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SMARTER HEALTHCARE FOR SOUTHERN CALIFORNIA

IN A GOOD PLACE

Patients find lifesaving care
at the H.H. Chao Comprehensive
Digestive Disease Center.



BECOMING BIGGER AND BETTER



If you haven't seen our medical center campus in Orange in recent years, we invite you to swing by for a look. I think you'll be impressed. UC Irvine Health is growing and thriving. This summer, we will open the doors to a state-of-the-art facility focusing on digestive diseases. The renovated H.H. Chao Comprehensive Digestive Disease Center is second to none in both the facility and the services we provide. You can read about the CDDC on page 6.

As with the CDDC renovation, we undertake expansion with you in mind. The needs of the people of Orange County and surrounding communities guide our actions. For example, we know you want access to high-quality care that's convenient. That's why we've increased the number of community-based medical offices — offering primary care and specialty services — around Orange County and in Corona. (We have offices in Yorba Linda, Tustin, Anaheim, Placentia, Santa Ana, Irvine, Newport Beach and Costa Mesa.)

In recent years we've also added immediate care at several locations, such as a walk-in care clinic at UC Irvine Medical Center, an urgent care center at our Tustin location and same-day appointments at Gottschalk Plaza in Irvine. We're also expanding our laboratory locations and hours so people can easily undergo the blood tests and other lab work their doctors order. See page 5 for more information. We keep a constant eye on medical innovation and the evolution of healthcare delivery across our country. As our leaders in Washington debate changes to the Affordable Care Act, we stand ready to adapt and evolve, always staying true to our top priority: your health and well-being. ■

Sincerely,

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



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

YOU MAKE THE DIFFERENCE

When someone you care about is fighting an intractable cancer or seeking clinical support for healthy aging, a university medical center can provide the breakthrough care that makes a difference. As Orange County's only academic medical center, UC Irvine Health offers you access to personalized, innovative, research-driven healthcare.

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

EXOSOMES: UNLOCKING CANCER'S MYSTERIES

WRITTEN BY LINDA MARSA

They were once seen as lowly cellular garbage trucks. But now, microscopic substances found in the blood called exosomes may help us understand how cancer cripples the immune system and goes on its destructive rampage throughout the body. UC Irvine Health scientists, along with researchers around the country, are studying the role these bubble-like sacs play in the development of cancer with the aim of devising better treatments and diagnostic tools to catch tumors at their earliest and most treatable stages.

Nearly all cells, including cancer cells, release exosomes into the blood. Early studies of these tiny structures suggested they served cellular housekeeping functions, such as clearing out unneeded proteins and other cellular debris when cells turned over and divided. But scientists now know that these sacs carry with them bits of proteins, DNA and RNA from their originating cells. When they enter the bloodstream, they travel to distant locations in the body and spread their cargo at these remote sites.

Even more recent research indicates

exosomes may dampen immune function, creating an environment that supports cancer and helps it spread.

“Over the past several years, we’ve come to recognize that exosomes are not just benign bags of cellular garbage,” says Dr. Edward Nelson, chief of the Division of Hematology/Oncology. “Investigators are now looking at exosomes as a possible window into the presence of tumors or cancer. What we do know is that when people have large tumors, they have more exosomes floating in their blood.”

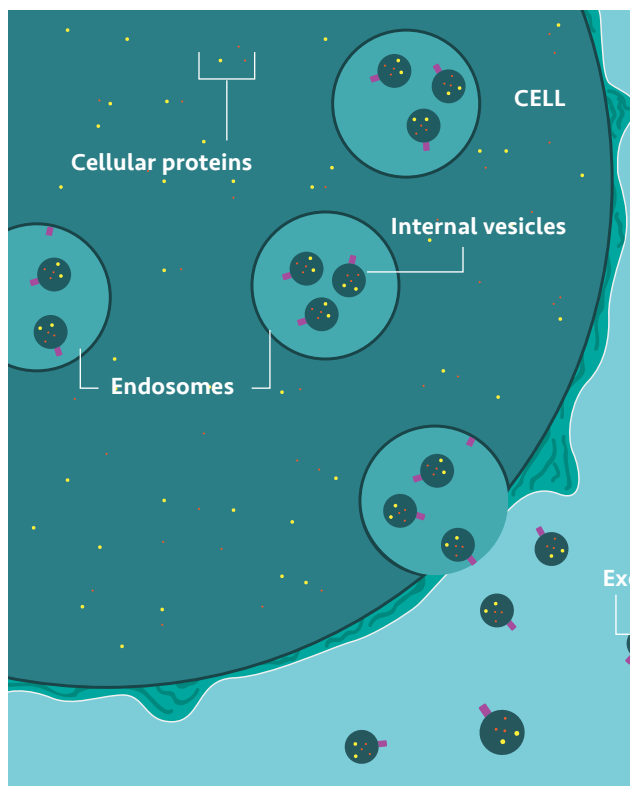
To better understand the relationship between exosomes and tumor development, Nelson and his colleagues at the UC Irvine Health Chao Family Comprehensive Cancer Center launched a study last year of 20 patients with different types of cancer, including lung, liver, ovarian, pancreatic, breast and colon. Patients undergoing treatment were tracked for six months to see if there was a correlation between the level of exosomes in the blood and whether the treatment was working, or if exosome concentrations might be an early indication that the tumor was not responding to treatment.

“If we know that a spike in exosomes means that the tumor is starting to grow, it will help us monitor treatment more closely,” says Nelson, who is working with Aethlon Medical Inc., a San Diego-based biotech company, and expects to have study results before the end of the year.

This research may also shed light on how exosomes released from cancer cells hamper the immune system’s ability to limit the growth of tumors. Exosomes seem to facilitate the conversion of T-cells — the immune system cells that fight disease — into cells that shut off the immune response, says Nelson. “These exosomes seem to be part of the pathways that drive this immune-suppressive environment.”

The ultimate aim of these studies is to uncover new strategies for targeting cancer.

“This research is especially attractive to me as a tumor immunologist because we’re always looking for ways to make the immune system fight cancer better,” says Nelson. “If you have a mechanism by which you could deplete the exosomes, you have the potential to manipulate and decrease the immune-suppressive environment. This looks promising.” ■



ON THE HUNT FOR EXOSOMES

An exciting new area of research involves exosomes, tiny bubbles of cellular material that originate from inside cells, which can be released in fluids, such as blood.

1. When inside the cell, exosomes are called internal vesicles. The internal vesicles contain proteins, genetic material and other important molecules.
2. Internal vesicles are surrounded by larger vesicles, the endosomes.
3. Endosomes fuse with the cell membrane (the layer surrounding the cell's contents)
4. This releases the internal vesicles as exosomes that can travel to other parts of the body to influence cell functions.

AVOIDING SUMMER TROUBLES

Summer is a blast. The weather is perfect. School's out. Vacation is coming due. Sometimes, however, mishaps can ruin summer fun. Since injuries spike in the summer, we asked Dr. Arlene Ing, a UC Irvine Health family medicine physician based in our Tustin office, to advise us on some precautions to keep your summer days healthy and happy.

GEAR UP — Know your sport and wear the appropriate safety gear, such as helmets, wrist guards, life vests or goggles. Make sure your equipment is in good condition, fits well and is worn correctly before you begin an activity. Children should learn and practice the skills they need to safely participate in an activity.

PRACTICE SUN PROTECTION — Sunscreen, shade and protective clothing are the tools you need to avoid painful sunburn and the kind of skin damage that increases the risk of skin cancer. Avoid sun exposure between 10 a.m. and 2 p.m., she advises. Wear broad-spectrum sunscreen that will protect against all ultraviolet radiation.



“Purchase a sunscreen with an SPF of at least 30 and apply a tablespoon 15 to 30 minutes before going outdoors and reapply it at least every two hours.”

KEEP ALLERGIES AT BAY — Allergy rates soar in our area during the summer, mostly from ragweed, Ing says. People often open doors and windows in the warmer months, but that allows more airborne allergies to waft into your home. “You actually want to do the opposite and keep doors and windows closed. Try running the

KEEP WATER ACTIVITIES SAFE AND FUN

Summer beckons us to the sparkling waters of pools, lakes and oceans. But water activities can be dangerous. Drowning is the leading cause of death for children ages 1 to 4 years in the United States, in California and here in Orange County. We have not been able to substantially reduce the number of children who have drowned or been brain-injured as a result of near-drowning, says Dr. Phyllis Agran, a UC Irvine Health pediatric gastroenterologist who has studied drowning and near-drowning.

Agran and her colleagues studied 46 Orange County toddler drownings from 2000 to 2007. In 2006 and 2007 there were four deaths; in 2012, 2013 and 2015 there were five. “We have not moved the needle in preventing these tragedies,” she says. “We need uniform surveillance if we want to understand the causes of drowning. Understanding the causes leads us to the intervention.”

The data provided an illuminating look at how children get into trouble around water. One major cause of toddler drowning was when children gained entry to a pool without the caregiver's knowledge. The study also showed children can drown even when the caregiver is nearby, such as in the yard, but not actively watching the child.

These situations can be remedied by having a high fence — with a self-closing, self-locking gate — surrounding a pool and by always being within arm's reach of a child in the water. “You can't be multitasking. You can't be on the phone,” Agran says.

Common-sense guidelines can help prevent drowning among all age groups. While toddlers are at highest risk of drowning, statistics show drowning occurs in all age groups, says Christy Carroll, RN, the UC Irvine Health Trauma Program coordinator. Swimming lessons alone are not sufficient.

“Even experienced adult swimmers drown,” she says. Drowning-related accidents among adults are often tied to the use of alcohol or drugs, she adds.

Safety measures go a long way toward preventing tragic accidents. “We need layers of protection to prevent drowning,” Agran says.



Prevention Tips:

- The pool should be completely separate from the house and play area of the yard.
- Alarms and pool covers should not be used as a substitute for a fence.
- When supervising children around water, use “touch supervision,” which means always remain in arm's reach of the child.
- Never leave your child alone or in the care of another child in or around water.
- Know how to swim.
- Learn CPR and first aid.
- Have rescue equipment, such as a life preserver.
- Wear Coast Guard-approved life jackets when swimming in the ocean.
- Bring a phone to the pool, lake or beach in case of emergency.
- Provide swimming lessons when your child is ready to learn.

To learn more, visit ucirvinehealth.org/drowning



air conditioner to keep allergens down or use an air filter or air purifier," she says. "Vacuum more often and wash sheets often in hot water."

PACE YOURSELF IN HOT WEATHER AND DRINK WATER —

Dehydration can be sneaky. Older people, in particular, may be vulnerable to dehydration due to medications they take or other health conditions, she says. Kids can become dehydrated through overexertion on a hot day. The key is to keep track of your liquid intake. Drink six to eight glasses of water a day.

KEEP FOODS AT THE APPROPRIATE TEMPERATURE —

Each year in the U.S., about 47 million cases of foodborne illness are reported. During the summer, salmonella is especially problematic. Dairy products, as well as egg dishes, can be breeding grounds for salmonella, Ing says. Don't let food sit out for more than two hours. On a hot day (90°F or higher), reduce this time to one hour. Put perishable items in a cooler

or insulated bag. Wash your hands often. Older people, infants and people with weakened immune systems are especially vulnerable to foodborne illness.

FEND OFF PESKY CREATURES —

Bugs, bees, snakes and other creatures can disrupt your picnic, hike or round of golf. Wear protective clothing if you're in areas where such pests are common. "Insect repellents are safe and are recommended for kids as young as 6 months," Ing says. "DEET-containing insect repellents work best. Mosquitoes can carry dangerous viruses like Zika, West Nile virus and Lyme disease." If you encounter a bee, she says, remove the stinger from your skin as quickly as possible. You can use a credit card or anything with a firm edge to pop the stinger out. See a doctor if you develop a rash or any other symptoms following a bee sting.

For more information, visit ucirvinehealth.org/safesummer



DR. LISA GIBBS HONORED AS OC'S PHYSICIAN OF THE YEAR

Dr. Lisa Gibbs, medical director of the UC Irvine Health SeniorHealth Center, was recently named the Orange County Medical Association 2017 Physician of the Year. OCMA's Physician of the Year award was established in 1983 to recognize an Orange County doctor whose career exemplifies what it means to be an accomplished physician. Gibbs, who is a clinical professor in the Department of Family Medicine and chief, Division of Geriatrics and Gerontology, UC Irvine School of Medicine, was recognized for her commitment to patient care, community service, teaching and research. She is involved in numerous collaborative projects in Orange County aimed at improving the health and quality of life of older adults. For more information on the SeniorHealth Center programs and services, please see page 12.

NEW PHARMACY OPENS

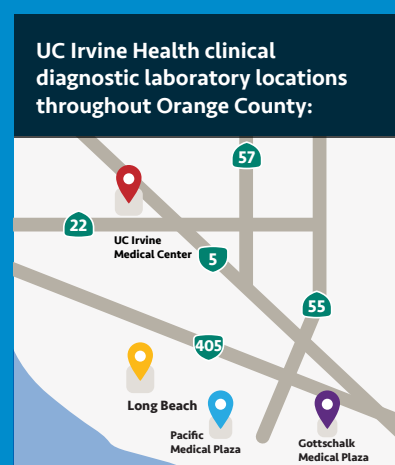
Need to fill your prescription? We'll take care of it. The new UC Irvine Health Outpatient Pharmacy in Pavilion 4 offers a simple and convenient way for you to fill your prescription on the same day of your doctor's appointment or have it mailed free to your home.

Also, as a specialty pharmacy, we work closely with patients with complex conditions and the healthcare team to discuss a specific plan of care, review medication options, and provide education and monitoring to ensure your safety.

Pharmacy hours:

M-F, 9 a.m.–6 p.m.
101 The City Dr. South, Pavilion 4, Orange

To learn more, visit
ucirvinehealth.org/newpharmacy



Gottschalk Medical Plaza

1 Medical Plaza Drive, Irvine
Phone: 949-824-8620
M-F, 7:30 a.m.–5 p.m.

Pacific Medical Plaza

1640 Newport Blvd.,
Suite 330, Costa Mesa
Phone: 949-386-5080
M-F, 7:30 a.m.–4 p.m.

New Lab Locations to Serve You

We have a number of clinical diagnostic laboratories to help you get the tests your doctor orders. Our service is prompt and convenient, and we contract with major PPO insurance plans, Medicare and Medi-Cal. Our Orange facility offers extended and Saturday hours.

UC Irvine Medical Center

101 The City Drive South,
Building 29, Pavilion 3, Orange
Phone: 714-456-5385
M-F, 6:30 a.m.–5 p.m.
Sat., 8 a.m.–noon
(Park in parking structure on Dawn Way)

Long Beach

1649 Termino Ave., Suite B,
Long Beach
Phone: 562-597-7842
M-F, 8:30 a.m.–5 p.m.
(Closed 1–2 p.m.)





Debra Baker's treatment for a rare cancer included an innovative type of chemotherapy. Baker, with husband Greg, enjoy time on their son's boat in Newport Harbor.

A HEALING SPACE

INNOVATION AND COMPASSION GRACE THE HALLS OF THE H.H. CHAO COMPREHENSIVE DIGESTIVE DISEASE CENTER.

WRITTEN BY SHARI ROAN | PHOTOGRAPHED BY REMY HAYNES

Things looked bleak when Debra Baker, 60, sat down at UC Irvine Medical Center with Dr. Alessio Pigazzi, professor of surgery, in January 2015. Baker, of Crestline, had been diagnosed with cancer of the appendix and had undergone surgery to remove the appendix, uterus and ovaries at another Orange County hospital. But the cancer spread, and surgeons referred her to UC Irvine Health for additional treatment.

The doctor and patient squared off — the start of a candid and honest relationship that, Baker says, saved her life.

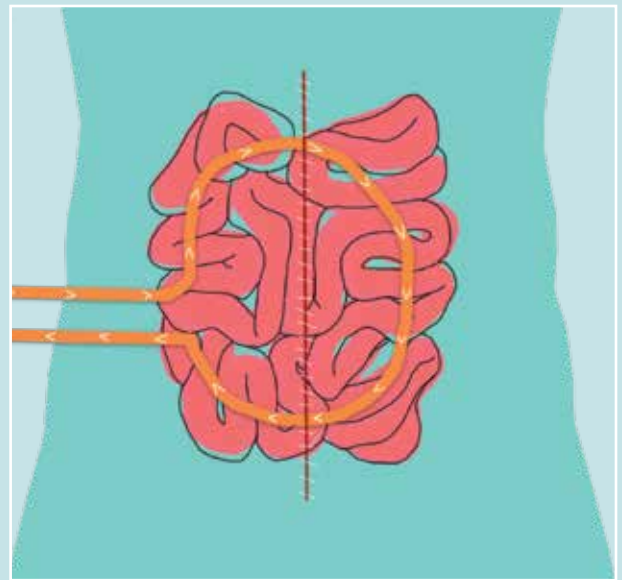
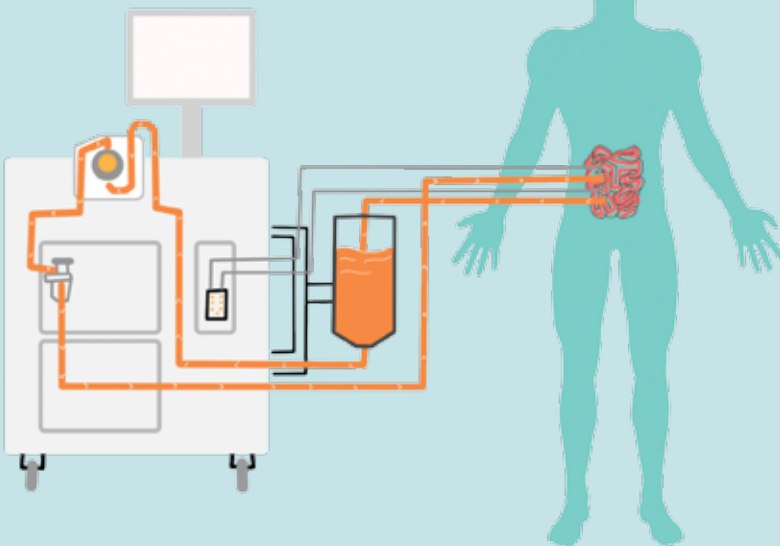
"He was straightforward," Baker recalls. "He said, 'This is serious. It's not good.'" But Baker saw through the tough talk and had confidence that Pigazzi could perform the advanced treatments necessary to restore her health. And Pigazzi came through. "He was more than positive. He listened and I never got the feeling that I wasn't being heard. I love that man."

Today, Baker is two years out from a life-threatening disease that was treated with extensive surgery, an innovative form of chemotherapy called hyperthermic intraoperative peritoneal chemotherapy (HIPEC) and a six-week hospitalization. Pigazzi, a colon and rectal surgeon, performed the complex procedure and oversaw Baker's recovery, assisted by Dr. Mehraneh D. Jafari, also a colorectal surgeon and part of the HIPEC team.

Baker would not likely have received the complex HIPEC treatment, requiring specialized surgical and recovery teams, at other hospitals. Near the end of a 12-hour surgery to remove cancer from her abdominal cavity, doctors pumped heated chemotherapy

HIPEC: HOW IT WORKS

Hyperthermic intraoperative peritoneal chemotherapy (HIPEC) is a long title for a complex type of cancer treatment that very few hospitals offer. The treatment is designed to place chemotherapy in the tissues where the cancer developed and spread in order to expose every cell to the medication.



1. Near the end of surgery to remove cancer, doctors pump heated chemotherapy into the patient's abdominal cavity.
2. The patient's belly is massaged to circulate the chemotherapy solution throughout the abdomen. This takes about an hour.
3. The chemotherapy is drained from the patient's body.
4. The abdomen is rinsed, and the incision is closed.

To learn more, visit ucirvinehealth.org/chemobath

into her abdomen and gently rocked her body to circulate the fluid and bathe her internal organs with the cancer-fighting solution. After about an hour, the fluid was pumped out. HIPEC is designed to reach and kill any undetected cancer cells and to reduce recurrence of disease.

"I had never heard of it," Baker says. "But it made a lot of sense. The chemo touches all of the surfaces. I kind of look at it as putting bleach on mold. After you go through something like this, there are a lot of things you reflect on. I was so fortunate that I received HIPEC."

Pigazzi has been using HIPEC for several years. "It's increasingly recognized as an important treatment modality for selected patients," he says.

A RENOVATED FACILITY

From rare and challenging cases like Baker's to the most common digestive disorders like heartburn, the UC Irvine Health digestive disease center is one of the top in the country. And now the center has a building matching its star status. The H.H. Chao Comprehensive Digestive Disease Center (CDDC) will re-open later this summer after undergoing extensive additions and renovations.

The new building opens to a three-story, sunlight-filled atrium designed to reduce noise and soothe patients. Exam and procedure

rooms are spacious. Patients can have diagnostic, treatment, follow-up care and visits with other specialists in the same building, says Dr. Kenneth Chang, director of the CDDC and a leading specialist in gastroesophageal reflux disease (GERD), Barrett's esophagus and endoscopic surgery to treat digestive diseases.

"A lot of centers are virtual centers; they coordinate your care, but you go to this building and that building. The CDDC is a one-stop center for practically anything in digestion diseases. You can see a gastroenterologist, surgeon, oncologist — everyone will be under one roof. There is nothing like it anywhere on the West Coast."

Ongoing research, including many novel clinical trials, and technological innovations also set the CDDC apart, Chang says. From mini microscopes that are inserted via the throat to look at the digestive tract to instruments that freeze away unwanted tissue (called cryotherapy), the center's staff utilizes the latest tools and strategies to improve patient care.

"We're always developing new treatments that are not yet standard of care, and our patients have access to them," Chang says.

HIPEC, for example, is also used for advanced colorectal cancers, adding to the growing arsenal to fight the disease. At the CDDC, colorectal cancer patients receive multiple types of therapies (surgery, chemotherapy, radiation) to improve the odds of

"AFTER YOU GO THROUGH SOMETHING LIKE THIS, THERE ARE A LOT OF THINGS YOU REFLECT ON. I WAS SO FORTUNATE THAT I RECEIVED HIPEC."

success. Patients undergo minimally invasive surgery in most cases.

“We are able to offer more minimally invasive procedures to more patients,” Pigazzi says. “These procedures result in better quality of life and faster initiation of other therapies.”

Doctors are even exploring whether some patients with rectal cancer can avoid surgery. UC Irvine Health is part of an 18-center national study, called Organ Preservation in Rectal Adenocarcinoma (OPRA), that uses chemotherapy and radiation only — no surgery — for early-stage rectal cancer. The CDDC is the only program in the county offering the OPRA trial.

“The objective is to see if patients with rectal cancer can be treated without ever having surgery,” says Dr. Joseph Carmichael, a UC Irvine Health colorectal surgeon. “If we develop protocols where people don’t have to undergo surgery it will be so much better for patients.”

CANCER TREATMENT AND PREVENTION

The CDDC is also a leading center on the treatment of pancreatic cancer and is one of the few centers in the region to perform the Whipple procedure for removing pancreatic cancer found in the “head” of the organ. This surgery is a complex operation that is only offered at high-level hospitals.

Patients with tumors in the “body” or “tail” of the pancreas are often candidates for minimally invasive surgery. Dr. David Imagawa and his pancreas surgical team perform more minimally invasive pancreatic cancer procedures than any other medical center on the West Coast.

Chang also performs gene sequencing for patients with pancreatic cancer, which means these patients get the most effective treatment for their individual genetic makeup. He is a pioneer in devising ways to diagnose precancerous pancreatic cysts and determining which patients are at higher risk for developing pancreatic cancer.

Cancer prevention is a major goal of the CDDC staff, Chang says. The center is a leader in treating GERD as well as Barrett’s esophagus, a precancerous condition of the esophagus that can develop among people who have had severe GERD for many years. Without treatment, Barrett’s esophagus can lead to esophageal cancer.

Another prevention project spearheaded by UC Irvine Health physicians is to make the county “colon cancer-free” by encouraging colorectal cancer screening. In UC Irvine Health offices around Orange

County, patients are asked to take a short survey on a mobile device that assesses their risk of developing colon cancer and shows how simple changes and appropriate cancer screening can reduce the risk.

INFLAMMATORY BOWEL DISEASE PROGRAM

The CDDC is also home to the region’s only comprehensive program for inflammatory bowel diseases (IBD), such as Crohn’s disease and ulcerative colitis. These chronic and often-complex conditions are best treated in a multidisciplinary setting and by physicians who are experienced in a wide range of IBD

manifestations, says program director Dr. Nimisha Parekh.

The CDDC is one of the few facilities in Southern California to use magnetic resonance (MR) enterography as a first-line tool to diagnose IBD. This type of scan can reveal inflammation and thickening in the small bowel walls and other changes that define IBD. Patients who require surgery can often undergo minimally invasive and robot-assisted procedures that preserve the small bowel, hasten recovery and reduce complications.

Since IBD is often diagnosed in younger adults, the CDDC provides a comprehensive care plan that includes a focus on patients’ psychosocial needs and supportive services to enhance quality of life, Parekh says.

BARIATRIC SERVICES

Obesity treatment and prevention is another objective of the CDDC staff, Chang says. Obesity is implicated in many types of cancers, such as colorectal cancer. Physicians offer state-of-the-art procedures and programs for weight loss, including a new nonsurgical procedure called endoscopic sleeve gastroplasty.

During this procedure, a flexible tube called an endoscope is inserted through the mouth and threaded down the esophagus to the stomach. The endoscope is fitted with a mechanical suturing device.

“WE ARE ABLE TO OFFER MORE MINIMALLY INVASIVE PROCEDURES TO MORE PATIENTS. THESE PROCEDURES RESULT IN BETTER QUALITY OF LIFE AND FASTER INITIATION OF OTHER THERAPIES.”

Dr. Kenneth Chang,
director of the
H.H. Chao Comprehensive
Digestive Disease Center





 An expanded and improved H.H. Chao Comprehensive Digestive Disease Center reopens this summer. Learn more at ucirvinehealth.org/cddcopening

Once the device is in the stomach, the physician manipulates the endoscope to apply stitches in the stomach to reduce the stomach size by resizing it into the shape of a sleeve. A variety of other weight loss procedures — endoscopic and surgical — are also offered.

“Roughly 20 percent of all cancer-related deaths are related to obesity,” Chang says.

COMPASSIONATE CARE

The CDDC’s beautiful facility reflects the soothing, holistic care provided by its staff. Each patient receives a personalized care plan and the services of a multidisciplinary team.

This is the kind of care and attention that made Baker a fan for life. One night during her six-week hospitalization, she awakened to find Pigazzi in her room to check on her. It was after midnight, and he had just returned to Orange County from a medical conference out of state. Despite the hour, he drove straight to his patient’s bedside, eager to check on how she was doing.

“Now that’s something you just don’t see,” she says.

A NEW PROTOCOL IMPROVES SURGICAL RECOVERY

Anyone who has experienced surgery knows that the first day or two following the procedure can be a roller coaster. Pain and nausea levels can fluctuate. Eating is often a dicey proposition, and the first trip out of bed can be daunting.

UC Irvine Health caregivers, however, are at the forefront of an emerging national trend to change the way patients come through surgery. The goal is to make recovery easier, quicker, safer and more predictable by following a list of evidence-based measures, called Enhanced Recovery After Surgery (ERAS).

“Under this protocol, patients typically feel better, go home sooner and their quality of life is improved,” says Dr. Joseph Carmichael, a UC Irvine Health colorectal surgeon who is a national authority on ERAS. “We can achieve this through some fairly simple practices.”

The protocol includes more than a dozen strategies that have been proven through medical research to improve safety and enhance recovery. The process begins before surgery, Carmichael says. Patients are encouraged to remain active or to even get more exercise prior to surgery to build up strength and stamina. Oral antibiotics are prescribed to reduce the chances of surgical wound infection. If colorectal surgery may result in the need for an ostomy bag, patient education begins prior to surgery, rather than after the ostomy is placed.

“Many studies show if you empower patients with information early, and keep educating them, they will have a much greater quality of life after surgery and will feel much less lost in the process,” Carmichael says.

On the day of surgery, patients receive anti-nausea drugs and their first dose of pain medication before those side effects set in. This

preemptive strategy has been shown to significantly curtail pain and nausea. Patients also find lots of changes once they wake up from surgery. Food is offered right away to prompt the intestines to wake up and function, and the IV is turned off as quickly as possible, which limits swelling in the intestines. Pain medications are given on a schedule, rather than “as needed.”

“When you start to do these simple things, you walk in their room the day after surgery and they are sitting up in a chair, looking great and asking when they’re going to go home,” Carmichael says.

Everyone — surgeons, anesthesiologists, specialty physicians, nurses, therapists and dietitians — need to be on board to make the protocol succeed, he notes. Carmichael is the lead author of a seminal paper on ERAS that will be jointly published later this year by American Society of Colon and Rectal Surgeons and the Society of American Gastrointestinal and Endoscopic Surgeons. The guidelines will help hospitals around the country and in Canada adopt the ERAS protocol.

Colorectal surgery patients benefit greatly from the protocol because surgical complications are more common in colorectal surgery compared to other types. However, experts in gynecology, cardiology, hepatic medicine and other fields are looking at adopting the ERAS protocol as well, he says.

Research also shows the protocol can dramatically lower healthcare costs by reducing complications and shortening hospital stays.

“We tend to do things a certain way just because that is how we were taught,” Carmichael says. “ERAS is about destroying dogma. But it takes the whole team.”

WORLD KIDNEY DAY

UC Irvine Health hosted a special symposium about kidney health on March 18 at UC Irvine Medical Center in Orange. The event featured experts speaking on nephrology, urology, transplant and nutrition, and attendees were offered health screenings.



Dr. Jaime Landman, chair of the Department of Urology with Rachel Hogue of UC Irvine Health



Dr. Jason Samarasena, left, and Dr. William Karnes

FACEBOOK LIVE FOR COLON CANCER AWARENESS

A Facebook Live event on March 29 featured UC Irvine Health gastroenterologists Dr. Jason Samarasena and Dr. William Karnes. They answered questions about colon cancer, prevention and advances in colonoscopy. Thousands of people have watched the video, which can be viewed at ucirvinehealth.org/preventcoloncancer

MINI MED SCHOOL 101

"Innovations in Medicine: Mini Med School 101," a five-week lecture series, introduced community members to the latest news in medical science. Curriculum included a look at how nationally renowned experts within UC Irvine Health are pursuing innovative treatments and groundbreaking studies to improve health locally and beyond.



Mini Med School students Dee Hughes, Beryl Smith and Michaela Kilday

AMERICAN HEART ASSOCIATION HEART WALK

The Mega Heart — a walk-through oversize model of the organ — was a big hit at the UC Irvine Health booth at the American Heart Association Heart Walk on March 4 at Angel Stadium. Participants learned about the heart's structure and heart disease. UC Irvine Health also gave away backpacks before participants engaged in cardiovascular exercise for a good cause.



EASY AGING

THE SENIORHEALTH CENTER ADDRESSES THE SPECIAL NEEDS OF OLDER ADULTS.

WRITTEN BY NANCY BRANDS WARD

PHOTOGRAPHED BY REMY HAYNES



Dr. Lisa Gibbs, medical director, UC Irvine Health SeniorHealth Center, was recently named the Orange County Medical Association Physician of the Year.

By the year 2050, the United States population aged 65 or older is estimated to reach 83 million, nearly double the number in 2012, according to the U.S. Census Bureau. The goal of the UC Irvine Health SeniorHealth Center is to combine the latest medical advances with a compassionate, whole-person approach to healthy aging. Dr. Lisa Gibbs is a clinical professor, medical director of the SeniorHealth Center and chief of the Division of Geriatric Medicine and Gerontology. *Live Well* spoke with Gibbs about the latest approaches to caring for the growing older adult population.

WHAT IS A GERIATRICIAN?

Geriatricians complete one or two years of advanced training, called a fellowship, specialize in optimizing the care of older adults. Because we specialize in complex care, we are often at the forefront of innovation and new models of care for older adults. We offer primary care as well as consultations for memory, falls and loss of function, among other issues older adults face. In addition, we are comfortable caring for patients where they need us, be it in the clinic, hospital, nursing home or the patient's own home. Our board-certified group of physicians is the largest in Orange County and cares for patients in multiple settings.

WHAT ARE THE ADVANTAGES OF GOING TO A GERIATRICIAN?

As we age, our needs and medical concerns change. Age is not as important as function and well-being, and it is advantageous for older adults to obtain care from physicians who understand the interrelatedness of physiology, medications, medical conditions, mental health and the social well-being of older adults.

DO GERIATRICIANS RECEIVE SPECIAL TRAINING?

Yes, geriatricians are fellowship-trained and board-certified by the American Board of Internal Medicine or the American Board of Family Medicine. Because of the focus and training that geriatricians receive during their course of study, they are more apt to recognize, properly diagnose and treat medical issues that concern older adults. They also understand that caregiver and family involvement and community services are key components to patient care.

WHAT SERVICES FALL UNDER THE UMBRELLA OF THE UC IRVINE HEALTH SENIORHEALTH CENTER?

The UC Irvine Health SeniorHealth Center is a certified Patient Centered Medical Home (PCMH), meaning that it meets strict requirements for care coordination in a team-based setting and affords patients a voice in their own healthcare. Services include primary care for people aged 60 and older and consultative care for specific conditions such as memory, polypharmacy (interactions between multiple medications) and falls. Consultations with

disciplines such as psychology, pharmacy and social work are also available. Because the care of older adults often requires the expertise of many disciplines, we also specialize in team-based care. One of our premier programs, the Health Assessment Program for Seniors (HAPS), provides a comprehensive assessment for patients and caregivers, followed by a personalized family conference. The assessments are conducted by a multidisciplinary team. We also partner with specialists to optimize patients' health prior to elective surgery.

DOES THE CENTER ASSIST PATIENTS WHO ARE CONCERNED ABOUT DEMENTIA?

The SeniorHealth Center offers the Memory Assessment Program for Seniors in which a geriatrician, geropsychologist and social worker evaluate and treat memory and care needs.

HOW IS THE DIVISION OF GERIATRICS WORKING TO MEET THE NEEDS OF THE AGING BABY BOOMER GENERATION?

New models of care are needed. One project involves a partnership with the Gary and Mary West Health Institute, an organization dedicated to healthy aging. Our 360 Degree Caregiving Solution initiative seeks to improve the lives of those living independently in the community. The partnership provides a coordinated patient-centered plan that links healthcare with community-based social service agencies to make sure older adults receive the care and services they need.

WHY ARE THESE NEW SERVICE MODELS NEEDED?

Our national healthcare system is ill-prepared to collaboratively, efficiently and compassionately care for the increasing numbers

of older patients. So there is an urgency to develop models for patient-centered and cost-effective care. Our focus includes improved quality of care and patient experience for patients and caregivers. As one of the few certified PCMH models in the country focusing on a geriatric population, we are uniquely positioned to create and implement new models of care coordination for frail older adults. Our vision is to care for patients how, when and where they need it.

HOW IS THE DIVISION OF GERIATRICS WORKING WITH THE COMMUNITY TO MEET THE NEEDS OF OLDER ADULTS?

Community outreach and integration are very important to us. We are a member of the Orange County Aging Services Collaborative, alongside numerous agencies providing care for older adults. We also have a strong partnership with the UC Irvine School of Nursing and Alzheimer's OC in teaching geriatric care to other primary care providers in Orange County through a federal grant.

WHY IS ORANGE COUNTY A GOOD PLACE TO INTRODUCE NEW GERIATRIC HEALTHCARE MODELS?

Orange County is home to a diverse population that is expected to mirror national shifts in ethnic diversity and growth of the older adult populations. As a leading university in Orange County, and with strong medical and nursing geriatric medicine teaching and clinical programs, UC Irvine has a mission to help prepare Orange County to address the needs of a burgeoning senior population. And every day we continue to make great strides.

For more information, visit ucirvinehealth.org/geriatriccare





Children are monitored during exercise at the UC Irvine Health Pediatric Exercise and Genomics Research Center (PERC).

EXERCISE IS MEDICINE

RESEARCHERS STUDY HOW ACTIVITY IMPACTS FUTURE HEALTH

WRITTEN BY TRAVIS MARSHALL

Everyone understands implicitly that regular exercise is good for our health. It helps us lose weight, reduces the risks of diseases like heart disease and can even improve mood.

But exercise also has effects on our bodies at the molecular level that may offer insights about how to prevent or recover from many serious health issues.

Doctors also want to know how to use exercise in conjunction with medicines and other lifestyle factors to improve health, which could be especially important for children.

That's what the researchers at the UC Irvine Health Pediatric Exercise and Genomics Research Center (PERC) hope to uncover as one of only seven centers around the country participating in a new National Institutes of Health program called Molecular Transducers of Physical Activity in Humans.

"We know that exercise is good for us, but we don't know as much about the molecular mechanisms, the processes throughout the cells of the body, that benefit us when we exercise," says Dr. Shlomit Radom-Aizik, executive director of PERC. The \$170 million project

forms the multidisciplinary Molecular Transducers of Physical Activity Consortium, or MoTrPAC, she says, "to create the molecular map in response to exercise, using cutting-edge genomics, metabolomics and proteomics platforms."

The new study "is like the Human Genome Project for exercise," says Dr. Dan Cooper, founding director of PERC, who will oversee the UC Irvine MoTrPAC study with Radom-Aizik. The federally funded Human Genome Project was undertaken in the 1990s to sequence all human DNA.

"One of the major lessons of the Human Genome Project was that just knowing the sequence of the genome isn't enough; we have to look at the factors that influence how the genes are expressed," adds Cooper, who is also associate vice chancellor for clinical and translational science and director of the UC Irvine Institute for Clinical and Translational Science. "We will discover how exercise controls the expressions of genes, a field known as epigenetics, and we will use state-of-the-art analysis of

metabolism and proteins. It's a big deal, and we are so excited to be part of it."

“WE WILL DISCOVER HOW EXERCISE CONTROLS THE EXPRESSIONS OF GENES, A FIELD KNOWN AS EPIGENETICS...”

Researchers are increasingly looking at how exercise and fitness in children could have lasting implications for their health as they grow and age. PERC is the only center in the program that will have pediatric participants. The children, ages 11 to 17, will be recruited from schools around Orange County in collaboration with the Orange County Department of Education. "The reason we're recruiting from those ages is we want to see differences in exercise before and after puberty, a very dynamic period of change in growth and metabolism, and follow those differences as they develop," Cooper says.

The overall goal of the study is to collect data from a diverse group of 3,000 participants aged 11 to 75 years, of whom 360 will be pediatric. Once the study begins, participants will be split into two groups, doing either resistance training or aerobic training in the centers' human performance laboratories. Tissue samples from participants will be sent for analysis to a single laboratory shared by all seven centers.

Studying the molecular changes triggered by exercise in healthy people will create a basis for future research. For example, researchers may learn how exercise affects the immune system. "We know that when you run, you get an immediate stress response that actually affects how white blood cells work. But there may be longer-term effects, such as influencing which genes are turned on to fight infection and control inflammation," Cooper says.

In addition to the MoTrPAC program, PERC is home to a number of ongoing studies that look at how exercise relates to specific conditions and certain age groups of children. PERC's human performance laboratory allows participants to exercise on equipment like treadmills and stationary bikes while connected to monitoring devices, and the PERC on-site genomic laboratory can run genomic and epigenetic assays from various tissues like blood, muscle and saliva. One current study examines how exercise can affect the immune system in children with asthma, while another probes the mental and physical effects of therapeutic dance among children with cerebral palsy.

"We have 10 to 15 projects running at any given time," Radom-Aizik says.



"We believe exercise might be used with other traditional medicines to improve the overall health of children with chronic diseases. MoTrPAC will help us to develop the scientific basis for using exercise as medicine."

Ultimately, Radom-Aizik and Cooper hope that research programs like MoTrPAC will allow doctors to prescribe detailed exercise programs for patients depending on their specific conditions.

"Healthy people and people with different clinical conditions respond to exercise in different ways," Radom-Aizik says. "We are investigating so we can learn how to fine-tune the type and intensity of the exercise we prescribe both for healthy children and for children with chronic disease and disabilities."

For more information, visit ucirvinehealth.org/perc



PHOTOGRAPHED BY PAUL KENNEDY.



HEALTH CLASSES

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

Please note: There is a small fee for parking at UC Irvine Medical Center and UC Irvine Health Douglas Hospital.

LOCATIONS:

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

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

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

ADVANCE DIRECTIVE

July 20 | 11 a.m.–12:30 p.m.
UC Irvine Medical Center
Neuropsychiatric Center, Room 101

BREASTFEEDING

June 1, June 29, Aug. 3,
Sept. 7, Oct. 5 | 6–9 p.m.
UC Irvine Medical Center Library
2nd floor, Classroom 2105

DIABETIC DIET

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

DIABETES MANAGEMENT SERIES (three classes)

June 6, 13, 20 | 4–6 p.m.
Oct. 4, 11, 18 | 4–6 p.m.
UC Irvine Medical Center Library
2nd floor, Classroom 2103

DIABETES OVERVIEW

July 11 | 4–6 p.m.
UC Irvine Medical Center
Neuropsychiatric Center, Room 101

DIABETES OVERVIEW, SPANISH

July 19, Oct. 18 | 5–7 p.m.
UC Irvine Medical Center
Neuropsychiatric Center, Room 101

HEART FAILURE

July 10 | 2–3:30 p.m.
UC Irvine Health Douglas Hospital
Conference Room 3005

HIGH BLOOD PRESSURE

June 13, Sept. 12 | 6–7:30 p.m.
UC Irvine Medical Center Library
2nd floor, Classroom 2103

JOINT REPLACEMENT, HIP OR KNEE

Every Monday, except holidays
June 5, 12, 19, 26; July 3, 10, 17, 24, 31;
Aug. 7, 14, 21, 28; Sept. 11, 18, 25;
Oct. 2, 9, 16, 23, 30 | 2–3 p.m.
UC Irvine Health Douglas Hospital
3rd floor, Family Room 3001

MATERNITY RECEPTION

June 6, Aug. 1, Sept. 5, Oct. 3, Nov. 7
5:30 p.m. Spanish | 6:30 p.m. English
UC Irvine Medical Center, Building 53

MEDITATION FOR HEALTH SERIES (four classes)

June 5, 12, 19, 26 | 6:30–7:30 p.m.
Sept. 11, 18, 25, Oct. 2 | 6:30–7:30 p.m.
UC Irvine Health Douglas Hospital
Conference Room 3005

MEDITATION FOR HEALTH SPECIAL TOPIC: BREATHING

Oct. 16 | 6:30–7:30 p.m.
UC Irvine Health Douglas Hospital
Conference Room 3005

NEWBORN CARE

June 9, July 14, July 28, Sept. 8,
Oct. 20, Nov. 17, Dec. 15 | 6–9 p.m.
UC Irvine Medical Center
Building 56, Room 113

PREPARED CHILDBIRTH (five classes)

June 28, July 5, 12, 19, 26 | 7–9:30 p.m.
June 29, July 6, 13, 20, 27 | 7–9:30 p.m.
Sept. 6, 13, 20, 27, Oct. 4 | 7–9:30 p.m.
Sept. 7, 14, 21, 28, Oct. 5 | 7–9:30 p.m.
Oct. 18, 25, Nov. 1, 8, 15 | 7–9:30 p.m.
Oct. 19, 26, Nov. 2, 9, 16 | 7–9:30 p.m.
UC Irvine Medical Center
Building 56, Room 113

PREPARING FOR SURGERY — MIND, BODY AND SPIRIT

June 5, 19; Sept. 5, 18;
Oct. 2, 16 | 3–4:30 p.m.
UC Irvine Health Douglas Hospital
3rd floor, Conference Room 3005 or 4843

PREVENT STROKE

June 13, Sept. 12 | 4–5 p.m.
UC Irvine Medical Center Library
2nd floor, Classroom 2103

STOP SMOKING (five classes)

July 3, 10, 17, 24, 31 | 5:30–6:30 p.m.
Oct 2, 9, 16, 23, 30 | 5:30–6:30 p.m.
UC Irvine Medical Center Library
2nd floor Classroom

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



SUPPORT GROUPS

ART FOR THE SOUL
714-456-5235

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

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

**BRAIN TUMOR
EDUCATION/SUPPORT GROUP**
714-456-8609

BURN SURVIVORS SUPPORT GROUP
714-456-7437

GRIEF SUPPORT GROUP FOR CHILDREN
714-456-2295

EVENTS

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

GAVIN HERBERT EYE INSTITUTE COMMUNITY LECTURE SERIES

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

SAGS AND BAGS:

Current Treatments
in Oculofacial Surgery
Sept. 18 | 7 p.m.

STEERING YOUR CHILD TO BETTER VISION:

A Guide for Parents
Nov. 6 | 3 p.m. and 7 p.m.

ORANGE COUNTY BRAIN TUMOR WALK

Sept. 16 | 8 a.m. registration,
9:30 a.m. walk

Angel Stadium, Anaheim

For more information: events.braintumor.org

SAVE THE DATE

7TH ANNUAL SUPER SATURDAY COMMUNITY HEALTH FAIR

Oct. 21 | 10 a.m.–1 p.m.

UC Irvine Medical Center
Manchester Pavilion parking lot
200 S. Manchester Ave., Orange
Free flu shots, health screenings and information will be offered. Learn about your health and about UC Irvine Health doctors and services. Listen to a Department of Motor Vehicles representative discuss licensing older adult drivers and how they can keep their independence. Visit booths from such health organizations as Alzheimer's OC and more. Questions? Call 714-456-8434.



THE ANTI-CANCER CHALLENGE CYCLE & RUN FOR CURES

JUNE 10–11

Angel Stadium

2000 E. Gene Autry Way, Anaheim

Join UC Irvine Health in the fight against cancer! This exciting two-day event will raise funds for lifesaving cancer research at the UC Irvine Health Chao Family Comprehensive Cancer Center.

Challenge Weekend will begin Saturday, June 10, with a free festival, 2 to 6 p.m., that will include a health and wellness expo, live entertainment, craft beer, stationary bike event, children's ride and food from local vendors.

Sunday, June 11, will feature a cycling ride and 5K Run/Walk with a finish-line festival.

Join us in creating a cancer-free world by registering for one of the following challenges:

- Cycle 10, 30, 60 or 100 miles
- 5K run/walk on the field
- Stationary bike (spin) event
- Volunteer
- Children's ride

One hundred percent of proceeds go directly to lifesaving cancer research at the Chao Family Comprehensive Cancer Center, Orange County's only National Cancer Institute-designated comprehensive cancer center. Are you ready to rise to the challenge?

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



INFLAMMATORY BOWEL DISEASE SUPPORT GROUP

714-456-7057

LOOK GOOD, FEEL BETTER

800-227-2345

MULTIPLE MYELOMA SUPPORT GROUP

800-452-2873, ext. 233

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

714-456-5235

TRIGEMINAL NEURALGIA ASSOCIATION SUPPORT GROUP

714-730-1600

YOUNG ADULT CANCER SUPPORT GROUP

714-456-7057

Learn more about our
support groups online at
ucirvinehealth.org/summer17
or call the numbers listed.





ON MY MIND

In February 2014, Chapman University student Janelle Hauber was enjoying winter break with her family in their Yorba Linda home. Her mom noticed several large moles on her back and recommended she see her dermatologist. No big deal, Hauber thought — until her biopsy indicated malignant melanoma skin cancer.

Hauber was frightened and confused. Fortunately her dermatologist referred her to oncologic surgeon Dr. James Jakowatz at the UC Irvine Health Chao Family Comprehensive Cancer Center. Jakowatz and his team shepherded Hauber, then just 21, through her treatment, easing her and her family's fears.

Since then she has been cancer-free and has finished her degree in integrated educational studies. She is currently working on her master's in special education and will proudly participate in the UC Irvine Health Anti-Cancer Challenge, June 10-11, at Angel Stadium of Anaheim. Proceeds from the Challenge — an event featuring cycling routes, a run-walk, a stationary bike event and other activities — support research at Orange County's only National Cancer Institute-designated comprehensive cancer center.



I was at work when I got the call about my biopsy. I had no idea what malignant melanoma was, but I knew from my doctor's voice that it was not good. So I did something you're not supposed to do — I Googled it. Bad call.

Later that day I was too upset to take a midterm test. I explained to my professor that I was having a bad day, which was a big understatement. Telling my parents on the phone was heartbreaking. It was St. Patrick's Day, and that evening we ate our corned beef and cabbage in total silence. And I come from a very loud family!

Fortunately, my mood changed the moment I walked into the Chao Family Comprehensive Cancer Center with my mom and dad. The receptionist was very kind, so I knew everyone else would be kind, too. Then, while waiting for my appointment, a volunteer, Bob, came in and handed me a stuffed bunny. His wife makes these "bunnies against cancer." Bob said he was a "worst-case scenario" melanoma survivor and told me I was going to be OK.

Next, this loud, happy man walked into my room and said, "We're gonna get this thing out of you." Dr. Jakowatz held my mom's hand; he understood that my entire family was going through this, too. That meant the world to me. I tell everyone now that I'm the No. 1 advocate for the Chao Family Comprehensive Cancer Center.

In retrospect, I was lucky. I only needed one surgery to remove the cancer, and there was no cancer in any of my lymph nodes.

Today my health is great, although I'm still adjusting to being a cancer survivor. I still worry about moles changing. But seeing Dr. J — that's what I call him — for my regular checkups keeps me sane. My whole thing now is to remain positive. I might have scars on my body that I never expected, but I know that they mean I survived.

In June, I'll be running in the Anti-Cancer Challenge with my friends as 'Team Hauber.' They'll get to meet my doctors and become part of my cancer center family. I'm doing this because I care about people who are currently undergoing cancer. I want them to feel a sense of community, know they're not alone and keep their hopes for the future alive — just as others have helped me.



— Janelle Hauber



For more information, visit
anti-cancerchallenge.org
 and ucirvinehealth.org/preventmelanoma

THE ANTI-CANCER CHALLENGE

UCI | CYCLE & RUN FOR CURES



RIDE



RUN



VOLUNTEER

THIS IS WHERE THE END OF CANCER BEGINS.

Rise to the challenge for a cancer-free world.

June 10-11, 2017 | Angel Stadium, Anaheim, CA

100% of event proceeds go directly to lifesaving cancer research at the Chao Family Comprehensive Cancer Center at UC Irvine Medical Center. The renowned facility is the only National Cancer Institute-designated comprehensive cancer center in Orange County, reflecting its expertise in translating leading-edge scientific findings into clinical treatment.

Be a champion in the fight for cures and register today at Anti-CancerChallenge.org

#IAMANTICANCER

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Children's



UC Irvine Health

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UC Irvine Medical Center has been awarded its sixth consecutive "A" for safety by The Leapfrog Group.

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