

UC San Diego
SCHOOL OF MEDICINE

DEPARTMENT OF SURGERY
ANNUAL REPORT 2022-2023

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LETTER FROM THE CHAIR

Dear Colleagues and Friends of the Department,

It is that time of year (perhaps a bit past due) to reflect on the 2023 academic year. I invite you to join me in our annual ritual of reflection by way of the UC San Diego Department of Surgery's annual report, a celebration of our many accomplishments of this past year. I am very proud of what the members of this department achieved over the course of fiscal year 2022-2023 and pleased to share this year's research, clinical, and training highlights. I am also eager to draw your attention to some special sections of this publication.

The theme of this year's annual report is "Healing Beyond Borders." Our mission, simply put, is to positively impact our world. "Our world" extends beyond our geographical region where we deliver exceptional, nation-leading surgical care to patients and communities distant to our facilities. This is accomplished through impactful research that

informs and improves care received by others and by training future generations of surgeons who will carry the our brand wide and far. It is also accomplished when we choose to leave the confines of our academic medical center to deliver care and teach others across the globe. In special eponymous section, of this year's report you will discover many avenues by which our teams have positively impacted global communities. This is not a one-way street and without exception, our teams grow and develop through these interactions bringing back to UC San Diego fresh perspectives, a renewed sense of purpose, and new approaches to surgical care. Living in San Diego, one need not travel far to have a "global" impact...


You will find additional features, reviews of our divisions, and an introduction to many accolades bestowed upon our teams. Truly amazing care happens every day at UC San Diego and does not go unnoticed as you will discover in the "Year of Triumphs" sections of this report and a special feature "Transforming Transplantation" that focuses on clinical successes in this complex field of surgical care, as well as the deep gratitude of the patients we serve. You will learn more about the extraordinary increase in the research activity of the Department which is captures in the 36% annual increase in funding experienced over the past year.

Academic Departments rely extensively on the interest and generosity of committed partners who understand our mission and who have often been touched by the care we deliver. This past year saw the creation of the Levine Family Endowed Chair in Surgical Oncology which was made possible by the generosity of Peter Levine and his family. This chair is dedicated to supporting a surgical oncology faculty member whose clinical and research interests focus on patients with gastrointestinal cancers. The inaugural holder of this Chair is Dr. Andrew Lowy (*Professor of Surgery, Chief of the Division of Surgical Oncology*) who is an international leader in the fields of pancreatic cancer and peritoneal malignancies. We could not be more grateful to the Levine family for this generous support.

I look forward to seeing what the Department will accomplish this coming year, and I have faith that our teams will continue to break new ground in their quest to make tomorrow better for our patients, present and future.

I sincerely thank you for your support and interest in the Department of Surgery.




BRYAN M. CLARY, MD, MBA, FACS
Chair, Department of Surgery
UC San Diego

SURGERY BY THE NUMBERS

TOTAL \$ AMOUNT RESEARCH FUNDING:

\$24.9M

ACTIVE CLINICAL TRAILS:

73

TOTAL ACTIVE RESEARCH AWARDS:

112

TOTAL NUMBER OF FEDERAL GRANTS:

48

NUMBER OF PUBLICATIONS:

327

TOTAL NUMBER OF FACULTY:

151

TOTAL NUMBER OF RESIDENTS AND FELLOWS:

98

TOTAL NUMBER OF EMPLOYEES AND STAFF:

117

ADULT SURGICAL VOLUME:

14,272
INPATIENT

9,489
OUTPATIENT

TOTAL NUMBER OF OFFICE VISITS:

78,065

METEORIC FUNDING INCREASE

FEDERALLY FUNDED RESEARCH IN THE UC SAN DIEGO DEPARTMENT OF SURGERY EXPANDS DRAMATICALLY

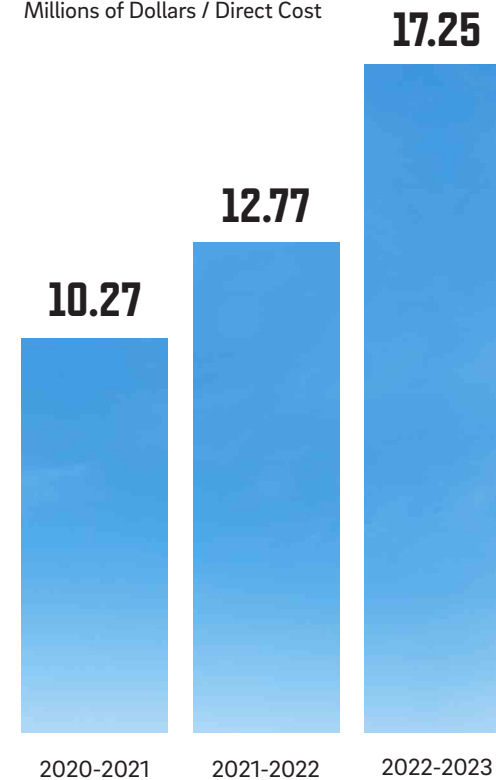
To the extent that federal funding is a barometer of research impact, one could say that the Department of Surgery has risen quite dramatically—and has never been more productive or successful.

There are several sources of grant funding for academic departments of surgery, including the National Institutes of Health (NIH), the Department of Defense (DoD), the Veterans Affairs (VA), the Food and Drug Administration (FDA), the National Science Foundation (NSF), and the Centers for Disease Control (CDC).

Other sources of grant funding include societies and foundations, as well as philanthropic funding based on donations by private individuals. But the NIH funds more than half of all biomedical research in the U.S., and NIH funding is widely considered the most coveted.

RESEARCH FUNDING

Millions of Dollars / Direct Cost



26 ACTIVE NIH R01 GRANTS

\$17.25 MILLION IN DIRECT COSTS

69.5% INCREASE
OVER 2020-2021

36.3% INCREASE
OVER 2021-2022

As of December 31, 2023, the Department of Surgery holds 26 active NIH R01 grants (along with several other so-called "R01 equivalent" grants) which define the cream of the crop in academics. For the fiscal year period covered by this report, that funding amounts to \$17.25 million in direct costs—a 69.5 percent increase over 2020-2021, and a 36.3 percent increase over 2021-2022.



22 SURGEONS FEDERALLY FUNDED

FUNDED FACULTY IN THE DEPARTMENT OF SURGERY

UC San Diego surgery department faculty are receiving federal grant funding through 2023, including four faculty members with K-series career development awards that are the stepping stones to R-series awards.

*Excludes Division of Otolaryngology/Head & Neck Surgery

**Receiving a KL2 award through the CTSA grant.

FULL-TIME FACULTY:*

- | | | |
|--------------------|----------------------|--------------------|
| 1. Michael Bouvet | 6. Wolfgang Junger | 11. Georgia Sadler |
| 2. Yuan Chen | 7. Tatiana Kisseleva | 12. Jason Sicklick |
| 3. Todd Costantini | 8. Andrew Lowy | 13. Rebekah White |
| 4. Antonio De Maio | 9. Winta Mehtsun** | |
| 5. Brian Eliceiri | 10. Elsie Ross | |

ADJUNCT FACULTY:*

- | | | |
|----------------------|-------------------|---------------|
| 1. Cosimino Commisso | 2. Tania Morimoto | 3. Linda Hill |
|----------------------|-------------------|---------------|

DIVISION OF OTOLARYNGOLOGY / HEAD & NECK SURGERY

- | | | |
|--------------------|------------------|------------------------|
| 1. Joseph Califano | 4. Allen Ryan | 7. Uri Manor (Adjunct) |
| 2. Rick Friedman | 5. Carol Yan | |
| 3. Quyen Nguyen | 6. Theresa Guo** | |

FIRST SURGEON-FOCUSED NIH T32 TRAINING GRANT OBTAINED

In addition, the Department of Surgery, in collaboration with the Moores Cancer Center at UC San Diego, also recently obtained our first surgeon-focused NIH T32 training grant called the **SOAS (or Surgical Oncologists as Scientists)** Training Program, which is funded by the National Cancer Institute (NCI) and led by **Drs. Jason Sicklick** and **Yuan Chen**. These training grants are highly competitive, with 155 total NCI-funded T32's in the U.S. but only 19 (12.3 percent) of these specifically designed to train surgeon-scientists. Importantly, we are also one of just two UC Departments of Surgery with an NCI-funded T32. This sought-after training grant will result in an increase in our ability to train the next generation of surgeon-scientists specialized to treat cancer.

By any measure, the increased federal research funding by the Department of Surgery is no small achievement. In fact, using the Blue Ridge Institute for Medical Research's ranking of total NIH funding, UC San Diego's Department of Surgery was ranked No. 19 in 2023 among all surgical departments in the U.S., up from our 2022 listed ranking at No. 24.

Our Department's federal funding does not stop at the NIH. We have enjoyed similar success with new and ongoing VA and DoD grants as well.

VA FACULTY: 1. Michael Bouvet, 2. Allen Ryan

DoD FACULTY: 1. Andrew Lowy, 2. Yuan Chen

**1 OF 2
IN THE U.S.***
DEPARTMENTS OF SURGERY
WITH NCI-FUNDED T32

*when excluding adjunct faculty whose funding is linked to their primary department

Additionally, the Department receives \$5.0 million in foundation and society funding, as well as well \$2.8M in industry sponsored research funding. And this research portfolio spans over 21,000 academic square feet of space on campus and annually produces over 325 peer-reviewed publications, some of which are published in elite, high-impact journals [Impact factor (IF) >10] across all of science and medicine.

We also produce substantial intellectual property, which can and does translate into new start-ups, R&D types of grants, and eventually, new, and better ways to treat surgical patients and their diseases.

These grants bring in additional support to the Department total NIH funding of doing research per se, but for departmental costs to support the research mission. These federal indirect cost (IDC) rates, as they are called, are the highest paid out for doing unrestricted research—yet another reason that federal research is so prized by all institutions.

So, a tremendous congratulations is due to all 23 unique investigators in the Department (20.7 percent of our 111 faculty) as well as their research teams on obtaining and/or maintaining NIH, DoD, and VA federal research funding! Your fabulous achievements hardly go unnoticed.

KEEP UP THE AMAZING WORK AND CONTINUE WORKING TO ADVANCE THE CARE OF SURGICAL PATIENTS—NOT JUST IN SAN DIEGO BUT AROUND THE WORLD!

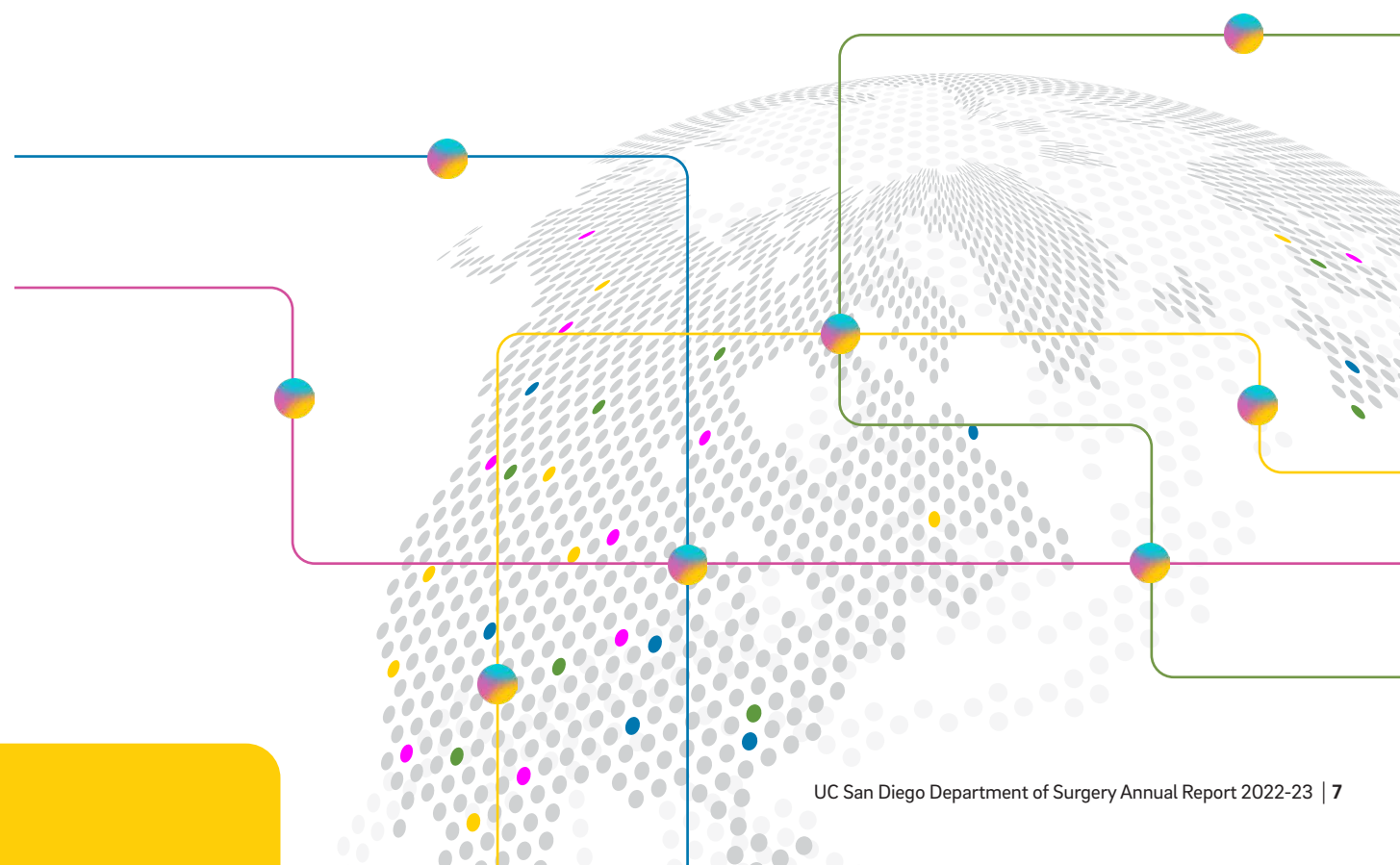
\$5.0M
IN FOUNDATION AND SOCIETY FUNDING

\$2.8M
INDUSTRY-SPONSORED RESEARCH FUNDING

327 PEER-REVIEWED PUBLICATIONS

22 UNIQUE INVESTIGATORS

21,000 SQ FT
ACADEMIC SPACE ON CAMPUS



HEALING BEYOND BORDERS

The fiscal year 2022-2023 marks a period of extraordinary global outreach, where the collective efforts of the department have transcended geographical constraints, leaving an indelible mark on the landscape of international healthcare.

Across diverse corners of the globe and on nearly every continent, UC San Diego surgeons stand committed to building international partnerships, addressing critical healthcare needs, and fostering sustainable change. The people, projects and initiatives shared here reflect our team's shared ethos of global collaboration and compassion. From providing pediatric surgical care, to building surgical capacity in low- and middle-income countries or advocating for trauma and disaster preparedness legislation right here at home, our Department has played a pivotal role in empowering communities with life-saving treatments and life-giving means to continue in good health.

The collective impact of the group transcends borders,

emphasizing our shared commitment to address diverse healthcare challenges, build surgical capacity, and foster sustainable change worldwide. As the department continues to navigate the evolving landscape of global healthcare, it reaffirms its dedication to healing beyond borders, where the boundaries of surgical excellence are defined by compassion, collaboration, and a collective commitment to a healthier world.



"In a world where the impact of disease and injury knows no bounds, the UC San Diego Department of Surgery has long championed initiatives that extend beyond the traditional realms of surgical practice."

— Dr. Bryan Clary



DR. STEPHEN BICKLER

Dr. Stephen Bickler remains a leader in surgical epidemiology research and pediatric humanitarian surgery efforts in low- and middle-income countries. His efforts to build international research and practice bridges in the world of surgery involve a continued support for the UC San Diego-Universidad Eduardo Mondlane (UEM) partnership in Mozambique. Here, UC San Diego supports the UEM and the associated Maputo Central Hospital in tropical infectious disease research and the development of surgical capacity for the region through a bilateral exchange program. Mozambique is a low-income country which can greatly benefit from Dr. Bickler's work securing grants for research through the partnership.

Most of Dr. Bickler's recent research has been aligned with the goals of the Global Initiative for Children's Surgery (GICS), a group that he helped to form in 2015. GICS aims to provide all children, including those in low- and middle-income countries, with quality surgical care. One major aspect of the GICS mission is building international relationships between surgical providers around the world: a process which Dr. Bickler facilitates in his leadership role as a member of the GICS advisory board. GICS continues to grow rapidly and now has over 1,100 members from 64 countries—approximately half from low- and middle-income countries.

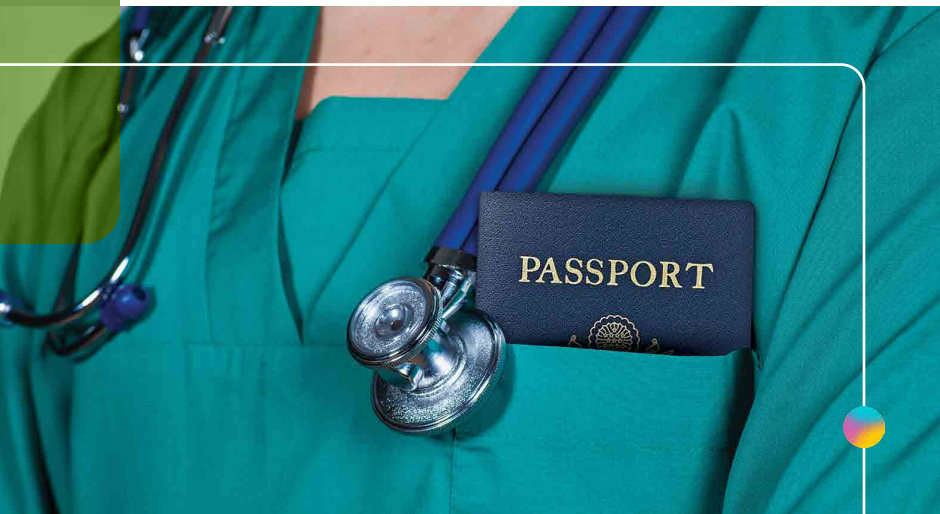
In February 2024, GICS will host the GICS V conference in Manila to discuss children's surgery as an essential component of public health and the reduction of health disparities worldwide.

While the COVID-19 pandemic stopped all international travel, Dr. Bickler continued his global surgery research using public databases and collaborations which he developed nationally and internationally over the past 20 years. Fourteen of Dr. Bickler's 24 publications during the past three years have focused on global surgery topics.

One of his most influential global surgery publications in the past three years was published in September 2022; this paper estimated the number of treatable deaths which can be avoided in scaling up surgical care at first-level hospitals in low- and middle-income countries within the first 20 years of life. Dr. Bickler found that most treatable deaths in adolescents occur in the under-5-year age group (80.9%) and relate to improved obstetrical care and its effect on reducing neonatal encephalopathy due to birth asphyxia and trauma.

Overall, Dr. Bickler found that scaling up surgical care in first-level hospitals could avert 51% of deaths in the first 20 years of life.

Increasing surgical capacity in low- and middle-income countries is an effort which can be facilitated through Dr. Bickler's groundbreaking work developing partnerships in GICS, to include the development of pediatric specialties in countries like Mozambique. Dr. Bickler's efforts in surgical public health speak to his dedication to pediatric surgery and securing health for all children in low and middle-income countries.



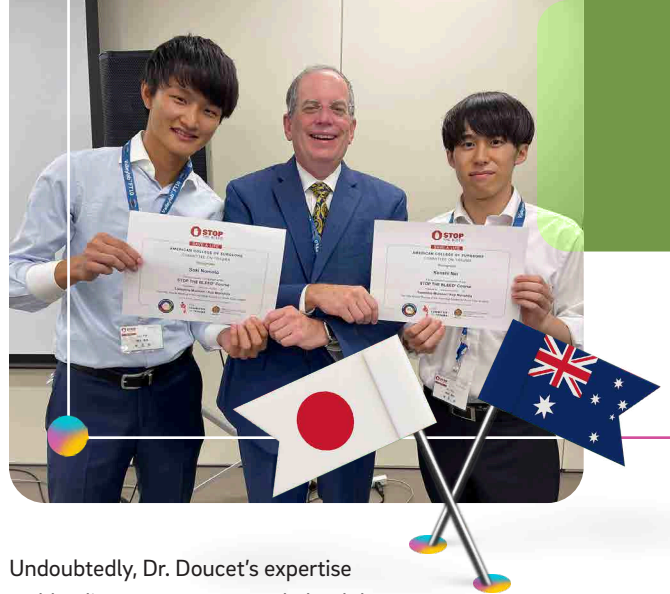
DR. JAY DOUCET

Dr. Jay Doucet, Chief of the UC San Diego Division of Trauma, Surgical Critical Care, Burns & Acute Care Surgery, remains central to domestic and international efforts for trauma and disaster readiness. He is especially involved in "Stop the Bleed," a grassroots national campaign for medical education and legislation to reduce traumatic bleeding and equip members of the public with the knowledge to handle bleeding emergencies.

As part of the California chapter for the American College of Surgeons, Dr. Doucet advocated for legislation that would enhance trauma bleeding education through the state of California. Assemblyman Rodriguez was author of a bill in the Sacramento legislature to add more "Stop the Bleed" kits to California public buildings, include bleeding control courses in public education, and provide resources for bleeding control education on school district websites. Dr. Doucet travelled to Sacramento as a representative for the bill's main sponsor, the California Chapters of the American College of Surgeons. The bill, AB 71, was signed into law by Governor Newsom and will come into effect in July of 2024. Californians will be more prepared for emergency bleeding in the future thanks to the advocacy of Dr. Doucet.

In the trauma world, prevention is key, but mass disasters won't wait for us to be ready. This past year, Dr. Doucet also taught numerous emergency care courses for medical students and future Stop the Bleed instructors in areas affected by natural disasters. In mid-September 2022, Japan was affected by one of the most powerful typhoons in recent memory and its fourteenth that year; Typhoon Nanmadol evacuated millions and caused over 100 injuries. In the aftermath of the typhoon, Dr. Doucet led a "Stop the Bleed" course on September 30, 2022 for 30 Japanese residents and medical students in the coastal city of Miyazaki, Japan during the 14th Annual Meeting of the Japanese Society for Acute Care Surgery.

Dr. Jay Doucet with the Miyazaki cohort of medical students and residents trained to "Stop the Bleed."



Undoubtedly, Dr. Doucet's expertise on bleeding emergency care helped the region cope with typhoon-related traumas and will enhance Japanese emergency preparedness.

Enhanced by climate change, Australia faces ongoing dangers in the bushfire season. On March 2, 2023, Dr. Doucet taught two courses to Australian and New Zealander professionals at the Southwest Australia Network (SWAN) trauma conference in Sydney, Australia. He directed a Disaster Management and Emergency Preparedness (DMEP) course, which teaches medical management, awareness, and planning methods for coping with mass casualty disaster situations. Dr. Doucet also led a Stop the Bleed course at the conference for 50 new Australian and New Zealander Stop the Bleed instructor candidates. Educators and trauma practitioners in Australia and New Zealand will undoubtedly benefit from Dr. Doucet's expertise as they implement disaster preparedness methods in their own medical systems and advocate for emergency bleeding awareness.

For Californians, trauma can happen at any time; for trauma patients in Japan and Australia, disaster didn't wait. Dr. Doucet's tireless efforts for "Stop the Bleed" and other emergency preparedness programs show that UC San Diego trauma surgeons will not wait, either, in educating California and the world to handle emergencies.

DR. AMANDA GOSMAN

Dr. Amanda Gosman's global impact in the field of plastic surgery has been transformative. Her leadership as President of the California Society of Plastic Surgeons (CSPS) has opened doors for collaboration across the state and across the US-Mexico border, fortifying the organization and nurturing its membership. The signing of a Memorandum of Understanding (MOU) to formalize collaboration between CSPS and The Baja Plastic Surgery society (CCPER) stands as a testament to her commitment to fostering cross-border relationships and partnerships. This collaboration paved the way for an array of initiatives, including joint educational programming and advocacy efforts. She has organized outreach to the state legislature to safeguard the scope of practice, promote safety in plastic surgery, and initiate a state audit of mental health services for children with facial conditions, ensuring comprehensive support and care.

Internationally, she is the co-founder of the SHARE (Surgeons in Humanitarian Alliance for Reconstruction, Research, and Education) program through the Plastic Surgery Foundation which is a two-year fellowship program for surgeons in sub-Saharan Africa. The SHARE program has a robust clinical and research curriculum as well as in-person visiting professor support to residency programs in the region. In her role as co-editor of the Plastic and Reconstructive Surgery Global Open Journal, Dr. Gosman has been a champion of surgical quality and evidence-based practice by promoting the publication of local research by the SHARE fellows. She also serves as an examiner for the annual COSECSA (College of Surgeons of Eastern, Central, and Southern Africa) plastic surgery certification exams.

Dr. Gosman is also the founder of ConnectMed International, a non-profit organization that is dedicated to improving access to healthcare and quality of life for people with physical differences from resource-limited communities through partnerships, education, research, and psychosocial support. UC San Diego students, residents, faculty, and nurses have actively participated in the activities of ConnectMed since its founding in 2010. Activities include quarterly surgical educational outreach trips to Tijuana, international research projects, a fellowship, and local self-esteem day camps for children with facial differences.

All the UC San Diego pediatric specialized plastic surgery faculty; Dr. Hinchcliff (hand), Dr. Kanack (craniofacial), and Dr. Gosman volunteered throughout the year for the Fresh Start Surgical Gifts Program. This local organization, based at Rady Children's Hospital, provides free multidisciplinary reconstructive surgery care to patients from around the world, transcending geographical boundaries to offer

transformative treatments.

Dr. Gosman's efforts in fostering global collaboration have attracted international visitors for educational, collaborative, and research purposes. Notable collaborations this year include ConnectMed International fellow Dr. Lozano from Argentina, a key contributor to groundbreaking craniofacial quality of life studies based at UC San Diego. Dr. Metasebia Abebe, a SHARE Fellow from Ethiopia and recipient of the prestigious American Association of Plastic Surgery Constable Travelling Fellowship award also chose to visit UC San Diego which underscores the program's global reach and impact.

The Division of Plastic Surgery's commitment to bridging borders, advocating for comprehensive care, and fostering international partnerships has been pivotal in advancing surgical practices, expanding access to care, and promoting knowledge exchange worldwide.

Below:
UC San Diego Faculty Melissa Kanack MD and Amanda Gosman MD with residents Riley Dean, Jason Llaneras, and JMC Operating room nurse and tech Kayla Latta and Kristen Arnaiz on a recent ConnectMed International surgical outreach trip in Tijuana.



Dr. Amanda Gosman visited residents and faculty at the University of Rwanda Plastic Surgery Residency Program



DR. ROMEO IGNACIO

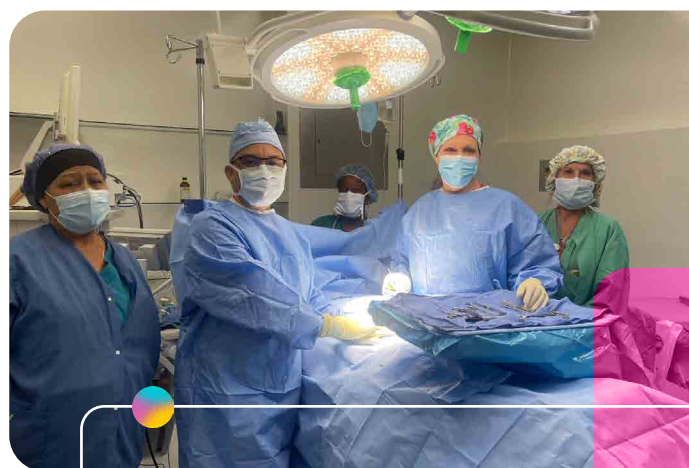
Pediatric surgeon Dr. Romeo Ignacio's surgical career has a long-standing and wide-reaching international footprint. As a navy surgeon, Dr. Ignacio was involved in humanitarian missions in Southeast Asia, South America, and Central America. Dr. Ignacio reflected that one of his most rewarding cases was in the Philippines, where a mother carved out a canoe and rowed across several miles of ocean, walked 80 miles on bare feet, and pushed through a crowd of 3,000 patients to get treatment for her severely ill child. Local agencies had refused the complex case. He completed the surgery, and the child went home two weeks later—testament to what a mother is willing to do for her child, as well as the immense barriers to specialized medical care in low- and middle-income countries.

Dr. Ignacio endeavors to overcome these barriers in his continued dedication to international humanitarian surgery. Providing humanitarian surgical care in the Navy inspired Dr. Ignacio to continue similar efforts through international faith-based surgical missions. This summer, Dr. Ignacio traveled to the Philippines to start work on establishing a pediatric surgical mission. He is also involved with an inspiring annual surgical mission with Faith in Practice to serve the Las Obras Sociales del Santo Hermano Pedro Hospital in Antigua, Guatemala. Dr. Ignacio's surgical team in Antigua was able to help 46 children and families in the week of the mission in August 2023.

Dr. Ignacio's work in Antigua aims to provide comprehensive orthopedic and surgical care to children in need. Procedures on the mission range from common cases such as hernias, hydroceles, circumcisions, and orchiopexies to the more complex, such as thyroglossal cysts, abdominal masses, congenital defects, and even tumors. The efforts of the mission have greatly expanded Antigua's surgical capacity, with recent advancements allowing for more head and neck alongside laparoscopic procedures.

Patient populations in Guatemala and Phillipines face significant poverty, and surgeons working in these areas face significant obstacles and sacrifices as a result of limited medical resources in low- and middle-income countries.

Rather than being deterred, Dr. Ignacio embraces these challenges and finds practicing in this context to be uniquely rewarding. Six years ago, the hospital had limited resources for many routine procedures. Because of improvement through donations, supplies, and the hard work of dedicated surgeons like Dr. Ignacio, many of the procedures performed in Antigua are now similar to what is done in the U.S. Dr. Ignacio's continued commitment to humanitarian surgical practice and advocacy for healthcare access and quality in impoverished South American and Southeast Asian communities will undoubtedly improve the lives of many children.



Dr Ignacio completes a surgical mission in Antigua and Guatemala helping 46 children/families in one week.

DR. TATIANA KISSELEVA

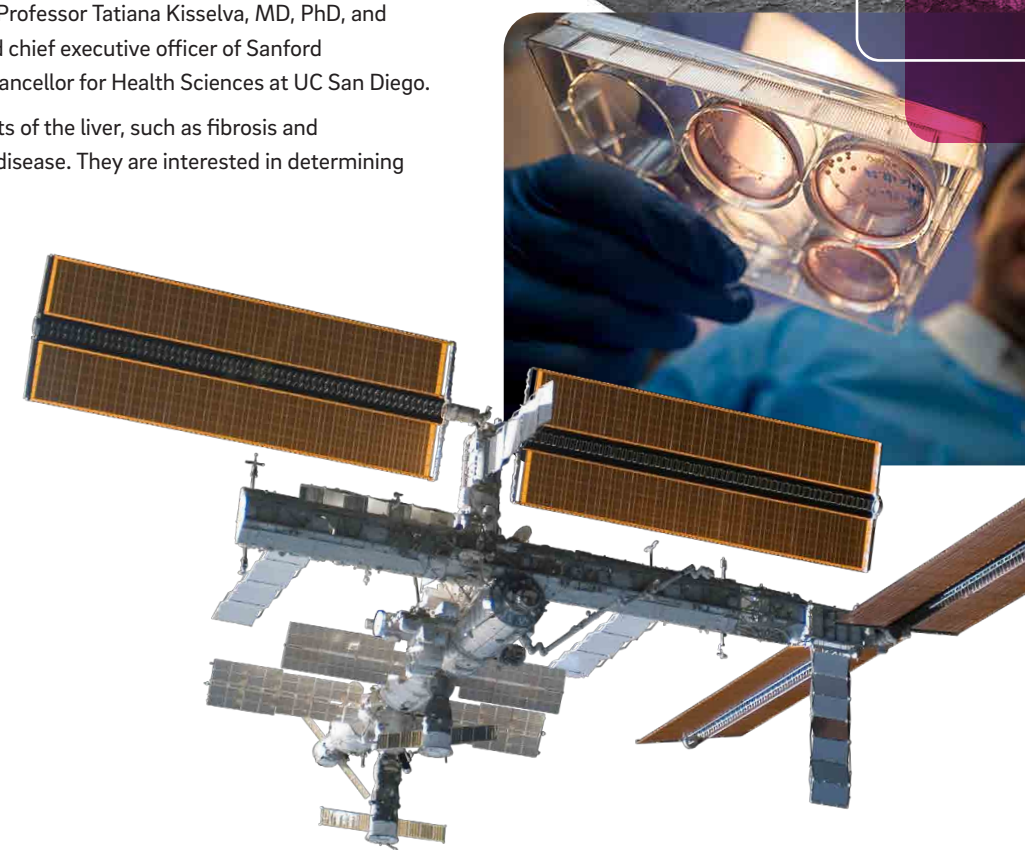
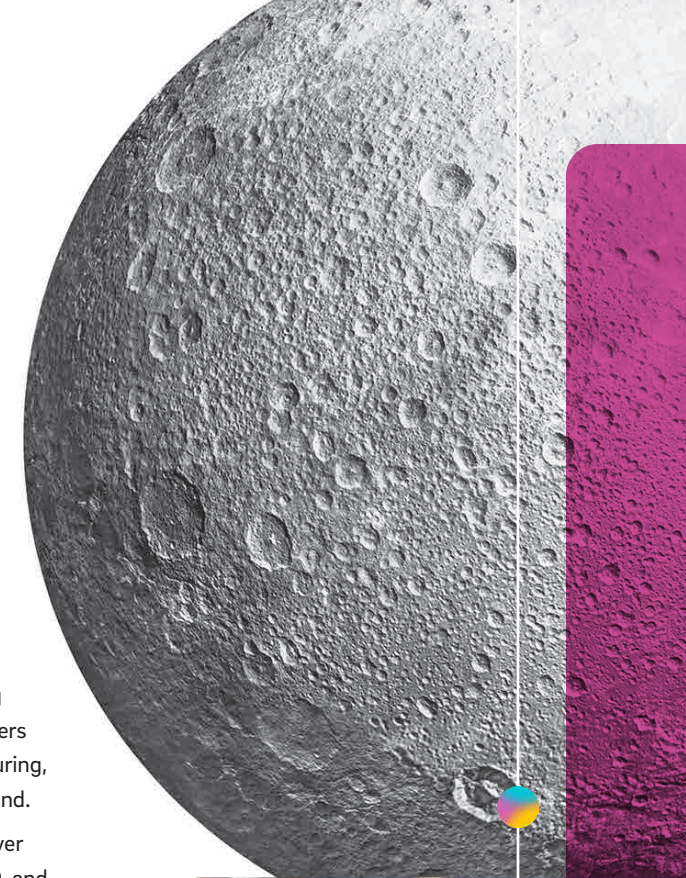
Over the last five years, the university has become a pioneer in performing stem cell research in space. In a series of successful launches, researchers have sent blood, brain and liver stem cells onto NASA's International Space Station (ISS), where the unique environment of low Earth orbit (LEO) offers an unparalleled view into the molecular mechanisms of cancer and aging.

These pioneering experiments have now paved the way for a new era in health science research. On February 27, 2023, leaders of the UC San Diego Sanford Stem Cell Institute announced the launch of a new Astrobiotechnology Hub, which brings together academic, industry and government partners to drive scientific and commercial innovation in stem cell research.

The announcement came a day before key members of the hub present their plans at the 2023 Biocom California Global Life Science Partnering & Investor Conference. The event marks the first public meeting of leaders in stem cell research, biotechnology, aerospace and in-space manufacturing, with all groups coming together to build consensus and break new ground.

One line of research will investigate the effects of stress and aging on liver progenitor cells. This work is led by Professor Tatiana Kisseleva, MD, PhD, and David A. Brenner, MD, president and chief executive officer of Sanford Burnham Prebys and former vice chancellor for Health Sciences at UC San Diego.

Kisseleva and Brenner study ailments of the liver, such as fibrosis and steatohepatitis, a type of fatty liver disease. They are interested in determining the impact of microgravity on liver function, which could provide insights into diseases on Earth, and the potential effects of space travel.



For stem cell research at UC San Diego, the sky's no longer the limit.

A YEAR OF TRIUMPHS

UC SAN DIEGO HEALTH'S DOMINANCE IN REGIONAL AND NATIONAL RANKINGS



UC SAN DIEGO HEALTH RANKS #1 REGIONALLY BY U.S. NEWS & WORLD REPORT

According to the 2022-2023 U.S. News & World Report "Best Hospitals" survey, UC San Diego Health has once again ranked No. 1 in San Diego and No. 5 in California, placing it among the nation's best health care providers. Designed to assist patients and doctors in making informed health care decisions, these annual rankings distinguish hospitals that excel in providing multidisciplinary, comprehensive care for the most challenging health conditions.

"These prestigious data-driven rankings are a tremendous honor and validation of our daily commitment to providing world-class medical and surgical care to our patients," said Patty Maysent, CEO, UC San Diego Health.

DEPARTMENT OF SURGERY RANKED IN 10 SPECIALTIES:

- CANCER (20)
- EAR, NOSE AND THROAT (21)
- GI SURGERY AND GASTROENTEROLOGY (11)
- HEART SURGERY AND CARDIOLOGY (21)
- LUNG SURGERY AND PULMONOLOGY (10)

"Our extraordinary teams are ambassadors of good health, committed to helping all patients experience the very best possible care."

— Patty Maysent, CEO UC San Diego Health

RADY CHILDREN'S HOSPITAL RANKED AMONG BEST PEDIATRIC MEDICAL FACILITIES IN U.S.

U.S. News & World Report "Best Children's Hospitals" survey recognized Rady Children's Hospital-San Diego among the best pediatric medical facilities in the country. We are sharing this impressive news as these enviable rankings are enabled by the extraordinary faculty of UC San Diego School of Medicine who also serve at Rady Children's Hospital-San Diego.

This is, in fact, the sixth consecutive year that Rady Children's has been ranked among the nation's best children's hospitals in all 10 pediatric specialties surveyed. Seven of Rady Children's ranked specialties are among the top 20 in the nation.

We recognize and congratulate our Rady colleagues across all School of Medicine departments, from pediatrics to surgery to medicine. We thank you and salute you for your commitment to providing excellent care for children of all ages within our community.



RADY CHILDREN'S RANKED #9 IN THE NATION

For the first time in history, Rady Children's Hospital-San Diego has been named to the 2023-24 U.S. News & World Report "Best Children's Hospitals" Honor Roll – a distinction awarded to only 10 children's hospitals nationwide. We are sharing this impressive news as these enviable rankings are, in great part, due to the extraordinary faculty of UC San Diego School of Medicine who also serve at Rady Children's Hospital.

This is the seventh consecutive year that Rady Children's has been ranked among the nation's best children's hospitals in all 10 pediatric specialties surveyed. Only 23 hospitals nationwide were ranked in all 10. Also of note, eight of Rady Children's ranked specialties are among the top 20 in the nation.

RADY CHILDREN'S 5 SPECIALTIES RANKED IN THE TOP 10:

- CARDIOLOGY & HEART SURGERY (3)
- ORTHOPEDICS (6)
- NEONATOLOGY (7)
- NEUROLOGY & NEUROSURGERY (8)
- DIABETES & ENDOCRINOLOGY (8)

"I'm so proud of our incredible nurses, doctors, researchers and team members from every department and division across Rady Children's and UC San Diego School of Medicine."

— Dr. Patrick Frias, president and CEO of Rady Children's





“This facility will boost access to our top-quality medical education, drive development and delivery of innovative treatments and cures, and expand access to our exceptional patient care experience – improving health outcomes in our region and worldwide.”

— Pradeep K. Khosla
UC San Diego Chancellor

REACHING NEW HEIGHTS AT UC SAN DIEGO MEDICAL CENTER IN HILLCREST

The final steel beam for the new outpatient pavilion was positioned while team members looked on in admiration and pride.

A celebratory Topping Out ceremony at UC San Diego Medical Center in Hillcrest marked the approximate halfway point for construction of a new outpatient pavilion, part of the first phase of a comprehensive revitalization project for the medical campus.

The 250,000-square-foot outpatient pavilion is anticipated to open in 2025 and will house specialty clinical programs, including oncology, neurosurgery, urology, otolaryngology and orthopedics, as well as ambulatory surgery operating rooms, gastroenterology procedure rooms, advanced imaging, infusion and radiation oncology.

“This historic milestone is a visible representation of not only the progress made, but also the number of people involved in expanding access to the region’s No. 1 health care provider,” said Patty Maysent, CEO of UC San Diego Health. *“The new outpatient pavilion greatly increases our capacity to serve our community and provide life-saving, novel and compassionate care to patients and their loved ones.”*

The project is part of the UC San Diego Long Range Development Plan, which encompasses approximately 60 acres and the redevelopment of the more than 50-year-old Hillcrest campus. Complementing the new academic medical facilities and services will be new housing and fitness facilities.

Beam signing UC San Diego Medical Center Topping Out ceremony
The June 23, 2023 event provided an opportunity for UC San Diego Health staff, as well as construction team members, to sign the final steel beam before it was raised 100 feet in the air and placed in the structural frame of the building, forever part of its lifespan.

Photos credit: Erik Jepsen
University Communications



MISSION ZERO GRANT FUNDING AWARDED TO TRAUMA CENTER AT UC SAN DIEGO

The U.S. Department of Health and Human Services Administration for Strategic Preparedness and Response (DHS ASPR) recently announced hospitals chosen for Mission Zero Grant Funding. The Military Civilian Partnership for Trauma Readiness Grant will include the Trauma Center operated by the Division of Trauma, in the Department of Surgery. The first year funding is \$80,000, with further opportunities over the next five years. Dr. Jay Doucet is project PI, Dr. Todd Costantini is Co-PI, and the Trauma faculty are Co-Investigators.

This funding will help to ensure trauma care readiness by providing federal grants that can be used to integrate military trauma care providers into civilian trauma centers. This program was established by the Military Injury Surgical Systems Integrated Operationally Nationwide to Achieve ZERO Preventable Deaths Act or “MISSION ZERO Act”, which was authorized by the Pandemic and All-Hazards Preparedness and Advancing Innovation Act of 2019.

The first project to be funded by the grant will include providing enhanced training to Independent Duty Corpsmen of the U.S. Navy, who work solo in isolated locations and on board ships, and will focus on modular training in clinical Burn and Trauma care. Dr. Jeanne Lee is the Director of the Regional Burn Center at UC San Diego.

According to the Centers for Disease Control and Prevention, trauma is the leading cause of death for children and adults under age 44, killing more Americans than AIDS and stroke combined. The funding provided by the MISSION ZERO Act will allow our members to continue to save lives, enhance trauma training for our military healthcare personnel and help trauma centers manage and recover from mandatory furloughs of surgeons, nurses and other staff that were a direct result of the COVID 19 pandemic.

CENTER FOR HEALTH INNOVATION EXPANDS WITH \$22 MILLION IN GIFTS

Support from Joan and Irwin Jacobs to create hospital based mission control center to help solve real-world patient care needs.

With a generous \$22 million in gifts from Joan and Irwin Jacobs, UC San Diego Health will bring its Center for Health Innovation into full reality. The gifts will fund a novel patient-care “mission control center” within Jacobs Medical Center at UC San Diego Health and the Jacobs Chancellor’s Endowed Chair in Digital Health Innovation. These initiatives and other plans will be shared and celebrated on May 4-5 with the Innovation in Digital Health symposium for thought leaders across the nation.

“The Center for Health Innovation represents a singular opportunity to redefine the way our clinicians and patients leverage the power of technology and data to improve health outcomes,” said UC San Diego Chancellor Pradeep K. Khosla. *“Once again, Joan and Irwin Jacobs are transforming health care in San Diego through their visionary generosity and kindness. We thank the Jacobs for their continued partnership in caring for our community, now and in the future.”*

“This gift will allow us to solve real-world patient care issues and translate them into safe patient-centered technologies that monitor, prevent or treat a variety of conditions.” said Patty Maysent, CEO, UC San Diego Health.

The Center for Health Innovation was founded in September 2021, with internal seed money from UC San Diego to develop and test technologies that make measurable differences in the lives of patients.

After the center demonstrated multiple successes at scale, the Jacobs funded several initiatives that are scheduled over the next three to five years.

The \$22 million in gifts builds upon the \$100 million to build Jacobs Medical Center, the 10-story, 245-bed academic medical center in La Jolla.

“We owe an incredible debt of gratitude to the Jacobs family for always stepping forward to help us develop new ideas, places and technologies that will change patient care for the better.”

— Patty Maysent, CEO
UC San Diego Health



UC SAN DIEGO HELPS EMC STAY AFLOAT

UC San Diego Health will soon take over day-to-day operations for Imperial County’s largest hospital.

El Centro Regional Medical Center has suffered a string of financial setbacks and staffing problems in recent years. Without UC San Diego Health’s intervention, the Medical Center’s financial reserves would likely be exhausted later this year according to hospital administrators.

Under the proposed plan, UC San Diego Health will assume full leadership of the hospital. It’s one of two medical centers in the county that is home to 179,000 residents according to census data.

TRANSFORMING TRANSPLANTATION

UC SAN DIEGO HEALTH'S CENTER FOR TRANSPLANTATION IS AMONG THE NATION'S BEST IN LUNG, HEART, KIDNEY AND LIVER PROGRAMS

Organ donation and transplantation marks one of the great advances of modern medicine, providing a second chance at life for a patient whose organ(s) is failing or damaged beyond repair from disease or injury.

The Center for Transplantation at UC San Diego Health is a national hub of clinical expertise and research, and the region's leader in transplantation. Since 1968, the center has performed thousands of transplants under a national standard of care model.

The transplant team includes surgeons, physicians, transplant coordinators, pharmacists, financial coordinators and nutritionists. There are also social workers and psychologists to provide emotional support and to help facilitate short- and long-term follow-up.

UC San Diego Health surgeons perform lung, heart, kidney and liver transplants — the most in the region, averaging 36 lung, 74 heart, 133 kidney and 68 liver procedures annually over the last five years. In 2022, we are on track to perform more than 140 liver transplants and 95 heart transplants.

One-year transplant patient and organ survival rates exceed national averages across all procedures, placing UC San Diego Health among the nation's best transplant centers, according to the Scientific Registry of Transplant Recipients (SRTR), which provides statistical and other analytic support for the Organ Procurement and Transplantation Network.

"The bi-annual SRTR report provides data analyses to transplant programs, organ procurement organizations, policy makers, transplant professionals, transplant recipients, organ donors and donor families, as well as the general public to help patients make an informed decision about where to seek an organ transplant," said Tamra Magee, the director of the Center for Transplantation at UC San Diego Health.



Kristin Mekeel, MD, chief of the Division of Transplant and Hepatobiliary Surgery at UC San Diego Health performing a transplant operation with her team

"We provide a full spectrum of care for the entire transplantation process — from pre-transplant evaluation to post-surgical maintenance. Our thorough process ensures the precious gift of an organ goes to the right patient."

— Kristin Mekeel, MD

Everything begins with donors. How an organ is received, removed and transplanted have all dramatically advanced over the years, but the fundamental gift of life remains the same, as does an abiding appreciation from all involved.

For Amy Honeycutt, a life-saving liver transplant she underwent in 2011 in Kansas inspired her to become a nurse and, currently, a liver transplant coordinator at UC San Diego Health.

There are not enough donors. According to the Health Resources & Services Administration, more than 40,000 transplants were performed in 2021, but almost 106,000 persons remain on the national transplant waiting list, with 17 people on the list dying each day.

Locally, 413 organs were transplanted in 2021, with almost 2,000 persons on transplant waiting lists. Eighty-seven patients died waiting for an organ in 2021, according to Lifesharing, a nonprofit involved in the organ donation process in San Diego and Imperial counties.

SECOND BREATH

A typical day for Escondido resident Federico Gomez-Gil starts with making his bed, watering his garden and 30 minutes on his treadmill. The end of the day usually involves a walk around the block with his wife.

These simple acts represent an extraordinary achievement for the father of two and grandfather of five. "I can't believe how far I have come," said the 57-year-old Gomez-Gil. "I do not take anything for granted."

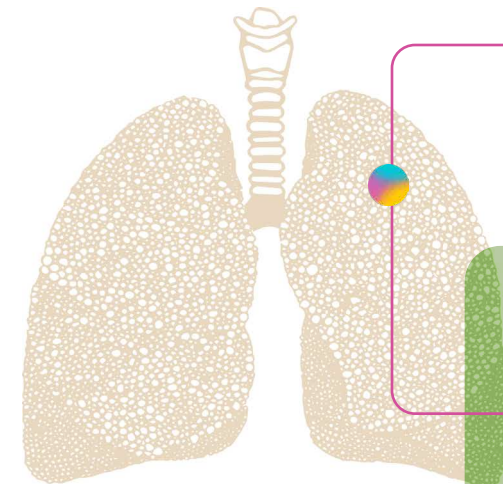
"It has been amazing to see his progress," said Guadalupe Gomez, Gomez-Gil's eldest daughter. "One day he had all these tubes in (his body). Eventually, they were removed and he was communicating with us. Now we are spending quality time together and making plans for our future. Something we weren't sure was possible when he was lying in that hospital bed."

In February 2021, Gomez-Gil was rushed to UC San Diego Health in critical condition, weak, feverish and struggling to breathe. He was diagnosed with COVID-19. His condition deteriorated. He developed pneumonia, permanently impairing lung function and requiring extracorporeal membrane oxygenation (ECMO), an advanced life-support technology used when a ventilator alone is insufficient.

As days passed, it became clear Gil would require a double lung transplant.

"I am grateful every day to my donor. I can now live fully in every moment, understand my patients and their families on a deeper level and impact the lives of others."

— Amy Honeycutt, RN



"He would not have survived if he had not come to UC San Diego Health. We were able to provide him care and approaches not available at any other hospital system in San Diego."

— Eugene Golts, MD



Stricken by COVID-19, Federico Gomez-Gil, 57, successfully underwent a double lung transplant, the first such procedure in the region and one of only a handful in the nation at the time.

To the right: Gomez-Gil and the UC San Diego Care Team



Dr. Eugene Golts

“Our program has grown tremendously over the past several years. Patient access, innovative treatments and a proactive, interdisciplinary care model for complex cases are what have successfully built our program with integrity and superb outcomes.”

— Eugene Golts, MD

A multi-disciplinary team of physical therapists, respiratory therapists, pulmonologists, surgeons and nursing staff began working to get him strong enough to become a viable candidate for the transplant surgery.

On June 14, 2021, after more than 50 days on ECMO, Gomez-Gil received his new lungs during an eight-hour surgery performed by **Eugene Golts, MD**, cardiothoracic surgeon at UC San Diego Health. He was the first COVID-19 patient in the San Diego region to undergo a lung transplant. The first known double-lung transplant for a COVID-19 patient in the nation had been performed just one year earlier.

The program, which launched in 1990, employs a variety of advanced methodologies, including a technology that improves the viability of organ donor lungs once outside of the body; the ability to safely transplant lungs from donors with hepatitis C into recipients who do not have the infection; and rare experience using bacteriophage therapy to control antibiotic-resistant lung infections.

“With improvements, such as using medications to eradicate hepatitis C in donor lungs, we are able to perform more transplants and save more lives,” said Kamyar Afshar, DO, medical director of the lung transplant program at UC San Diego Health.

Three months after surgery, Gomez-Gil was discharged. The first thing he did after arriving home was hug his grandchildren and sit in his garden. He is on a strict medication regimen, but enjoying life. He is learning to play the guitar.

HEART-TO-HEART

The American Heart Association estimates 6 million Americans are living with heart failure, with approximately 60,000 suffering end-stage disease when conventional therapies no longer work. For these persons, a heart transplant becomes the only life-saving option.

With a national shortage of donated organs, patients requiring a heart transplant can wait months, even years, for an organ. With the passage of time comes the increasing risk of their passing.

“It often feels like we are racing against the clock, trying our best to keep severely sick people alive, doing whatever possible until we find a suitable organ,” said Eric Adler, MD, cardiologist and medical director of cardiac transplant and mechanical circulatory support at UC San Diego Health.

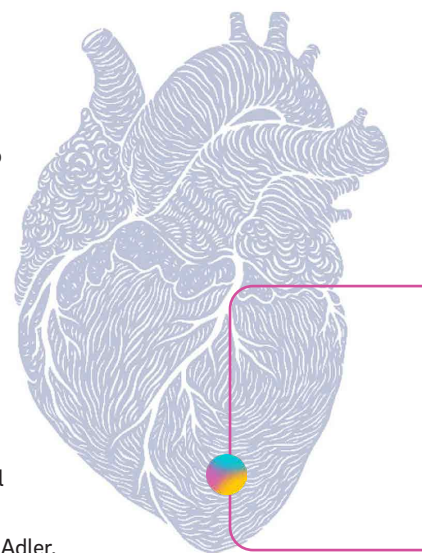
UC San Diego Health’s heart transplant program debuted in 1989; and performed its first heart transplant in 1990. Approximately 500 heart transplants have since been performed.

In 2011, the Sulpizio Cardiovascular Center at UC San Diego

Health opened its doors, offering patients access to leading diagnostics, novel treatments and several clinical trials unavailable elsewhere in the region.

Led by **Victor Pretorius, MBChB**, surgical director of cardiac transplant and mechanical circulatory support at UC San Diego Health, and Adler, the heart transplant program has become the largest in San Diego and the second largest in California. It ranks among the nation’s top-performing transplant centers.

In 2020, UC San Diego Health was the first hospital on the West Coast to perform heart transplant surgery from a donor after circulatory death, or DCD, using a new



portable organ care system. The successful surgery was part of a national interventional clinical trial that could increase organ donation by an estimated 20-30 percent, resulting in shorter wait times for patients in need of a new heart.

DCD involves retrieving organs from hospitalized donors who have died because their heart has stopped, either naturally or because life support has been discontinued. In such cases, with prior consent, surgeons remove the organ — within 30 minutes — and connect it to a machine that perfuses the heart with warm blood, reviving and keeping the organ beating and functional for assessment and possible transplantation. The warm perfusion system can potentially keep the organ viable for longer periods than traditional cold storage, allowing for transporting organs over much longer distances.

“When it comes to how organs are procured and preserved from donors, this machine is changing the paradigm for heart transplants,” said Pretorius. *“Not only will this increase the number of hearts available for those in need, but it can also optimize the timing of the transplant operation and utilization of operating room resources.”*

Ongoing research in cardiac transplant includes the evaluation of new drugs to prevent rejection that are more effective with fewer adverse effects, as well as new mechanical devices that can assist the heart.

“Over the last decade, we have seen remarkable growth in the heart transplant program, with high volumes, out-

LIVER AND LET LIVE

Husband and father of four, Andy Patridge, 53, was diagnosed in 2018 with primary sclerosing cholangitis, a disease that can lead to Inflammation and scarring within the bile ducts, eventually resulting in serious liver damage.

“I was in total shock when I learned I was in late-stage liver disease,” said Patridge.

After moving to San Diego, Patridge transferred his care to UC San Diego Health where it was determined he needed a liver transplant.

UC San Diego Health’s live liver donation program is unique in San Diego County and one of only two in Southern California. A living donor liver transplant involves surgically removing a portion of liver from a healthy person and transplanting it into a patient whose liver is failing. Regeneration of the liver in both donor and recipient begins immediately,

standing outcomes and leading edge research,” said Adler. *“Most importantly, we have given a renewed life to countless San Diegans, none of which would be possible without an extraordinary team and the generous organ donors.”*



Dr. Victor Pretorius

“We are determined to treat heart failure cases in our region and beyond. We offer the most advanced transplant services combined with a personal connection to our patients.”

— Victor Pretorius, MBChB
Surgical director of cardiac transplant and mechanical circulatory support

with the organs returning to 80 percent of original size within six weeks and up to 90 percent after one year.

Patridge’s friends and family members were all tested as possible donors. His brother, Mike, was a match, not just in blood type, but in the actual size of the organ. Standing at 6 feet, 5 inches, Andy needed a large liver.

“I’m 6-foot-7, so I knew I would be a strong candidate,” said Mike, 51, who flew to San Diego from England to go through the testing process.

On March 2, 2022, the brothers prepared for the surgery.

“I vividly remember looking at us in our surgical caps and gowns waiting to be wheeled into the operating room. It was nerve-racking to know what was about to happen,” said Andy. *“The transplant went well all around.”*



"With live liver donation, we can control the timing of transplant, which means the recipient can be transplanted much sooner and before they become severely ill. This allows patients to better manage the demanding process of liver transplantation," said **Justin Parekh, MD**, transplant and hepatobiliary surgeon at UC San Diego Health.

The liver transplant program at UC San Diego Health performed 82 transplants in 2021.



Nationally, there are more than 12,000 people in need of a liver transplant, including more than 2,300 in California.

In September 2020, UC San Diego Health became the first health care system in Southern

California to transplant a liver from a donor with Human Immunodeficiency Virus (HIV) into an HIV-positive recipient. The successful surgery was part of a national clinical trial that could lead to more life-saving options and less time on the transplant wait lists for HIV-positive patients. To date, five patients in the national trial have undergone liver transplants.

UC San Diego Health is participating in three national clinical trials supported by the HIV Organ Policy Equity (HOPE) Act, passed in 2013. The HOPE Act permits transplant teams in the United States with an approved research protocol to transplant organs from donors with HIV to qualified recipients with HIV and end-stage organ failure.

"As the region's only academic medical center, we are able to offer patients the most advanced treatment options through clinical trials," said Saima Aslam, MBBS, director of the

solid organ transplant infectious diseases service at UC San Diego Health and a trial principal investigator.

"We want evidence-based results to better understand the outcomes of using an HIV-positive organ versus an HIV-negative organ in a patient infected with HIV. Do they have the same short- and long-term outcomes?"

For patients with hepatocellular carcinoma (HCC), one of the most common predictors for liver transplant, quicker transplant evaluation increases the probability of a successful procedure before the tumor spreads.

"We recognized the need to evaluate this population quickly and implemented an expedited evaluation protocol that decreased their evaluation time by 80 percent," said **Veeral Ajmera, MD**, medical director of liver transplantation at UC San Diego Health.

A recent study by UC San Diego Health physician-scientists found that patients with advanced HCC who were treated with immunotherapy can progress to curative liver transplant in select situations. Historically, this type of treatment precluded liver transplant.

The Patridge brothers are continuing to recover and back to their daily activities. Andy recently went on a hike at an elevation of 6,000 feet.

"I didn't realize how sick I was until after the transplant. What Mike did for me was a true gift."

"We are excited to be part of these groundbreaking efforts, which are helping to move science forward."

— **Gabriel Schnickel, MD**
Surgical director of liver transplantation

LIVING, PAIRED, EXCHANGE OR VOUCHER

The kidney transplant program at UC San Diego Health was the first of its type in the San Diego region, starting in 1968. It is also the largest: Nearly 3,200 transplants have been performed.

"It is such an honor to do what I do for a living and give patients a better quality of life," said **Kristin Mekeel, MD**. "I also get to witness family members donating to loved ones and strangers donating to patients, giving life through the selfless act."

UC San Diego Health works closely with the National Kidney Registry, which provides access to paired, chain and voucher donations from a national patient list. This program offers patients with living donors who are not a match an opportunity to still receive a living donor transplant within a short time frame.

"With the national kidney pairs and chain donations, any patient who has an available living donor can get a transplant. These advancements in kidney donation have increased access to transplant for many transplant recipients, as well as improving outcomes for those patients."

"Living donation offers kidney transplant patients the best option for a timely transplant with a long-life span. Patients do not have to wait on a list and are immediately off dialysis after the transplant."

— **Kristin Mekeel, MD**

UC San Diego Health is also among the few programs in Southern California where patients can receive kidney auto-transplants, a procedure in which surgeons remove a kidney, repair a medical problem or defect, and then return the organ to the body.

This procedure is useful in treating patients with anatomic diseases that affect kidney function or quality of life, such as nutcracker syndrome, a rare vein compression disorder that squeezes the left renal vein.

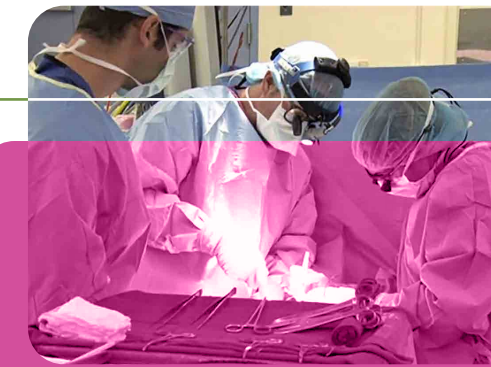
UC SAN DIEGO KIDNEY TRANSPLANT PROGRAM DIFFERENT APPROACHES:

A deceased kidney donation from a donor who has been diagnosed as "brain dead," but whose other organs remain functional

A donor kidney from a living donor, such as a family member or friend. In California, kidney transplant candidates with blood type O sometimes wait up to 10 years for a kidney from a deceased donor. Living donations help reduce the risks of waiting.

Paired kidney transplant allows donors who are not blood- or tissue-compatible with their recipient to "exchange" their kidney with a donor who is compatible

Kidney vouchers allow donors to donate a kidney many years before their intended recipient may need one. In 2014, UC San Diego Health was the first San Diego transplant program to implement the program.

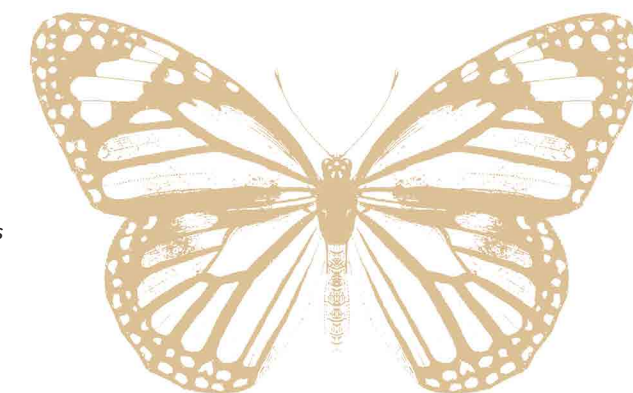


A LIFE-SAVING YEAR

The UC San Diego Health Center for Transplantation has had their biggest life-saving year thus far with a total of **481 life-saving organ transplants in 2023.**

Our dedicated, multi-disciplinary transplant teams worked tirelessly to make this possible, giving 481 individuals a second chance at life, including **37 patients who received multi-organ transplants.**

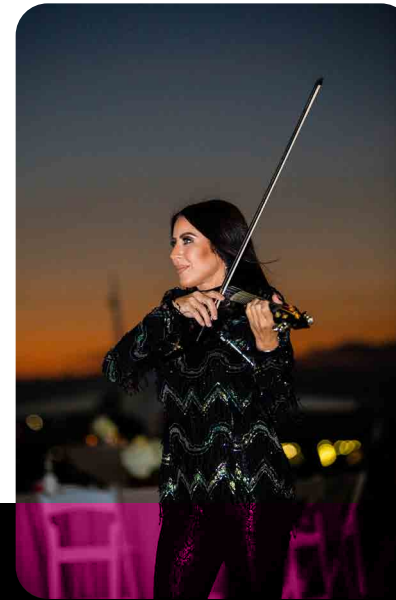
This remarkable achievement includes:
178 kidney transplants
148 liver transplants
95 heart transplants and
60 lung transplants



UC HEALTH RECEPTION ON THE MIDWAY

The 2022 reception on the USS Midway was organized by the UC San Diego Department of Surgery and hosted by all Departments of Surgery across the UC system.

This annual event takes place the Monday evening of the American College of Surgeons Annual Clinical Congress meeting. The reception is largely attended by faculty, trainees, alumni, and some students from all participating UCs.

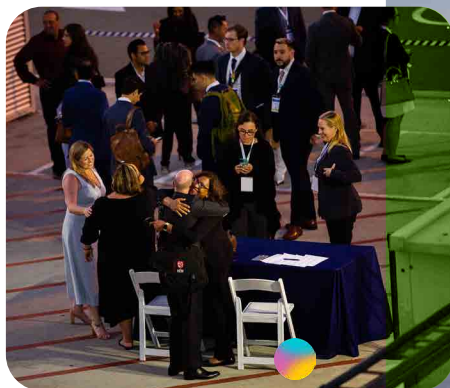


Dr. Bryan Clary



“The UC Surgery Family is a small one where many faculty have spent time in training and employment across a multitude of campuses. The Annual Reception for the UC Departments of Surgery at the American College of Surgeons is a fantastic opportunity to catch up with old friends and ongoing collaborators”

— Dr. Bryan Clary
Surgeon-In-Chief, Chair and
Professor of Surgery UC San Diego



CLINICAL HIGHLIGHTS

Our surgeons, experienced nursing staff and other team members are nationally recognized and bring the most advanced care to patients every day.

TODDLER EXPERIENCES SECOND-DEGREE BURN, GOES HOME SOONER WITH NEW TREATMENT

New treatment offered at the Regional Burn Center at UC San Diego Health uses an applied synthetic skin substitute to encourage skin growth on burn wound, giving some patients the opportunity to be discharged same-day.

For Julie Lu, one evening at home began as a night like any other. She had just finished giving dinner to her two-year-old daughter, Mai. They were about to begin their bedtime routine, which started by saying goodnight to family, who

happened to be in the kitchen. While receiving sweet dream wishes, one sudden move changed the lives of all in the room.

Mai had reached for the hot-water dispenser unit and knocked it over, inadvertently pouring hot water all over her feet and all over Lu as well.

As a primary care doctor at a local health care organization, Lu says she

went into “physician mode” and immediately took her daughter to the kitchen sink to run water over the area, trying to identify where Mai was injured.

“Within seconds, there was hot water everywhere, that’s how fast this happened,” said Lu. “By the time I pulled off her socks, her feet were already blistering and I knew we needed to get to the emergency department.”

It was determined that Mai had sustained second degree burns on the tops of both her feet.

“In my head, I knew it was a second-degree burn. I thought we’d have some wound dressings applied and could go home,” said Lu. “I definitely did not expect being admitted to the hospital.”

Mai was soon transferred to the Regional Burn Center at UC San Diego Health, where a multi-disciplinary team performed a surgical procedure to clean and dress the wound.

“For young children such as Mai, we often clean and dress wounds under general anesthesia in order to minimize trauma for our patients and their loved ones,” said Jeanne Lee, MD, director of the Burn Center.

“Mai also qualified for a new treatment option we recently began offering patients that would allow her to go home sooner,” said Lee.

“Everyone was so compassionate and understanding at the Burn Center, and after such a long night, I was grateful we could get home sooner so Mai could rest in her own bed”

— Jeanne Lee, MD

The treatment, called Suprathel, is a dressing and synthetic skin substitute that encourages skin growth. It is made of polylactic acid that creates a thin membrane over the wound, which adheres and adapts to the wound bed, thus promoting re-epithelization, or newly formed skin. This process takes approximately seven to 14 days.

According to Lee, most patients with second degree burns qualify for the treatment and are able to go home the same day after it’s been applied. After the initial application, patients return to the Burn Center weekly for dressing changes and reapplication of the treatment, if needed.

“The texture of the dressing is a silicone-like material, which remains on the wound and provides an element of pain control as well,” said Lee.

Prior to the new treatment option, patient cases such as Mai’s may have resulted in a longer hospital stay. Treatment would include

daily procedures to clean the wound and re-apply dressings until the wounds are nearly healed before discharge could take place.

A FAMILY CENTERED APPROACH TO TREATING BURNS

Treating children for burns can be especially challenging as coping with fear and anxiety associated with a burn wound is more difficult for younger individuals.

“The team at UC San Diego Health was so incredible to us, especially the social workers. There is a wonderful community and burn center support group available as well that I found so valuable and strongly recommend for other parents going through a similar experience.”

— Julie Lu

The team at UC San Diego Health takes a family centered approach that ensures the social, emotional and psychological needs are met for pediatric patients and their families. For young patients, toys are often provided by the Child Life Services Program, which provides comfort during hospital stays and outpatient wound change visits.

“The Child Life Services team brought some normalcy to the hospital setting,” said Lu. “My daughter had both her feet wrapped up so much that she couldn’t really walk, so the team got us a wagon to push her around in and would play with her while I met with the doctor.”

Certified Child Life Specialists at UC San Diego Health care for patients from newborns to age 21. The team is a vital part of treatment for children and offers support in developmental growth while they are in the hospital. In addition



For young patients, toys are often provided by the Child Life Services Program which provides comfort during hospital stays and outpatient wound change visits.

to providing a fun, developmentally appropriate outlet for children, the toys offered in the program reduce the traumatic impact of their wound or hospitalization, and are also used as an incentive or distraction to young patients so their care teams can more effectively treat them.

The toys and activities are also used for psychosocial interventions to help provide education about burn treatment to pediatric patients, so they better understand and cope with their injuries or diagnosis, as well as to prepare them for upcoming procedures.

“It’s all about working to minimize the potential trauma this experience might have on the child,” said Kate Hamelin, certified child life specialist at UC San Diego Health. “Our mission is to educate and empower the children while working to prevent any lasting negative impacts caused by the situation and care received for burn injuries. The toys and activities we provide to our patients help create a safe space for kids in the hospital.”

Once a patient leaves the hospital, many of the toys go home with them. For Mai, she took home her beloved bear, a toy she received from the team upon admission to the hospital.

Mai experienced an accident involving her home’s hot water dispenser, resulting in second degree burns on the tops of both her feet.

EMBARKING ON THE HEALING JOURNEY

Three months after the initial incident, Mai's feet have healed and she's back to wearing normal shoes and walking again.

"The healing journey is a long process, however," said Lu. "The initial wound care with the burn team thankfully only lasted about two months, but Mai's skin is still very sensitive. She is rarely without socks, and we still have to moisturize her feet twice a day."



Photos courtesy of Julie Lu

BABY GIRL BORN WITH 1 LUNG AND GIVEN 20% CHANCE OF SURVIVAL GOES HOME

Via Good Morning America – A California girl has beaten the odds to reunite with her twin and return home with her family after a six-month stay at Rady Children's Hospital, where she was treated by UC San Diego pediatric surgeons.

Charlotte and her twin sister, Olivia, were born to Karla and Joshua Valliere in December, 2022, but in January, Charlotte

was suddenly admitted to Rady Children's Hospital with breathing difficulties and a respiratory infection.

At first, the Vallieres didn't know what was wrong. Olivia was healthy, and although Charlotte had been born with one lung, she hadn't had any issues after birth.

"Her one lung grew like 1.5 sizes, so it was compensating for the lack of the second one. So [doctors] did run all the studies. She was totally fine –

oxygenation, everything 100%, so we were cleared to go after four days in the hospital," Karla Valliere told "Good Morning America." "It was six weeks at home – total bliss.



Dr. Matthew Brigger

Lu is using the experience as a reminder that accidents can happen to anyone, at any time.

"I'm a doctor. I counsel patients. I did all the home safety precautions meant for a toddler, and this still happened to us. It can happen to anyone," said Lu. "It's important to give myself grace and for parents to know of the care available at UC San Diego Health's Burn Center. The team at UC San Diego Health was so incredible to us, especially the social workers. There is a wonderful community and burn center support group available as well that I found so valuable and strongly recommend for other parents going through a similar experience."

The Regional Burn Center, turning 50 this year.

The team at UC San Diego Health treats approximately 450 hospitalized patients each year, and another 1,000 patients are seen in the outpatient burn clinic.

Approximately one third of all admissions and outpatient visits are pediatric patients under the age of 18.



Everything was great ... and all of a sudden she started having breathing problems."

Matthew Brigger, MD., chief of the pediatric otolaryngology division at Rady Children's Hospital, started seeing Charlotte, who was just six weeks old at the time. Charlotte would eventually be diagnosed with tracheal stenosis and complete tracheal rings. This meant she had a birth defect with her airway where the rings in her trachea were abnormal and she had an abnormal narrowing of the trachea, or windpipe. She also had a blood vessel wrapped around her trachea.

"This set of anomalies, with the single lung, with the way the aorta was wrapped around the trachea itself and the trachea being this narrow, is actually fairly rare."

– Brigger told "GMA"

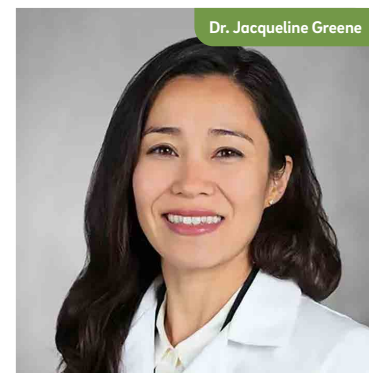
FACIAL NERVE SURGEONS GIVE FIREFIGHTER HIS SMILE BACK

Specialized team at UC San Diego Health performs facial reanimation surgery to treat facial paralysis

Steve Chafe, a firefighter for more than 25 years, is not taking anything in life, including a smile, for granted.

Nearly five years ago, after finishing a 72-hour shift, his life changed. He couldn't quite gather his thoughts; he couldn't read, and his speech was jumbled. An MRI identified Chafe had a transient ischemic attack. It also found something unexpected: a large tumor the size of a golf ball.

"I thought I had cancer," said Chafe.



Dr. Jacqueline Greene



Dr. Quyen Nguyen

Chafe was diagnosed with a rare, benign and slow growing skull base tumor that affects nearby critical nerves. Approximately 3,000 people are diagnosed with this type of tumor annually. The pressure caused by a tumor can result in hearing loss, ringing in the ear, loss of balance and potentially facial paralysis.

Due to the size and position of Chafe's tumor, delicate facial nerves were impacted, leading to facial drooping and paralysis on the right side of his face.

His tumor was removed November 2018, which paved the way for a specialized team at UC San Diego Health to repair the damage the tumor caused.

"Mr. Chafe is an example of why we have the facial nerve team at UC San Diego Health," said **Quyen Nguyen, MD, PhD**, head and neck surgeon with specialty training in

neurotology and skull base surgery at UC San Diego Health. "As the only academic medical center in the region, we offer the highest level of support that involves research, medicine, surgery and recovery."

For complex cases such as Chafe's, where the large sized tumor had been pressing on his brain stem causing nerve issues, facial nerve surgeons at UC San Diego Health work together to develop a specialized treatment plan, an offering that is only available at a few institutions in the country.

Chafe's first facial nerve surgery involved a nerve transfer and placement of a nerve graft across the face to provide him with a bite-driven smile. The cross-face nerve graft was collected via a minimally invasive approach from a muscle in Chafe's ankle, and allowed for a future option of muscle transfer to restore his spontaneous smile.

Jacqueline Greene, MD, head and neck surgeon with advanced subspecialty training in facial reanimation and microvascular surgery at UC San Diego Health, designed and carefully harvested a portion of the gracilis muscle in Chafe's leg to restore a natural, spontaneous smile.

"The goal of this delicate procedure was to make Mr. Chafe smile and laugh spontaneously again," said Nguyen.

"Mr. Chafe had a long road to recover his smile and is truly an inspiration to those who had the honor and privilege of taking care of him," said Greene.

A year after his gracilis surgery, Chafe says he feels like a new version of himself.

"We connect nerves that are 1.5mm in diameter or less with sutures that are thinner than a strand of human hair, as well as vessels that are smaller than 2-3mm in diameter.

They're tiny vessels, but they're mighty."

– Jacqueline Greene, MD

"The medical team from UC San Diego literally and figuratively gave me my smile back"

– Steve Chafe



RESEARCH HIGHLIGHTS

The 2022-2023 Department of Surgery Annual Report celebrates significant accomplishments and research milestones in the realm of surgical medicine.

These achievements span a wide spectrum of topics, from recognizing excellence in the field of pulmonary hypertension to pioneering studies on pancreatic cancer, appendiceal cancer, stem cell research in space, and grants that support innovative research endeavors.

APPENDICEAL CANCER GETS ITS OWN PRECLINICAL MODEL

UC San Diego researchers develop a 3-D culture for a rare disease that has long defied effective study and development of therapies.

Appendiceal cancer (malignancies of the appendix, a small tissue pouch that is part of the gastrointestinal tract) is very rare, occurring in perhaps one or two people per 1 million

per year. Prognosis is mixed, with a 5-year survival rate of 67 to 97 percent for low-grade tumors detected early, but much lower for advanced cases that may have spread to other parts of the body.

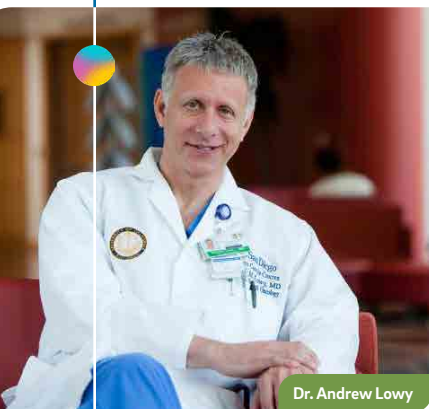
For cancer researchers attempting to study appendiceal cancer and find remedies,

a primary challenge has been the lack of an effective preclinical model to probe its pathology and test new drugs or therapeutic approaches. In a paper published in the

November 1, 2022 print issue of Clinical Cancer Research, researchers at University of California San Diego School of Medicine and Moores Cancer Center at UC San Diego Health describe the first preclinical model of appendiceal cancer that contains all elements of the tumor, allowing previously stymied investigations to proceed.

"We've learned that appendiceal cancer has a distinctive genomic landscape and is surprisingly full of immune cells," said senior author **Andrew Lowy, MD**, chief of the Division of Surgical Oncology at Moores Cancer Center and a professor of surgery at UC San Diego School of Medicine. *"Relying on other models, such as colorectal, don't apply, which makes this an unmet need. Epithelial neoplasms (new, abnormal tissue growth) of the appendix are rare, but without an effective way to study them, the opportunities to develop new treatments have also been rare."*

The obstacles to creating a preclinical model of appendiceal cancer are numerous: Access to clinical tissues is rare because the disease is rare. The majority of neoplasms have mucinous histology, a characteristic that makes them difficult to assess under a microscope and to culture. Mice do not have the equivalent of a human appendix, rendering them unsuitable as a genetically modified model.



Dr. Andrew Lowy

GRANT: NIH R35 GRANT FOR MECHANISMS OF HUMAN GENES IN INJURY RESPONSE

Todd W. Costantini, MD, FACS and his team achieved a significant milestone with their successful NIH R35 grant application, titled *"Mechanism of action of uniquely human genes in the injury response."* The R35 grant mechanism (Maximizing Investigators' Research Award-MIRA) is intended to provide greater flexibility and stability to "highly talented and promising" new and established funding.

Dr. Todd W. Costantini



Dr. Brian Eliceiri

GRANT: BRIAN ELICEIRI'S ION-ARPA GRANT FOR THERAPEUTIC DELIVERY PLATFORMS

Brian Eliceiri, PhD, has achieved a significant milestone by securing a new ION-ARPA grant from Ionis Pharmaceuticals. His project, titled "Bifunctional extracellular vesicles as therapeutic delivery platforms," reflects his commitment to innovative approaches in therapeutic delivery.

Dr. Eliceiri's work promises to open new avenues for therapeutic research and development, ultimately benefiting patients in need.

GRANT: DR. LOWY RECEIVES A PANCREATIC CANCER RESEARCH GRANT FROM THE LUSTGARTEN FOUNDATION

Andrew M. Lowy, MD, FACS, the project, titled *"Building on Kras Inhibition in Pancreatic Cancer: Defining Rationale Pairings to Combat Resistance and Enhance Responses to Immunotherapy,"* exemplifies his commitment to advancing our understanding of pancreatic cancer.

This grant acknowledges Dr. Lowy's dedication to pioneering research strategies that hold promise for combating resistance and enhancing immunotherapeutic responses in the fight against this deadly disease.

GRANT:

DR. REBEKAH WHITE RECEIVES R01 FOR PANCREATIC CANCER TREATMENT

Surgical Oncologist **Rebekah White, MD**, has received an R01 grant for her work titled: *Irreversible Electroporation (IRE) Combined with CD40 Agonism as In Situ Vaccine Therapy for Pancreatic Cancer.*

Irreversible electroporation (IRE) is a technique that is being used increasingly for ablation of persistent LAPC after systemic therapy. Dr. White's group has demonstrated that IRE can function as an "in situ vaccine" by releasing tumor neoantigens in the setting of inflammation, allowing the body's innate immune system to recognize the tumor.

CD40 is an immune receptor located on antigen-presenting cells that serves as a bridge between the innate immune system and the host's specific response to neoantigens (the adaptive immune system). Using immunocompetent orthotopic mouse models of pancreatic cancer, Dr. White and colleagues have shown that the combination of IRE with local delivery of a CD40 agonistic antibody (CD40 Ab), can both improve the local effects of IRE and decrease metastatic disease in the liver.

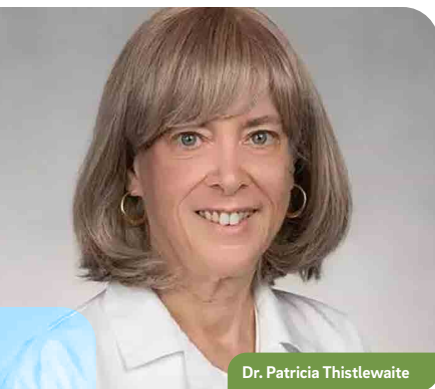
Dr. White hypothesizes that local delivery of a CD40 agonist at the time of IRE in patients with LAPC will augment the systemic immune effects of IRE, enhance local disease control, and ultimately decrease distant recurrence. They will conduct a phase I study of intratumoral mitazalimab injection at the time of surgical IRE to determine a recommended Phase 2 dose and establish preliminary efficacy for future studies. In parallel, they will perform correlative studies to determine if this combination can generate immune responses to neoantigens identified using an unbiased bioinformatic analysis pipeline of tumor biopsies.

The multi-disciplinary team is uniquely qualified to conduct the proposed studies. Dr. White is a surgical oncologist at UC San Diego with clinical expertise in IRE and whose laboratory generated the preliminary data. The researchers hypothesize that this novel approach to the treatment of LAPC will prove to be safe, and result in progression-free survival superior to that of patients previously treated with IRE alone.

UC San Diego Health



Rebekah R. White, MD, FACS
Surgical Oncologist
UC San Diego Health



Dr. Patricia Thistlewaite

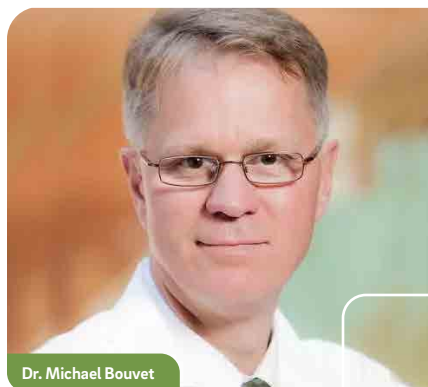
**AWARD:
LIFETIME ACHIEVEMENT AWARD FOR EXCELLENCE IN PULMONARY
HYPERTENSION RESEARCH**

Patricia Thistlewaite, MD, PhD, received the esteemed Lifetime Achievement Award of Excellence from the Pulmonary Vascular Research Institute (PVRI) during its annual meeting. This recognition is a testament to Dr. Thistlewaite's exceptional contributions to the field of pulmonary hypertension, demonstrating her commitment to advancing the treatment and understanding of this condition.



**AWARD:
DR. MICHAEL BOUVET'S VA MERIT AWARD AND CANCER
THERAPEUTICS TRAINING PROGRAM RENEWAL**

Michael Bouvet, MD's significant achievement in securing a VA Merit Award for his proposal, "Development of Near Infrared Fluorescence-Guided Surgical Navigation and Tumor Specific Photoimmunotherapy for Improved Outcomes for GI Cancers," showcases his commitment to advancing the field of surgical oncology. Moreover, his successful renewal of work for The Cancer Therapeutics Training Program (CT2), alongside Dr. Dwayne Stupack, further underscores their dedication to advancing cancer therapeutics and training the next generation of researchers.



Dr. Michael Bouvet

**AWARD:
RECOGNIZING RESEARCH EXCELLENCE IN RESIDENCY**

Kevin Li, MD, PGY3, was honored with the Society of University Surgeons (SUS) Resident Research Award for his project focusing on inhibiting SUMOylation as a therapeutic strategy for pancreatic ductal adenocarcinoma. This recognition acknowledges Dr. Li's outstanding contributions to the field of surgical research and his commitment to innovative treatment approaches.

**AWARD:
PROF. TANIA MORIMOTO'S BECKMAN YOUNG INVESTIGATOR AWARD**

Tania Morimoto, PhD, up-and-coming faculty member in the Jacobs School of Engineering and Department of Surgery, has received the prestigious Beckman Young Investigator Award.

The Beckman Foundation supports early-career researchers in the chemical and life sciences, particularly those who demonstrate the potential to invent novel methods, instruments, and materials that open new avenues of scientific research. Dr. Morimoto's receipt of this award reflects her outstanding promise in advancing research and innovation in these fields.



Dr. Tania Morimoto

**CENTER FOR THE FUTURE OF SURGERY HOSTS
MORE THAN FOUR HUNDRED COURSES ANNUALLY**

Program highlights includes:

- » Hosting large-scale association courses for American Academy of Oral and Maxillofacial Surgeons, PCCM Interventional Pulmonology, American Academy of Cosmetic Surgery, California Society of Facial Plastic Surgery, American Academy of Pain Medicine, American College of Surgeons, Association of Women Endoscopists, SAGES Flexible Endoscopy, North American Skullbase Society, San Diego ARTS as well as fellowship programs for RUHS, Loma Linda and Kaiser, and our second laser program the Boston Scientific Moses Mastery Course.
- » Proximie telehealth systems installed across all of our ORs, partnership with Stryker to upgrade our imaging equipment to their latest 1588 models with 4K monitors, have added 16 new 3D Med laparoscopic training boxes.
- » Continue to be a regional training facility for Intuitive hosting robotics courses daily and the addition of the CIOS Spin c-arm for use with internal programs.
- » Survival animal study research labs in reproductive medicine with Dr. Alison Ting and surgical adhesives with UCLA and Dr. Cheng.
- » CFS exhibited at the AAO-HNS Annual Conference to generate increased exposure of our facility and usage of the Microsurgery Suite.
- » Hosted UC San Diego Family Day surgery events for Neurosurgery and General Surgery divisions with industry partner support.
- » Expanded residency programs for Shiley Eye Institute, UC San Diego Orthopedics, ENT and Neurosurgery divisions and the addition of a new MIS Fellows program.

**2023 ANNUAL SOUTHWEST OTOLARYNGOLOGY HANDS-ON
BOOT CAMP FEATURING ALL 11 SOUTHWEST PROGRAMS**

Our 4th Annual SUO Southwest Otolaryngology Boot Camp entitled "Effective Responses to Otolaryngology Emergencies" was a success on Sat, August 5 at UC San Diego.

All 11 Southwest programs (UCLA, USC, Cedars-Sinai, UC Irvine, Loma Linda, Mayo-Arizona, Univ of Arizona, Univ of Nevada at Las Vegas, Univ of New Mexico, US Naval Medical Center and UC San Diego) came with their energetic junior residents and talented visiting faculty.



DIVISION OF ANATOMY

The Division of Anatomy is responsible for the anatomy education of all doctors-in-training at UC San Diego.

Our teaching approach centers on the dissection laboratory, where student doctors actively learn about human structure from surgeons equipped with an innovative curriculum that emphasizes clinical applications.

DR. GEOFFROY NOEL RECEIVES SEED GRANT FROM SANFORD INSTITUTE FOR EMPATHY AND COMPASSION

The Center for Empathy and Compassion Training in Medical Education, housed within the Sanford Institute for Empathy and Compassion, recently awarded a medical education seed grant to Department of Surgery faculty member, **Dr. Geoffroy Noel**.

Dr. Noel's project proposal aims to develop and disseminate educational programming that enhances empathy and compassion throughout medical training; the project will run through the 2022-23 academic year.

His study, titled "Most appropriate ways to present body donors to medical students to foster empathy, racial justice and inclusion during dissection," aims to understand how personal information and individual physical characteristics of body donors, such as hair, tattoos, and piercings, can impact a medical student's physiological and subjective markers of empathy and inclusion, specifically during cadaveric dissection.



DR. GEOFFREY NOEL RECEIVES UC SAN DIEGO SCHOOL OF MEDICINE KAISER FOUNDATION TEACHING AWARD

Congratulations to Department of Surgery faculty member, **Professor Geoffroy Noel**, recipient of a UC San Diego School of Medicine Kaiser Foundation Teaching Award.

FUNDING

2022-2023 Association for Surgical Education CESERT Pyramid Grant

2022-ASEF-G5 "Measuring the effects of different types of body donor presentation on surgical trainee's empathy and inclusion during simulation"

TEACHING DIVISION SUPPORT

Dr. Steve Howe
Cardiothoracic Surgeon Associate
Professor of Surgery

Dr. Sam Ward
Vice Chairman Professor
Orthopedic Surgery

Dr. Nicole Goldhaber

Dr. Kristin Cox

Dr. Jason Llaneras

Daniel Suto (MSTP)

Caitlyn Belza (MS student)

Fernanda Pacheco (MS student)

Gabriela Sendek (MS student)

John Perry (MS student)

RESEARCH TRAINEES

Catherine Shaw
2nd year BS Biology

Stephanie Barajas
2nd year BS Biology

Thomas Spence
4th year BS Psychology

James Doan
B.S. Cognitive Behavioural
Neurosciences

Lipika Gangakhedkar
4th year BS Bioengineering:
Biotechnology

Jessica Kern
3rd year MD program (ISP project, chair)

Niveda Rao
2nd year MD program (ISP project, chair)

Chantilly Otto-Smith
2nd year MD program (ISP project, chair)

Colin King
4th year MD program (ISP project, chair)

Caroline Kornelsen
1st year MD program (ISP project, chair)

NEWS

CHANGEMAKER FELLOWS:

Anti-Racist Pedagogy Learning, UC San Diego

UC San Diego is one of only 45 universities around the world to receive the prestigious designation of Changemaker Campus from Ashoka U, the world's largest network of social innovators who share inspiration, connections, and a desire to broaden the reach and impact of social innovation around the world

UC SAN DIEGO HEALTH:

Sanford Compassionate Communication Academy Fellowship, UC San Diego

The Sanford Compassionate Communication Academy Fellowship is composed of physicians, nurses, APPs, and artists working together, with the mission to re-wire the way they approach compassionate communication. We apply arts and humanities lessons to medical communication training, improving communication between physicians and patients, and among healthcare teams. These skills have a wide range of applications including communication with policy makers, the public and the media.

SELECTED PUBLICATIONS

1. A thematic analysis of students' discussions on death and body donation in international online focus groups. Wu A, McWatt SC, Utomo R, Talis A, Xiao QY, Saraci K, Brassett C, Sagoo MG, Wingate R, Chien CL, Traxler H, Waschke J, Vielmuth F, Sigmund A, Yamada Y, Sakurai T, Zeroual M, Olsen J, El-Batti S, Viranta-Kovanen S, Keay K, Stewart W, Mao Y, Lang A, Kunzel C, Bernd P, Kielstein H, Noel GPJC. (2023) Anat Sci Educ. 2023 Mar 7. doi: 10.1002/ase.2265. Online ahead of print.
2. Scoping review: The use of augmented reality in clinical anatomical education and its assessment tools. McBain KA, Habib R, Laggis G, Quaiattini A, M Ventura N, Noel GPJC. Anat Sci Educ. 2022 Jul;15(4):765-796. doi: 10.1002/ase.2155. Epub 2022 Jan 19. PMID: 34800073.



Dr. Geoffroy Noel

ANATOMY FACULTY

CHIEF OF DIVISION
Geoffroy Noel, PhD

TEACHING FACULTY
Joy Balta, PhD
Health Sciences Educator

CLINICAL PROFESSOR
Joshua Bardin, MD

HEALTH SCIENCES EDUCATOR
Grant Neifeld, MD
Diana Paddock, PA

PROFESSOR OF SURGERY EMERITUS
David H. Rapaport, PhD

CLINICAL INSTRUCTOR
Murray Reicher, MD, FACR

HEALTH PROFESSIONAL EDUCATOR SPECIALIST
Paul Kingston, PhD
Jose Ubada, MS

UC SAN DIEGO SCHOOL OF MEDICINE "ARTISTS IN RESIDENCE"
Larry and Debby Kline

DIVISION OF BREAST SURGERY

The UC San Diego Division of Breast Surgery, combined with the Division Chief's dual responsibility as Director of the Comprehensive Breast Program, has continued to be highly successful in overseeing the activities of the clinic, infusion, and breast imaging, while expanding clinical and translational research opportunities within the breast cancer program.

WHAT I'VE LEARNED AS A BREAST CANCER SURVIVOR

When I first arrived at the fabulous Hawaiian location for our family vacation, I was overwhelmed with happiness and joy. Aside from the obvious reasons — being on a much-needed trip and unplugging from everything — I was feeling deep gratitude to be alive.

I had been planning this trip for five years. It was the bright light at the end of a dark, long tunnel, called breast cancer treatment.

In 2017, I sat in a doctor's office with a radiology technician asking me if I had a loved one in the waiting room. My heart sank, but my gut knew something was not right the second I felt an enlarged lymph node in my armpit a few weeks prior. I was my own health advocate and made an appointment. My intuition was shouting, and I was listening.

I was diagnosed with an aggressive Stage 2B breast cancer that had spread to my lymph nodes. I was age 39 with two young sons. My husband and I sat in that room together trying to take in the surreal news. It was also Valentine's Day — our least romantic one to date.

My entire world got turned upside down. I was young, healthy and unsuspecting of a two-centimeter tumor that

had been growing deep in my breast tissue. I drove home the day of that radiology appointment overwhelmed with anxiety. I thought of my kids, wondering if I was going to see them grow up.

One in 8 women will be diagnosed with breast cancer in her lifetime. I was the 'one.' I also tested positive for the BRCA1 gene mutation. I have been described as an overachiever, but this was certainly not how I wanted to prove that adjective. The mutation put me at a high risk of breast and ovarian cancer. Knowing about the mutation is significant in order to make informed healthcare decisions.

On March 20, 2017, Michelle received her first chemotherapy treatment at Moores Cancer Center at UC San Diego Health. She was surrounded by family and work colleagues who came to support her.

Left to Right: John Brubaker (Michelle's husband), Michelle and Sharon Schaefer (Michelle's mom).



The day Michelle shaved her head before her last four sessions of chemotherapy.

Her husband and two kids all joined in, each shaving a section.



The next few years were a whirlwind of appointments, treatments, surgeries, tests and scans. I felt like I was hit by a tsunami.

I had walked into Moores Cancer Center at UC San Diego Health many times before the day of my diagnosis. I work on the UC San Diego Health communications team. I had

“During the early days of my diagnosis, a survivor told me I would one day find the gifts from the journey. I didn't understand at the time. In fact, I almost didn't believe her. I have learned she was right.”

— Michelle Brubaker

true empathy as I looked around at the other cancer patients receiving chemotherapy. There is always someone facing a harder challenge.

I had also walked through Jacobs Medical Center at UC San Diego Health while it was under construction. I saw it when it was just rebar and dirt. As it evolved, I walked every hallway and toured the surgical suites, learning about the state-of-the-art building and the innovative care that would be provided. Then, I found myself being wheeled down the hallway for my double mastectomy. I learned how to mourn and accept (not always in that order) parts of my body being removed.

I have experienced firsthand the most comprehensive and compassionate care by remarkable multi-disciplinary teams

at the Comprehensive Breast Health Center at UC San Diego Health. I had team members wipe my tears and hold my hand.

My body went to war, and I had an army of experts throughout the entire hospital system to get me through it.

As much as my body went through physically, I have learned that going through breast cancer treatment is just as hard (if not harder, at times) on a person's mental health. The glass is not always half full. It's okay to just be okay on some days. Facing a health crisis is a marathon, not a sprint. I am forever grateful for the village of support, both personally and professionally, who lifted me up when I was brought to my knees.



Michelle says her greatest accomplishments are being a mom and a cancer survivor. Both have taught her the most valuable lessons she implements in all aspects of her life.

After nearly two years of treatment, involving 10 chemotherapy sessions, a double mastectomy, 28 radiation sessions, a hysterectomy and breast reconstruction, there is no evidence of cancer. My husband and I learned that I was officially in remission on our wedding anniversary. It made up for Valentine's Day.

I am now in the chapter of survivorship. I have learned that there is a new set of emotions and obstacles that come on this path. I have learned how to be in the present.

When I now walk inside UC San Diego Health's hospitals and clinics, I can't help but have mixed emotions and flashbacks of some of the hardest days of my life, and some of the most celebratory.

During the early days of my diagnosis, a survivor told me I would one day find the gifts from the journey. I didn't understand at the time. In fact, I almost didn't believe her. I have learned she was right.

My life is more vibrant. I have a bucket list to remind me that none of us are guaranteed another day.

I think of cancer every day, however, it no longer consumes me. It motivates and inspires me.

I hug my kids with an extra squeeze now, knowing I have been given the opportunity through life-saving care to watch them grow up.

I started planning our Hawaii trip to celebrate my five-year cancer free milestone while I was going through the thick of treatment.

As we swam in the warm ocean looking at sea turtles surrounding us, I took mental photos. My breast cancer journey led me to that special moment with my husband and kids. I will remember it forever.

I have never been so elated to cross something off my bucket list.



As Breast Cancer survivor, I am passionate about sharing my story to educate and provide hope and encouragement to those newly diagnosed.

I have learned that these reminders can save your life:

Mammography is the most effective tool for screening for breast cancer

Examine your breasts and your armpit areas

Know your family cancer history

Talk to your doctor about genetic testing and counseling

Be your own health advocate

If the disease is detected early, the survival rate is 98 percent

AWARDS



Dr. Anne Wallace
Physicians of Exceptional Excellence | 2023

Dr. Anne Wallace
San Diego Top Doctors | 2023

Dr. Sarah Blair
San Diego Top Doctors | 2023



Dr. Anne Wallace
SDBJ Top 500 most influential people | 2022

SELECTED PUBLICATIONS

1. Association of Residual Ductal Carcinoma In Situ With Breast Cancer Recurrence in the Neoadjuvant I-SPY2 Trial. Osdoit M, Yau C, Symmans WF, Boughey JC, Ewing CA, Balassanian R, Chen YY, Krings G, Wallace AM, Zare S, Fadare O, Lancaster R, Wei S, Godellas CV, Tang P, Tuttle TM, Klein M, Sahoo S, Hieken TJ, Carter JM, Chen B, Ahrendt G, Tchou J, Feldman M, Tousimis E, Zeck J, Jaskowiak N, Sattar H, Naik AM, Lee MC, Rosa M, Khazai L, Rendi MH, Lang JE, Lu J, Tawfik O, Asare SM, Esserman LJ, Mukhtar RA. *JAMA Surg.* 2022 Nov 1;157(11):1034-1041. doi: 10.1001/jamasurg.2022.4118. PMID: 36069821; PMCID: PMC9453630.
2. Prognostic Significance of Residual Ductal Carcinoma In Situ After Complete Response of Invasive Breast Cancer to Neoadjuvant Therapy. O'Keefe TJ 5th, Wallace AM. *JAMA Surg.* 2023 Feb 22. doi: 10.1001/jamasurg.2022.8238. Online ahead of print. PMID: 36811893
3. Preoperative ultrasound-guided percutaneous cryoneurolysis for the treatment of pain following mastectomy: A randomized, participant- and observer-masked, sham-controlled study. Ilfeld BM, Finneran JJ, Swisher MW, Said ET, Gabriel RA, Sztain JF, Khatibi B, Armani A, Trescot A, Donohue MC, Schaar A, Wallace AM. *Nov 2022 Anesthesiology, In Press* PMID: 35929983
4. Full Remission of CAR-Deficient Tumors by DOTAP-Folate Liposome Encapsulation of Adenovirus. Huang CH, Dong T, Phung AT, Shah JR, Larson C, Sanchez AB, Blair SL, Oronsky B, Trogler WC, Reid T, Kummel AC. *ACS Biomater Sci Eng.* 2022 Dec 12;8(12):5199-5209. doi: 10.1021/acsbomaterials.2c00966. Epub 2022 Nov 17. PMID: 36395425.
5. A Local and Abscopal Effect Observed with Liposomal Encapsulation of Intratumorally Injected Oncolytic Adenoviral Therapy. Dong T, Shah JR, Phung AT, Larson C, Sanchez AB, Aisagbonhi O, Blair SL, Oronsky B, Trogler WC, Reid T, Kummel AC. *Cancers (Basel).* 2023 Jun 12;15(12):3157. doi: 10.3390/cancers15123157. PMID: 37370769; PMCID: PMC10296131.
6. Tri-Compartmental Restriction Spectrum Imaging Breast Model Distinguishes Malignant Lesions from Benign Lesions and Healthy Tissue on Diffusion-Weighted Imaging. Besser AH, Fang LK, Tong MW, Sjaastad Andreassen MM, Ojeda-Fournier H, Conlin CC, Loubrie S, Seibert TM, Hahn ME, Kuperman JM, Wallace AM, Dale AM, Rodriguez-Soto AE, Rakow-Penner RA. *Cancers (Basel).* 2022 Jun 30; 14(13). PMID: 35804972; PMCID:



Dr. Anne Wallace

BREAST SURGERY FACULTY

CHIEF OF DIVISION
Anne Wallace, MD

PROFESSOR OF SURGERY
Sarah L. Blair, MD, FACS

ASSISTANT PROFESSOR OF SURGERY
Ava Armani, MD, FACS
Sara Grossi, MD
Julie Le, MD



Michelle is now considered in remission and has a passion for sharing her story to educate and provide hope and encouragement to newly diagnosed patients.

Photo courtesy Gabrielle Fox Photography

DIVISION OF CARDIOVASCULAR & THORACIC SURGERY

LIFE-SAVING TRIP RESULTS IN MULTI-ORGAN TRANSPLANTATION FOR FATHER

Khristiane “Frances” Reyes credits a 2013 trip to the Philippines for saving his life. After dealing with symptoms like severe shortness of breath and exhaustion for quite some time, it wasn’t until he landed in Manila to visit family that he realized something was truly wrong.



Reyes spent two weeks in the hospital in the Philippines, where the clinical team diagnosed him with heart failure and gave him six months to live.

When Reyes returned to the United States, he went directly to the emergency room at UC San Diego Health. At the time, his blood oxygen was at 80 percent. An oxygen saturation level of 95 to 100 is considered healthy.

To his surprise, Reyes was diagnosed with congenital heart disease and pulmonary hypertension. He spent two months at UC San Diego Health recovering.

Reyes initially improved with the help of anticoagulant

UC San Diego Health is the worldwide leader in pulmonary thromboendarterectomy (PTE) surgery to remove chronic blood clots from major blood vessels in the lungs.

Our surgeons conduct more successful PTEs than any other medical center and the lowest post-surgery mortality rate worldwide. Patients with thromboembolic pulmonary hypertension who have not received appropriate diagnosis and treatment elsewhere are often treated successfully at our Sulpizio Cardiovascular Institute.

medication and continuous infusion therapy. He remained stable for approximately seven years before showing signs of disease progression. Unfortunately, Reyes’ symptoms and disease eventually worsened, and in 2020, he was referred for organ transplant surgery.

A SECOND CHANCE

Once his organ transplant evaluation process was complete, Reyes was placed on the organ transplant waitlist in June 2020; he was on the waitlist for six weeks. “

“The number eight is very special for us because eight months after my son was born, and nearly eight years after my initial diagnosis, I was back in the hospital for my transplant surgery on August 8, 2020,” Reyes said. *“For me, it felt like a second chance at life.”*

Reyes’ surgery was performed by **Victor Pretorius, MBChB**, surgical director of cardiac transplant and mechanical circulatory support at UC San Diego Health and **Eugene Golts, MD**, cardiothoracic surgeon and surgical director of the lung transplant program at UC San Diego Health.

“We offer the most advanced transplant services in the region and we have the capacity to deal with these more-than-complex cases where the patient needs multiple organs transplanted at one time,” said Pretorius. *“This is combined with a personal connection with each of our patients. I’m so proud of our team for how well we manage such cases.”*

“Our transplant program has grown tremendously over the past several years,” said Golts. One-year transplant patient and organ survival rates exceed national averages across all procedures, placing UC San Diego Health among the nation’s best transplant centers, according to the Scientific Registry of Transplant Recipients, which provides statistical and other analytic support for the Organ Procurement and Transplantation Network.



“By incorporating patient access, innovative treatment options and a proactive, interdisciplinary care model for cases like Mr. Reyes, we have successfully built our program with integrity that has resulted in incredible patient outcomes.”

— Eugene Golts, MD

For Reyes, the gift he received from his organ donor meant he could see his now three-year-old son grow up, alongside his wife and family.

“From my trip to the Philippines to receiving treatment at UC San Diego Health, everything was perfect timing and a blessing from God,” said Reyes. *“Had I not gone on my trip, I would have kept ignoring the signs of my deteriorating health. I wouldn’t have met my wife, and I wouldn’t have my beautiful son, Akiko.”*

AWARDS

Healthgrades Top Hospital, America’s 100 Best Cardiac Care, Cardiac Care Excellence Award, 2022-2023



SELECTED PUBLICATIONS

1. You’re never too old for optimal venous thromboembolism prophylaxis: Re-thinking current trauma guidelines. Borst JM, Modi RN, Kirchberg TN, Box K, Smith AM, Godat LN, Doucet JJ, Costantini TW, Berndtson AE. *Thromb Res.* 2022 Sep 1;218:186-188. doi: 10.1016/j.thromres.2022.08.026. Online ahead of print. PMID: 36081242 No abstract available.
2. Multidisciplinary Approach to Chronic Thromboembolic Pulmonary Hypertension: Role of Radiologists. Hahn LD, Papamatheakis DG, Fernandes TM, Poch DS, Yang J, Shen J, Hoh CK, Hsiao A, Kerr KM, Pretorius V, Madani MM, Kim NH, Kligerman SJ. *Radiographics.* 2023 Feb;43(2):e220078. doi: 10.1148/rg.220078. PMID: 36525366



Dr. Michael M. Madani

CARDIOVASCULAR & THORACIC SURGERY FACULTY

CHIEF OF DIVISION
Michael M. Madani, MD

PROFESSORS OF SURGERY
Joelle Coletta, MD
Eugene Golts, MD
Steven Howe, MD
John Nigro, MD
Mark Onaitis, MD
Victor Pretorius, MD
Patricia A. Thistlethwaite, MD, PhD

**ASSOCIATE PROFESSORS
OF SURGERY**
John Artrip, MD
Daniel Gramins, MD
Mark Kearns, MD
Travis Pollema, DO

**ASSISTANT PROFESSOR
OF SURGERY**
Joshua Boys, MD
Srujan Ganta, MD
Antonios Sideris, MD

**PROFESSOR OF SURGERY
EMERITUS**
Stuart Jamieson, MD
Jolene Kriett, MD

DIVISION OF COLON AND RECTAL SURGERY

The Division of Colon and Rectal Surgery at UC San Diego is recognized as national leader in the fields of medical robotics, colorectal cancer and colorectal innovation. Our aim is to provide the most advanced colorectal care in the region.

The colorectal team is rounded out by the incredible help and support of our front desk team, schedulers, MAs, nurses, APPs, WOCNs, and administration.

MEET THE TEAM:

Dr. Sonia Ramamoorthy is the Chief of the Division of Colon and Rectal Surgery. Under her auspices, the division has continued to expand its clinical footprint in San Diego with new and expanded clinic presence throughout the region. Colorectal ambulatory volume has increased 20% in the past fiscal year, with a concomitant rise in operative volume. UC San Diego Gastroenterology and GI Surgery reached a national ranking of #18 this year with the highest score possible for colon cancer surgery.

Dr. Ramamoorthy continues to serve locally as the systemwide faculty representative to the UC Regents Health Services committee and the vice chair of the UC San Diego Planning and Budget Committee. On a national level, she is President-elect of the American Society of Colon and Rectal Surgeons (ASCRS) and will be the first minority woman president and only the fourth female president of the society in 125 years. Dr. Ramamoorthy was also recently appointed to Women in Medicine advisory board for Doximity.

She has enjoyed connecting with colleagues throughout the country and internationally as an invited speaker at the Pennsylvania Colorectal Society (to give the Bacon Oration), the Orlando Surgical Congress, the Korean Surgical Society (to deliver a keynote address on gender equity), and the Lahey Clinic.

Dr. Bard Cosman is our colorectal lead at the Jennifer Moreno VA Medical Center, while still maintaining a university practice. He is the busiest general surgeon at the VA, where he also chairs the Tumor Board and Cancer Committee. He has a clinical interest in operations for hidradenitis suppurativa / acne inversa, and he is getting regional referrals and limiting his UC San Diego practice to this condition.

He is part of the Master Clinician Program for medical students and has received a "Golden Scalpel" award from the residents. He is the Southern California Councilor for Pacific Coast Surgical Association, and he serves on the ASCRS Program Committee. He is a longstanding Editorial Board member and reviewer for Diseases of the Colon & Rectum; he is also on the editorial board of Vexillum, the North American Vexillological Association's quarterly.



Dr. Ramamoorthy and her daughter at the UC San Diego Center for the Future of Surgery on Family Day



Dr. Lisa Parry

Dr. Lisa Parry stands as a cornerstone of the Colorectal Cancer Disease team at the NCI-designated Moores Cancer Center, where her leadership drives innovation and excellence. With a specialized focus on colorectal robotic surgery, she boasts an impressive portfolio of over 600 successful robotic cases, showcasing her unparalleled expertise in the field.

Her impact extends beyond the walls of the Moores Cancer Center as she spearheaded the introduction of robotic surgery at the La Jolla VA Medical Center, revolutionizing treatment options for patients in need. Dr. Parry's visionary leadership has also led to the expansion of UC San Diego Colorectal into North San Diego County, with the establishment of a prominent presence at the Rancho Bernardo UC San Diego Clinic at Via Tazon.

In addition to her clinical achievements, Dr. Parry is deeply committed to education, mentoring medical students and residents at UC San Diego. Her dedication to advancing surgical education is evident in her development of cutting-edge robotic curriculum for residents, earning her this year's esteemed chief resident award for her exemplary teaching in the operating room.

Beyond her clinical and educational endeavors, Dr. Parry's advocacy and leadership roles further underscore her commitment to the field. She serves as the Chair of the Women in Surgery Committee at UC San Diego and holds the prestigious position of President of the San Diego Colorectal Collaborative, where she continues to drive collaboration and best practices throughout the region.

Dr. Samuel Eisenstein is the director of IBD surgery and has continued to increase UC San Diego's footprint nationally in this field. Dr. Eisenstein had pioneered stem cell fat grafting, a safe and effective treatment for Crohn's anal fistulas.

UC San Diego has become a national referral center for this disease and published on our experience this year. Dr. Eisenstein was also awarded a prestigious Litwin grant from the Crohn's and Colitis Foundation to study CBD suppositories in treating symptoms from this challenging disease. He has also received pilot funding from the institution to study the patient microbiome and its effects of surgery for Crohn's fistulas. He continues to spearhead the NSQIP-IBD project nationally as well as IBD-SIRQC which rolled out earlier this year and will be largest database of IBD surgical outcomes. He has published eight manuscripts in the last year and has several more currently in press.

Locally, Dr. Eisenstein has recently been selected to be a member of the Academy of Clinician Scholars, the Health Sciences Research Grants Committee, and the Risk Adjustment Steering Committee. Dr. Eisenstein has also been acknowledged as a national expert in colon and rectal surgery, having been asked to speak at the Crohn's and Colitis Congress, SAGES, and the annual meeting of ASCRS. He was also selected to be the program director of the 2025 ASCRS national meeting here in San Diego.



Dr. Samuel Eisenstein

You can hear Dr. Eisenstein as a co-host of the Gut Check podcast, the official podcast of ASCRS.

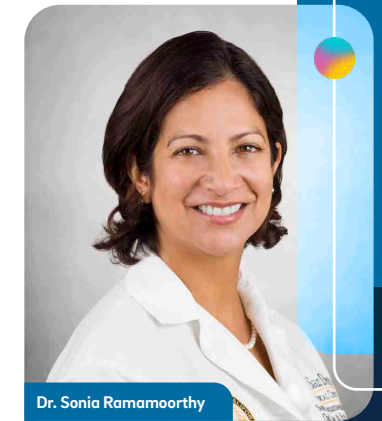
Dr. Nicole Lopez remains at the forefront of UC San Diego's National Accreditation Program for Rectal Cancer (NAPRC), leading efforts that recently underwent a rigorous re-accreditation site visit this Fall. Her dedication to excellence in oncology has garnered widespread recognition, as evidenced by her prestigious selection as a *Castle Connolly Exceptional Woman in Medicine* for the year 2023, along with her well-deserved inclusion in the esteemed *San Diego County Medical Society/San Diego Magazine Top Docs* list for the same year.

Adding to her impressive array of accomplishments, Dr. Lopez has been appointed to a significant role on the American Board of Surgery, serving on the Complex General Surgical Oncology (CGSO) Certifying Exam Committee, where her expertise contributes to shaping the future of surgical oncology education and certification.

Furthermore, Dr. Lopez has demonstrated her commitment to continuous improvement in healthcare delivery by successfully completing and earning her Lean Six Sigma Healthcare Green Belt, showcasing her proficiency in optimizing processes and enhancing patient care.



Dr. Nicole Lopez



Dr. Sonia Ramamoorthy

SELECTED PUBLICATIONS

1. Effectiveness and Safety of Biologic Therapy in Hispanic Vs Non-Hispanic Patients With Inflammatory Bowel Diseases: A CA-IBD Cohort Study. Nguyen NH, Luo J, Paul P, Kim J, Syal G, Ha C, Rudrapatna V, Park S, Parekh N, Zheng K, Sauk JS, Limketkai B, Fleschner P, Eisenstein S, Ramamoorthy S, Melmed G, Dulai PS, Boland BS, Mahadevan U, Sandborn WJ, Ohno-Machado L, McGovern D, Singh S. *Clin Gastroenterol Hepatol.* 2023 Jan;21(1):173-181.e5.
2. Effect of Obesity on Risk of Hospitalization, Surgery, and Serious Infection in Biologic-Treated Patients With Inflammatory Bowel Diseases: A CA-IBD Cohort Study. Gu P, Luo J, Kim J, Paul P, Limketkai B, Sauk JS, Park S, Parekh N, Zheng K, Rudrapatna V, Syal G, Ha C, McGovern DP, Melmed GY, Fleschner P, Eisenstein S, Ramamoorthy S, Dulai PS, Boland BS, Grunvald E, Mahadevan U, Ohno-Machado L, Sandborn WJ, Singh S. *Am J Gastroenterol.* 2022 Oct 1;117(10):1639-1647
3. Gender Related Differences in Surgeon Compensation: Survey Results from the American Society of Colon and Rectal Surgeons. Lopez NE, Nguyen NH, Hull TL, Peters WR, Singh S, Ramamoorthy SL. *Ann Surg.* 2023 Apr 1;277(4):e832-e838
4. Alvimopan for Enhanced Gastrointestinal Recovery after Cytoreductive Surgery and Hyperthermic Intraperitoneal Chemotherapy: A Randomized Controlled Trial. Baumgartner JM, Chen R, Messer K, Veerapong J, Kelly KJ, Ramamoorthy S, Lowy AM. *J Am Coll Surg.* 2022 Nov 1;235(5):693-701.
5. The Mucin Family of Proteins: Candidates as Potential Biomarkers for Colon Cancer Cox KE, Liu S, Lwin TM, Hoffman RM, Batra SK, Bouvet M. *Cancers (Basel).* 2023 Feb 27;15(5):1491. doi: 10.3390/cancers15051491.PMID: 36900282
6. Robotic Surgery. Ramamoorthy S. *Fischer's Mastery of Surgery, Eighth Edition*, ed. Ellison CE, Upchurch GR et al. Walter Kluwer. 2023

COLON AND RECTAL SURGERY FACULTY

CHIEF OF DIVISION
Sonia Ramamoorthy, MD, FACS, FASCRS

PROFESSOR OF SURGERY
Bard Cosman, MD, FACS, FASCRS

ASSOCIATE PROFESSORS OF SURGERY
Ben Abbadessa, MD, FACS
Samuel Eisenstein, MD
Nicole Lopez, MD
Lisa Parry, MD

ASSISTANT PROFESSORS OF SURGERY
Shanglei Liu, MD, MAS

The Colon And Rectal Surgery Team



Dr. Benjamin Abbadessa

Dr. Benjamin Abbadessa steps into his new role as the Hillcrest Surgical Director and assumes the position of Colorectal Clinic Medical Director. His ongoing leadership as the colorectal and robotics led to a significant expansion of the clinical and robotics program, with a notable increase in both the volume and diversity of colorectal cases.

In addition to his clinical responsibilities, Dr. Abbadessa actively contributes to the academic and quality improvement aspects of his field. He holds an elected membership on the Health Sciences Faculty Council, where he advocates for advancements in healthcare education and research. Within the division of colorectal surgery, he serves as a dedicated quality improvement representative, ensuring that patient care continuously evolves to meet the highest standards. Dr. Abbadessa's commitment to nurturing future generations of surgeons is evident in his role as the surgeon champion for the Hillcrest Surgical Subspecialty medical student rotation.

Beyond his professional endeavors, Dr. Abbadessa celebrates the joyous arrival of his third child, Juliet, in November, marking a special milestone for the Abbadessa family.



Dr. Shanglei Liu

Dr. Shanglei Liu Dr. Shawn Liu shines brightly as one of the newest stars in our colon and rectal division. His clinical expertise continues to flourish, with a growing practice at both Hillcrest Medical Center and Jacob Medical Center. Dr. Liu leads the way in gender-affirmation surgery using robotic colon harvesting, a groundbreaking technique that he recently presented at a national meeting for colorectal surgeons, garnering acclaim for its innovation and potential to improve patient outcomes.

On the research front, Dr. Liu's contributions are equally impressive. He was honored with the prestigious career development award from The Society for Surgery of the Alimentary Tract for his proposal titled "*Detection of Colon Sessile Serrated Adenomas Using Antibody Coupled Fluorophores to Improve Colon Cancer Prevention*," highlighting his commitment to advancing the field of colorectal surgery and enhancing early detection methods for improved patient care. Dr. Liu is also the PI for two industry sponsored clinical trials assessing the effectiveness of fluorescent-guided imaging. With a strong background in bioengineering, Dr. Liu remains committed to his work in the area of surgeon ergonomics.



DIVISION OF MINIMALLY INVASIVE SURGERY



The Division of Minimally Invasive Surgery is nationally recognized as one of the premier centers for bariatric surgery, advanced foregut surgery, complex hernia and abdominal wall repairs and revisional minimally invasive surgery. We continue to maintain level 1 accreditation as a bariatric center and are collaborating with our colleagues in Tijuana to help provide comprehensive bariatric care to our region.

Our bariatric program continues to grow, and we have performed 150 percent more cases in the past year than the year prior. Additionally, our metabolic primary care specialists have introduced the use of GLP-1 inhibitors for our bariatric and other minimally invasive patients, with amazing success in weight loss prior to surgical intervention. We remain on the cutting edge of technology within the Department of Surgery, constantly advancing techniques, utilizing innovative surgical tools and bringing new approaches to commonly performed general surgery operations.

CENTER FOR FUTURE OF SURGERY

The Center for the Future of Surgery remains one of the premier training centers in the country. It has expanded to become the most comprehensive surgical training center in the nation. We continue to have a weekly resident lab where residents practice their surgical skills, including robotic, laparoscopic and microscopic surgery skills. Additionally, the CFS is utilized for medical student teaching, faculty training and is utilized by many specialties, including Vascular Surgery, anesthesia, trauma surgery and plastic surgery.

We recently were honored to host the annual Stryker iSPIES event at the CFS for the first time. This global conference brings together diverse specialties to learn about uses of fluorescence in surgical fields. The conference attracted providers from all over the world and was attended by over 300 individuals. Individuals presented their utilization of indocyanine green (ICG) in colorectal surgery to evaluate the anastomosis and identify the ureters, use of ICG in hepatobiliary surgery, subcutaneous flap evaluation, and lymph node mapping, among many other topics.



SAGES Endoscopic Education for Fellows

ADVANCEMENTS IN ROBOTIC SURGERY

The MIS division is a leader in progressing the use of robotic surgery at UC San Diego, and recently initiated use of a robotic platform for outpatient hernia repairs. We have found similar operative times, turnover times, and outcomes to laparoscopic and open approaches. This provides promising data for incorporating the use of the robotic platform in elective outpatient surgeries.

Additionally, **Dr. Bryan Clary** and **Dr. Santiago Horgan** successfully performed the first robotic choledochal cyst resection in the summer of 2022. The divisions have continued this collaborative effort to provide minimally invasive care for benign common bile duct conditions.



FLUORESCENCE GUIDED SURGERY

With the creation of the Center for Fluorescence Guided Surgery, in conjunction with UC San Diego surgical oncologist **Dr. Michael Bouvet**, our department continues to be on the forefront of utilizing fluorescence imaging for safer minimally invasive surgery. The use of indocyanine green (ICG) is now the standard for laparoscopic cholecystectomies at our institution, helping us visualize anatomy and avoid intra-operative complications.

We continue to investigate the use of fluorescence with ongoing research projects in the field.



Dr. Broderick teaching at the Fellows Course

MEET THE TEAM

Santiago Horgan, MD, is a board-certified surgeon and chief of the division of MIS, who specializes in treating advanced foregut disease and obesity. He is a distinguished leader in revisional foregut and bariatric surgery. His areas of expertise include laparoscopic and robotic surgery. He is also the director of the Bariatric and Metabolic Institute, the Center for Future of Surgery and the Center for Fluorescence Guided Surgery. He has established a partnership with our colleagues in Tijuana to help provide comprehensive bariatric care and create an additional Center for the Future of Surgery in Mexico.

Garth Jacobsen, MD, is a board-certified surgeon and associate professor who specializes in abdominal wall reconstruction, minimally invasive hernia repairs and bariatric surgery. He is on the forefront of utilizing the robotic platform for outpatient hernia surgery. Additionally, he serves as the General Surgery Residency Program Director for UC San Diego.

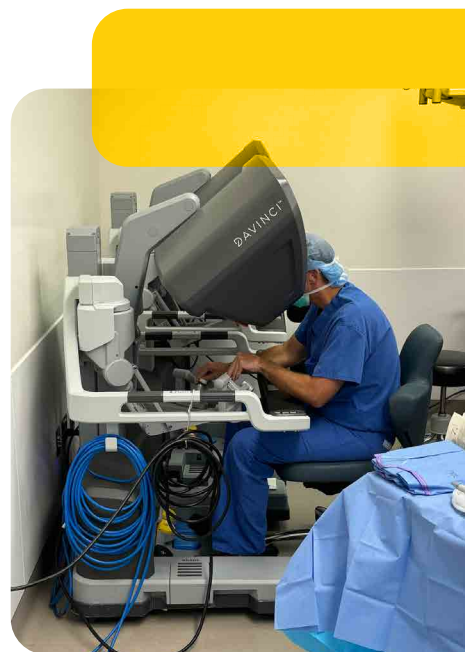
Bryan Sandler, MD, is a board-certified surgeon and associate professor who specializes in treating patients with disorders of the foregut, esophagus, gastric or biliary system and small intestine. This past September, Dr. Sandler co-chaired the SAGES Fellow Course in Flexible Endoscopy for the second year in a row, a non-CME course that familiarizes minimally invasive surgery fellows around the country with various methods used in endoscopic surgery.

Ryan Broderick, MD, is a board-certified surgeon and assistant professor, and the most recent faculty member to be hired in the division of MIS. He specializes in disorders of the foregut, esophagus and hernia repairs. He is also involved in collaborating with the surgical oncology department to provide minimally invasive oncologic surgeries of the foregut and in a leader in the research department and providing education to the residents at the CFS.

FELLOWS:

Dr. Emily Kunkel (Second from the left next to Dr. Horgan) is one of our two fellows this year. She completed her general surgery residency at Temple University in Philadelphia, Pennsylvania.

She is interested in bringing her skills back to the east coast after the completion of her fellowship.



Dr. Jacobsen using the robot at Komen Outpatient Pavilion (KOP)



SELECTED PUBLICATIONS

1. Distinguishing characteristics of xanthogranulomatous cholecystitis and gallbladder adenocarcinoma: a persistent diagnostic dilemma. Huang EY, Reeves JJ, Broderick RC, Serra JL, Goldhaber NH, An JY, Fowler KJ, Hosseini M, Sandler BJ, Jacobsen GR, Horgan S, Clary BM. *Surg Endosc*. 2023 Oct 2. doi: 10.1007/s00464-023-10461-8. Epub ahead of print. PMID: 37783778.
2. Carbohydrate Loading and Aspiration Risk in Bariatric Patients: Safety in Preoperative Enhanced Recovery Protocols. Huang EY, Li JZ, Chung D, Jacobsen GR, Sandler BJ, Wadhwa A, Said E, Robbins K, Horgan S, Broderick RC. *J Am Coll Surg*. 2023 Jun 1;236(6):1200-1206. doi: 10.1097/XCS.0000000000000665. Epub 2023 Feb 21. PMID: 36804320.
3. Lighting the Way with Fluorescent Cholangiography in Laparoscopic Cholecystectomy: Reviewing 7 Years of Experience. Broderick RC, Li JZ, Huang EY, Blitzer RR, Lee AM, Serra JL, Bouvet M, Sandler BJ, Jacobsen GR, Horgan S. *J Am Coll Surg*. 2022 Nov 1;235(5):713-723. doi: 10.1097/XCS.0000000000000314. Epub 2022 Oct 17. PMID: 36102574.
4. Post Sleeve Reflux: indicators and impact on outcomes. Li JZ, Broderick RC, Huang EY, Serra J, Wu S, Genz M, Sandler BJ, Jacobsen GR, Horgan S. *Surg Endosc*. 2023 Apr;37(4):3145-3153. doi: 10.1007/s00464-022-09454-w. Epub 2022 Aug 10. PMID: 35948805.
5. Despite regression of healthy lifestyle habits, weight loss after bariatric surgery is not affected during the COVID-19 pandemic. Huang EY, Grunvald E, Blitzer RR, Lee AM, Broderick RC, Li JZ, Cheverie JN, Sandler BJ, Horgan S, Jacobsen GR. *Surg Endosc*. 2023 Jan;37(1):607-612. doi: 10.1007/s00464-022-09356-x. Epub 2022 Jun 13. PMID: 35697849; PMCID: PMC9191545.
6. A steady stream of knowledge: decreased urinary retention after implementation of ERAS protocols in ambulatory minimally invasive inguinal hernia repair. Broderick RC, Li JZ, Blitzer RR, Ahuja P, Race A, Yang G, Sandler BJ, Horgan S, Jacobsen GR. *Surg Endosc*. 2022 Sep;36(9):6742-6750. doi: 10.1007/s00464-021-08950-9. Epub 2022 Jan 4. PMID: 34982228.
7. The physiology of intraoperative error: using electrokardiograms to understand operator performance during robot-assisted surgery simulations. D'Ambrosia C, Aronoff-Spencer E, Huang EY, Goldhaber NH, Jacobsen GR, Sandler B, Horgan S, Appelbaum LG, Christensen H, Broderick RC. *Surg Endosc*. 2023 Jun;37(6):4641-4650. doi: 10.1007/s00464-023-09957-0. Epub 2023 Mar 2. PMID: 36862171; PMCID: PMC10234932.
8. Weight loss outcomes are not compromised in bariatric patients using cannabis. Huang EY, Broderick RC, Li JZ, Serra JL, Ahuja P, Wu S, Genz M, Grunvald E, Kunkel DC, Sandler BJ, Horgan S, Jacobsen GR. *Surg Endosc*. 2023 Mar;37(3):2194-2201. doi: 10.1007/s00464-022-09453-x. Epub 2022 Jul 21. PMID: 35861881.
9. Obesity Hypoventilation Syndrome and Postsurgical Outcomes in a Bariatric Surgery Cohort. Raphaelson JR, Schmickl CN, Sonners C, Kreitinger K, Grunvald E, Horgan S, Malhotra A. *Obes Surg*. 2022 Jul;32(7):1-7. doi: 10.1007/s11695-022-06073-1. Epub 2022 May 11. PMID: 35538187; PMCID: PMC9276616.
10. Co-Localization of Gastrointestinal Stromal Tumors (GIST) and Peritoneal Mesothelioma: A Case Series. Courelli AS, Sharma AK, Madlensky L, Choi YY, Li S, Sarno S, Kelly K, Mehtsun W, Horgan S, Harismendy O, Baumgartner JM, Sicklick JK. *Ann Surg Oncol*. 2022 Nov;29(12):7542-7548. doi: 10.1245/s10434-022-12211-x. Epub 2022 Jul 18. PMID: 35849291; PMCID: PMC10226389.
11. Esophageal Pathology in Asymptomatic and Symptomatic Patients with Obesity Undergoing Evaluation for Bariatric Surgery. Sharma P, Youssef F, Greytak M, Broderick R, Jacobsen G, Horgan S, Yadlapati R. *J Gastrointest Surg*. 2022 Apr;26(4):921-923. doi: 10.1007/s11605-021-05169-w. Epub 2021 Oct 20. PMID: 34671915; PMCID: PMC9018857.
12. Experience with 10 years of a robotic surgery program at an Academic Medical Center. Stringfield SB, Parry LA, Eisenstein SG, Horgan SN, Kane CJ, Ramamoorthy SL. *Surg Endosc*. 2022 Mar;36(3):1950-1960. doi: 10.1007/s00464-021-08478-y. Epub 2021 Apr 12. PMID: 33844089; PMCID: PMC8847263.
13. Commentary: Minimally invasive esophagectomy: Steady progress. Horgan S, Onaitis M. *J Thorac Cardiovasc Surg*. 2021 Sep;162(3):707-708. doi: 10.1016/j.jtcvs.2021.02.054. Epub 2021 Feb 22. PMID: 33832792.



Dr. Santiago Horgan

MINIMALLY INVASIVE SURGERY FACULTY

CHIEF OF DIVISION
Santiago Horgan, MD, FACS

PROFESSOR OF SURGERY
Garth R. Jacobsen, MD, FACS
Bryan J. Sandler, MD, FACS

ASSOCIATE PROFESSOR OF SURGERY
Ryan Broderick, MD

ASSISTANT PROFESSORS OF SURGERY
Eduardo Grunvald, MD
Tania Morimoto, MD, PhD

DIVISION OF OTOLARYNGOLOGY

Our program moved from 61 to 26 to 14 in the U.S. News & World Report over the past three years. With our inclusion in the rankings we helped make UC San Diego #1 in healthcare in San Diego.

We were again successful in offering a full year or two of research for our residents by successfully funding with an application for a five-year, R25, Mentored Research Pathway for Otolaryngology Residents grant from NIH-NIDCD. This new grant mechanism, with Dr. Rick Friedman as the principal investigator, replaces the T32 grant that we have had continuously funded for over 20 years.

DR. MATTHEW BRIGGER LEADS THE FIRST EVER EXIT PROCEDURE AT JACOBS MEDICAL CENTER

Dr. Matthew Brigger and his team from the Center for Pediatric Aerodigestive Disorders and Airway Surgery at Rady Children's Hospital successfully performed the first Ex Utero Intrapartum Therapy (EXIT) at Jacobs Medical Center. The team was consulted to assist in the delivery of a child who was diagnosed on prenatal ultrasound with a critical airway obstruction and at high risk for acute airway obstruction at delivery.

The highly coordinated procedure involved multiple teams to partially deliver the child through a controlled cesarian section while maintaining placental circulatory support. While on placental support, Dr. Brigger and his team secured the airway, allowing safe delivery and immediate transfer to the NICU at Jacobs.

The team at the Center for Pediatric Aerodigestive Disorders and Airway Surgery provides tertiary and quaternary care for airway and swallowing problems and has developed a national and international reputation for high level, innovative care for these complex children.

Dr. Matthew Brigger and his team at the Center for Pediatric Aerodigestive Disorders and Airway Surgery perform the first ever procedure.

GOING THE DISTANCE IN ACOUSTIC NEUROMA RESECTION: MICROSURGICAL OUTCOMES AT HIGH-VOLUME CENTERS OF EXCELLENCE

A new study from UC San Diego Neurological Surgery and the Head & Neck Surgery experts finds traveling to a high-volume center of excellence like at UC San Diego Health leads to improved outcomes for AN patients, despite delays in treatment time.

Dr. Friedman's publication is based upon the data from our acoustic neuroma program which has performed over

1,000 surgeries since the arrival of Drs. Friedman and Schwartz, we demonstrate that overall outcomes for surgically treated patients are superior at high volume treatment centers.

Our programs data was compared to national databases reporting morbidity, mortality, complications, and length of stay.

FROM THE PATIENT PERSPECTIVE

It all started in 2016, when I noticed that my equilibrium was not quite right. Then, in early 2018, I began to experience sudden hearing loss that initially responded to a corticosteroid.

Seeking further treatment, I went for my first MRI later that summer. It showed a small lesion inside my left ear vestibule, which the radiologist and ENT thought was most likely scar tissue. A follow-up MRI determined a small acoustic neuroma close to the cochlea, apparently a rare location.

I began to research my specific situation. I did lots of reading and talked to a half dozen neurotologists. All agreed that radiation treatment would make a cochlear implant impossible and that when my hearing was finally gone, surgical resection with the implant was the best solution.

COVID interrupted everything. But by the summer of 2021, another MRI showed little to no growth and an audiogram showed nearly total deafness. So, it was surgery. This was a unique situation in that my perseverance of hearing depended on a simultaneous surgical removal and placement of an implant because of the acoustic neuroma location.

Nobody else had the volume of patients, the specific acoustic neuroma experience, and the comprehensive approach to this surgery than UC San Diego Health.

Over the next few months leading up to surgery, I continued to watch the ANA forum and read about the experiences of dozens of new patients who had surgery with

Dr. Rick Friedman and **Dr. Marc S. Schwartz**, and how they were treated afterward.

It was really notable and impressive how the "before and after" were consistent. I became more certain with every post that I'd made the right choice.

My surgery took place in February 2022. I'm an avid scuba diver and underwater photographer and was super nervous about surgery preventing me from diving again.

A month later, I returned to UC San Diego Health to have the cochlear implant activated. I was prepared to hear nothing. But when they turned it on, I was immediately able to understand speech. My wife spoke to me on my 'deaf' side and I responded, reflexively turning my head in that direction. And then I started crying. I had regained sound localization!

Post-surgery, my activity was completely unrestricted. I'm back to yoga and riding the peloton about three times a week. I went diving for the first time since surgery and had no problems at all. All of this is a tremendous improvement in the quality of my life, and I am truly grateful. //

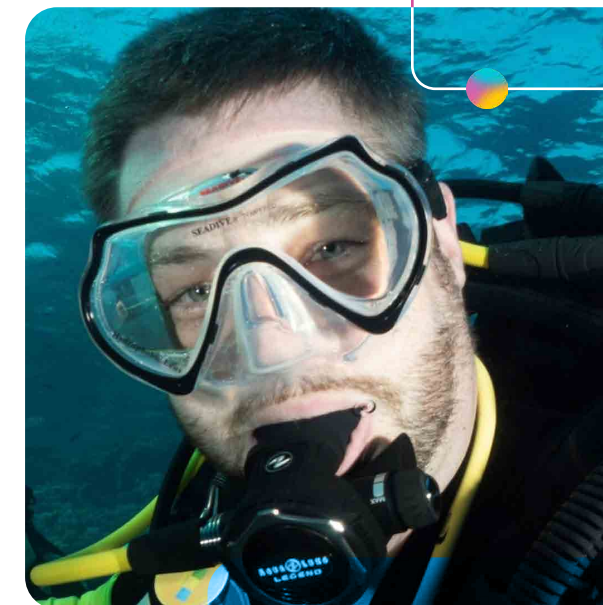
— Liam Stannard



Dr. Rick A. Friedman



Dr. Marc S. Schwartz



“ Dr. Friedman and his team really listened and agreed to take an approach that would leave my eustachian tubes functional (necessary for diving). When I woke up from surgery, my balance was almost completely back.”

— Liam Stannard

ACOUSTIC NEUROMA SURGERY OUTCOMES LINKED TO THE HEAR AND WHERE

Vestibular schwannoma, otherwise known as acoustic neuroma, involves a usually slow-growing tumor that develops within the inner ear. Schwannoma refers to Schwann cells, which normally wrap around nerve fibers to help support and insulate them, including hearing and balance nerves inside the ear.

Overproduction of Schwann cells in the form of a tumor, however, can cause hearing loss, tinnitus (*ringing in the ear*), dizziness and loss of balance. If untreated, a growing tumor can interfere with the trigeminal nerve, which controls facial sensations, such as touch and temperature, and helps you chew. If the tumor becomes large enough, it can press against nearby brain structures and become life threatening.

Treatment may involve stereotactic radiosurgery, which delivers precisely targeted radiation to the tumor while avoiding surrounding healthy tissue, but surgery is often the preferred option.

In a cohort study published online March 2, 2023 in JAMA Otolaryngology, physicians-scientists at UC San Diego School of Medicine report that higher vestibular schwannoma surgical volumes were associated with a reduced risk of adverse outcomes, shorter hospital stays and less likelihood of subsequent readmission.

Study authors reviewed 11,524 relevant cases at U.S. medical facilities accredited by the Commission on Cancer between 2004 and 2019.

The median case volume was 16 cases per year, but with higher case volume, authors said reports of adverse reactions and excess hospital times declined, plateauing around 25 cases per year. Surgery at facilities with annual case volume at or above 25 were associated with a 42% reduction in the odds of excess time compared to those below the 25-case-per-year threshold.

For patients with vestibular schwannoma and facing surgery — there are an estimated 3,000 new cases diagnosed annually — the data may provide food for thought when choosing a place for surgery.

These findings suggest that higher hospital surgical volume may be associated with reduced risk of excess time in the hospital after vestibular schwannoma surgery, and 25 cases per year may represent a risk-defining threshold.

AWARDS

DR. JACQUELINE GREENE RECEIVES AN ACTRI KL2 AWARD

Congratulations to **Dr. Jacqueline Greene**, who just received an *ACTRI KL2 award*, a research training grant for junior faculty, provides up to three years of research career development support and up to \$120,000 for UC San Diego instructors or assistant professors.

DR. CAROL YAN IS CELEBRATED WITH TWO AWARDS

Congratulations to **Dr. Carol Yan**, who received a K08 as well as an *American Rhinological Society New Investigator Award*.

DR. THERESA GUO RECEIVES V FOUNDATION AWARD

Congratulations to **Theresa Guo, MD**, on her V Foundation award. Her \$200,000 award is entitled, "*Defining the relationship between aberrant splicing burden and anti-tumoral immunity in head and neck squamous cell carcinoma*".

DR. QUYEN NGUYEN AWARDED R01 FOR PERIPHERAL NERVE INJURY RESEARCH

Peripheral nerve injuries incurred as a result of trauma, tumors, or other medical conditions may cause complete or partial paralysis and require \$50,000-\$200,000 reconstructive surgeries annually. The autograft is the current "*gold standard*" of treatment, but it requires additional procedures to harvest the graft, can be challenging to perform in a pediatric population and often leads to neuroma formation and loss of function at the donor site.

Quyen Nguyen, MD, PhD, is collaborating with Dr. Shaochen Chen in the UC San Diego Department of Nanoengineering to validate the materials and methods to fabricate pre-clinical polymeric three-dimensional (3D) nerve conduits with an embedded wireless sensor for continuous monitoring of functional recovery to be used in infants/children.

PEOPLE NEWS

DR. RICK A. FRIEDMAN COLLABORATES THE SALK INSTITUTE

The Friedman lab in collaboration with researchers from the Salk institute, demonstrated that treatment with a small molecule, CMS 121, can attenuate age-related hearing loss in a mouse model. Attenuation of Age-Related Hearing Impairment in Senescence-Accelerated mouse prone 8 (SAMP8) Mice Treated with Fatty AcidSynthase Inhibitor CMS121

DR. JESSE QUALLIOTINE JOINS THE DEPARTMENT

We are pleased to announce the recruitment of Jesse Qualliotine, MD, as Assistant Professor. Dr. Qualliotine, an ablative and reconstructive surgeon scientist and engineer investigating novel detection and reconstructive approaches

GRANTS

DR. JOSEPH CALIFANO AWARDED R01 FOR OPTIMIZING IMMUNORADIOTHERAPY FOR HEAD AND NECK SQUAMOUS CELL CARCINOMA

Co-Principal Investigators **Joseph Califano, MD**, and Andrew Sharabi, MD, PhD, have received a 5-year, \$2.3 million National Institutes of Health (NIH) R01 grant from the National Cancer Institute (NCI). This grant will fund experiments to define a new precision approach to targeting combination immunotherapy and radiation to improve outcomes and reduce toxicity in patients with head and neck cancer.

DR. CALIFANO RECEIVES A 5-YEAR, \$2.4 MILLION NIH GRANT

Joseph Califano, MD grant from the NCI is called "*Neoadjuvant immunoradiotherapy for HPV [human papillomavirus] mediated oropharynx cancer*" that will fund a multi-institutional clinical trial for HPV-mediated throat cancer. University of California, San Diego, will lead the trial, which will also be conducted at Oregon Health Sciences University and Providence Hospital in Portland, Oregon.

SELECTED PUBLICATIONS

1. A Young Man Presenting With Tongue Lesions. Victor M, Vavinskaya V, Guo T. JAMA Otolaryngol Head Neck Surg. 2022 Nov 23. doi: 10.1001/jamaoto.2022.3799. Online ahead of print. PMID: 36416858
2. International Pediatric Otolaryngology Group (IPOG) consensus recommendations: Evaluation and management of congenital tracheal stenosis. Sidell DR, Meister KD, de Alarcon A, Boudewyns A, Brigger M, Chun R, Fayoux P, Goudy S, Hart CK, Hewitt R, Hsu WC, Javia LR, Johnson RF, Messner AH, Moreddu E, Nicollas R, Prager JD, Rahbar R, Rickert S, Rossi ME, Russell J, Rutter M, Sandu K, Smith RJH, Soma M, Thierry B, Trozzi M, White DR, Balakrishnan K. Int J Pediatr Otorhinolaryngol. 2022 Oct;161:111251. doi: 10.1016/j.ijporl.2022.111251. Epub 2022 Aug 17. PMID: 35988373 Review.
3. Use of platelet-rich plasma for COVID-19 related olfactory loss, a randomized controlled trial. Yan CH, Jang SS, Lin HC, Ma Y, Khanwalker AR, Thai A, Patel ZM. Int Forum Allergy Rhinol. 2022 Dec 12. doi: 10.1002/alr.23116. Online ahead of print. PMID: 36507615



Dr. Jeffrey Harris

OTOLARYNGOLOGY SURGERY FACULTY

CHIEF OF DIVISION
Jeffrey Harris, MD, PhD

PROFESSORS OF SURGERY

Matthew Brigger, MD
Kevin Brumund, MD
Joseph Califano, MD
Daniela Carvalho, MD
Adam DeConde, MD
Rick Friedman, MD, PhD
David Hom, MD
Anthony Magit, MD
Quyen Nguyen, MD, PhD
Deborah Watson, MD
Jiang Wen, MD
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Paul Schalch, MD
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Meghan Spriggs, AuD, CCC-A
Andrew Vahabzadeh-Hagh, MD

ASSISTANT PROFESSOR OF SURGERY

Morgan Bliss, MD
Jacqueline Greene, MD
Theresa Guo, MD
Cornelius Jansen III, MD
Ryan Orosco, MD
Carol Yan, MD

RECALL FACULTY OF SURGERY
Allen Ryan, PhD

DIVISION OF PEDIATRIC SURGERY

The Division of Pediatric Surgery provides the highest quality comprehensive surgical care to the children of San Diego and the surrounding counties.

Our surgeons value our role in research, academics, education and advocacy. We strive to make a significant contribution to all of the students, residents and fellows in the University of California, San Diego System

WE ARE COMMITTED TO IMPROVING THE HEALTH AND WELFARE OF CHILDREN AND ADOLESCENTS LIVING IN SAN DIEGO COUNTY

The division of Pediatric Surgery remains dedicated to supporting the needs of the community in an ever changing and evolving healthcare environment.

UC San Diego Pediatric Surgery continues to meet the needs of our community through a dedicated clinical practice providing state of the art care. Educationally we provide pediatric surgical exposure to medical students and residents interested in pediatric surgery. Eager learners have the opportunity to participate in and learn about life changing surgical care of children. The division is involved in advocacy for pediatric trauma on a national basis and supports several international health initiatives, including the annual Pediatric Surgery Transition to Fellowship Course or "boot camp".

The team has continued to support multiple clinical and basic science research projects which have been presented both regionally and nationally, developing several quality based initiatives to improve care. Trauma care is a long-standing priority for the division, we continue to improve the surgical critical care through cooperation and training with the UC San Diego Trauma Division.

The pediatric surgery division is always using research to evaluate the care we provide and trying to improve it. We will soon educate our first fellow. The ACGME fellowship has recruited top-notch candidates and is a passion for everyone involved.

"The future is bright, and the Division of Pediatric Surgery intends to continue to make improvements."

— Timothy Fairbanks,
Pediatric Surgery
Chief of Division



The Rady Children's Hospital Pediatric trauma team at UC San Diego is a model nationally.

FACULTY NEWS

Dr. Steve Bickler continues his work as an expert in international health. He serves on the Global Initiative for Children's Surgery and College of Surgeons East, Central and Southern Africa as an external examiner. He has published 24 articles in the last 3 years on a variety of subjects.

Dr. Bickler has made a special commitment to the children of the Jacobs Medical Center NICU and the UC San Diego high-risk obstetrical program. As an educator, he is a very popular clinician educating medical students, residents, and fellows.

Dr. Tim Fairbanks, is the Division Chief. He is active in the administration of all the pediatric surgical sub-specialties in on the Rady campus.

Clinically, he enjoys minimally invasive surgery and the surgical care of neonatal patients. Currently he has been active in operationalizing the increasing clinical volume of the last year. Over the years, Dr. Fairbanks has seen the pediatric Surgery faculty grow, diversify, and excel in many areas. The team gets stronger every year!



Dr. Steven Bicker and Dr. Timothy Fairbanks

Dr. Gerald Gollin academic interests involve necrotizing enterocolitis and the operative and antibiotics management of neonates. He continues to pursue the development and validation of a point of care assay for a urinary marker of pre-clinical NEC. Dr. Gollin is keen to provide students, residents and fellows with the best educational pediatric surgery experience possible.

Dr. Romeo Ignacio is the Rady Trauma Medical Director. A national leader in the care of and advocacy for pediatric trauma patients, he is very active in clinical research and leads the clinical research efforts for the division.

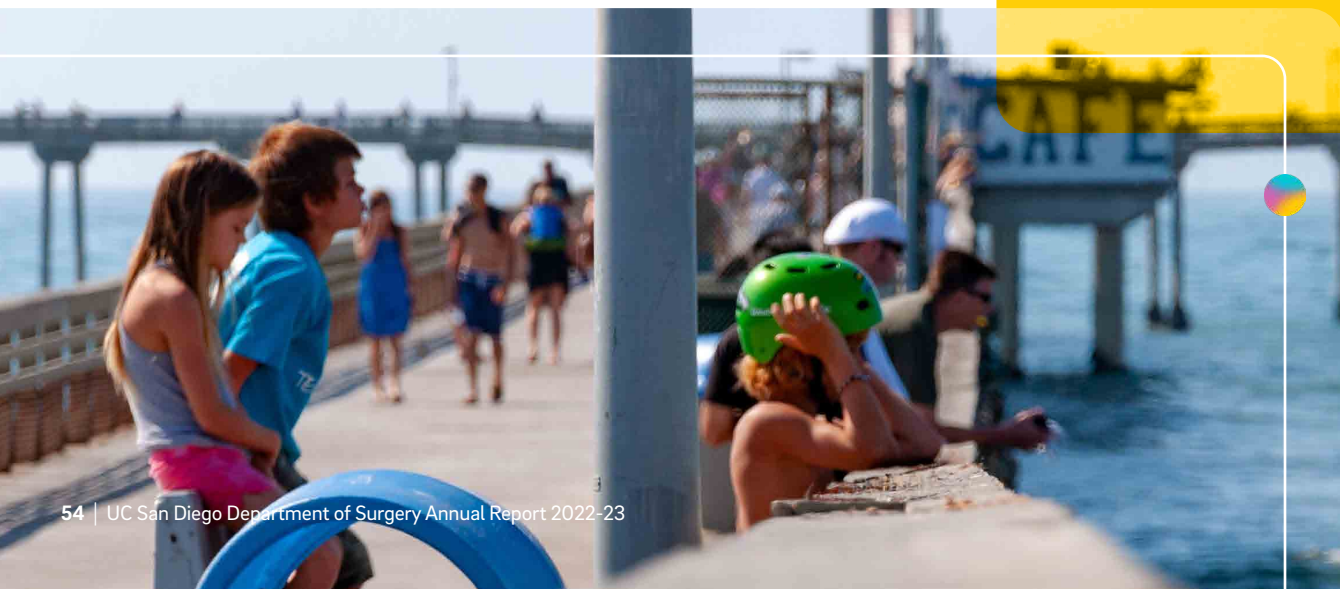
Dr. Ignacio has many important roles on national meetings and committees.

Dr. Ben Keller is board certified in Pediatric Surgery and Critical Care.

He is the Surgical Director of the Pediatric Intensive Care Unit. Dr. Keller is in the process of starting a Pediatric Surgical Critical Care Fellowship and he is a patient and family favorite, often receiving exemplary comments in patient feedback surveys. Dr. Keller has led our efforts on several successful quality improvement projects.



Dr. Ben Keller and Dr. Romeo Ignacio



Dr. Karen Kling is the foundation of the pediatric surgery education efforts. She has provided excellent leadership and mentorship as the pediatric surgery fellowship program director. Clinically she performs many complicated hepatobiliary cases in addition to the comprehensive case variety.

Dr. Kling continues her leadership in the educational curriculum for students, residents and fellows, and has presented her research at multiple national conferences.



Dr. Karen Kling

Dr. David Lazar, a proud representative of the UC San Diego general surgery residency program, has an extensive and diverse clinical practice. He has started a lecture series targeting appropriate subject matter for the residents and medical students, and continues multiple research projects.

Dr. Lazar been active in the Pediatric Surgery Transition to Fellowship book camp, acting as our site director for this important national program.

Dr. Hari Thangarajah leads the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) at Rady Children's Hospital. This program is the gold standard for the improvement in the quality of the surgical care provided at Rady / UC San Diego, the program would not be possible without his diligent efforts.

Dr. Thangarajah has played an important role as Pediatric Surgery Medical Staff Chief, and he is proving advance surgical oncology care along with comprehensive pediatric surgery care. His steady hand for the fellows in the OR is sought after clinically and for his excellent care.

Dr. Bryan Clary, Dr. Jennifer Berumen and the UC San Diego Transplant Team have played an increasing role in the care of children on the Rady Campus in recent years. Dr. Clary performed a rarely needed Whipple on a young girl. Dr. Berumen is involved with Dr. Thangarajah on complex oncology cases.

This cooperation increases the capability to provided advanced complex multidisciplinary care to the children of San Diego.



Dr. Hari Thangarajah



Fellow **Tim Terrell MD** (left) and Attending **David Lazar MD**. Both UC San Diego General Surgery Alumni

SELECTED PUBLICATIONS

1. Surgically Correctable Congenital Anomalies: Reducing Morbidity and Mortality in the First 8000 Days of Life. Banu T, Sharma S, Chowdhury TK, Aziz TT, Martin B, Seyi-Olajide JO, Ameh E, Ozgediz D, Lakhoo K, Bickler SW, Meara JG, Bundy D, Jamison DT, Klazura G, Sykes A, Yap A, Philipo GS; GICS. World J Surg. 2023 Dec;47(12):3408-3418
2. Elemental, fatty acid, and protein composition of appendicoliths. Prieto JM, Wang AW, Halbach J, Cauvi DM, Day JMD, Gembicky M, Ghassemian M, Quehenberger O, Kling K, Ignacio R, DeMaio A, Bickler SW. Sci Rep. 2022 Nov 17;12(1):19764
3. A new chronology for the Māori settlement of Aotearoa (NZ) and the potential role of climate change in demographic developments. Bunbury MME, Petchey F, Bickler SH. Proc Natl Acad Sci U S A. 2022 Nov 16;119
4. Fostering Sustainable Biomedical Research Training in Mozambique: A Spin-Off of the Medical Education Partnership Initiative. Noormahomed EV, Noormahomed S, Hlashway D, Martins E, Ismail M, Bickler SW, Nachega J, Mahoche M, Barrett KE, Benson CA, Schooley RT. Ann Glob Health. 2022 Aug 2;88(1):65
5. Prevalence and Severity of Burn Scars in Rural Mozambique. Barba P, Neubauer DC, Cossa M, Sieker J, Hornacek MW, Lance SH, Ewing E, Tsai C, Funzamo C, Amado V, Adamo F, Rose J, Bendix P, Vaz F, Noormahomed E, Bickler SW, Gosman A. World J Surg. 2022 Nov;46(11):2561-2569.
6. Estimates of Treatable Deaths Within the First 20 Years of Life from Scaling Up Surgical Care at First-Level Hospitals in Low- and Middle-Income Countries. Sykes AG, Seyi-Olajide J, Ameh EA, Ozgediz D, Abbas A, Abib S, Ademuyiwa A, Ali A, Aziz TT, Chowdhury TK, Abdelhafeez H, Ignacio RC, Keller B, Klazura G, Kling K, Martin B, Philipo GS, Thangarajah H, Yap A, Meara JG, Bundy DAP, Jamison DT, Mock CN, Bickler SW; On behalf of the Global Initiative for Children's Surgery. World J Surg. 2022 Sep;46(9):2114-212
7. Defining Surgical Workforce Density Targets to Meet Child and Neonatal Mortality Rate Targets in the Age of the Sustainable Development Goals: A Global Cross-Sectional Study. Truche P, Smith ER, Ademuyiwa A, Buda A, Nabukenya MT, Kaseje N, Ameh EA, Greenberg S, Evans F, Bickler S, Meara JG, Rice HE. World J Surg. 2022 Sep;46(9):2262-2269
8. Integrating traffic safety data with area deprivation index: A method to better understand the causes of pediatric pedestrian versus automobile collisions. de Cos V, Rooney AS, Sykes AG, Ghetti CB, Henry OS, Krzyzaniak A, Thangarajah H, Bickler SW, Bansal V, Martin M, Lazar D, Ignacio RC Jr. J Trauma Acute Care Surg. 2022 Nov 1;93(5):650-655
9. Pediatric DUCT Score: A Highly Specific Predictive Model for Choledocholithiasis in Children. Ignacio RC Jr, Kelley-Quon LI, Ourshalimian S, Padilla BE, Jensen AR, Shew SB, Lofberg KM, Smith CA, Roach JP, Pandya SR, Russell KW, Wang K; Western Pediatric Surgery Research Consortium Choledocholithiasis Investigative Group. J Am Coll Surg. 2023 May 1;236(5):961-970
10. Pediatric penetrating thoracic trauma: Examining the impact of trauma center designation and penetrating trauma volume on outcomes. Floan GM, Calvo RY, Prieto JM, Krzyzaniak A, Patwardhan U, Checchi KD, Beth Sise C, Sise MJ, Bansal V, Ignacio RC, Martin MJ. J Pediatr Surg. 2023 Feb;58(2):330-336
11. Trial and Error: Learning From Malpractice Claims in Childhood Surgery. Prieto JM, Falcone B, Greenberg P, Sykes AG, Sisson WB, Gow KW, Ignacio RC. J Surg Res. 2022 Nov;279:84-88
12. Bike Helmet Usage in the Most Disadvantaged Neighborhoods: A Focused Area for Trauma Prevention. Henry OS, Rooney AS, Heflinger MV, Sykes AG, Ghetti CB, de Cos V, Kling KM, Lazar DA, Martin MJ, Bansal V, Ignacio RC. J Surg Res. 2022 Oct;278:7-13
13. Integrating traffic safety data with area deprivation index: A method to better understand the causes of pediatric pedestrian versus automobile collisions. de Cos V, Rooney AS, Sykes AG, Ghetti CB, Henry OS, Krzyzaniak A, Thangarajah H, Bickler SW, Bansal V, Martin M, Lazar D, Ignacio RC Jr. J Trauma Acute Care Surg. 2022 Nov 1;93(5):650-65
14. Adolescent Vaping-Associated Trauma in the Western United States. Russell KW, Katz MG, Phillips RC, Kelley-Quon LI, Acker SN, Shahi N, Lee JH, Fialkowski EA, Nacharaju D, Smith CA, Jensen AR, Mueller CM, Padilla BE, Ignacio RC, Ourshalimian S, Wang KS, Ostlie DJ, Fenton SJ, Kastenber ZJ; Western Pediatric Surgery Research Consortium. J Surg Res. 2022 Aug;276:251-255
15. Multi-disciplinary care in patients with complex pediatric general and thoracic surgical pathology: lessons learned from a 20-year experience. Keller BA, Saenz NC. Pediatr Surg Int. 2023 Apr 20;39(1):184



Dr. Timothy Fairbanks

PEDIATRIC SURGERY FACULTY

CHIEF OF DIVISION
Timothy Fairbanks, MD, MBA

PROFESSORS OF SURGERY
Stephen Bickler, MD
Romeo Ignacio, MD
Karen Kling, MD
Nicholas Saenz, MD

ASSOCIATE PROFESSOR OF SURGERY
Hariharan Thangarajah, MD, MPH

ASSISTANT PROFESSORS OF SURGERY
David Lazar, MD
Benjamin Keller, MD

DIVISION OF PLASTIC AND RECONSTRUCTIVE SURGERY

The Division of Plastic Surgery is committed to providing comprehensive reconstructive and aesthetic surgical care to our local and global communities.

We continue on an exciting trajectory of growth and recognize the value of innovation in expanding our educational programs, research endeavors, and multidisciplinary clinical collaboration.

IN MEMORIAM: DR. RALPH E. HOLMES, PIONEERING CRANIOFACIAL AND PEDIATRIC PLASTIC SURGEON

UC San Diego Surgery mourns the loss of an exceptional individual whose impact on the medical field and the lives of countless patients will be remembered for generations to come. Dr. Holmes, an esteemed physician and a beacon of compassion, has passed.

Dr. Holmes was born in San Diego, and from an early age it was evident his calling lay in the pursuit of medicine. With an unwavering dedication, he embarked on a remarkable journey that would leave an indelible mark on the lives of those he touched.

Dr. Holmes received his medical degree from Boston University School of Medicine and his otolaryngology training at the Yale-New Haven Medical Center. His interest in reconstructive surgery led him to complete a research fellowship and plastic surgery training at the University of Texas Southwestern Medical Center in Dallas.

Throughout his career, Dr. Holmes held various leadership positions, including

Chief of Plastic Surgery at UC San Diego and Chief of Rady Children's Pediatric Surgery Division, contributing significantly to the medical community. His exceptional skills as a clinician and ability to inspire and mentor aspiring physicians earned him the admiration and respect of colleagues and students alike.

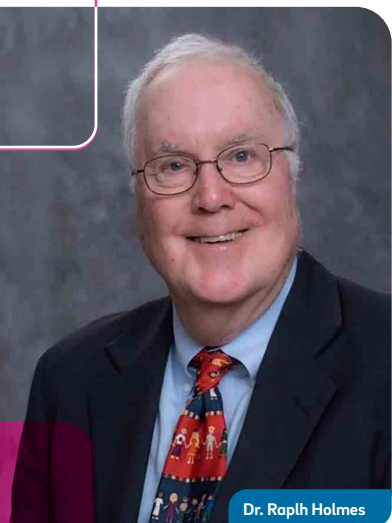
A founder of the Craniofacial Surgery Program and the Vascular Lesion and Birthmark Center at Rady Children's, Dr. Holmes collaborated closely with many different specialties to provide comprehensive care to the children and families of San Diego. He had a personal interest in reconstruction of the outer ear and was the first to bring to Rady Children's modern techniques of creating new ears from rib cartilage for children with microtia.

Dr. Holmes was an incredible researcher and innovator. He co-founded multiple companies including MacroPore and LeonardoMD. He has had notable contributions to the scientific literature and published more than 100 peer review publications, 10 book chapters, and delivered over 160 scientific presentations.

Dr. Holmes' legacy will continue to resonate within the medical community and beyond. His tireless efforts to restore health have touched the lives of countless individuals, leaving an enduring impact that will not be forgotten. His passion for the outdoors and love of hiking in the Sierras was an inspiration to many who followed in his footsteps.

We plan to honor his legacy by establishing the Ralph E. Holmes Visiting Professorship in Craniofacial and Pediatric Plastic Surgery at UC San Diego. Please contact us if you are interested in contributing to this legacy.

As we bid farewell to Dr. Holmes, we extend our deepest sympathies to his family, friends, and colleagues who shared in his journey. Let us celebrate the life of an extraordinary healer, whose compassionate spirit will forever be a guiding light in the medical world. Dr. Holmes leaves behind a void that will be impossible to fill, but his legacy of healing, kindness, and dedication will inspire generations of physicians to come.



Dr. Ralph Holmes



UC SAN DIEGO HOST THE ANNUAL PLASTIC SURGERY BOOT CAMP

We were honored to host the 2022 Annual Plastic Surgery Boot Camp for the new plastics residents. Thank you to the Plastic and Reconstructive surgery department team for going above and beyond to make this happen. Thank you to all the amazing faculty for making the trip and being so invested.

PLASTIC SURGERY SCHOLARSHIP FOR UNDER-REPRESENTED STUDENTS

All fourth-year medical students were invited to apply for the UC San Diego Division of Plastic Surgery Scholarship for Underrepresented Students for Visiting Subinternship.

Awardees received up to \$2000 to cover the costs of travel, lodging, and food alongside opportunities for mentorship and research.

SELECTED PUBLICATIONS

1. The cost of doing business: An appraisal of relative value units in plastic surgery and other surgical subspecialties. Shim JY, Stoffel V, Neubauer D, Gosman AA, Matros E, Reid CM. *Plast Reconstr Surg.* 2023 Nov 1;152(5):1129-1136. doi: 10.1097/PRS.00000000000010306. Epub 2023 Feb 15. PMID: 36790785.



American Association of Plastic Surgeons Dr. James Chang joins our team as visiting professor for an invaluable 2 days of cases, lectures, dinner, and an amazing flap lab



Dr. Amanda Gosman

PLASTIC AND RECONSTRUCTIVE SURGERY FACULTY

CHIEF OF DIVISION
Amanda Gosman, MD, FACS

PROFESSORS OF SURGERY
Marek Dobke, MD, PhD
Frederic Kolb, MD

ASSOCIATE PROFESSORS OF SURGERY
Samuel Lance, MD, FACS
Mark Rechnic, MD
Ahmed Suliman, MD, FACS

ASSISTANT PROFESSORS OF SURGERY
Katharine Hinchcliff, MD
Melissa Kanack, MD
Christopher Reid, MD

DIVISION OF SURGICAL ONCOLOGY

The Division of Surgical Oncology maintains a robust clinical and research enterprise and has the distinction of offering clinical programs that draw patient referrals nationally and internationally.

All division members are active in basic and/or clinical research, and division members are funded by the National Institutes of Health, National Cancer Institute, the Veterans Administration, and Stand Up to Cancer, among others.

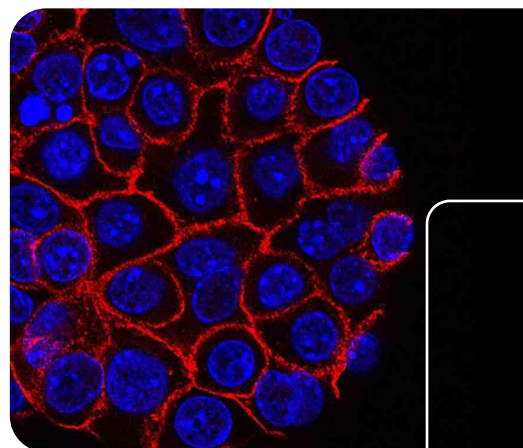
SURVIVAL IS A MIXED MATTER FOR DEADLIEST OF PANCREATIC CANCERS

UC San Diego scientists find that quality and mix of collagen in pancreatic ductal adenocarcinoma tumors determines whether prognosis is poor or very poor.

Pancreatic ductal adenocarcinoma (PDAC) is the most common and most lethal form of pancreatic cancer. The overall 5-year survival for patients with PDAC is just 7.1 percent.

All cancers are different. A unique feature of PDAC is extensive tumor desmoplasia or fibrous connective tissue within the tumor, which is caused by infiltration of the tumor mass by fibroblasts and the extracellular matrix they secrete. The main component of the matrix is type I collagen or Col 1, a protein broadly used in the body to form the basic structure of bone, skin, blood vessels and connective tissues.

The effect of Col 1 on PDAC development and its response to therapy has been a matter of intense debate among researchers, with some arguing that Col 1 promotes tumor growth and spread and others contending that it restricts tumor growth and protects the cancer cells from immune attack.



Pancreatic cancer cells (nuclei in blue) are shown growing as a sphere encased in membranes (red).

STRESS-TOLERANT CELLS DRIVE TUMOR INITIATION IN PANCREATIC CANCER

Tumor-initiating cells (blue) produce an extracellular matrix containing fibronectin (pink) which gives them increased stress tolerance, drug resistance and tumor-initiating properties.

Researchers at University of California San Diego School of Medicine have discovered a molecular pathway critical to the initiation of pancreatic tumors. The mechanism could also contribute to the disease's high resistance to chemotherapy and its propensity for metastasis.

The study, published on January 16, 2022 in Nature Cell Biology, found that pancreatic tumor-initiating cells must first overcome local 'isolation stress' by creating their own tumor-promoting microenvironment, and then recruit surrounding cells into this network. By targeting this tumor-initiating pathway, new therapeutics could limit the progression, relapse and spread of pancreatic cancer.

Pancreatic cancer is one of the most lethal cancers, notoriously resistant to treatment. Almost all patients experience cancer recurrence or metastasis.

THREE TIME CANCER SURVIVOR WRITES HER JOURNEY



Phyllis Schwartz is an author and is using her journey to help others writing

PATIENT FULL OF GRATITUDE AFTER FACING CANCER THREE TIMES

Phyllis Schwartz, a former news executive, knows first-hand what a cancer diagnosis is like. She has been through treatment for three different types of cancers – Hodgkins's lymphoma, breast cancer and pancreatic cancer.

Her most recent diagnosis was pancreatic neuroendocrine cancer. She did her research and decided to receive her cancer care with **Andrew Lowy, MD, FACS**, surgical oncologist and chief of the Division of Surgical Oncology at Moores Cancer Center at UC San Diego Health.

Schwartz underwent the Whipple procedure, a complex surgery that takes several hours and involves removal of the pancreas head and then the duodenum, the first portion of the small bowel.

Now, nearly five years post-surgery, Schwartz is living a full life and full of gratitude to the entire medical team who treated her.

DR. SICKLICK LAB RECEIVES THE LIFE RAFT GIST CENTER OF EXCELLENCE AWARD

A Center of Excellence is an institution that goes above and beyond to insure the highest standard of care for GIST patients.

The Center is being honored because of its research contributions, involvement in clinical trials, focus on extraordinary treatment to the GIST community and its multi-disciplinary approach to the well-being of patients and their families. The multidisciplinary team of oncologists, surgeons and nurses go above and beyond to treat the GIST community.

We honor these exceptional medical professionals for their informed clinical care, the patients for their strength and courage and the caregivers for their unwavering support, all of whom play an integral role in patient survival. **Dr. Jason Sicklick** was also presented with \$25,000 towards his research for GIST.



GIST AWARENESS DAY

Dr. Jason Sicklick and his team starts the 30 day countdown to #Miles4Merak Step Challenge to raise funds to accelerate GIST research and find a cure for SDH-deficient GIST/Para/Pheo Syndrome.

UC SAN DIEGO CANCER CARE EXPANDS

To ensure patients can receive the treatment they need closer to home, UC San Diego is expanding their cancer care services, including chemotherapy, for patients in North County. The additional infusion therapy is available at our location in Vista.

PEOPLE NEWS

Congratulations to Dr. Jonathan Weitz, Dr. Tatiana Hurtado de Mendoza, and **Dr. Andrew Lowy** for selection of their article, "An ex-vivo organotypic culture platform for functional interrogation of human appendiceal cancer reveals a prominent and heterogenous immunological landscape", as the cover image for the November 1, *Clinical Cancer Research* magazine!

Congratulations to **Dr. Andrew Lowy** and Dr. Michael Karin (Pharmacology) on their U01 entitled, "Regulation of PDAC metabolism and immunity by collagen and its cleavage products"! The project focuses on CAF-produced type I collagen, its cleavage and receptors as novel approaches for converting CAF-mediated tumor promotion and immunosuppression to tumor growth inhibition and enhanced anti-tumor immunity.

Andrew Lowy, MD, FACS, has been appointed Adjunct Professor in the Department of Pharmacology. Dr. Lowy is Chief of our Division of Surgical Oncology and an expert in treating cancers of the pancreas and GI tract. He is also Clinical Director for cancer surgery at UC San Diego Moores Cancer Center.

Dr. Jason Sicklick appointed Co-Leader of the Structural and Functional Genomics Research Program

Dr. Jason Sicklick is inducted to American Surgical Association

AWARDS

DR. ANDREW LOWY RECEIVES TWO NEW R21 FUNDING AWARDS

Congratulations to **Andrew Lowy, MD, FACS**, on his new R21 entitled, "CDK4/6 inhibition: a novel therapeutic strategy for GNAS-mutant gastrointestinal malignancies." This research aims to explore the hypothesis that GNAS mutant tumors are sensitive to CDK4/6 inhibition by treating them alone and in combination with other approved therapies and by exploring the mechanisms by which mutant GNAS promotes tumor growth.

Dr. Lowy also received a second R21 award, entitled, "Targeting the MICAL2 signaling axis in pancreatic cancer." The project is focused on the therapeutic potential of inhibiting the flavin monooxygenase, MICAL2, in pancreatic cancer pre-clinical in vivo and ex vivo models and the cell intrinsic and extrinsic effects of MICAL2 inhibition using mouse genetics and human tissue-based model systems.

DRS. REBEKAH WHITE AND JORGE DE LA TORRE RECEIVE MINORITY SUPPLEMENT TO R01

Congratulations to **Rebekah White, MD, FACS**, and Jorge de la Torre, MD, on receiving a Minority Supplement to R01, "Combining Irreversible Electroporation with Immunotherapy for the Systemic Treatment of Pancreatic Cancer." This funding will support the research portion of Dr. de la Torre's residency training.

DR. ANDREW LOWY RECEIVES LUSTGARTEN FOUNDATION GRANT

Congratulations to **Andrew M. Lowy MD, FACS** on his Lustgarten Foundation for Pancreatic Cancer Research grant, "Building on Kras Inhibition in Pancreas Cancer: Defining Rationale Pairings to Combat Resistance and Enhance Responses to Immunotherapy".

DR. KEVIN LI RECEIVES SUS RESEARCH AWARD

Kevin Li, MD, has been selected for the 2022-2023 Society of University Surgeons (SUS) Resident Research Award, sponsored by the SUS Foundation for his project, "Inhibiting SUMOylation as a novel therapeutic strategy for treating pancreatic ductal adenocarcinoma."

DR. REBEKAH WHITE RECEIVES AMERICAN CANCER SOCIETY GRANT

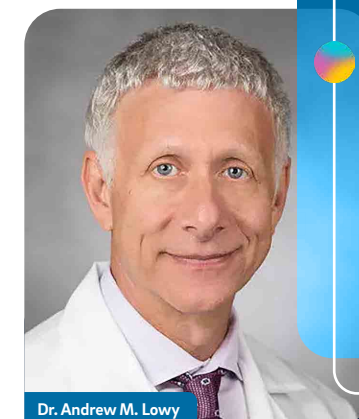
Rebekah White, MD, FACS, has received an American Cancer Society grant and supplement to her existing Discovery Boost Grant entitled, "Digestive Proteases Contribute to Immune Escape in Pancreatic Cancer."

DR. MICHAEL BOUVET RECEIVES VA MERIT AWARD

This major grant award was to **Michael Bouvet, MD, FACS** for his proposal entitled "Development of Near Infrared Fluorescence-Guided Surgical Navigation and Tumor Specific Photoimmunotherapy for Improved Outcomes for GI Cancers."

SELECTED PUBLICATIONS

1. Carcinoma of unknown primary: Molecular tumor board-based therapy. Shreenivas AV, Kato S, Hu J, Skefos C, Sicklick J, Kurzrock R. *CA Cancer J Clin*. 2022 Aug 25. doi: 10.3322/caac.21748. Online ahead of print. PMID: 36006378
2. Collagenolysis-dependent DDR1 signalling dictates pancreatic cancer outcome. Su H, Yang F, Fu R, Trinh B, Sun N, Liu J, Kumar A, Baglieri J, Siruno J, Le M, Li Y, Dozier S, Nair A, Filliol A, Sinchai N, Rosenthal SB, Santini J, Metallo CM, Molina A, Schwabe RF, Lowy AM, Brenner D, Sun B, Karin M. *Nature*. 2022 Oct 5. doi: 10.1038/s41586-022-05169-z. Online ahead of print. PMID: 36198801
3. Osteosarcoma with cell-cycle and fibroblast growth factor genomic alterations: case report of Molecular Tumor Board combination strategy resulting in long-term exceptional response. Persha HE, Kato S, De P, Adashek JJ, Sicklick JK, Subbiah V, Kurzrock R. *J Hematol Oncol*. 2022 Aug 28;15(1):119. doi: 10.1186/s13045-022-01344-x. PMID: 36031605
4. Pancreatic cancer cells upregulate LPAR4 in response to isolation stress to promote an ECM-enriched niche and support tumour initiation. Wu C, Rakhshandehroo T, Wettersten HI, Campos A, von Schalscha T, Jain S, Yu Z, Tan J, Mose E, Childers BG, Lowy AM, Weis SM, Cheresch DA. *Nat Cell Biol*. 2023 Jan 16. doi: 10.1038/s41556-022-01055-y. Online ahead of print. PMID: 36646789
5. Lymphatic-preserving treatment sequencing with immune checkpoint inhibition unleashes cDC1-dependent antitumor immunity in HNSCC. Saddawi-Konefka R, O'Farrell A, Faraji F, Clubb L, Allevato MM, Jensen SM, Yung BS, Wang Z, Wu VH, Anang NA, Msari RA, Schokrpur S, Pietryga IF, Molinolo AA, Mesirov JP, Simon AB, Fox BA, Bui JD, Sharabi A, Cohen EEW, Califano JA, Gutkind JS. *Nat Commun*. 2022 Jul 25;13(1):4298. doi: 10.1038/s41467-022-31941-w. PMID: 35879302 Free PMC article.
6. Smarcd3 is an epigenetic modulator of the metabolic landscape in pancreatic ductal adenocarcinoma. Ferguson LP, Gatchalian J, McDermott ML, Nakamura M, Chambers K, Rajbhandari N, Lytle NK, Rosenthal SB, Hamilton M, Albini S, Wartenberg M, Zlobec I, Galván JA, Karamitopoulou E, Vavinskaya V, Wascher A, Lowy AM, Schürch CM, Puri PL, Bruneau BG, Hargreaves DC, Reya T. *Nat Commun*. 2023 Jan 18;14(1):292. doi: 10.1038/s41467-023-35796-7. PMID: 36653361
7. An ex-vivo organotypic culture platform for functional interrogation of human appendiceal cancer reveals a prominent and heterogenous immunological landscape. Weitz J, Hurtado de Mendoza T, Tiriach H, Lee J, Sun S, Garg B, Patel J, Li K, Baumgartner J, Kelly KJ, Veerapong J, Hosseini M, Chen Y, Lowy AM. *Clin Cancer Res*. 2022 Sep 6;CCR-22-0980. doi: 10.1158/1078-0432.CCR-22-0980. Online ahead of print. PMID: 36067351
8. Treatment of pancreatic cancer with irreversible electroporation and intratumoral CD40 antibody stimulates systemic immune responses that inhibit liver metastasis in an orthotopic model. Shankara Narayanan JS, Hayashi T, Erdem S, McArdle S, Tiriach H, Ray P, Pu M, Mikulski Z, Miller A, Messer K, Carson D, Schoenberger S, White RR. *J Immunother Cancer*. 2023 Jan;11(1):e006133. doi: 10.1136/jitc-2022-006133. PMID: 36634919
9. Human papillomavirus E5 suppresses immunity via inhibition of the immunoproteasome and STING pathway. Miyauchi S, Kim SS, Jones RN, Zhang L, Guram K, Sharma S, Schoenberger SP, Cohen EEW, Califano JA, Sharabi AB. *Cell Rep*. 2023 May 30;42(5):112508. doi: 10.1016/j.celrep.2023.112508. Epub 2023 May 11. PMID: 3717196
10. Pan-cancer molecular tumor board experience with biomarker-driven precision immunotherapy. Louie BH, Kato S, Kim KH, Lim HJ, Okamura R, Eskander RN, Botta G, Patel H, Lee S, Lippman SM, Sicklick JK, Kurzrock R. *NPJ Precis Oncol*. 2022 Sep 22;6(1):67. doi: 10.1038/s41698-022-00309-0. PMID: 36138116
11. Accurate genome-wide genotyping from archival tissue to explore the contribution of common genetic variants to pre-cancer outcomes. Nachmanson D, Pagadala M, Steward J, Cheung C, Bruce LK, Lee NG, O'Keefe TJ, Lin GY, Hasteh F, Morris GP, Carter H, Harismendy O. *J Transl Med*. 2022 Dec 27;20(1):623. doi: 10.1186/s12967-022-03810-z. PMID: 36575447 Free PMC article.



Dr. Andrew M. Lowy

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DIVISION OF SURGICAL SCIENCES



The Division of Surgical Sciences serves as a nucleus that unites primarily non-clinician scientists in the Department of Surgery. It is a home for their growth, development, and mentorship. Altering discipline specific approaches, sharing resources, and integrating different disciplines achieves a common scientific goal. The DSS nurtures a research culture that is valued within the Department of Surgery and encourages non-clinician and clinician collaborations.

Together, the DSS will help facilitate mentorship of junior non-clinician scientists and clinician-scientists, as well as improve the training of post-doctoral fellows, surgical residents, medical students, and Masters students.

Our faculty members actively participate in education and serve as program co-directors and mentors for National Institutes of Health (NIH) funded research training programs for surgical residents, graduate students and postdoctoral fellows. Our research programs focus on various surgical diseases and are supported by relevant institutes of the NIH, including National Institute on Alcohol Abuse and Alcoholism, National Institute of Diabetes, Digestive and Kidney Diseases, National Institute of General Medical Sciences, National Cancer Institute, National Institute of Dental and Craniofacial Research, and the Veteran's Administration, among others.

DR. YUAN CHEN SPEAKS AT THE LANDSCAPE OF POST-TRANSLATIONAL MODIFICATIONS IN TUMOR BIOLOGY WORKSHOP

Post-Translational Modifications (PTMs) expand protein structure/function, enabling dynamic adaptation to cell-intrinsic and extrinsic stimuli. However, there are knowledge gaps in understanding how these modifications work in a coordinated way to drive or suppress tumorigenesis and response to cancer therapy.

To discuss the role of post-translational modifications in tumor biology, NCI held a virtual workshop on Sept. 22 – 23, 2022. The meeting brought together researchers in key and diverse areas of PTMs (including ubiquitination,

phosphorylation, acetylation, methylation, and glycosylation) to discuss the current status of science, important advances, and challenges that may stand in the way of new directions and opportunities when attempting to unravel the complexities of tumor biology.

Experts in the field were invited to present their research and discuss how to better integrate these disparate – yet interconnected areas of PTM research as integral building blocks underlying tumor biology from bench to bedside.

DR. WOLFGANG JUNGER JOINS THE TEAM

Wolfgang Junger, PhD, is a biomedical scientist with extensive expertise in the analysis of biological samples.

Dr. Junger professional experience is mostly focused on immune research (specifically myeloid and lymphoid cells) and he have developed many technical skills in this area.

Dr. Junger's work in cell biology focuses on understanding how ATP and adenosine receptors, ion channels, mitochondria, and metabolism within eukaryotic cells influence cell functions. The overall aims of his laboratory are to unveil new insights into the mechanisms that regulate immune cells and can be exploited as novel therapeutic targets to improve host immune function in patients with acute and chronic inflammatory diseases.



Dr. Wolfgang Junger

DEPARTMENT GRANTS

Surgical Oncologists as Scientists (SOAS) Training Program
NIH/NCI, T32CA275782
Jul 1, 2023 – Jun 30, 2028
PI: Jason Sicklick and Yuan Chen

A New Therapeutic Target to Prevent Pancreatic Cancer Metastasis
Department of Defense, PA220024
Jul 1, 2023 – Jun 30, 2026
One of two teams received funding through this mechanism nationally.
PI: Yuan Chen and Andrew Lowy

Mechanisms of extracellular vesicle biogenesis that regulate wound healing
NIH/NIGMS R35
PI: Brian Eliceiri

Activation Controls Anti-tumor Adaptive Immunity
CHRNA7 (63/377,504).
Patents Pending
PI: Brian Eliceiri and Sarah Blair

AWARDS

Dr Kevin Li, a surgical resident mentored by Drs. Chen, Lowy, and Clary, received the 2022-2023 Resident Research Award for his project entitled *"Inhibiting SUMOylation as a novel therapeutic strategy for treating pancreatic ductal adenocarcinoma"*.



Yuan Chen, PhD

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Brian P. Eliceiri, PhD

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James Friend, PhD

ASSISTANT PROFESSOR OF MECHANICAL AND AEROSPACE ENGINEERING
Tania Morimoto, PhD

ASSISTANT PROFESSOR, MECHANICAL AND AEROSPACE ENGINEERING
Tania Morimoto, PhD

PROFESSOR OF ANATOMY
Geoffroy Noel, PhD

DIVISION OF TRANSPLANT AND HEPATOBILIARY SURGERY

The Division of Transplant and Hepatobiliary Surgery is the leading abdominal transplant program in San Diego and is a regional referral center for the surgical treatment of liver disease and cancers. The program performs liver, kidney and multi-organ transplantation, as well as complex liver and bile duct surgery for cancer and benign conditions.

FATHER'S LIFE IS SAVED AFTER RECEIVING HEART, KIDNEY AND LIVER TRANSPLANT

Triple organ transplant is first in the nation to use three organs from a donor after circulatory death using innovative approach for organ recovery.

Anthony Donatelli, age 40, has served in the U.S. Navy for 22 years. On February 14, 2022, he was wheeled into the operating room at UC San Diego Health; his body facing a different kind of combat. His kidney, heart and liver were failing, and he was about to receive three new organs.

"I didn't have the option of dying. I had two children at home, a six and three-year-old," said Donatelli.

Eight months prior, Donatelli was diagnosed with AL amyloidosis, a rare disease that originates in the bone marrow and causes a build-up of an abnormal protein in tissues and organs. The disease is not curable but, in some cases, bone marrow transplant may be an option.

"When Anthony arrived, he had advanced disease with a prognosis of less than one year. His kidneys had failed and needed hemodialysis. He had severe liver dysfunction that required draining fluid from his abdomen two times per week and tests showed his heart function was rapidly declining,"

said Marcus Urey, MD, cardiologist at UC San Diego Health. *"He was dying in front of our own eyes."*

It was determined Donatelli needed a heart, liver and kidney transplant – a first for UC San Diego Health and a rare treatment approach offered to patients with AL amyloidosis.

"It was completely overwhelming," said Donatelli. "My emotions ranged from anger to acceptance."

Comprehensive, multi-disciplinary teams made up of abdominal transplant surgery, bone marrow transplant, hematology, cardiology, cardiothoracic surgery, gastroenterology, hepatology and nephrology were assembled.

The first step in the process was to see if chemotherapy could control the bone marrow from making more of the



Kristin Mekeel, MD

abnormal protein. Donatelli required chemotherapy from time of diagnosis until a few days prior to transplant. He was then deemed a candidate for organ transplant and placed on the waitlist.

He spent Thanksgiving and watched the Super Bowl from his hospital bed. Urey was by his side for both.

"The care and compassion I received during that time was top-notch," said Donatelli. "UC San Diego Health started to feel like my second home."

After nearly three months of waiting in the hospital with his health deteriorating, a donor was identified.

"This process requires extensive communication and collaboration between the transplant specialists for all three organs. If one is not suitable for the patient, the other organs need to be declined," said **Kristin Mekeel, MD**, chief of the division of transplant and hepatobiliary surgery at UC San Diego Health.

This is the first triple organ transplant in the nation from a donor after circulatory death (DCD). This approach involves retrieving organs from hospitalized donors who have died because their heart has stopped. Historically, these organs could not be used for transplantation due to damage

sustained during the dying process.

Innovation in organ preservation now allows the donated organs to be machine perfused with blood, utilizing a technique known as Thorco-abdominal Normothermic Regional Perfusion (ta-NRP). The machine recovers the organ function and allows for assessment and transplantation. The technique has significantly increased donor organ availability.

"Once the organs are accepted for transplant, there is a carefully choreographed sequence of operations, starting with the procurement of organs from the donor."

— Dr. Kristin Mekeel

"We are the only program on the West Coast to offer this type of procurement from DCD donors," said Victor Pretorius, MBChB, surgical director of cardiac transplant and mechanical circulatory support at UC San Diego Health.

"This donor provided seven organs for transplantation. Three went to Anthony. Organ donation is the ultimate gift of life and selflessness. Our teams have deep gratitude for the donors. They are on the forefront of our minds and hearts in all we do."

On Valentine's Day, Donatelli was taken into surgery.

"It was a lot to process in a short amount of time, but I just kept thinking of my family. I knew this was the only way I would be able to watch my children grow up."

During the triple organ transplant, the heart transplant was performed first by the heart transplant team, led by Pretorius and Mark Kearns, MD, cardiothoracic surgeon at UC San Diego Health. The donor liver and kidney remained on perfusion pumps to preserve their function.

The liver transplant was completed immediately after the heart transplant by **Gabriel Schnickel, MD**, surgical director of liver transplantation at UC San Diego Health.

"Since the kidney can remain safely on the perfusion pump for up to 36 hours, Anthony was taken to the intensive care unit to recover from the heart and liver transplants. He returned to the operating room the next day for the kidney transplant to complete the entirety of the procedure," said Schnickel.

The recovery process after an organ transplant is intensive. Following the triple organ transplant, it was incredibly challenging for Donatelli.

"I woke up so weak, but relieved it all went well."

He was discharged nearly two months after his transplant surgeries. He is now focusing on gaining strength on many levels. He is going through the rehabilitation process, including sessions at The Step Family Cardiovascular Rehabilitation Wellness Center at UC San Diego Health. He is also getting back to yoga, swimming and surfing, as well as planning to go back to school. A once unknown future, he is now planning for his life ahead.

"It has been a physical, mental and spiritual process. It has been a humbling experience and there have been some really hard days, but each day gets better. I am learning to trust my body again and training for a Spartan race happening next spring. I have come a long way," said Donatelli.

"None of this would be possible without the donor. I think of their generous act every day and will continue to honor my donor's organs by working hard to be in the best shape and health possible."

Donatelli will continue to be monitored carefully to ensure his donated organs remain functional and his AL amyloidosis in remission.

"As the only academic medical center in San Diego County, we can offer patients like Anthony therapies they are not available elsewhere. We can treat the most complex presentations of rare diseases," said Urey. *"We have the privilege of offering patients a second chance at life."*



Dr. Gabriel Schnickel



Anthony Donatelli, a father of two, received a heart, liver and kidney transplant after a rare disease caused his organs to fail.

The triple organ transplant is a first for UC San Diego Health.

Photo credit: Anthony Donatelli

FOR ORGAN TRANSPLANTATION, EVERYTHING BEGINS WITH DONORS

There are not enough donors, however. According to the Health Resources & Services Administration, more than 20,000 transplants were performed in 2022, but almost 80,000 people remain on the national transplant waiting list, with 17 people on the list dying each day.

How an organ is received, removed and transplanted have all dramatically advanced over the years, but the fundamental gift of life remains the same and begins with the donor, as does an abiding appreciation from all involved.

Locally, 437 organs were transplanted in 2022, with almost 2,000 persons on transplant waiting lists. Ninety-one patients died waiting for an organ in 2022, according to Lifesharing, a nonprofit involved in the organ donation process in San Diego and Imperial Counties.

As the region's only academic medical center, UC San Diego Health is a national hub of clinical expertise and research, and a leader in transplantation.

A multidisciplinary team — consisting of surgeons, transplant coordinators, nurses, pharmacists, financial coordinators, nutritionists, social workers and psychologists — provides a full-spectrum of care for the entire transplantation process, from pre-transplant evaluation to post-surgical maintenance.

UC San Diego Health is the only health care system in the region that offers multi-organ transplantation.

Surgeons perform lung, heart, kidney and liver transplants — the most in San Diego, averaging 36 lung, 74 heart, 133 kidney and 68 liver procedures annually over the last five years.



From the left: Dr. Jennifer Berumen, Dr Aleah Brubaker, and Dr. Kristin Mekeel

Since 1968, the Center for Transplantation at UC San Diego Health has performed thousands of transplants under a national standard of care model.



According to the latest U.S. News & World Report "Best Hospitals" survey, UC San Diego Health ranked among the nation's best for pulmonology and lung surgery and cardiology and heart surgery.

PEOPLE NEWS

DR. KRISTIN MEKEEL RECEIVES LEAN SIX SIGMA BLACK BELT

Kristin Mekeel, MD, chief of the UC San Diego Division of Transplant and Hepatobiliary Surgery, is the first surgeon at UC San Diego and one of only a few physicians at UC San Diego to have earned her Lean Six Sigma Black Belt. To receive this certification, Dr. Mekeel completed a cross-functional process improvement project resulting in at least a \$100k impact for UC San Diego Health.

Dr. Mekeel is a board-certified transplant surgeon who specializes in liver, kidney, and pancreas transplantation surgery in adults and children. She performs operations in patients with conditions such as chronic kidney disease, chronic liver disease, liver cancer and diabetes. As Chief of Transplant and Hepatobiliary Surgery, Dr. Mekeel leads a group of four surgeons performing over 250 transplants, living and deceased donor organ procurements, and other surgeries per year. She also serves as vice-chair of Quality for the Department of Surgery and program director for Surgical Quality at UC San Diego Health. In these roles, Dr. Mekeel oversees quality and safety for operating rooms and surgical subspecialties.

DR. GABRIEL SCHNICKEL IS NAMED UC SAN DIEGO ATTENDING PHYSICIAN OF THE YEAR 2023

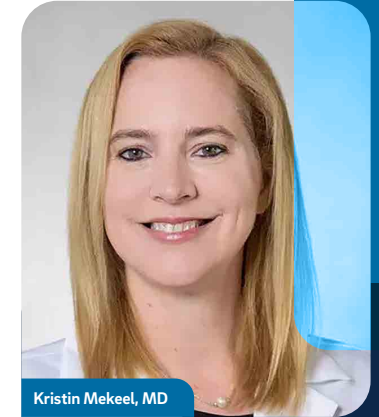
Congratulations to **Dr. Gabriel Schnickel**, Surgical Director for Liver Transplantation at UC San Diego for being named *Attending Physician of the Year*. Dr. Schnickel is an outstanding surgeon, innovator in liver transplantation, a model of professionalism, and incredible colleague

#UCSDHLIVERTRANSPLANTWARRIORS

We are so grateful for the gift of life and honor all the people who donated organs for our patients in need. Sign up to be a donor, you are 10x more likely to need a transplant than to be an organ donor.



The division of Transplant and Hepatobiliary at UC San Diego celebrate April — National Donate Life Month



Kristin Mekeel, MD

TRANSPLANT AND HEPATOBIILIARY SURGERY FACULTY

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ASSOCIATE PROFESSORS
Jennifer Berumen, MD
Tatiana Kisseleva, MD, PhD

ASSISTANT PROFESSORS OF SURGERY
Aleah Brubaker, MD, PhD
Justin Parekh, MD

SELECTED PUBLICATIONS

1. Candida albicans-specific Th17 cell-mediated response contributes to alcohol-associated liver disease. Zeng S, Rosati E, Saggau C, Messner B, Chu H, Duan Y, Hartmann P, Wang Y, Ma S, Huang WJM, Lee J, Lee SM, Carvalho-Gontijo R, Zhang V, Hoffmann JP, Kolls JK, Raz E, Brenner DA, Kisseleva T, LeibundGut-Landmann S, Bacher P, Stärkel P, Schnabl B. Cell Host Microbe. 2023 Mar 8;31(3):389-404.e7. doi: 10.1016/j.chom.2023.02.001. PMID: 36893735
2. Aberrant iron distribution via hepatocyte-stellate cell axis drives liver lipogenesis and fibrosis. Gao H, Jin Z, Bandyopadhyay G, Wang G, Zhang D, Rocha KCE, Liu X, Zhao H, Kisseleva T, Brenner DA, Karin M, Ying W. Cell Metab. 2022 Aug 2;34(8):1201-1213.e5. doi: 10.1016/j.cmet.2022.07.006. PMID: 35921818
3. Immunoglobulin Y antibodies against cytolysin reduce ethanol-induced liver disease in mice. Cabré N, Hartmann P, Llorente C, Kouno T, Wang Y, Zeng S, Kim HY, Zhang X, Kisseleva T, Iyer S, Kudumala S, Schnabl B. Hepatology. 2023 Feb 23. doi: 10.1097/HEP.000000000000324. PMID: 36811393.
4. Heart-liver-kidney transplantation for AL amyloidosis using normothermic recovery and storage from a donor following circulatory death: Short-term outcome in a first-in-world experience. Brubaker AL, Urey MA, Taj R, Parekh JR, Berumen J, Kearns M, Shah M, Khan A, Kono Y, Ajmera V, Barman P, Tran H, Adler ED, Silva Enciso J, Asimakopoulos F, Costello C, Bower R, Sanchez R, Pretorius V, Schnickel GT. Am J Transplant. 2023 Feb;23(2):291-293. doi: 10.1016/j.ajt.2022.11.003. PMID: 36804136

DIVISION OF TRAUMA, SURGICAL CRITICAL CARE, BURNS AND ACUTE CARE SURGERY

The Division of Trauma, Surgical Critical Care, Burns, and Acute Care Surgery has a mission to provide world-class care 24/7 to acutely injured or ill surgical patients. It does this with an ACS verified level one trauma center and an American Burn Association verified Regional Burn Center at the Hillcrest campus of UC San Diego.

UC San Diego opened the first regional level one trauma center in 1976 and also operates the only regional burn center for San Diego and Imperial Counties. Our mission is to save our patients' lives and health and return them safely to their families.

Dr. Jessica Weaver



DR. JESSICA WEAVER IS AN ASSOCIATION OF WOMEN SURGEONS 40 UNDER 40 HONOREE

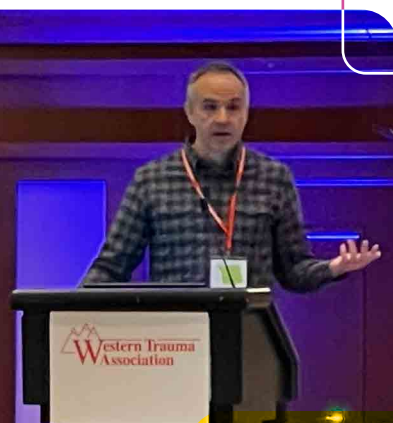
The Association of Women Surgeons (AWS) has announced the recipients of 2022 40 Under 40 Honors, and included among them is **Jessica Weaver, MD, PhD**, of the UC San Diego Surgery Division of Trauma, Surgical Critical Care, Burns and Acute Care Surgery.

The 40 Under 40 Awards highlight the eager and diverse professionals who are leading the way for women in surgery. Each accomplished in their own right, the women surgeons recognized as AWS's 40 Under 40 are the future of the surgical profession and prove that AWS members will continue to be trailblazers in the field. "The mission of AWS is to engage, empower and give women the opportunity to excel," offered Dr. Salewa Oseni, AWS Council Treasurer and coordinator of this year's 40 Under 40 nomination process, "This slate of accomplished surgeons certainly reflects the mission and AWS is in excellent hands for the next 40 years." Upon reviewing the honorees, AWS Council President, Dr. Elizabeth Shaughnessy shared, "The future certainly looks bright, given the accomplishments, talent, and capabilities of the AWS 40 under 40 who are stepping up to greater responsibilities and leadership!"

The award winners were announced via email in September and were honored at the 2022 AWS Annual Conference on Saturday, Oct. 15, 2022, at the Marriott Marquis Marina in San Diego, CA. At the first in-person meeting since turning 40, AWS is not only remembering the accomplishments of the past 40 years; but also focusing on the next 40 years.

DR. COSTANTINI DELIVERS FOUNDER'S LECTURE AT WESTERN TRAUMA – WTA2023

UC San Diego **Todd Costantini, MD, FACS** gives the prestigious Founder's Lecture at Western Trauma WTA2023 on his National Institutes of Health funded basic science work on uniquely human genes, their effect on trauma inflammation and promising possible therapies.



PEOPLE NEWS

Congratulations to **Jarrett Santorelli, MD**, assistant professor of surgery, who has been appointed our new Medical Director of Acute Care Surgery and Director of Clinics for the UC San Diego Surgery Division of Trauma, Surgical Critical Care, Burns and Acute Care Surgery.

Congratulations to graduating AAST ACS Fellow, **Laurie Adams, MD** on being hired as our newest Assistant Professor and Attending Trauma Surgeon, after an extensive national search.

DEPARTMENT GRANTS

Todd Costantini, MD, FACS: Human-specific CHRFA7A gene encodes a human-specific 7 nicotinic acetylcholine receptor antagonist that modulates cholinergic regulation of inflammation. NIH R35 MIRA \$250,000 annual (DC for 5 years)

Brian Eliceiri, PhD: Tissue repair, extracellular vesicular biogenesis, and the control of immune responses, NIH NIGMS R01 \$1,532,052 (DC+IDC over 4 years)

Brian Eliceiri, PhD: Pharmacological targeting of cholinergic receptors as a novel breast cancer immunotherapy, IONIS Pharmaceutical \$1,915,311 (DC+IDC over 4 years)

SELECTED PUBLICATIONS

1. Predictors of Readmission Following Treatment for Traumatic Hemothorax. Kirchberg TN, Costantini TW, Santorelli J, Doucet JJ, Godat LN. J Surg Res. 2022 Sep;277:365-371. doi: 10.1016/j.jss.2022.04.031. Epub 2022 May 12. PMID: 35569214.
2. Youth violence prevention can be enhanced by geospatial analysis of trauma registry data. J Trauma Acute Care Surg. Doucet JJ, Godat LN, Berndtson AE, Liepert AE, Weaver JL, Smith AM, Kobayashi LM, Biffi WL, Costantini TW. 2022 Oct 1;93(4):482-487. doi: 10.1097/TA.0000000000003609. Epub 2022 Mar 28. PMID: 35343924.
3. Fluoxetine reduces organ injury and improves motor function after traumatic brain injury in mice. Weaver JL, Eliceiri B, Costantini TW. J Trauma Acute Care Surg. 2022 Jul 1;93(1):38-42. doi: 10.1097/TA.0000000000003646. Epub 2022 Apr 12. PMID: 35727591.
4. A secondary analysis of the CLOTT study. Godat LN, Haut ER, Moore EE, Knudson MM, Costantini TW. Venous thromboembolism risk after spinal cord injury: J Trauma Acute Care Surg. 2023 Jan 1;94(1):23-29. doi: 10.1097/TA.0000000000003807. Epub 2022 Oct 7. PMID: 36203245.
5. Who is informed of trauma informed care? Patients' primary language and comprehensiveness of initial trauma assessment. Kundu S, Costantini TW, Doucet JJ, Berndtson AE. J Trauma Acute Care Surg. 2023 Jan 1;94(1):45-52. doi: 10.1097/TA.0000000000003815. Epub 2022 Oct 17. PMID: 36279324.



Dr. Jay Doucet

TRAUMA FACULTY

CHIEF OF DIVISION

Jay Doucet, MD, MSc, FRCSC, FACS

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ASSISTANT PROFESSORS OF SURGERY

Laurie Adams, MD
Jarrett Santorelli, MD
Jessica Weaver, MD, FACS

PROJECT SCIENTIST

David Cauvi, PhD



The Trauma team wearing orange in support of the National Gun Violence Awareness Day

DIVISION OF VASCULAR AND ENDOVASCULAR SURGERY

The Division of Vascular and Endovascular Surgery at UC San Diego is committed to providing the highest quality, comprehensive surgical care for the entire spectrum of peripheral arterial, carotid, aneurysmal, and venous diseases.

All faculty members, view the practice of vascular surgery as an honor and privilege as we aim to both expand and improve the care we provide. We look forward to the challenges that are ahead as we aim to continue to expand the division.



Dr. Malas at VSIG vascular surgery suture workshop



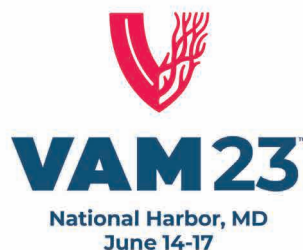
Dr. Mahmoud B. Malas

2023 SOCIETY FOR VASCULAR SURGERY VASCULAR ANNUAL MEETING

The SVS Vascular Annual Meeting (VAM) is an extremely competitive and premier educational meeting designated for the vascular surgery specialty.

The meeting took place over four days in National Harbor, Maryland, where UC San Diego had a profound presence led by **Dr. Mahmoud B. Malas**.

Of the 22 abstracts submitted, a total of 20 were accepted, and UC San Diego has had the greatest number VAM presentations for three consecutive years.



ABSTRACTS: 20

ORAL PRESENTATIONS: 4 | POSTER COMPETITION: 8 | INTERACTIVE POSTERS: 8



Dr. Malas and colleagues at 2023 Society for Vascular Surgery Annual Meeting

SELECTED PUBLICATIONS

1. Surgery or Endovascular Therapy for Chronic Limb-Threatening Ischemia. Farber A, Menard MT, Conte MS, Kaufman JA, Powell RJ, Choudhry NK, Hamza TH, Assmann SF, Creager MA, Cziraky MJ, Dake MD, Jaff MR, Reid D, Siami FS, Sopko G, White CJ, van Over M, Strong MB, Villarreal MF, McKean M, Azene E, Azarbal A, Barleben A, Chew DK, Clavijo LC, Douville Y, Findeiss L, Garg N, Gasper W, Giles KA, Goodney PP, Hawkins BM, Herman CR, Kalish JA, Koopmann MC, Laskowski IA, Mena-Hurtado C, Motaganahalli R, Rowe VL, Schanzer A, Schneider PA, Siracuse JJ, Venermo M, Rosenfield K; BEST-CLI Investigators. *N Engl J Med.* 2022 Nov 7. doi: 10.1056/NEJMoa2207899. Online ahead of print. PMID: 36342173
2. Heterogeneous treatment effects of therapeutic-dose heparin in patients hospitalized for COVID-19. Goligher EC, Lawler PR, Jensen TP, Talisa V, Berry LR, Lorenzi E, McVerry BJ, Chang CH, Leifer E, Bradbury C, Berger J, Hunt BJ, Castellucci LA, Kornblith LZ, Gordon AC, McArthur C, Webb S, Hochman J, Neal MD, Zarychanski R, Berry S, Angus DC; REMAP-CAP, ATTACC, and ACTIV-4a Investigators. *JAMA.* 2023 Apr 4;329(13):1066-1077. doi: 10.1001/jama.2023.3651. PMID: 36942550
3. Effect of P2Y12 inhibitors on organ support-free survival in critically ill patients hospitalized for COVID-19: A randomized clinical trial. Berger JS, Neal MD, Kornblith LZ, Gong MN, Reynolds HR, Cushman M, Althouse AD, Lawler PR, McVerry BJ, Kim KS, Baumann Kreuziger L, Solomon SD, Kosiborod MN, Berry SM, Bochicchio GV, Contoli M, Farkouh ME, Froess JD, Gandotra S, Greenstein Y, Hade EM, Hanna N, Hudock K, Hyzy RC, Ibáñez Estélez F, Iovine N, Khanna AK, Khatri P, Kirwan BA, Kutcher ME, Leifer E, Lim G, Lopes RD, Lopez-Sendon JL, Luther JF, Nigro Maia L, Quigley JG, Wahid L, Wilson JG, Zarychanski R, Kindzelski A, Geraci MW, Hochman JS; ACTIV-4a Investigators. *JAMA Netw Open.* 2023 May 1;6(5):e2314428. doi: 10.1001/jamanetworkopen.2023.14428. PMID: 37227729
4. Serpin-loaded extracellular vesicles promote tissue repair in a mouse model of impaired wound healing. Park DJ, Duggan E, Ho K, Dorschner RA, Dobke M, Nolan JP, Eliceiri BP. *J Nanobiotechnology.* 2022 Nov 5;20(1):474. doi: 10.1186/s12951-022-01656-7. PMID: 36335351
5. Propensity-score matched analysis of three years survival of transcatheter artery revascularization versus carotid endarterectomy in the Vascular Quality Initiative Medicare linked database. Zarrintan S, Elsayed N, Patel RJ, Clary B, Goodney PP, Malas MB. *Ann Surg.* 2023 Jul 13. doi: 10.1097/SLA.0000000000006009. Online ahead of print. PMID: 37436847
6. Highlights from the International Chronic Thromboembolic Pulmonary Hypertension Congress 2021. Simonneau G, Fadel E, Vonk Noordegraaf A, Toshner M, Lang IM, Klok FA, McInnis MC, Screaton N, Madani MM, Martinez G, Salauney K, Jenkins DP, Mat-subara H, Brénot P, Hoeper MM, Ghofrani HA, Jaïs X, Wiedenothe CB, Guth S, Kim NH, Pepke-Zaba J, Delcroix M, Mayer E. *Eur Respir Rev.* 2023 Feb 7;32(167):220132. doi: 10.1183/16000617.0132-2022. Print 2023 Mar 31. PMID: 36754432
7. Role of Renin-Angiotensin-Aldosterone System Inhibition in Patients Undergoing Carotid Revascularization. Elsayed N, Unkart J, Abdelgawwad M, Naazie I, Lawrence PF, Malas MB. *J Am Heart Assoc.* 2022 Aug 24:e025034. doi: 10.1161/JAHA.121.025034. Online ahead of print. PMID: 36000412

DRS. MORIMOTO AND NORBASH RECEIVE NEW R01 FUNDING

Tania Morimoto, PhD, and Alexander Norbash, MD, (Radiology) have received new R01 funding for their project entitled, "VINE Catheter: Soft, Tip-extending, Robotic Catheters with Shape Control for Endovascular Surgery."

This award will fund the development of new soft, tip-extending robotic catheters with shape control. This technology will potentially increase access to endovascular procedures by enabling navigation of vessels that can currently only be performed by a small number of specialists. The approach represents a fundamentally different method of movement through the vasculature compared to typical manual and robotic methods that rely on axial loading of semi-rigid catheters, and has the potential to improve safety and effectiveness of endovascular surgical procedure.



Dr. Tania Morimoto

2022-2023 TRAINEES, RESIDENTS & FELLOWS

THE UC SAN DIEGO DEPARTMENT OF SURGERY IS COMMITTED TO DEVELOPING THE VERY BEST SURGEONS OF TOMORROW.

The Department offers fully accredited academic residency training programs and fellowships in a number of surgical specialties.

Our programs provide the opportunity to train in clinical care and research with highly respected experts and innovators in surgery. UC San Diego trainees are able to take advantage of state-of-the-art training and research facilities, including the Center for the Future of Surgery, where residents, fellows, medical students, and faculty train on simulation equipment in a risk-free environment.

Trainees also play a crucial role in the scope of our basic, clinical and translational research endeavors, which extend from the laboratory, where fundamental questions are being asked about the mechanisms that underlie human disease, to the community, where faculty are developing new methods for cancer education, outreach, and injury prevention.

GENERAL SURGERY

RESIDENTS:

INTERNS - PGY-1

John Austin
Alyssa Joachim
Bradley Kawano
Nicholas Neel
Danae Olaso
Paul Park
Roshun Sankaran
Javier Bravo Quintana (Preliminary)
Asma Mathlouthi (Preliminary)

PGY-2

Mark Antkowiak
Claire Bensard
Asimina Courelli
Simone Hyman
Kim Nguyen-Ta
Parisa Oviedo
Graham Spurzem
Alexander Zhu

PGY-3

Wyeth Alexander
William Johnston
Sohini Khan
Jay Meisner
Zonyang "Tom" Mou
Sean Perez
Michael Turner

PGY-4

Rachel Blitzer
Harrison Chau
Sasha Douglas (Halasz)
Isabella Guajardo
Jonathan Li
Jared Matson
James Jeffrey Reeves

CHIEF RESIDENTS

Hannah Hollandsworth
Charissa Lake
Arielle Lee
Stephen Niemiec
Thomas O'Keefe
Raeda Taj

RESEARCH FELLOWS

Karina Covarrubias
Kristen Cox
Jorge De la Torre
Nicole Goldhaber
Estella Huang
Kevin Li
Rohini Patel
Louis Perkins
Ashwyn Sharma

AWAY - RESEARCH FELLOWS

Victoria Bendersky
Duke University
Sophie Chung
Boston University
Ana Maria Dumitru
Children's Hospital of Philadelphia
Rachel Jensen
Stanford University

VASCULAR SURGERY INTEGRATED RESIDENCY PROGRAM:

INTERN - PGY-1

Kevin Ye

PGY-2

John Hallsten

VASCULAR FELLOWSHIP 1ST YEAR FELLOW

Claire Janssen

2ND YEAR FELLOW

Peter F. Layman
*Community Practice
Loveland, Colorado*

NEUROLOGY FELLOWS

PGY-7

Peter Dixon

PGY-6

Pawina Jiramongolchai

PLASTIC SURGERY INTEGRATED RESIDENTS:

PGY-1

Vivian Hu
Alexandra Alving-Trinh

PGY-2

Jason Llaneras
Lucy Sheahan

PGY-3

Garrison Leach

PGY-4

Meera Reghunathan

PGY-5

Riley Dean
Paige McLean

PGY-6

Kevin Englar

INDEPENDENT RESIDENTS:

PGY-6

Austin (Cooper) Morgan



OTOLARYNGOLOGY / HEAD AND NECK SURGERY SURGERY RESIDENTS:

PGY-1

Priya Bisarya
Peter Eskander
Rohith Voora

PGY-2

Tammy Pham
Benjamin Bernard

PGY-3

Jeffrey Bernstein
Andrew Yousef
Samuel Early

RSCH

Morgan Davis
Benjamin Ostrander

PGY-4

Mena Said

PGY-5

Kayva Crawford
Farhoud Faraji
Omid Moshtaghi (Chief)

PGY-6

Emily Funk (Chief)
Robert Saddawi

GRADUATING FELLOWS

ACUTE CARE SURGERY

Jonathan Chica
*Allegheny Health Network
Pittsburgh, Pennsylvania*

William Aaron Marshall
University of Colorado

CARDIOTHORACIC SURGERY

Ian Glenn
*Academic Practice at
UC San Diego
Division of Cardiothoracic
Surgery*

MINIMALLY INVASIVE SURGERY

FELLOWSHIP

Edward Cho
*Community Practice
Santa Maria, CA*

Kevin L. Wissinger
*Community Practice
Stuart, Florida*

TRAUMA AND SURGICAL CRITICAL CARE

Kendra Black
*Acute Care Surgery Fellowship
UC San Diego*



PARTNER STORIES AND DONORS

DR. ANDREW LOWY APPOINTED LEVINE FAMILY ENDOWED CHAIR

Andrew Lowy, MD, FACS, has been appointed the inaugural holder of the Levine Family Chancellor's Endowed Chair in Surgical Oncology for the UC San Diego School of Medicine, Department of Surgery.

This transformative named endowment provided by Peter J. Levine and family will afford perpetual funding of outstanding tenured faculty of gastrointestinal cancers at Moores Cancer Center. This five-year appointment is based on the recommendation of campus reviewers and the enthusiastic endorsement of university leadership.

Dr. Lowy has spent his career developing an outstanding research program in surgical oncology, and specifically in

studies of the pathogenesis of pancreatic cancer. Among other contributions, his laboratory created the first Cre driver strains used to develop the KC and KPC models of pancreatic cancer, and most recently has made important contributions in the areas of tyrosine kinase signaling and

made important contributions in the areas of tyrosine kinase signaling and stem cell biology.

He is a renowned investigator, who has written more than 226 publications and book chapters. Dr. Lowy's research has been continuously funded since 1999, including multiple, concurrent NIH, Stand up to Cancer, Lustgarten Foundation, Pancreatic Cancer Action Network awards.

He has held multiple leadership positions, including serving as vice-chair of the NCI Pancreatic Cancer Task Force from 2007- 2016, and chair from 2016-2021. He has served as co-leader of the SWOG pancreas cancer subcommittee since 2007 and served as interim Chair of the SWOG GI committee in 2019. In addition, he serves on the Pancreatic Cancer Working Group of the Clinical Trials and Translational Research Committee (CTAC) for NCI, which advised on development of priorities for the Recalcitrant Cancers Act of 2013 and continues to serve to report on the progress of NCI initiatives around PC.

Dr. Lowy's outstanding contributions to science, research and the improvement of clinical care make him an outstanding candidate to receive the Levine Family Chancellor's Endowed Chair in Surgical Oncology.



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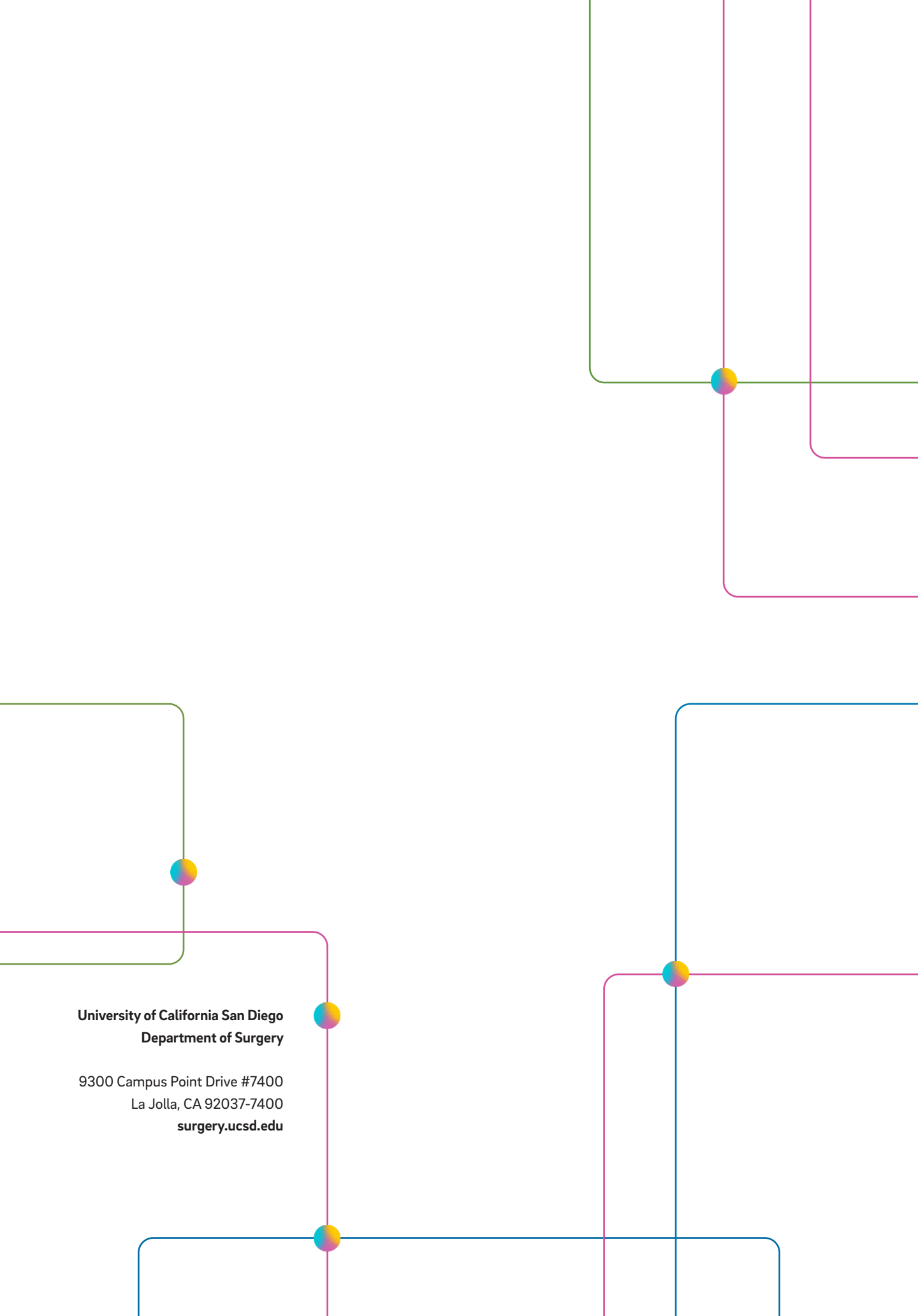
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