tumor Center, shared three advantages patients can expect from the center.

World-class resources

"We use every single advantage and piece of technology that's available. We rely on so many emerging tools, and we put them together with new therapies and an amazing clinical care team to provide the most optimal treatment."

Personalized medicine

"When I operate on a brain tumor, we collect that tumor and put it into a cell-culture medium so the cells stay alive. We can learn what drives the tumor and perform specialized tests to understand its biology and genes to find drugs that work against those exact cells."

Compassionate staff

"I approach every patient as if they were a family member — and I encourage my team to do the same. Whether it starts with surgery and goes on to radiation or chemotherapy or other treatments, we want to make everything as worry-free as possible."

Roger Bignell is back to playing disc golf after a triple bypass surgery at USC Arcadia Hospital.

Care Next Door

BY MICHAEL JULIANI

A lifesaving triple bypass procedure marked the first collaboration between Keck Medicine of USC surgeons and USC Arcadia Hospital staff, paving the way for a new, full-time cardiac surgical program at the hospital.

Roger Bignell knew something was wrong when he woke up in severe pain at 4 a.m. For about a month, he had felt chest tightness while going for walks during his lunch break, but he didn't think too much of it.

"If I slowed down, it would go away," Roger says.

But this pain, throbbing in his chest and both arms, overshadowed the daytime symptoms.

The 65-year-old Arcadia resident dialed 911 and managed to dress himself before an ambulance arrived and brought him to USC Arcadia Hospital, about a mile from his home.

An electrocardiogram confirmed that Roger had experienced a heart attack. A subsequent angiogram revealed the culprit: severe atherosclerosis — a buildup of cholesterol, lipids and calcium throughout his arteries.

"The blockage was not in a good area," Roger says. "It was too close to the heart. It was crowding other valves."

Although he initially hoped to avoid surgery, Roger agreed to undergo a triple bypass open-heart surgery one week after his heart attack. A triple bypass would reroute blood flow from his blocked vessels to unblocked ones.

A milestone procedure

In September 2022, Roger received a triple bypass at USC-AH, performed by John Chen, MD, a cardiothoracic surgeon from the USC Cardiac and Vascular Institute.

The surgery addressed Roger's blockages and he avoided life-threatening complications in the aftermath, despite comorbidities like chronic renal disease.

"Dr. Chen was fantastic, before and after the surgery," Roger says. "Rarely did I have a question to ask him that he hadn't already covered with me."

In addition to saving Roger's life, the surgery was significant for another reason: It was the first collaborative surgery between Keck Medicine of USC surgeons and USC-AH personnel since the hospital's new affiliation.

"Our long-standing aim has been to bring top-quality, advanced care to patients across Southern California, right in their own communities," says Vaughn Starnes, MD, executive director of USC CVI. "This partnership is an exciting step toward that goal."

Dr. Chen collaborated with nursing and operating room staff who had worked at the hospital prior to the new affiliation.

To create a full-time cardiac surgical program, Dr. Chen and other Keck Medicine physicians prepared the USC-AH intensive care unit, blood bank and laboratories. Meanwhile, nurses from USC-AH observed cases at Keck Medical Center of USC to prepare for Roger's surgery.

"We're all committed to making sure that we provide a very high standard of care for our patients," Dr. Chen says.



Keck Medicine of USC
Kremer/Johnson Photography

World-class care, close to home

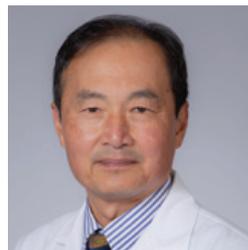
Founded in 1903, USC Arcadia Hospital is a full-service, 348-bed community hospital.

The hospital's new affiliation with Keck Medicine of USC brings San Gabriel Valley residents convenient access to Keck Medicine's specialized care, research and breakthrough technology — including advanced cardiovascular care from the USC Cardiac and Vascular Institute, which now has a full-time cardiac surgical presence there.

Keck Medicine will invest in USC-AH's equipment, infrastructure and services in the coming years. Expanded neuroscience and oncology services, among other disciplines, are planned to complement multispecialty outpatient services Keck Medicine already provides in Arcadia.

The health system will also develop academic and training programs at the hospital for residents and fellows.

The continued efforts at USC-AH share one goal: to deliver comprehensive care under one roof.



John Chen, MD

When Nature Calls Too Often

BY KATE FAYE

An illustration of a white toilet with a personified orange arm and hand holding a black smartphone. The toilet is standing on dark blue legs. The background is a solid light orange color.

Frequent urination — going more than once every three hours — is surprisingly common, and it's an issue that can affect anyone. The experts of Keck Medicine of USC explain possible causes and the doctors best suited to help.

Family Medicine

This will be your first stop, where providers will test for urinary tract infections and other causes. “We treat sexually transmitted infections, enlarged prostate and overactive bladder,” says Katherine Footracer, a physician assistant at Keck Medicine. “We can diagnose a wide range of conditions — such as diabetes — start a treatment plan and refer you to a specialist when needed.”

Possible treatments:

- **Antibiotics**
- **Medications for chronic conditions**
- **Lifestyle modifications**

Male Urology

An enlarged prostate (benign prostatic hyperplasia, or BPH) can cause frequent urination, especially in older men, by pressing against the urethra or bladder wall. But other conditions affect all ages. “For example, if the sphincter muscles downstream from the bladder can’t relax, then patients may not be able to fully empty their bladder,” says David Ginsberg, MD, a urologist at USC Urology.

Possible treatments:

- **Medication**
- **Physical therapy**
- **Minimally invasive surgery**

Urogynecology

These experts specialize in a range of gynecological issues that affect urinary health, including vaginal atrophy and prolapse, uterine fibroids that can push on the bladder, and stones that block urine flow, says Keck Medicine urogynecologist Tanaz Ferzandi, MD. They may also help patients curb habits that weaken the bladder — such as overhydrating or holding in urine.

Next steps:

- **Medication**
- **Relaxation-focused pelvic floor therapy**
- **Insertable device for prolapse**
- **Surgery**

Neurology

Neurological causes of frequent urination are often rooted in the spine. “Injury, compression or normal deterioration can affect nerves connected to the urinary tract,” says Keck Medicine neurologist Xenos Mason, MD. Frequent urination can also indicate cognitive decline or movement disorders such as Parkinson’s disease.

Effective approaches include:

- **Physical therapy**
- **Surgery**
- **Medications for movement, bladder relaxation or sleep**

Uro-oncology

While uncommon, “frequent urination could be the only presenting sign of a bladder tumor,” says Varsha Tulpule, MD, a uro-oncologist with Keck Medicine. “With this symptom, your primary care provider will rule out common ailments and collect a detailed history before a referral to a urology specialist.”

Plan of action:

- **Advanced testing (urinalysis, cytology, imaging and cystoscopy)**
- **Surgery**
- **Chemotherapy, radiology or immunotherapy**

To learn more or to schedule an appointment, call (800) USC-CARE or visit [KeckMedicine.org](https://www.KeckMedicine.org)



Onward and Upward

BY HOPE HAMASHIGE

A living-donor kidney transplant didn't just save An Pham's life. It also gave him a renewed spirit and sense of adventure.

An Pham enjoys a morning workout at LA Boulders in Downtown Los Angeles.

An Pham was walking to work in January 2022 when his phone started ringing. He doesn't usually answer unfamiliar numbers, but something compelled him that morning to pick up.

It was the call that An had waited nearly five years to receive.

The caller explained they had found a kidney that was a match and asked An, then 25, if he was ready to proceed with a transplant.

"I didn't need time to think," An says. "I just blurted out, 'Yes!'"

He didn't yet know how special his transplant was going to be.

An has Alport syndrome, a genetic disease that leads to kidney failure, and he has known since childhood that one day a transplant would be necessary.

During his sophomore year of college, An started feeling unusually tired. After being evaluated by his nephrologist, he learned that his kidneys were failing. His doctor told him it was time to start dialysis and to join the waiting list for a kidney transplant.

An had been treated at Children's Hospital Los Angeles for his kidney disease. Now that he was older, his care was transferred to Keck Medicine of USC.

An unexpected gift

A kidney transplant is the best treatment option for people with end-stage renal disease.

But the waits can be long and difficult. According to the National Kidney Foundation, most people receive a new kidney in three to six years, but wait times tend to be longer in California.

A transplant not only improves quality of life, but it can also dramatically extend a person's life, says Santhi Voora, MD, a transplant nephrologist at the USC Transplant Institute.

For someone in their mid-20s, like An, a kidney transplant adds about 20 years to their life expectancy compared to a person receiving dialysis, Dr. Voora says.

An was 20 when he started dialysis — a treatment that performs the work of the kidneys, removing waste and excess fluid from the blood — and got on the transplant waiting

list. He often felt weak, a common issue for dialysis patients, but was determined to finish college.

An, an El Monte resident, maintained a strict diet and exercise routine to keep up his strength. He also made regular visits to multidisciplinary specialists at the USC Transplant Institute.

"The team at Keck was extremely professional," An says. "I always felt like I was in good hands."

Although An was on a wait list to receive a kidney from a deceased donor, he learned that he was going to get a kidney from a living donor matched through the National Kidney Registry as part of a paired donation chain.

Most live donations come from a person known to the recipient, typically a family member or friend.

But in An's case, the donor was a stranger who had decided for altruistic reasons to donate a kidney to someone in need.

"My doctors and nurses were really excited, and they told me that I had basically won the lottery," An says.

Need for donors

The number of nondirected living organ donations is increasing, but they are uncommon.

Of the 211 kidney transplants performed at Keck Hospital of USC in 2022, only 36 came from living donors. Of that group, just four came from people unknown to the recipient.

"It is a really special thing when it happens," Dr. Voora says, adding that living donations offer patients the best possible outcomes — including immediate organ function after surgery and a longer life span of the organ. It also significantly shortens the wait time for a transplant.

Which is why Keck Medicine offers many resources to guide the donation process.

It operates a wellness program to help potential donors overcome modifiable health problems, such as being overweight, so they may become candidates for donation, and it has teamed up with outside programs to help donors get reimbursed for time off work or for travel expenses related to organ donation.

"This is something we are doing to try to increase the number of living donations and help more of our patients get the transplants they need," Dr. Voora says.

"My doctors and nurses were really excited, and they told me that I had basically won the lottery."

An Pham



Santhi Voora, MD



A living-donor kidney transplant has given An Pham strong health and renewed energy.

Kremer Johnson Photography

Adventures ahead

Just a few days after receiving his new kidney, An noticed big changes in his energy and mood. He also saw dramatic improvement in his levels of hemoglobin — a protein in red blood cells that carries oxygen — which were consistently low while on dialysis.

Several weeks after the transplant, An was in the gym to improve his muscle strength.

Soon after, he pined for something that had been impossible for many years: adventure.

“I always knew I wanted to become a rock climber and to explore nature,” An says. Last fall, he began climbing at indoor gyms around Los Angeles and he has since scaled boulders in Joshua Tree National Park.

With renewed momentum and future plans to complete a triathlon, An remains humbled by his path to transplant.

“I don’t know who donated their kidney to me,” he says. “That person’s selflessness really touched my heart and changed my life.”

To learn more or to schedule an appointment, call (800) USC-CARE or visit [KeckMedicine.org/LivingDonor](https://www.keckmedicine.org/livingdonor)



5 Questions About Living Organ Donation

What organs can I donate?

Keck Medicine of USC specializes in living-donor liver and kidney transplants. Kidneys accounted for more than 90% of all living-donor transplants in 2021, federal data show.

Is it safe for me to give an organ?

People can live normal lives with one healthy kidney. The liver is the only organ that regenerates; donors give a part of the organ, and it grows back fully in both parties.

Who is eligible to donate?

Anyone who is healthy and willing. A donor does not need to be related to a recipient nor be a match. Living donors go through extensive medical and psychological evaluations.

What if I change my mind?

The gesture is 100% voluntary. At Keck Medicine, independent advocates are on hand to ensure donors do not feel pressured. Donors and recipients also have separate medical teams.

What is the recovery process like?

The surgery carries a low risk for kidney donors, who spend a few days in the hospital. Living-liver donation, which is safe but more invasive, involves a four- to six-week recovery at home.



Jocelyn Aguilar is focused on the future after successful breast cancer treatment and surgery at USC Verdugo Hills Hospital.



Kremer Johnson Photography

Early Action

BY ERIN LAVIOLA

By advocating for herself and working with an expert team at USC Verdugo Hills Hospital, Jocelyn Aguilar has a new outlook — and a new baby — after breast cancer.

Jocelyn Aguilar is a breast cancer survivor who recently welcomed her second child into the world, thanks to a mammogram that first caught her disease three years ago.

Her grandmother and two aunts had battled breast cancer. While doctors look to the cancer histories of first-degree relatives — such as a sibling or mother — as a guideline to advise a mammogram before age 40, Jocelyn asked to be screened at 37.

“A mammogram is the gold-standard method for imaging the breast, and it’s the best way to find the earliest, smallest cancer,” says Maria Nelson, MD, a breast surgeon at Keck Medicine of USC.



Jocelyn Aguilar credits her care team for helping support her journey to motherhood.

Medical organizations, including the American Cancer Society, the U.S. Preventive Services Task Force and the American College of Obstetricians and Gynecologists, each have slightly different recommendations for when to start breast cancer screenings (many groups say women with average risk should begin annually at 40).

Still, Jocelyn's instinct proved lifesaving. In October 2019, despite having no symptoms, the South Pasadena resident was diagnosed with Stage 1 breast cancer.

She was also raising a young daughter on her own. "If anything were to happen to me, what would happen to her?" Jocelyn says.

Under the guidance of Dr. Nelson and an expert team at USC Verdugo Hills Hospital, which is part of Keck Medicine, Jocelyn received personalized, team-based care. And she had the unique experience of being a patient in the same place where she works as a surgical nurse.

Highly coordinated care

Surgery is the mainstay for early-stage breast cancer, but most patients also need some combination of radiation, chemotherapy and hormone therapy. They may choose a lumpectomy (surgical removal of cancerous tissue) or a mastectomy, which removes the entire breast.

Jocelyn wanted a double mastectomy. "I know that even if you beat it, cancer can come back," she says. "I've seen this happen in my family. I wanted to decrease that chance as much as possible."

Research has shown that treating early-stage breast cancer with

mastectomies versus lumpectomies plus radiation results in equivalent survival, says Dr. Nelson, who praised Jocelyn's resolve throughout her cancer journey.

"Jocelyn was a dream patient," says Dr. Nelson, who also removed several of Jocelyn's lymph nodes that had been flagged as areas of concern and performed the breast reconstruction. "She was very pragmatic. Her attitude was, 'I'll do what needs to be done.'"

"It was very sweet having the people I worked and trained with care for me."

Jocelyn Aguilar

Jocelyn received physical and occupational therapy for her arms and chest, as well as a range of holistic services to support her recovery.

"There was a nurse coordinator who connected me with a social worker, a fertility specialist, a psychiatrist and a dietitian," Jocelyn says, praising USC-VHH teams for "really thinking ahead about what kind of help you're going to need."

For Jocelyn, a 20-year employee of the hospital, the process was highly personal.

"It was very sweet having the people I worked and trained with care for me," she says.

Every patient can expect a similar experience. "USC Verdugo Hills has a community, family-type atmosphere," Dr. Nelson says. "And patients who need higher levels of care have access to the expertise of Keck Medicine and its physicians and specialists."

A new chapter

After her surgery, Jocelyn completed four rounds of chemotherapy at USC Norris Comprehensive Cancer Center, which is also part of Keck Medicine. She was declared cancer-free in March 2020.

The news was bittersweet because Jocelyn's father passed away from cancer several weeks later. COVID-19 lockdowns had also begun, adding more uncertainty to her life.



Maria Nelson, MD

Soon after, Jocelyn met the man who would become her partner, whom she describes as "an angel" and "my ray of sunshine."

As part of her follow-up care, Jocelyn returned to USC-VHH every three to six months for manual breast exams and visits with her oncologist, her OB/GYN, and Dr. Nelson. She also took a hormone-blocking medication designed to help prevent cancer recurrence.

But Jocelyn and her partner wanted to grow their family. In February 2022, her care team gave the OK to go off the medication so she could conceive.

"We made sure the risks were very low before trying to get pregnant," Jocelyn says. "After I stopped the medication, my doctors asked me to come in even more frequently for check-ups."

Despite Jocelyn's challenges, she chooses to focus on joy.

"I just kept telling myself there's a reason this happened," Jocelyn says. "It's OK to be sad some days, and it's OK to be angry and cry. But I think having a positive outlook really helped."

Jocelyn, now 40, feels blessed to support friends and coworkers facing breast cancer. She wants others to know the importance of knowing their family history and listening to their body by speaking up if they suspect any potential sign or symptom of the disease.

To learn more or to schedule an appointment, call (800) USC-CARE or visit [KeckMedicine.org/VHHBreastCare](https://www.KeckMedicine.org/VHHBreastCare)



Compression has value

This holds the breast in place and separates overlapping tissue to provide a clearer image so small, hidden masses can be detected. It also reduces the amount of radiation exposure.

Expect only brief discomfort

The physical act takes only a few seconds per breast. If you're worried about pain, talk to your technologist. They can ease your worries and may have tips to help you prepare.

Technology has evolved

3D mammography (digital breast tomosynthesis) moves in an arc around the breast to capture many images from different angles. It's a more effective option for patients with dense breasts.

It's recommended to start at 40

Most guidelines advise to begin at this age. If you have risk factors such as genetic mutations or a strong family history, your doctor may schedule an earlier mammogram.

Mammograms save lives

Mammography is the best screening tool available. It can catch tumors before they can be felt in a monthly self-check, making treatment much more likely to be effective.

Big Step Forward

BY ERIN LAVIOLA

A prosthetic leg option from Europe delivers exceptional mobility. Keck Medicine of USC is one of only a few places in the United States to offer it.

For Robert Johnson, the ability to pick up his young daughter and go for walks around the neighborhood with his wife means everything. But it was not long ago that this simple activity posed a major challenge.

Robert had his right leg amputated above the knee in 2019 after a cancer diagnosis. He relied on a traditional prosthetic, a socket that fits atop the residual limb and connects to an artificial leg. But the Mid-City resident constantly felt off balance and afraid to hold his baby girl.

“When I had a socket on, it wouldn’t ‘stick’ on to me,” Robert says, “so I was always scared the leg would fall off and I would fall and drop her.”

Thanks to an innovative procedure offered at Keck Medicine of USC called osseointegration — where a metal implant inserted into the bone of the remaining limb is attached directly to a prosthesis — Robert has gained better mobility and the confidence to experience life with his family.

And the surgery, performed for more than two decades in Europe, now has the potential to help many other patients with prosthetic legs.



Robert Johnson on his new prosthetic leg after osseointegration surgery: “It feels completely different.”

Unexpected loss of limb

In 2016, Robert started to experience chronic pain in his right leg. A bump formed above his knee and continued to grow, but multiple physicians sent him away without a diagnosis.

“I went to different doctors and hospitals for about a year, and they all told me it was nothing,” Robert says. “At one hospital, they did an X-ray, decided it wasn’t cancerous, and just sent me home with pain medication.”

The turning point finally came after Robert was referred to Lawrence Menendez, MD, an orthopaedic oncologist with Keck Medicine. After performing a biopsy, he diagnosed Robert with osteosarcoma, an invasive form of bone cancer, and performed surgery to remove the mass from the patient’s leg.

To prevent the cancer from spreading further, Dr. Menendez and his team needed to amputate his right leg above the knee.

The news came while Robert’s wife was pregnant with their daughter.

“I just went for it because I didn’t want the worst outcome that could happen from cancer,” Robert says. “I was thinking long term, being able to be there for my daughter.”

After the wound healed and six months of chemotherapy, Robert was cancer-free and fitted with a socket prosthesis. But walking with it was challenging, and the onset of the COVID-19 pandemic kept him from regular physical therapy appointments.

Unhappy with his limitations, Robert began researching other options.

“I watched an interview with a woman who had been struggling to get around, but after the osseointegration procedure, she could walk and even go hiking,” he says. “I really wanted that.”

Continued on Page 35



A New Home for Osseointegration

Osseointegration has been performed in Europe for more than 25 years, but it is new in the United States. The surgery earned approval from the U.S. Food and Drug Administration in 2020, and only 10 to 15 medical centers in the country currently offer it.

Keck Medicine of USC benefits from collaboration with the physician who pioneered the procedure: Rickard Brånemark, MD, PhD, an orthopaedic surgeon from Sweden.

“We have a good relationship with Dr. Brånemark, and he reviews all of our osseointegration cases,” says Lawrence Menendez, MD, an orthopaedic oncologist with Keck Medicine.

The primary risk factor for patients is infection. “You have a metallic object that is connected to the bone and that penetrates the skin,” says Dr. Menendez, noting that infections are rare and can be treated with oral antibiotics.

Although osseointegration is available only to above-knee amputees experiencing chronic problems with traditional prosthetic management, that eligibility could change, including for patients with above-elbow arm amputations.

“It is normal for amputee patients to have socket problems, so I think as time goes on, most are going to be treated with osseointegration,” Dr. Menendez says.



Lawrence Menendez, MD

Consultations

Inclusive Care for Everyone

Keck Medicine of USC has launched the Gender-Affirming Care Program, a multi-department effort to bring comprehensive, respectful care to transgender and nonbinary adult patients.

Gender-affirming care tends to the physical, mental and social well-being of transgender and non-binary people while respectfully affirming their gender identity, says Laura Taylor, MD, a family medicine physician at Keck Medicine and the program's medical director.

"We provide all the services that somebody may need in the course of their health care over time, including primary care for all medical conditions," Dr. Taylor says. "Additionally, we provide supportive services for people who may be interested in gender-affirming interventions like hormones, surgeries and some mental health care."

The program also helps provide education to Keck Medicine staff, medical trainees and the community on best practices in transgender health care.

Transgender and nonbinary patients have long faced mistreatment or marginalization when seeking health care. A 2021 study from the Center for American Progress found that 1 in 3 transgender patients said they have had to teach their doctors about transgender people.

And, until recently, care for this population has been largely relegated to LGBTQ+-focused clinics, Dr. Taylor says.

She encourages new patients to start their journeys with one of Keck Medicine's family medicine doctors to build a trusting, long-term relationship while covering their routine and preventive health care needs.

These providers, she adds, can also collaborate with specialists who can best serve the needs of each patient. These include — but are not limited to — experts in endocrinology, gynecology, otolaryngology, occupational therapy, physical therapy and plastic surgery.

A person's transgender identity does not equal a need or desire for surgery, says Roberto Travieso, MD, the program's surgical director.

For those who choose it, however, gender-affirming surgery is a component of the Keck Medicine program — including a full spectrum of chest and genital surgeries (top and bottom surgeries), as well as facial procedures, voice surgeries, and gender-affirming hysterectomies.

To further understand and meet the needs of a diverse population, Keck Medicine recently partnered with The TransLatin@ Coalition, a Los Angeles advocacy group.



“We are really excited about providing high-quality, equitable care to the transgender and nonbinary population and advocating for this community at Keck Medicine.”

Laura Taylor, MD,
Director, Gender-Affirming Care Program

The care program also works with Keck Pride, the health system’s employee resource group dedicated to fostering an inclusive, supportive environment for members of the LGBTQ+ community.

“We are really excited about providing high-quality, equitable care to the transgender and nonbinary population and advocating for this community at Keck Medicine,” Dr. Taylor says.

To learn more about the program, visit KeckMedicine.org/gender-affirming-care or email KeckGenderCare@med.usc.edu

Leadership Roles Focused on Safety

Keck Medicine of USC has appointed two leaders to advance quality and safety efforts — critical steps to delivering the highest standard of care and strong patient outcomes.

Tom Bates, MBA, RN, is the first chief quality officer for Keck Medicine, and Mary Virgallito, MSN, RN, will be the first to hold the title at USC Verdugo Hills Hospital.

“Keck Medicine is dedicated to providing the best possible patient outcomes, and these two newly created positions further cement our ongoing efforts,” says Rod Hanners, CEO of Keck Medicine.

Both individuals began their roles last fall.



Tom Bates, MBA, RN



Mary Virgallito, MSN, RN

Bates, who joined Keck Medical Center of USC in 2009, is responsible for setting up the Keck Medicine Quality Institute — an effort that unites leaders across the organization to ensure strong approaches to quality, safety and clinical effectiveness.

In recent years, Bates has developed organizational strategies that contributed to Keck Hospital of USC’s “A” grade for hospital safety from the Leapfrog Group for the last seven periods.

Under Bates’ watch, Keck Medical Center was ranked No. 3 among 162 academic medical centers by the federal Agency for Healthcare Research and Quality Patient Safety Patient Safety Indicator Scores; Vizient has also named Keck Hospital a top performer in delivering high-quality care.

Virgallito previously served as executive administrator of quality and patient safety at USC-VHH, where she enhanced safety protocols and educated staff on patient safety and infection prevention. In her new job, she will oversee and align the hospital’s strategic quality and patient safety improvement efforts.

USC Verdugo Hills Hospital Turns 50

In 2022, USC Verdugo Hills Hospital celebrated 50 years of providing essential, community-focused health care.

When the hospital opened in 1972, it filled a need for residents in the La Cañada Flintridge and Crescenta Valley communities who had been isolated from the nearest full-service hospital in Glendale prior to the construction of the 2 and 210 freeways.

Local leaders and physicians lobbied hard throughout the late 1960s for a neighborhood hospital to address these needs. A proposal surfaced to repurpose and relocate the small, existing Behrens Memorial Hospital to a spot of land along the Verdugo Mountains donated by J. Morgan Greene and his family.

The site would become the home of Verdugo Hills Hospital.

“It was really created to serve the community, by the community, and it was funded by the community,” says Armand Dorian, MD, CEO of USC-VHH. “That community tie, as well as passionate physicians and nurses, really kept it going for many years.”

By the early 2000s, as the health care industry continued to evolve, VHH experienced the financial challenges of being an independent hospital not affiliated with a larger health system.

A merger between Keck Medicine of USC and Verdugo Hills Hospital in 2013 brought “huge investments in restoring and revitalizing the important health care resources that this community had come to rely on,” Dr. Dorian says.

Those investments at USC-VHH have produced a neonatal intensive care unit, an interventional radiology and cardiac catheterization lab, an award-winning emergency department, a nationally ranked urology department and a robust women’s health practice. USC-VHH is also designated as a center of excellence for knee and hip replacement and physical medicine.

One thing that has not changed is the personal touch and the comfort of receiving care in a smaller, more intimate hospital.

“We still want to provide the personalized care to the patients that we serve in this community, and I think we have kept that,” says Happy Khanna, MD, chief of staff at USC-VHH.



Scenes from the hospital's construction and grand opening celebration in 1972.



New Leadership at USC Arcadia Hospital

Ricardo Carrasco III



Ikenna Mmeje, MHA

Ikenna (Ike) Mmeje, MHA, has been named president and CEO of USC Arcadia Hospital, which is affiliated with Keck Medicine of USC. He replaces Dan Ausman, who retired from the role in March after a 12-year stint with the hospital.

Prior to joining Keck Medicine, Mmeje served as chief operating officer of both MemorialCare Long Beach Medical Center and Miller Children's & Women's Hospital Long Beach. Previously, he held CEO and COO roles with Tenet Healthcare.

Mmeje is active on several boards, committees and organizations, including the American College of Healthcare Executives and the National Association of Health Services Executives.

"I am humbled and excited to join USC Arcadia Hospital," Mmeje says. "The hospital has a rich 120-year history of caring for patients and the community, and I look forward to advancing its legacy and mission far into the future."

A Space for Endoscopic Care

The Advanced Center for Endoscopy provides patients a more comfortable and versatile setting for endoscopic procedures and studies while also giving treatment teams access to the field's most advanced technology.

Opened in January, the facility is located in Keck Medical Center of USC.

The center provides all endoscopy services in one designated setting, blending teams of surgeons, endoscopists, nurses and admitting staff. It features eight procedure rooms, one treatment room and a dedicated workspace for physicians.

"When patients walk in, all their needs are met in one localized place," says Melodie Bishop, RN, the center's nursing manager.

The space, Bishop says, was designed to enable integration with advanced technology — including new fluoroscopy tables that provide enhanced imaging views and new content management systems for patients and providers to view results.

The center is part of efforts by Keck Medicine of USC to grow and expand the health system's outpatient procedural spaces. (Keck Medical Center patients will continue to have access to the center on an inpatient basis.)

Before, endoscopy services were provided in various temporary spaces in inpatient care areas of Keck Medical Center, and to outpatient clients checked in through general admitting.

With the presence of a dedicated endoscopy laboratory space, "we're now able to share resources, equipment and do procedures that we were not able to do 10 years ago," says Gayane Cabrera, an associate administrator for the center. "Because of this, we're able to offer procedures and studies that can keep patients out of surgery."



Ricardo Carrasco III

Fast-Tracking Cell Therapy Treatments



Steve Cohn

A dedication for the new lab was held in January.

A new lab designed to turn early-stage research into lifesaving, commercially viable therapies has opened in the USC Norris Comprehensive Cancer Center — with diseases such as arthritis, blindness, cancer and diabetes among researchers’ top targets.

The USC/CHLA cGMP Laboratory offers clean rooms, laboratory space, cryostorage and state-of-the-art equipment for manufacturing and analytical testing.

Multispecialty lab teams will work to harness the healing power of modified cells — already seen in CAR T-cell therapy, which involves extraction and reengineering of patients’ immune cells to fight their own blood cancers.

“The great thing about cell therapy is that patients are not passive receiving treatment; they are active participants,” says Mohamed Abou-el-Enein, MD, PhD, MSPH, the lab’s director.

The new facility, Dr. Abou-el-Enein says, is “the missing puzzle piece that can enable us to bring homegrown discoveries to the clinic and to our patients.”

Launched through a partnership between Children’s Hospital Los Angeles, Keck Medicine of USC and the Keck School of Medicine of USC, the lab is intended to pursue big ideas while “supporting the steady, incremental and absolutely critical advancements” needed to bring a potential treatment safely and effectively to the masses, says USC President Carol L. Folt, PhD.

The lab is part of a larger effort — the USC/CHLA Cell Therapy Program — to advance cell therapy at both institutions, and it marks continued momentum for precision medicine approaches that use a person’s genetic information to prevent, diagnose and treat disease.

Reducing Anesthesia’s Carbon Footprint

Keck Medicine of USC is set to discontinue its use of desflurane, one of the most commonly used and environmentally toxic general anesthetics.

The health system has not ordered any additional desflurane, so when the anesthetic runs out, it will no longer be used. The effort is part of Keck Medicine’s commitment to reduce its impact on climate change and to implement more sustainable solutions.

Studies show that desflurane is so harmful to the environment that an eight-hour surgery causes as much damage to the atmosphere as driving from Los Angeles to Maine.

In its own call to action on pollution reduction, the California Society of Anesthesiologists noted that desflurane lingers for 14 years in the air.

Among the other options: sevoflurane, which remains in the air for just over a year, and isoflurane (3.2 years).

Both are safe, effective and often less costly. So far, no studies have indicated whether any of the three anesthetics delivers better outcomes, says Aren Nercisian, MD, an anesthesiologist at Keck Medicine.



CNA Awarded for Exceptional Care

Maria Hyde, CNA, a nursing assistant at Keck Medical Center of USC's Hematology/Oncology unit, was named 2022 Employee of the Year for Keck Medical Center of USC and USC Care Medical Group.

Rod Hanners, CEO of Keck Medicine of USC, shared an example of Hyde's compassion for a patient placed on Comfort Care, a palliative care program, at USC Norris Comprehensive Cancer Center.

The patient had been regularly receiving bed baths with warm towelettes and a shower cap. One day, Hyde approached the patient for their bath, but told them, "No shower cap today — we're going to have a real warm bath, with real water."

The news brought the patient to tears. The comfort of a full bath meant the world to the patient, who later remarked that "the warm water running through my hair and over my body felt like heaven."

Hyde's small yet deeply meaningful gesture underscores a limitless approach to care. "The greatest gift a Comfort Care patient can receive is a display of compassion in the final moments between this life and the next," Hanners says.



There are hundreds of **clinical trials and studies** currently taking place at Keck Medicine of USC, giving participants access to novel and potentially promising therapies that may not be available elsewhere. For more information on open clinical trials, visit clinicaltrials.KeckMedicine.org.

Advancing Postmenopausal Preventive Therapy (APPT), a progestogen-free estrogen therapy to potentially reduce atherosclerosis

The study seeks to determine whether a novel hormone replacement therapy can prevent or slow atherosclerosis (hardening of the arteries) and cognitive concerns such as memory loss and dementia that are common in postmenopausal women.

Traditional hormone replacement therapy combines estrogen with progesterone, which has been associated with cancer risks. The trial combines a new type of progesterone-free treatment with estrogen intended to protect a woman's health and reduce complications starting in the early years of menopause.

What should patients expect?

Participants will be randomized and split into two groups. One group will receive an FDA-approved medication designed to deliver estrogen without a progestogen (Bazedoxifene/estrogen); the other will receive a placebo, a pill that does not contain an active ingredient.

Every six months, participants have an ultrasound to monitor any progression of atherosclerosis. They also have yearly electrocardiograms. At the end of the study, which will last approximately three years, women will retake cognitive and memory tests.

Who can participate?

Postmenopausal women (45 to 59 years old) who have not had a hysterectomy and do not have heart disease or diabetes.

Principal investigator

Howard N. Hodis, MD

Contact:

USC Atherosclerosis Research Unit
(323) 442-2257

Labwork

Fast Food Linked to Liver Disease

You may want to rethink how often you eat fast food.

That’s because the diet is associated with nonalcoholic fatty liver disease — a potentially life-threatening condition in which fat builds up in the liver — according to a Keck Medicine of USC study.

Researchers discovered that if fast food accounts for 20% or more of daily calories, total liver fat goes up. And the increase, they found, is more severely elevated for people with obesity or diabetes.

The effect on that patient population is “especially striking,” says Ani Kardashian, MD, a hepatologist with Keck Medicine and the study’s lead author.

“Healthy livers contain a small amount of fat, usually less than 5%, and even a moderate increase can lead to nonalcoholic fatty liver disease,” Dr. Kardashian says.

The findings, published in *Clinical Gastroenterology and Hepatology*, also reveal that a relatively modest amount of fast food, which is high in carbohydrates and fat, can hurt the liver. This is one of the first studies to demonstrate the negative impact of fast food on liver health.

“If people eat one meal a day at a fast-food restaurant, they may think they aren’t doing harm,”

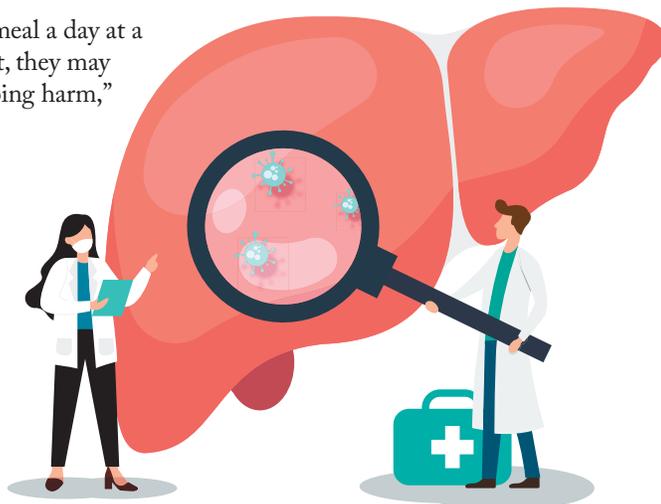
Dr. Kardashian says. “However, if that one meal equals at least one-fifth of their daily calories, they are putting their livers at risk.”

Nonalcoholic fatty liver disease, also known as liver steatosis, can lead to cirrhosis, or scarring of the liver, which can cause liver cancer or failure. Liver steatosis affects over 30% of the U.S. population, and the only current treatment method is an improved diet.

The study characterized fast food as meals, including pizza, from either a drive-thru restaurant or one without wait staff.

The researchers evaluated the fatty liver measurement of approximately 4,000 adults and compared the measurements to their fast-food consumption.

Of those surveyed, 52% consumed some fast food. Of these, 29% consumed one-fifth or more daily calories from fast-food, and these respondents also experienced a rise in liver fat levels. The link between liver steatosis and a 20% fast-food diet was consistent, even when data were adjusted for other factors.



Can Electric Vehicles Improve Public Health?

Local air pollution levels and emergency room visits dropped in ZIP codes where adoption of zero emissions vehicles (ZEVs) increased, a new study by researchers from the Keck School of Medicine of USC has found.

The study compared the total registration of ZEVs, air pollution levels and asthma-related emergency room visits across California between 2013 and 2019.

“When we think about the actions related to climate change, often it’s on a global level,” says Erika Garcia, PhD, MPH, an assistant professor of population and public health sciences at the Keck School and lead author of the study, which was published in the journal *Science of the Total Environment*.

“The idea that changes being made at the local level can improve the health of your own community could be a powerful message to the public and to policy makers.”

The researchers also found that while the total number of ZEVs increased over time, adoption was considerably slower in low-resource ZIP codes.

That disparity, the authors say, suggests an opportunity to restore environmental justice in communities disproportionately affected by pollution and related health problems.

Blood Pressure Categories

Normal:

Less than 120 systolic mm Hg (upper number) and less than 80 diastolic mm Hg (lower number)

Elevated:

120-129 systolic and less than 80 diastolic

High Blood Pressure (Hypertension) Stage 1:

130-139 systolic or 80-89 diastolic

High Blood Pressure (Hypertension) Stage 2:

140 or higher systolic or 90 or higher diastolic

Hypertensive Crisis (consult your doctor immediately):

higher than 180 systolic and/or higher than 120 diastolic

Source: American Heart Association

Study: Most Adults Don't Understand Blood Pressure Numbers

Almost two-thirds of adults don't know the upper thresholds for normal or healthy blood pressure, according to a study from the USC Schaeffer Center for Health Policy & Economics.

But nearly half of American adults have high blood pressure, also known as hypertension.

Most people will develop hypertension at some point in their lifetimes, especially as they age.

"High blood pressure usually has no symptoms," says Wändi Bruine de Bruin, MSc, PhD, co-director of the behavioral sciences program at USC Schaeffer, and the study's co-author. "So, it is important to have your blood pressure tested, and to take action if it's too high."

Blood pressure is measured with two numbers. The top number, called systolic blood pressure, measures the pressure in our arteries when our hearts beat.

The second number is called diastolic blood pressure; it measures the pressure in our arteries when our hearts are resting between beats.

Findings of the study, published in the journal *Medical Decision Making*, could indicate major gaps in public understanding of hypertension risk levels and when to seek care.

"Blood pressure feels like a familiar topic because it gets measured at pretty much every health care visit," Dr. Bruine de Bruin says. "But if these blood pressure measurements

are not explained well or at all, we may develop false confidence."

Lowering blood pressure can lead to better health. Lifestyle changes such as eating a low-sodium diet, limiting alcohol use, being more physically active, maintaining a healthy weight, managing stress and quitting smoking can help people with stage 1 hypertension.

Medication is recommended for those with stage 2 hypertension and for some patients with stage 1, including those with comorbidities like heart disease, kidney disease and diabetes.

Most people will develop hypertension at some point in their lifetimes, especially as they age.



DNA Damage Levels Similar in Vapers and Smokers

A breakthrough study by researchers from the Keck School of Medicine of USC shows that e-cigarette users, or vapers, develop similar levels of DNA damage as tobacco cigarette smokers. The damage was higher among those who vaped or smoked more frequently.

This type of DNA damage, found in the mouth's epithelial cells, is associated with an increased risk for many types of chronic diseases, including cancer and inflammatory diseases.

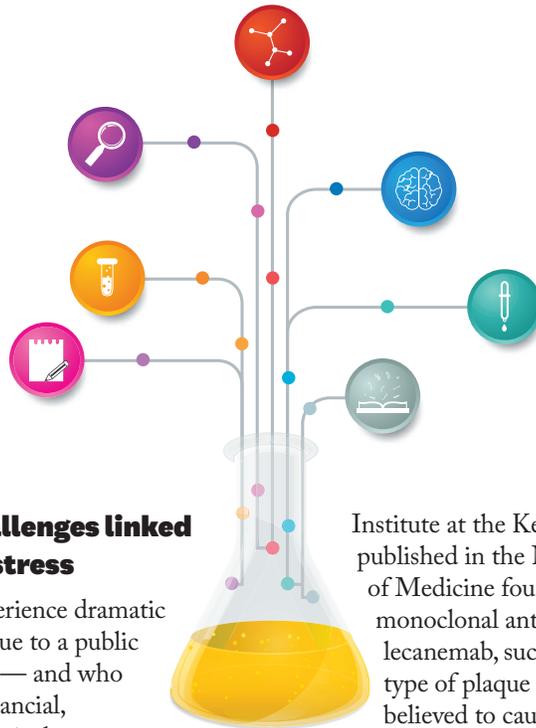
"For the first time, we showed that the more vapers used e-cigarettes, and the longer they used them, the more DNA damage occurred in their oral cells," says Ahmad Besaratinia, PhD, MPH, professor of research population and public health sciences at the Keck School and the study's senior author.

The study, published in the journal *Nicotine & Tobacco Research*, examined cells taken from the mouths of vapers and compared them to cells taken from smokers and nonsmokers.

Results showed that vapers and smokers had similar levels of DNA damage — more than twice the amount found in nonusers.

The researchers also found that DNA damage was most severe in vapers who used some of the most popular e-cigarette products on the market, including vape pods and mods, as well as sweet-, fruit- or mint-flavored vapes.

Research Briefs



Pandemic challenges linked to traumatic stress

Mothers who experience dramatic lifestyle changes due to a public health emergency — and who face significant financial, emotional and physical stress as a result — are more likely to experience long-term mental health consequences such as acute traumatic stress and post-traumatic stress disorder. The Keck School of Medicine of USC study, published in *JAMA Network Open*, began after the start of the COVID-19 pandemic.

Institute at the Keck School. A study published in the *New England Journal of Medicine* found that a new monoclonal antibody drug, called lecanemab, successfully removes the type of plaque in the brain that is believed to cause Alzheimer's.

Common pregnancy complications may delay development

Newborns exposed to complications such as gestational diabetes and preeclampsia are biologically younger than their chronological gestational age, according to a Keck School study published in *JAMA Network Open*. The findings have led to new questions about whether these common conditions that occur during pregnancy could cause delayed infant development or impact overall health later in childhood.

Reversing the aging process for arthritic cartilage

Researchers at USC Stem Cell have discovered a method for regenerating arthritic cartilage. In one test, the team used a molecule to activate a key protein called signal transducer and activator of transcription 3 (STAT3), which successfully triggered the older cartilage cells to revert to an immature state. The study was conducted in partnership with UCLA and was published in *Aging Cell*.

Biomarker could inform spine surgery outcomes

Biological age (how the body functions relative to its calendar age) could help determine a person's readiness for spine surgery. A pilot study in the *Journal of Neurosurgery* led by the USC Spine Center measured the length of DNA-protein complexes called telomeres in adult patients undergoing elective spinal surgery. Shorter telomeres were associated with increased risk of postoperative complications, regardless of a person's age.

Potential breakthrough to slow Alzheimer's disease

Lab-made antibodies can slow the progression of early-stage Alzheimer's disease, according to research from the Alzheimer's Therapeutic Research

Care Next Door

Continued from Page 15

Prior to the affiliation with Keck Medicine, which was announced July 1, 2022, the Arcadia hospital was staffed by highly skilled, board-certified community cardiac surgeons who rotated among USC-AH and other area hospitals.

Now, with USC CVT's presence, USC-AH has regular, full-time cardiac surgery physicians on-site.

Since Roger's surgery, San Gabriel Valley patients and referring physicians have continued to seek care from the new, collaborative USC-AH team, utilizing USC CVT's surgical resources close to their homes.

"We have built significant trust in the team, and patients trust us to deliver their care," Dr. Chen says. "There's no greater privilege than to care for people that you work with."

Back on course

After one month of outpatient recovery, Roger was able to return to his work as a property manager in Pasadena.

"I feel like I can do anything I could do before — climb ladders, lift things, whatever I need to do," Roger says.

As Dr. Chen observed Roger during follow-up appointments, he was pleased with his patient's improvement.

"It was a real win for him that he avoided all the potential complications," Dr. Chen says. "The fact that we paid a great deal of attention to his postoperative care, as well as his diligence in the follow-up, really helped in his recovery."

Roger, who has been an avid disc golf player on courses around the San Gabriel Valley since his twenties, is back in action. Now recovered, and having avoided further serious complications, he can take part in the hobby he has enjoyed with friends for more than 40 years.

To learn more or to schedule an appointment, call (800) USC-CARE or visit [KeckMedicine.org/USCArcadiaCare](https://www.KeckMedicine.org/USCArcadiaCare)

Big Step Forward

Continued from Page 25

Improved surgical option

The timing was ideal. The U.S. Food and Drug Administration had approved osseointegration for above-knee amputations in December 2020, and Dr. Menendez was one of just a handful of surgeons in the country with the training and expertise to perform it.

"Robert was a good candidate," says Dr. Menendez. "He's a young guy and otherwise healthy, and I thought he would benefit greatly from this type of prosthetic management."

"When I put my prosthetic on the floor, I can feel the different sensations, I can feel the grass, I can feel sand, I can feel soft surfaces."

Robert Johnson

Osseointegration is a two-part procedure in which a metal implant is inserted into the bone of the residual limb after the amputation. Over the course of about three months, the bone grows into the implant until it is secure and fully integrated.

Next, an additional device is attached to the implant, which protrudes from the skin and attaches to the prosthesis. Patients take up to a year to heal and require physical therapy.

The primary benefit of osseointegration is that it dramatically enhances the patient's stability and balance.

"With osseointegration, the prosthesis is connected directly to the femur bone, so patients really feel like it's just their leg," Dr. Menendez says. "Patients are much more comfortable walking — especially walking uphill, downhill and even backward."

'It feels completely different'

Dr. Menendez performed the first surgery on Robert in March 2021. Robert says he relied on crutches to get around while he waited for the bone to grow into the implant. The second surgery took place three months later.

Robert started weight-bearing training about six weeks after that to learn to walk on the new prosthetic, with physical therapists gradually increasing the amount until he was comfortable placing his entire body weight on the prosthetic.

Today, the 28-year-old no longer worries about the leg coming loose.

"I just screw the prosthetic onto my leg, and it doesn't come off," he says. "I'm never scared to hold my daughter anymore."

Osseointegration typically involves two surgeries, but Robert has a third scheduled due to the size of his thigh. A plastic surgeon will contour Robert's thigh and remove extra tissue and muscle surrounding the implant.

His quality of life, meanwhile, is forever changed.

"When I put my prosthetic on the floor, I can feel the different sensations," Robert says. "I can feel the grass, I can feel sand, I can feel soft surfaces. It feels completely different from having a socket."

Robert's journey is poised to be one of many stateside success stories, Dr. Menendez says.

"Being one of the first centers in the U.S. to perform osseointegration, we've established a solid track record here at Keck Medicine and we're ahead of the game," he says.

"It's been remarkable to see what patients can do with this type of prosthetic management."

To learn more or to schedule an appointment, call (800) USC-CARE or visit [KeckMedicine.org/Osseointegration](https://www.KeckMedicine.org/Osseointegration)

Perspective: A Commitment to Health Equity

Everyone deserves compassionate, high-quality health care.

This principle guides my role as chief diversity and inclusion officer at Keck Medicine of USC, where I work collaboratively with teams across the organization to make our services more accessible and equitable for people of all backgrounds.

The mission is personal. As a single Black mother, I attended college later in life while working two part-time jobs. I couldn't afford private health insurance, but I earned too much to qualify for Medicaid.

The experience inspired my career dedication to finding ways to improve access and equity in medicine.

Representation is a critical step. A 2019 study in the Journal of the National Medical Association, for example, found racial health disparities decreased when health care staffs are more diverse.

Another study, published in 2020 in JAMA Network Open, found that patients are more satisfied when their provider shares similar demographic and cultural characteristics as them.

At Keck Medicine, we are committed to inclusivity through educational efforts such as bias, vocabulary and cultural intelligence training.

We're also developing strategies to recruit and retain a workforce that meets the needs of Greater Los Angeles, where more than 200 languages are spoken, and socioeconomic gaps can impact access to care.

Our work can change lives; it is a privilege we don't take lightly. Prioritizing diversity, equity and inclusion at every step helps ensure that every patient and community will benefit.

Shannon Bradley, MBA, is chief diversity and inclusion officer with Keck Medicine of USC



Shannon Bradley, MBA

perspective



Keck Medicine of **USC**

**HEALTH SYSTEM MARKETING
AND COMMUNICATIONS**

2011 N. Soto St.
SST-2830
Los Angeles, CA 90032

NON-PROFIT
ORGANIZATION
US POSTAGE
PAID
UNIVERSITY OF
SOUTHERN
CALIFORNIA

Keck Medicine of **USC**

GREATNESS.TOGETHER.

Great doctors who listen. Personalized care.
True partnership. At Keck Medicine of USC, we've
transformed the patient experience to deliver
world-class care tailored specifically for you.
Together we are limitless.

Keck Hospital of USC
USC Arcadia Hospital
USC Care Medical Group
USC Norris Cancer Hospital
USC Verdugo Hills Hospital



[KeckMedicine.org](https://www.KeckMedicine.org)

© 2023 Keck Medicine of USC

