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Professor of Surgery

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Geoffroy Noel Ph.D.
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Dear Colleagues and Friends of the Department,

With the 2024 academic year at a close, it is time to reflect upon the state of the Department of Surgery at UC San Diego. It has been a year replete with many accomplishments and a number of new faces. In this year's annual report, we take time to celebrate the hard work of our faculty and staff, which included great strides in training, research and medical care. You will find information on the continued rise in prominence of UC San Diego, which was named as a top-twenty hospital in the rigorous U.S. News & World Report ranking program. Additionally, our affiliated Rady Children's Hospital, which is staffed almost entirely by UC San Diego faculty, was also ranked by U.S. News & World Report in the top ten of pediatric hospitals across the country.

You will note from the front cover that we have chosen to focus in this year's annual report on the role of leadership in accomplishing the overarching missions of academic surgical departments. The best departments in the country provide great care, conduct impactful research and train the next generation. They also house faculty who are leaders within their institutions and in myriads of regional, national and international surgical associations that are necessary to create, disseminate and implement breakthroughs in surgical care. Becoming a surgical leader is an honor bestowed upon by one's peers, as well as a call to service. In this year's report, you will meet numerous UC San Diego faculty who are serving or have served as presidents of their respective organizations. The fact that UC San Diego is home to so many surgical leaders is a direct reflection of their dedication and talents, and of the incredibly rich UC San Diego environment that breeds such success.

I hope that this year's annual report will be as inspiring to you as it is to me. I am proud of our team members and amazed by the impact they are having on the lives of so many. Your interest and support are critical to all of these activities, and we thank you for partnering with us.

Bryan Clary, M.D., M.B.A.

Marshall J. Orloff Family Endowed Chair
Professor and Chair, Department of Surgery
UC San Diego Health Sciences
Surgeon-in-Chief, UC San Diego Health

SURGERY BY THE NUMBERS

TOTAL NUMBER OF FACULTY
133



TOTAL NUMBER OF RESIDENTS AND FELLOWS
73



TOTAL NUMBER OF STAFF
95

ACTIVE CLINICAL TRIALS
44

ACTIVE RESEARCH AWARDS
118



RESEARCH FUNDING
\$19.6
MILLION



TOTAL FEDERAL GRANTS
44

OFFICE VISITS
60,846

TOTAL NUMBER OF CASES THAT INVOLVED THE DEPT OF SURGERY
INPATIENT: 11,177
OUTPATIENT: 6,856



FEATURE STORY



"Academic surgeons are unique in their calling to provide the highest level of surgical care, while at the same time ushering in a better future for tomorrow's patients. This emphasis on the future is carried out through the research and training of the next generation of surgeons. What is less appreciated is that the most impactful academic surgeons are also leaders who serve at the local level, helping guide their institutions as well as serve in regional, national and international organizations that are dedicated to the dissemination and implementation of important breakthroughs in surgical care. Through these activities, surgical leaders influence their peers and society in ways that lead to better care for current patients and for the patients of tomorrow by setting national priorities, guiding research funding and influencing the regulations that impact surgical practice. In this context, the vibrancy of an academic surgical department is measured not just in the quality of care delivered, the size of its research portfolio or the accomplishments of its trainees, but also in the leadership impact of its faculty. Top academic departments of surgery across the country are distinguished by faculty members who have held prominent leadership roles in their specialty-specific surgical societies, as well as in broader cross-specialty organizations.

By this yardstick and so many others, the vibrancy and substantial impact of the UC San Diego Department of Surgery is clear. In the paragraphs that follow, we highlight our faculty who have served as presidents of their respective professional societies and organizations. In doing so, we recognize that there are many substantive leadership roles that other faculty serve in that are not associated with the title of president. For example, many of our faculty have served on national cooperative clinical and translational research committees, such as the American College of Surgeons Committee on Trauma; National Institutes of Health study sections; and a variety of critical roles within our own institution. Notwithstanding, a quick tour of our faculty who hold or have held presidential roles provides important insights into the department's commitment and ability to affect positive change in the world around us. It is an inspiring review that reflects well on our faculty, the department, the institution as well as our friends and supporters."

– **Chair of the Department of Surgery, Bryan Clary, M.D., M.B.A.**

Michael Bouvet, M.D., is a founding member and past president of the International Society for Fluorescence Guided Surgery. The society advances fluorescence image-guided surgery (a technique that uses dyes and imaging to help surgeons visualize tissues during surgery) through clinical practice, education and the promotion of basic and clinical research. The objectives of the society include to: 1) internationally disseminate the most current updates and encourage original research through original scientific articles, review articles and editorials, authored textbook publications and multimedia; 2) promote the exchange of experiences, opinions and research by hosting one annual conference, held in various world-wide locations each year, with invited international leaders, regional educational programs, seminars and hands-on training programs; and 3) provide internships or training opportunities to improve acquisition of knowledge and improve clinical training.



FEATURED DOCTORS:

Standing, from the left: Bryan Clary, M.D., M.B.A., Michael Bouvet, M.D., Santiago Horgan, M.D., and Sonia Ramamoorthy, M.D.
 Sitting, from the left: Rebekah White, M.D., Amanda Gosman, M.D., Patricia Thistlethwaite M.D., Ph.D., and Diane Simeone, M.D.



Bryan Clary, M.D., M.B.A., is the past president of the Society of Clinical Surgery. The society was founded in 1903 as a traveling surgical club by a handful of rising surgical luminaries, including Harvey Cushing (who ushered in the specialty of neurosurgery) and others. Founded in an era where traveling to operative clinics in Europe was an important form of education and enlightenment, the society adopted a format whereby the meeting would be held at a different host institution every year with the opportunity to observe their faculty surgeons at work and to hear presentations on research ongoing within the institution. Election into the society was and continues to be highly selective, and the society counts amongst

its members many leaders in American surgery. Clary served as secretary of the society for four years prior to ascending into the vice president and president roles, and, in this capacity, worked to revise the charter to contemporary and inclusive standards, select meeting sites and organize the conduct of each meeting. While serving in executive leadership, Clary arranged for UC San Diego to be a host institution in 2017, providing an important opportunity for national surgical leaders to learn from current faculty and be exposed to the incredible portfolio of clinical and research programs at UC San Diego.

Amanda Gosman, M.D., is the chief of the Division of Plastic Surgery. She is also the president of the California Society of Plastic Surgery, which is the largest regional plastic surgery organization and plays a pivotal role in protecting and elevating the practice of every plastic surgeon in the state of California. One focus of the society is advocacy for patient safety and scope of practice to ensure the highest quality care to patients. Additionally, Gosman is the president of the American Council of Educators in Plastic Surgery, which is the preeminent organization of academic leaders in plastic surgery and supports the education of safe, ethical, competent and innovative plastic surgeons. She is also the former president of the San Diego Plastic Surgery Society.



Santiago Horgan, M.D., is the chief of the Division of Minimally Invasive Surgery and director of the Center for the Future of Surgery. He is the president-elect of Society of Robotic Surgery, a global society that aims to facilitate training, education and collaboration in the ever-evolving applications of surgical robotics in all surgical specialties. Horgan is also the past president of the Minimally Invasive Robotic Association, an international organization that aims to provide a cross-specialty forum in which minimal access surgeons can share their experience of the discipline of robotic surgery.

Sonia Ramamoorthy, M.D., is the chief of the Division of Colon and Rectal Surgery. She is also the 2024-2025 president of the American Society of Colon and Rectal Surgeons, the premier colorectal society representing nearly 5,000 colorectal surgeons throughout the United States and Canada. Ramamoorthy is the fourth female president and the first Asian female president of the 125-year-old surgical society. She previously served in various leadership roles within the society and has helped to establish the Leadership and Professional Development Program (Surgical Leadership Institute) and the New Tech Symposium, among many other contributions to the society.



Diane Simeone, M.D., is the director of the Moores Cancer Center, the Chugai Pharmaceutical Chair of Cancer and a pancreatic surgeon-scientist in the Department of Surgery. She is also the past president of the Society of University Surgeons and American Pancreatic Association and serves on the National Cancer Institute's Pancreatic Cancer Task Force. Simeone was also the chair of the scientific and medical advisory board of the Pancreatic

Cancer Action Network. In addition, she has been an innovator in the development of therapeutic clinical trials for pancreatic cancer and is the principal investigator of Precision Promise, a new adaptive platform clinical trial consortium focused on next-generation clinical trials for patients with pancreatic cancer. She also developed and leads the PRECEDE Consortium, an international collaboration of approximately 55 centers to study a large, longitudinal cohort of individuals at heritable risk for pancreatic cancer.

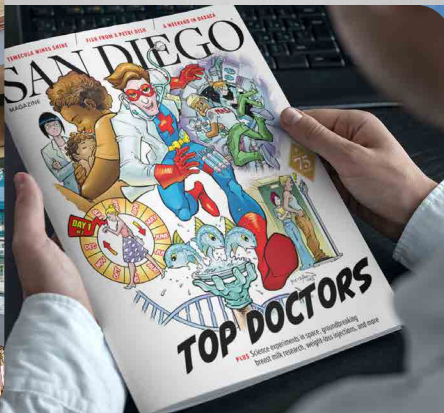


Patricia Thistlethwaite, M.D., Ph.D., is the past and first woman president of the Western Thoracic Surgical Association. The association brings together physicians from 13 western states and four Canadian provinces who are dedicated to advancing the quality and practice of thoracic and cardiovascular surgery and encourage research and clinical study within the specialty. Thistlethwaite is also the 2022 recipient of the Pulmonary Vascular Research Institute Lifetime Achievement Award of Excellence and the 2024 United Therapeutics Genesis Trailblazer Award. In honor of her contributions to cardiothoracic surgery, the Women in Thoracic Surgery organization established the Thistlethwaite Scholarship. The yearly award supports aspiring woman residents or fellows with interest in cardiothoracic surgery to attend and be mentored during the Western Thoracic Surgical Society meeting.



Rebekah White, M.D., is the past president of the Society of University Surgeons, which is an honorific society for mid-career surgeons that promotes excellence and leadership in academic surgery. She is also the president-elect of the Society of Clinical Surgery (as detailed above in Clary's profile), which is a small traveling organization that promotes the exchange of clinical and research ideas through meetings hosted by the institutions of its members.

DEPARTMENT HIGHLIGHTS



UC San Diego
SCHOOL OF MEDICINE

#5

for NIH funding among public medical schools (#13 overall)

Blue Ridge Institute for Medical Research

With the fiscal year at an end, UC San Diego Health continues its legacy as one of the best health systems in the nation, with the Department of Surgery standing out as one of the top performing departments. Many of our talented faculty, staff and trainees were also individually recognized for their achievements in the field.



CLINICAL HIGHLIGHTS

UC SAN DIEGO HEALTH RANKS NO. 1 IN SAN DIEGO, MAKES NATIONAL HONOR ROLL

UC San Diego Health once again ranked as the number one hospital in San Diego, according to the 2023-2024 U.S. News & World Report "Best Hospitals" survey, placing it among the nation's best health care providers.

For the first time in the academic medical center's history, UC San Diego Health also placed on the 2023-2024 "Best Hospitals National Honor Roll," a distinction awarded for outstanding patient care to only 22 hospitals nationwide.

"We are extremely honored and proud that UC San Diego Health is the only hospital system in San Diego that has reached a pinnacle level of recognition based on the quality of care provided by exceptional staff," says Patty Maysent, CEO of UC San Diego Health. "I celebrate and applaud the national recognition of our expert physicians, nurses and team members who work together cohesively every day with our patients' well-being and successful outcomes on the forefront of their minds."

For the 2023-2024 rankings, U.S. News & World Report evaluated more than 4,500 hospitals across 15 specialties and 21 procedures and conditions. UC San Diego Health ranked nationally in 10 specialties, four of them representing the Department of Surgery:

- » Lung Surgery and Pulmonology (9) » GI Surgery and Gastroenterology (18)
- » Cancer (20) » Cardiology, Heart and Vascular Surgery (23)

UC San Diego Health was also rated as "high performing" in 18 common procedures and conditions, which cover a spectrum of care from heart procedures and acute kidney care treatment options, to orthopedic and cancer surgeries and stroke care. UC San Diego Health also tied for number one hospital in California, along with UCLA, UCSF, Stanford Health Care and Cedars-Sinai.



"Making the national honor roll for the first time is the highest honor for our incredible team, who remains laser-focused on delivering the highest quality of care for our patients living in the San Diego region and for those who travel to receive care at our hospital system," said Christopher A. Longhurst, M.D., chief clinical and innovation officer at UC San Diego Health. "We are so privileged to serve this community, and this recognition is a direct reflection of our vision in making the world a healthier place, one life at a time."

The "Best Hospitals" survey methodology factors in data from the Centers for Medicare & Medicaid Services, American Hospital Association, professional organizations and medical specialists; recent changes include a greater emphasis on objective quality outcomes and health equity.



Patty Maysent

PATTY MAYSENT, CEO OF UC SAN DIEGO HEALTH, REFLECTS ON UC SAN DIEGO HEALTH'S REMARKABLE AND HISTORIC DISTINCTION AS A MEMBER OF THE BEST HOSPITALS HONOR ROLL

"This is the first time in our history that UC San Diego Health was named to the National Honor Roll, a distinction awarded to only 22 of more than 4,500 hospitals nationwide that are recognized for outstanding patient care" says Maysent.

The Department of Surgery is committed to patient safety, quality and experience, and the team contributes to earning a place on the honor role.

"Excellent outcomes for routine and complex surgeries also figure prominently in the methodologies of all safety and quality rankings," says Maysent. "We believe that these rankings help support awareness of the world-class care for UC San Diego Health."

RADY CHILDREN'S HOSPITAL-SAN DIEGO 2023-2024 BEST CHILDREN'S HOSPITALS HONOR ROLL

For the first time in its history, Rady Children's Hospital-San Diego was named to the U.S. News & World Report 2023-2024 "Best Children's Hospitals Honor Roll," a distinction awarded to only 10 children's hospitals nationwide.

This is the seventh consecutive year that Rady Children's was ranked among the nation's best children's hospitals in all 10 pediatric specialties surveyed. Four of them represented the Department of Surgery:

- » **Pediatric Heart Surgery and Cardiology (3)** » **Cancer (21)**
- » **Lung Surgery and Pulmonology (17)** » **GI Surgery and Gastroenterology (34)**

"I'm so proud of our incredible nurses, doctors, researchers and team members from every department and division across Rady Children's and the UC San Diego School of Medicine," said Patrick Frias, M.D., president and CEO of Rady Children's. "Achieving honor roll status is a tribute to their unwavering dedication to providing the highest level of care to our patients and families."

Rady Children's Hospital-San Diego is the largest children's hospital on the West Coast and one of the nation's top pediatric health care systems. Ranked as one of the 10 best children's hospitals in the nation by U.S. News & World Report in 2023, Rady Children's includes a 511-bed pediatric hospital that serves as the largest provider of comprehensive pediatric medical services in San Diego, southern Riverside and Imperial counties. With more than 40 locations, Rady Children's is the only health system in the San Diego area dedicated exclusively to pediatric health care and is the region's only designated pediatric trauma center.

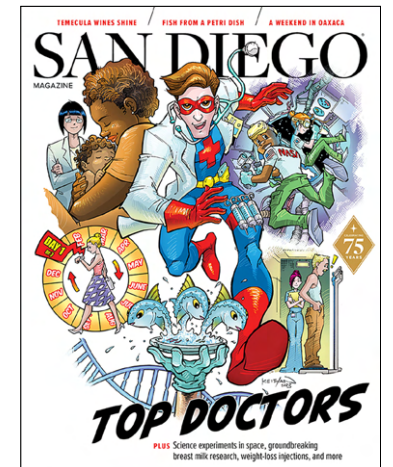


MORE THAN 100 UC SAN DIEGO HEALTH PHYSICIANS NAMED "TOP DOCS"

Being named a "Top Doc" in San Diego Magazine's annual "Physicians of Exceptional Excellence" survey is a coveted honor among physicians across the county. This past year, more than 100 UC San Diego Health physicians topped the 2023 survey list, an annual opportunity for local doctors to vote for their much-admired colleagues.

The outstanding physicians including numerous faculty members from the Department of Surgery:

- GENERAL SURGERY:**
 - » Sarah Blair, M.D.
 - » Garth Jacobsen, M.D.
- CARDIOTHORACIC SURGERY:**
 - » Eugene Golts, M.D.
 - » Victor Pretorius, M.B.Ch.B.
- COLON AND RECTAL SURGERY:**
 - » Sonia Ramamoorthy, M.D.
 - » Nicole Lopez, M.D.
- COMPLEX SURGICAL ONCOLOGY:**
 - » Julia Veerapong, M.D.
- PLASTIC SURGERY:**
 - » Anne Wallace, M.D.
- SURGICAL ONCOLOGY:**
 - » Bryan Clary, M.D., M.B.A
 - » Andrew Lowy, M.D.
- TRANSPLANTATION SURGERY:**
 - » Gabriel Schnickel, M.D., M.P.H.



Diane Simeone

WORLD-RENOWNED SURGEON NAMED NEW DIRECTOR OF MOORES CANCER CENTER AT UC SAN DIEGO HEALTH

Following an extensive national search, **Diane Simeone, M.D.**, was appointed as the director of Moores Cancer Center at UC San Diego Health.

Simeone brings robust institutional, national and international leadership experience to both oncologic patient care and scientific research, with a focus on establishing novel models of interdisciplinary collaboration. She is an internationally recognized surgeon-expert in the biology and multidisciplinary treatment of pancreatic neoplasms, with an active clinical practice in pancreatic surgery.

As director of UC San Diego Moores Cancer Center, Simeone will serve as the principal investigator for the National Cancer Institute (NCI)-sponsored Cancer Center Support Grant and will provide strategic intellectual direction for the center's research programs, administrative structure and multidisciplinary clinical service line.

"Moores Cancer Center at UC San Diego Health is a beacon of hope to communities locally and nationally," says Patty Maysent, CEO, UC San Diego Health. "Simeone will help us continue our legacy of discovering and testing new therapies, exceeding standards for life-saving, highly specialized care and supporting our patients and their loved ones through their most difficult life challenges. Simeone's combination of visionary leadership and expertise sets her up perfectly to lead this extraordinary institution and its bright future."

As an NCI-designated Comprehensive Cancer Center, Moores Cancer Center at UC San Diego Health is among the top four percent of approximately 1,500 cancer centers in the United States, and one of only 56 Comprehensive Cancer Centers in the nation.

UC SAN DIEGO HEALTH WELCOMES NEW HOSPITAL TO NETWORK OF CARE

UC San Diego Health purchased Alvarado Hospital Medical Center from Prime Healthcare. The acquisition of the 302-bed medical campus was completed in late 2023.

Located at 6655 Alvarado Road, Alvarado Hospital Medical Center has served the College Area community for more than five decades. Its high-quality programs and services include a new emergency department accredited for geriatric care as well as comprehensive behavioral health medical and surgical services.



Alvarado Hospital Medical Center, a 302-bed acute care hospital in San Diego. Photo courtesy of Prime Healthcare.

"UC San Diego Health continues to grow its network of clinics and hospitals to better care for the community within new neighborhoods across the region," says Patty Maysent, CEO of UC San Diego Health. "We are grateful for Prime Healthcare's commitment to successfully completing this transaction to allow us to care for this important part of our community. UC San Diego Health looks forward to collaborating with the extraordinary physicians, nurses and staff at Alvarado Hospital and inviting them to be part of our team."

As part of its 10-year vision, UC San Diego Health is taking a systematic approach to improving timely access to its services and care. Already underway, UC San Diego Health is revitalizing the UC San Diego

Medical Center, where a new outpatient surgical center is scheduled to open in 2025. Planning for a new replacement hospital is occurring now. Simultaneously, new clinics are opening throughout the region.

\$25 MILLION GIFT TO UC SAN DIEGO ESTABLISHES THE MCGRATH OUTPATIENT PAVILION

The San Diego-based McGrath Family Foundation pledged \$25 million to support the new outpatient pavilion at UC San Diego Medical Center, slated to open in 2025. In recognition of the gift, the facility will be named the McGrath Family Foundation Outpatient Pavilion, commonly known as the McGrath Outpatient Pavilion.

The 6-floor, 250,000-square-foot McGrath Outpatient Pavilion will house specialty clinical programs, including oncology, neurosurgery, urology, ear nose and throat and orthopedics, as well as outpatient surgery operating rooms, endoscopy procedure rooms, advanced imaging, infusion and radiation oncology.

The McGrath Outpatient Pavilion will address the growing demand for specialized diagnostic, treatment and surgical services.

The McGrath Outpatient Pavilion is part of phase one of the over \$3 billion UC San Diego Hillcrest Redevelopment Project. Sparked by the necessity to comply with the state's updated seismic requirements for hospitals, the Hillcrest Redevelopment Project is expected to continue over the next 10 to 15 years and will include replacement of the current hospital with a new state-of-the-art facility.

"We value the outstanding medical services that UC San Diego provides to the community," says Laurie McGrath, president of the McGrath Family Foundation.



Laurie McGrath signs a beam at the topping out ceremony for the new McGrath Family Foundation Outpatient Pavilion at UC San Diego Health.

UC SAN DIEGO HEALTH NAMED LEADER IN DELIVERING HIGH-QUALITY PATIENT CARE

UC San Diego Health was recognized as a top performer in the 2023 Bernard A. Birnbaum, M.D., Quality Leadership Ranking by Vizient, Inc. for its excellence in delivering high-quality patient care. This achievement represents the fifth consecutive year that UC San Diego Health has been ranked among the top ten academic health systems in the United States.

This past year, 784 participating hospitals were segmented into four cohorts for the Vizient Quality and Accountability Ranking. The ranking measured performance on the quality of patient care in six domains: safety, mortality, effectiveness, efficiency, patient centeredness and equity.

UC San Diego Health was ranked fifth out of 116 health care systems in the "Comprehensive Academic Medical Centers" cohort. UC San Diego Health was also recognized as having the highest level of safety from The Leapfrog Group, with an "A" for both the Hillcrest and La Jolla campuses. Further, the Centers for Medicare & Medicaid Services recognized UC San Diego Health as a five-star institution for the quality of our care.

"Achieving this recognition for the fifth consecutive year is a tremendous accomplishment, with only a few academic medical centers in the nation having accomplished this in the past," says Christopher Longhurst, M.D., chief clinical and innovation officer at UC San Diego Health. "This demonstrates that our health care system is committed to continuous improvement in order for our teams to achieve optimal patient outcomes at every interaction, resulting in lower readmission rates and decreased infection risk."

UC SAN DIEGO HEALTH RECOGNIZED AS HIGH PERFORMER FOR LGBTQ+ HEALTHCARE EQUALITY

Hillcrest Medical Center has garnered the "LGBTQ+ Healthcare Equality High Performer" designation from the Human Rights Campaign Foundation's (HRC) 16th iteration of the Healthcare Equality Index (HEI), the nation's premier benchmarking survey of the policies and practices health care facilities take to ensure equitable treatment and inclusion of LGBTQ+ patients, visitors and employees.

This is the 12th time UC San Diego Health has been recognized by HRC.

"We have a deep commitment to ensuring that every patient, visitor and team member feels welcome, and experiences equal access to the world-class health care we provide," says Patty Maysent, CEO of UC San Diego Health. "We are continually working to expand our offerings for the diverse communities that we serve."

The region's only academic medical center has practiced, celebrated and affirmed its commitment to health equity, including efforts such as:

- The Owen Clinic at UC San Diego Health, which provides expertise in care for patients with or at risk for HIV, including rapid expansion of pre-exposure prophylaxis for HIV prevention both within Owen Clinic and primary care clinics.
- UC San Diego Health being the only hospital system in San Diego to offer the full spectrum of gender affirming care services to individuals 18 years of age and older.
- The implementation of the University of California's Gender Recognition and Lived Name Policy, which was designed to provide at least three gender options and includes "lived names" instead of "legal names," where appropriate.
- LGBTQ+-friendly providers are identified on UC San Diego Health's "Find a Provider" page.



RESEARCH HIGHLIGHTS

THE LUSTGARTEN FOUNDATION ANNOUNCES LANDMARK YEAR OF FUELING CUTTING-EDGE PANCREATIC CANCER RESEARCH

The Lustgarten Foundation, the nation's largest private funder of pancreatic cancer research, announced a landmark year of funding, awarding 10 new grants to researchers at seven leading institutions.

One of the Dr. Robert F. Vizza Lustgarten Clinical Accelerator Initiative (CAI) Grants was awarded to **Andrew Lowy, M.D.**, chief of the Division of Surgical Oncology at UC San Diego, in collaboration with Shweta Joshi, Ph.D., for their study "Syk-Targeted Therapy with Fostamatinib: A Promising Avenue to Enhance Chemotherapy Response in Pancreatic Cancer."

The CAI speeds the translation of basic research into the clinic by supporting novel, science-driven clinical trials. All data from CAI trials will also be integrated into Lustgarten's United Clinical Information Database (LUCID), improving the data's collective potential while making it accessible to the broader research community.



Andrew Lowy



UC SAN DIEGO SECURES SEVERAL TOP SPOTS IN LATEST NATIONAL RANKINGS FOR NIH FUNDING

University of California San Diego School of Medicine solidified its status as a national leader in National Institutes of Health (NIH) funding, as reported by the 2023 Blue Ridge Institute for Medical Research (BRIMR) rankings. In total, the medical school received more than \$460 million in NIH grants in

2023, positioning it as number five among public institutions and number 13 overall.

This accords with its history — six years after its founding in 1968, the school elected to focus on research, "putting UC San Diego on a path to become one of the largest health science centers in the U.S.," according to the San Diego Union-Tribune.

"This year's Blue Ridge rankings underscore the vitality of scientific research at UC San Diego School of Medicine, where NIH-supported research advances innovative treatments for intractable illnesses, catalyzes new technology and cultivates the next generation of scientists," says Vice Chancellor for Health Sciences John Carethers, M.D.

UC SAN DIEGO REPORTS \$1.73 BILLION IN RESEARCH AWARDS FOR FY24

UC San Diego announced \$1.73 billion in new research funding in its fiscal year 2024 annual report. The university continues its long-standing presence among the top public research institutions in the world. The report highlights key trends and shifts in research funding expenditures across all campus entities.

Health Sciences, which includes the Department of Surgery, continues to have the most active research awards (3,321) and accounts for 54 percent of the university's total active awards (5,568).

"The most important takeaway from this year's numbers is to recognize that UC San Diego's commitment to innovation and research excellence remains world-class and steadfast," says Chancellor Pradeep Khosla.

UC San Diego's commitment to diversity and inclusion remained evident, with a 13 percent increase in grant submissions by women principal investigators and an 18 percent rise in submissions by underrepresented minority faculty.

UC SAN DIEGO DEPARTMENT OF SURGERY PRESENTS THE 12TH ANNUAL RESEARCH SYMPOSIUM

The Department of Surgery presented its annual research symposium on Tuesday, May 21, 2024. The event began with opening remarks by **Bryan Clary, M.D., M.B.A.**, chair of the department, who emphasized the importance of surgical science in patient care now and in the future. He was followed by **Jason Sicklick, M.D.**, executive vice chair of research, who commented on the enthusiastic participation of all divisions and many trainees in the department.

Over 140 people attended the symposium this year, with 101 abstract submissions — a 40.2 percent increase from 2023. Members of the Department of Surgery are more engaged than ever and eager to support the implementation of the department's research vision statement: "to transform surgical care through collaborative, impactful research and innovation."

"The annual research symposium exemplifies the Department of Surgery's unwavering dedication to academic research. The department is proudly committed to training the next generation of surgeon-scientists," says Bryan Clary, M.D., M.B.A.

Research at the symposium spanned from basic science and translational science to clinical research to health services and education research. These topics were highlighted in 24 oral presentations and 77 poster presentations and judged by faculty in the Department of Surgery, with prizes awarded for the best presentations in several categories.

The symposium also featured a keynote address by Scott LeMaire, M.D., from the Geisinger Commonwealth School of Medicine. His lecture on thoracic aortic disease — "Advancing the Field: The Impact of Academic Surgery" — discussed the evolution of treatment approaches to this complex disease, which have become more personalized over time. Early in LeMaire's career, thoracic aortic disease was categorized along a dichotomy between "Marfanoid" disease (consistent with Marfan's Syndrome) and other causes. Today, timing of surgical replacement is fine-tuned based on the precise cause of the disease, which radically affects the expected durability of the aorta. LeMaire also discussed the importance of academic research in training programs for surgeon-scientists.

Department of Surgery Faculty and Trainees Attended Numerous Conferences This Past Year

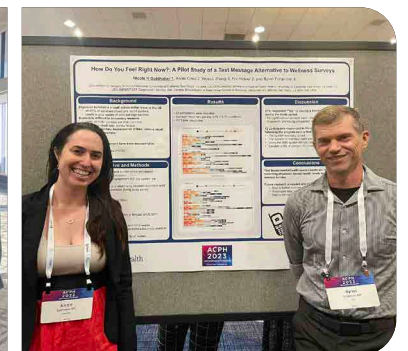


Members of the Department of Surgery at the Healthcare Informatics session at the American College of Surgeons Quality and Safety Conference.

From left: Karthik Ramesh, Tom Mou, Nicole Goldhaber and Kristen Mekeel.



Romeo Ignacio (left) and UC San Diego Health medical students and residents at the 2023 American College of Surgeons Clinical Congress.



Nicole Goldhaber and Byron Ferguson presenting their pilot project on real time text message assessments of medical trainee stress levels at the 2023 Annual Conference on Physician Health.

TRAINING HIGHLIGHTS

THE CENTER FOR THE FUTURE OF SURGERY

The center elevates education programs for future surgeons, integrating the latest technology in our operating room spaces and hosting external industry partners and internal departments at all stages from development and usability testing to surgeon training.

Medical students have their first look into surgical training with introductions to laparoscopy, suturing, IUD insertion and a resident transition course exposing them to the different specialties. Resident and fellow training education has continued to flourish for general surgery, plastic surgery, orthopedics, urology, obstetrician gynecologist and more through weekly training sessions and annual bootcamps. Each year novel approaches are introduced to expand learner outcomes. This includes perfused models to teach bleeding management as well as an interdisciplinary joint anesthesia/ general surgery lab series focused on advancing surgical and communication skills during a crisis in the operating room.

In alignment with these innovative programs, the Center for the Future of Surgery strives to maintain cutting-edge technology for its learners. The center is the first non-clinical facility to adopt J&J's AITA digital suture management system, a comprehensive solution that optimizes the way hospitals manage their inventory. Additionally, all the endoscopy towers have been recently upgraded to Stryker's 1788 system with 5K monitors to enhance surgical imaging and telehealth capabilities. The Center for the Future of Surgery also remains at the forefront of robotic surgery as a regional training center for Intuitive's daVinci Xi and ION systems. Distalmotion's Dexter robot was recently added with **Ryan Broderick, M.D.**, and **Garth Jacobsen, M.D.**, leading testing sessions. Several guest robots, such as Quantum's Epione Robot and Synaptive's Modus X, were onsite for additional faculty demonstrations and collaborations.

Each year, the Center for the Future of Surgery broadens its exposure within the medical community by hosting several large-scale association courses driven by UC San Diego Health faculty members, such as the California Society of Plastic Surgery with **Amanda Gosman, M.D.**, AO North America with **Katharine Hinchcliff, M.D.**, and SAGES Flexible Endoscopy with **Bryan Sandler, M.D.**, to name a few.



Division of Plastic Surgery residents training the Center for the Future of Surgery.



TOP: Training lab with Santiago Horgan.



LEFT: Microvascular surgery workshop with the Division of Plastic Surgery at the Center for the Future of Surgery on May 10, 2024.

Medical students were able to learn and practice skills applicable to a wide range of surgical specialties under the instruction of Christopher Reid.



RIGHT: General surgery and anesthesiology residents during a joint simulation lab.

This realistic, multidisciplinary team training challenged residents to manage the effects of acute hemorrhagic shock while building communication skills during the intraoperative crisis.

T32 TRAINING GRANT AIMS TO MOVE THE NEEDLE ON TRANSLATIONAL CANCER RESEARCH

The UC San Diego Department of Surgery was awarded T32 funding from the National Institutes for Health for a Surgical Oncologists as Scientists (SOAS) Training Program, which centers on the idea that patient health is a team sport. **Jason Sicklick, M.D.**, and **Yuan Chen, Ph.D.**, will oversee the SOAS program.

Translational cancer research moves innovative discoveries from basic research to preclinical validation and then on to clinical implementation via entrepreneurship and commercialization. SOAS will train two new surgeon-scientists annually in three topics: the tumor microenvironment, tissue biobanking via our College of American Pathologists-certified biorepository and innovation and entrepreneurial skills.

"Increasingly, the oncologic surgeon-scientist needs to thoroughly understand details of the major role the tumor microenvironment plays in cancer initiation, progression, metastasis, response to therapies and how it may help identify novel targets for anti-cancer drugs," says Sicklick.

The SOAS Training Program is dedicated to training a diverse group of surgeon-scientists, including individuals from various backgrounds such as women, underrepresented minorities and LGBTQ+ individuals. The program aims to nurture these trainees into future leaders in academic surgery and oncology, equipping them with the necessary skills to contribute to the translation of innovative discoveries into improved clinical cancer care.

"We're also emphasizing training in innovation and entrepreneurship due to the critical need to ensure that research training has real-world translational relevance — that is, we need to demonstrably improve cancer care, not merely improve understanding," says Chen.

NICOLE GOLDHABER AND COLLABORATORS WIN BEST BEME SYSTEMATIC REVIEW

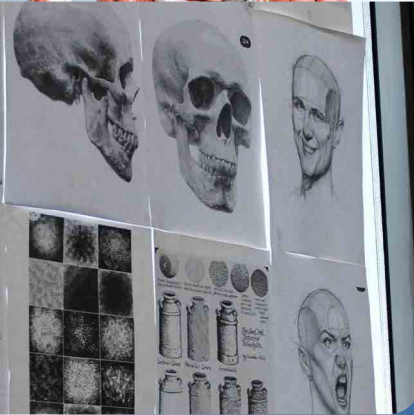
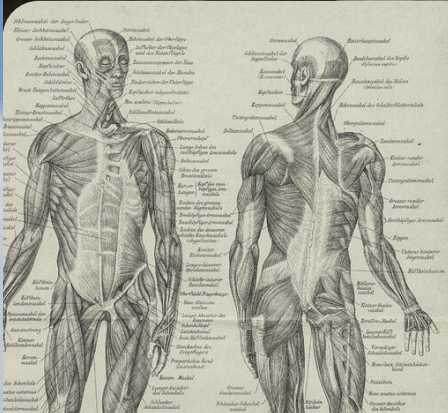
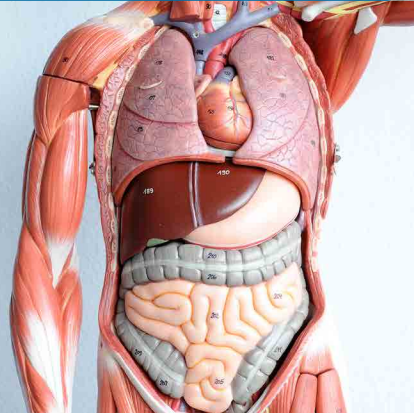
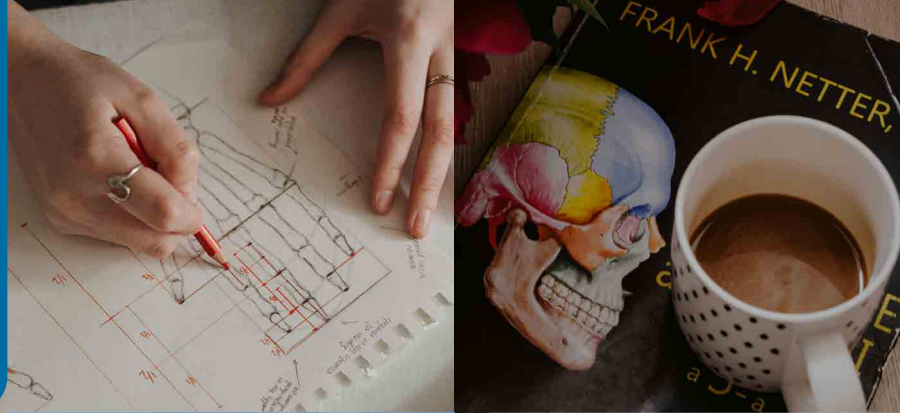
General surgery resident Nicole Goldhaber, M.D., was a co-author on a paper selected as the Best BEME (Best Evidence in Medical Education) Systematic Review published in 2022–2023. The paper was entitled, "Virtual Interviewing for Graduate Medical Education Recruitment and Selection: A BEME Systematic Review," and was published in the journal Medical Teacher.

This prestigious award reflects the journal's commitment to the development of evidence-informed medical and health professions education through dissemination of information that allows teachers and stakeholders to make decisions on the basis of the best evidence available, presented in a manner that meets the needs of the user.



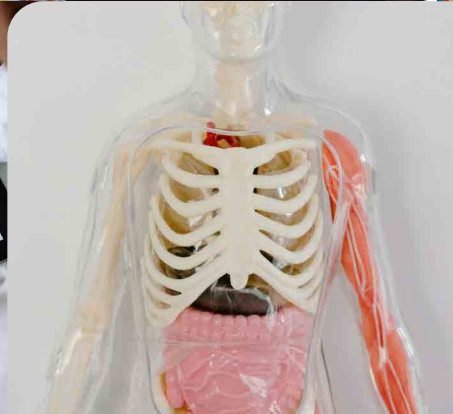
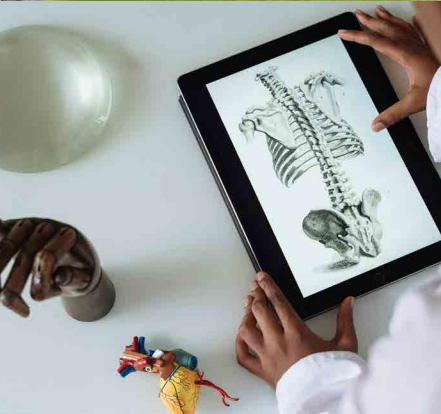
Nicole Goldhaber

DIVISION OF ANATOMY



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

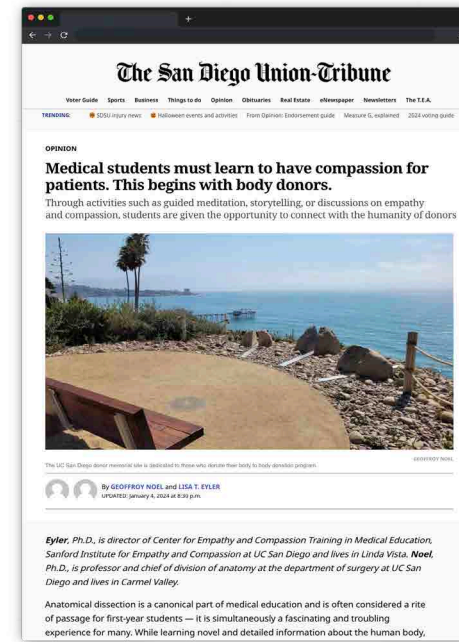
Our teaching approach centers on the dissection laboratory, where student doctors actively learn about human structure from surgeons equipped with an innovative curriculum that emphasizes clinical applications.



FEATURED STORY

MEDICAL STUDENTS MUST LEARN TO HAVE COMPASSION FOR PATIENTS. THIS BEGINS WITH BODY DONORS.

In an op-ed with The San Diego Union-Tribune, **Division Chief Geoffroy Noel, Ph.D.**, spoke about the importance of having compassion for body donors. Anatomical dissection is a critical part of medical education, but it can be both a fascinating and troubling experience for new medical students.



"While learning novel and detailed information about the human body, students find themselves confronting complex and potent aspects of the clinician-patient relationship, such as power, boundaries, respect for fellow humans and the sanctity of life, often leading to intense emotions," says Noel.

The UC San Diego School of Medicine understands the importance of forging a meaningful connection between students and donors who selflessly contribute their bodies to medical education.

"To facilitate this connection, we have implemented humanistic exercises at the start of each anatomy lab, a practice that we call Compassionatomy," says Noel. "This includes activities such as guided meditation, storytelling or discussions on empathy and compassion, so students are given the opportunity to connect with the humanity of the donors."

This lab was, and continues to be, developed with the support of the Sanford Institute for Empathy and Compassion and the Compassion Institute.

"By incorporating these exercises, we aim to instill a deep sense of gratitude and respect within our students, reminding them of the privilege and responsibility that comes with studying the human body," says Noel.

AWARDS

Geoffroy Noel, Ph.D., received multiple teaching awards from the School of Medicine at UC San Diego. For the first, Noel was awarded the Kaiser Excellence in Teaching Award by the first-year medical student class of 2024, which recognizes School of Medicine faculty who excel in their work as pre-clinical or clinical instructors.

Noel also received the School of Medicine Educational Scholarship Award, which recognizes one faculty or staff member each year who demonstrates an active role in health sciences education research; generates evidence-based teaching and learning practices to impact student learning outcomes; captures grant funding in medical education research; and disseminates scholarship of this research.

Noel has a reputation for facilitating the exchange of knowledge and ideas and fostering a culture of continuous improvement in health profession and sciences education. His work not only enriches the educational experiences of current and future health care professionals but also advances the broader mission of improving health care delivery and outcomes worldwide.



Geoffroy Noel receives his award from the School of Medicine at UC San Diego.

PRESENTATIONS

AMERICAN ASSOCIATION OF CLINICAL ANATOMISTS (ACAA)

New York, New York, June 2024

Oral Presentations:

Noel GPJC., Mercer C., Ryan J., Zeng D., Lau N., Suresh P., Moradi A., Howe S. and Balta J. The Role of Augmented Reality in Anesthesiology Residents' Learning Curve.

Noel GPJC., Beydoun S. and Venne G. Comparative Microbiological Analysis of Human Bodies Embalmed with Soft-Preservation Techniques.

Poster Presentations:

Noel GPJC., St-Onge T., Bouher LM. and Mutch J. Minimally Invasive Denervation of the Wrist: A Cadaveric Study Using Ultrasound-Guidance.

Detton A., Pirri C., Stecco C. and Noel G. Ultrasound Guided Subcutaneous Tissue Dissections in Cadavers.

Detton A., Anand MK., Boaz NT., Noel G., Tessema C., Harmon D., Labib H., Ward PJ., Weinhaus A., Wink AE. and Neumann PE. Consensus Survey Report of the Fascia Subcommittee of the Clinical Anatomy Terminology Committee.

AMERICAN ASSOCIATION FOR ANATOMISTS (AAA)

Toronto, Canada, March 2024

Oral Presentations:

Prasad J., Bhugra D., Stearns D., Brassett C., Molodynski A., Noel G. and Wu A. The State of Mental Health in Health Professions Students in 2023 – A Global Survey Via an Anatomy Course-Based Program.

Tzang CC., Molina P., Chien CL., Sagoo MG., Brassett C., McWatt S., Stearns D., Sakurai T., Noel G. and Wu A. Exploring AI Readiness in Medical Education: A Global Survey.

Poster Presentations:

Synowiec A., Matsuoka A., Ruiz M., Stearns D., Brassett C., Kitahara S., Kunzel C., Noel G., Haruta J., Hyakutake M., Wu A. A Global Study on the Impact of Gender and Single-Gender Education in Professional Identity Formation.

Zeroual M., El-Adem D., Tai P., Venne V., Balta J. and Noel G. Comparing Embalming Techniques for Recurrent Laryngeal Nerve Education.

ASSOCIATION FOR MEDICAL EDUCATORS IN EUROPE (AMEE)

Glasgow, United Kingdom, August 2023

Oral Presentations:

Yee M., Adrover González R., Norwitz N., McWatt S., Stearns D., Noel G., Wu A. Student Perspectives on Nutrition Education in Health Professions Programs – A Global Snapshot from 20 Universities.

Belage T, Pang P, Kumar S, Stearns D, Sakurai T, Kunzel C, McWatt S, Noel G, Wu A. Evaluating Professional Identity Formation Amongst Health Professional Students Globally.

Poster Presentations:

K Ihara, K Kim, S Kumar, C Brassett, Y Kanai, M Gill Sagoo, RWingate, CLChien6, H Traxler, J Waschke, A Sigmund, T Sakurai, Y Yamada, M Zeroual, J Olsen, S El-Batti, S Viranta-Kovanen, K Keay, S Kitahara, N Martinez-Abadias, A Navarro Ponz, JM de Anta Vinyals, J Helms, C Sforza, N Gagliano, M Norris,, A Lang, M Joseph, L Buehler, M Hardy, S Patel, P Bernd, H Kielstein, C Kunzel, A Green, S McWatt, GNoel, A Wu. Learning Alongside Global Classmates – An Online Anatomy Based Course Improves Intercultural Skills and Preparedness in Health Profession Students.

Other Presentations:

Noel GPJC., Beydoun S. and Venne G. (March 2024). Comparative microbiological analysis of human bodies embalmed with soft-preservation techniques. West Coast Consortium of Academic Donation Programs, University of California, Office of the President, Denver, Colorado.

Lhuair M., Hunsinger V., Biau D., Hivelin M., Noel G., Garrido I., Derder M., Abrahams P., Fontaine C., Tavitian B., Clement O. and Lantieri L. (March 2024) Variations anatomiques des vaisseaux perforants issues du pédicule profond de la cuisse chez la femme : étude anatomique et implications chirurgicales. 105e congrès des Morphologistes, Nice, France.

K Ihara, K Kim, S Kumar, C Brassett, Y Kanai, M Gill Sagoo, RWingate, CLChien6, H Traxler, J Waschke, A Sigmund, T Sakurai, Y Yamada, M Zeroual, J Olsen, S El-Batti, S Viranta-Kovanen, K Keay, S Kitahara, N Martinez-Abadias, A Navarro Ponz, JM de Anta Vinyals, J Helms, C Sforza, N Gagliano, M Norris,, A Lang, M Joseph, L Buehler, M Hardy, S Patel, P Bernd, H Kielstein, C Kunzel, A Green, S McWatt, G Noel, A Wu. (July 2023) Learning alongside Global Classmates – an Online Anatomy Based Course Improves Intercultural Skills and Preparedness in Health Profession Students. 55th Annual Meeting of the Japan Society for Medical Education, Nagasaki, Japan.

RESEARCH TRAINEES

David Zheng, first year M.D. program

Nathan Lau, first year M.D. program

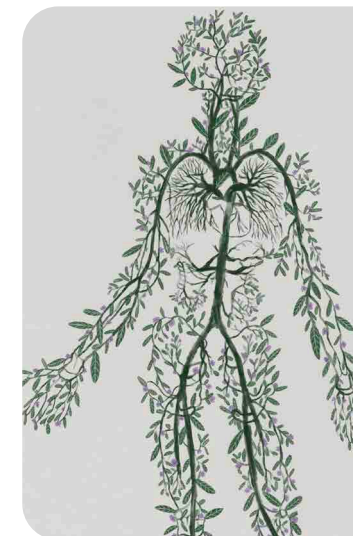
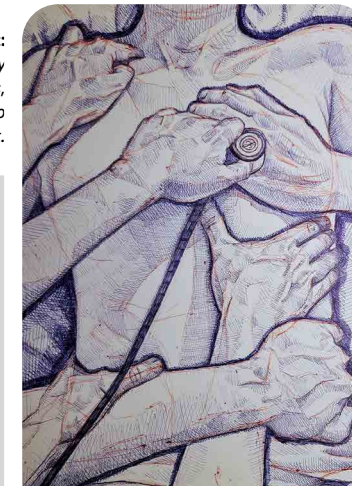
Cheyenne Mercer, second year M.D. program (chair of ISP project)

Jessica Kern, second year M.D. program (supervisor of SURG299)

SELECTED PUBLICATIONS

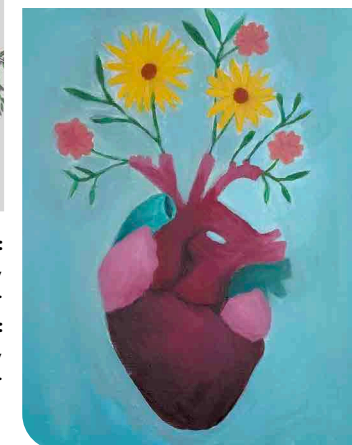
1. Cell-type-resolved mosaicism reveals clonal dynamics of the human forebrain. Chung C, Yang X, Hevner RF, Kennedy K, Vong KI, Liu Y, Patel A, Nedunuri R, Barton ST, Noel G, Barrows C, Stanley V, Mittal S, Breuss MW, Schlachetzki JCM, Kingsmore SF, Gleeson JG. Nature. 2024 Apr 10. doi: 10.1038/s41586-024-07292-5. PMID: 38600385.
2. A comparison of student perspectives on body donation across healthcare professional programs: From prosection- to dissection-based curricula. Claveria A, Bachour D, Balta JY, Antonacci R, Ventura NM, Noel GPJC. Anat Sci Educ. 2024 Feb 1. doi: 10.1002/ase.2383. PMID: 38299426.
3. Evaluating AI-powered text-to-image generators for anatomical illustration: A comparative study. Noel GPJC. Anat Sci Educ. 2023 Sep 11. doi: 10.1002/ase.2336. PMID: 37694692.
4. Comparison between pre-mortem and post-mortem cadaveric images for use with augmented reality headsets during dissection. Jabbarly Aslany F, McBain K, Chen L, O'Brien J, Noel GPJC. Surg Radiol Anat. 2023 Oct;45(10):1311-1319. doi: 10.1007/s00276-023-03239-z. Epub 2023 Sep 12. PMID: 37698598.

Right:
Drawing by
Breanna Collins,
UC San Diego
medical student.



Top:
Drawing by Stephanie Cleverdon,
UC San Diego medical student.

Right:
Painting by Sheila Noon,
UC San Diego medical student.



DIVISION OF ANATOMY FACULTY

Geoffroy Noel, Ph.D.
Chief of Division

Joy Balta, Ph.D., M.S.
Health Sciences Educator

Joshua Bardin, M.D.
Clinical Professor

Amir Meraban, M.S., M.B.A.
Health Sciences Educator

Grant Neifeld, M.D.
Health Sciences Educator

Diana Paddock, P.A.
Health Sciences Educator

David Rapaport, Ph.D.
Professor of Surgery Emeritus

John Kroener, M.D.
Clinical Instructor

Amir Moradi, M.D., M.B.A.
Clinical Instructor

Paul Kingston, Ph.D.
Health Professional
Educator Specialist

Jose Ubeda, M.S.
Health Sciences Educator

Jin Seo Park, Ph.D.
Visiting Professor

Krishna Sharma, Ph.D.
Postdoctoral Fellow

Larry and Debby Kline
UC San Diego School of Medicine
"Artists in Residence"

DIVISION OF BREAST SURGERY



*The UC San Diego Division of Breast Surgery, combined with the **Division Chief Anne Wallace'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.*



FEATURED STORY

UC SAN DIEGO BREAST SURGERY ARTICLE RANKS IN TOP 10 MOST DOWNLOADED FROM SCIENCE DIRECT IN 2023

A special series on the de-escalation of breast surgery in the August 2023 issue of *Surgery*, edited by **Sarah Blair, M.D.**, featured "Omitting axillary staging in selected patients: Rationale of Choosing Wisely in breast cancer treatment," authored by **Sara Grossi, M.D., Julie Le, M.D., and Ava Armani, M.D.**

The article ranked sixth most downloaded in 2023 across all-time ScienceDirect publications.



The Koman Family Outpatient Pavilion.

CLINICAL

The Koman Family Outpatient Pavilion Breast Health, directed by **Division Chief Anne Wallace, M.D.**, was named a FY24 Clinic Winner for their access, service, finance and quality.

Sara Grossi, M.D., helped develop the VA Breast Surgery Program into a multidisciplinary, comprehensive program with care planning across disciplines, including radiology and medical oncology. Grossi and

others fostered close partnerships with surrounding radiation oncology facilities to support patient health, and there is now a high-risk clinic for the veterans with timely referral to genetic testing and counseling. The Jennifer Moreno Department of Veterans Affairs Medical Center – San Diego is represented nationally as a member of the Breast and Gynecologic Oncology System of Excellence, a part of the VA's National Oncology Program initiative ensuring veterans receive state of the art, guideline-adherent care.

TRAINING

Ava Armani, M.D., Julie Le, M.D., and Sara Grossi, M.D., were mentors for the American Society of Clinical Oncology Summer Internship. The internship introduces rising second-year medical students, primarily from populations underrepresented in medicine, to the field of oncology.

AWARDS

Anne Wallace, M.D., was named a "Top Doc" in plastic surgery in San Diego Magazine's annual "Physicians of Exceptional Excellence" survey, a coveted honor among physicians across the county.

Julie Le, M.D., received both the Golden Scalpel and the UC San Diego Clinical Teacher of Winter Quarter 2023 awards. The Golden Scalpel is awarded by the UC San Diego Department of Surgery, and winners are chosen by medical students and residents..

FEATURED DOCTORS:

Ava Armani, M.D., Sarah Blair, M.D., Sara Grossi, M.D., Julie Le, M.D., and Anne Wallace, M.D.



Vincent Genna

PEOPLE NEWS

Vincent Genna, N.P., was named the chair-elect of the Advanced Practice Council, a group comprised of 15 members with a mission to represent the overall advanced practice providers community at UC San Diego Health. The council provides a collaborative forum for reporting and evaluating practice concerns; recognizing and rewarding successes; standardizing orientation and mentorship for all incoming providers; and organizing educational programming. He is also the lead for the Engagement Committee.

Sarah Blair, M.D., was the chair of the American Society of Breast Surgeons annual meeting scientific committee. She moderated the scientific session and gave a podium presentation on granulomatous mastitis, which is now published in the *Annals of Surgical Oncology*.

The Division of Breast Surgery attended a gala called Starry Starry Night, benefitting autism and cancer research.

Division Chief Anne Wallace, M.D., presented at the event, hosted by Bill and Daphne Barak at The Ritz Carlton, Rancho Mirage, which also featured a cocktail party, dinner reception, auction and live entertainment.

Lori Morgan retires after 15 years of service as an administrative assistant at UC San Diego Health.

Anne Wallace, M.D., and **Vincent Genna, N.P.**, attended the ceremony for the new McGrath Family Foundation Outpatient Pavilion at UC San Diego Health. Breast surgery will play a major role at the new pavilion, which is slated to open in 2025.



Sara Grossi

On Delivering Bad News

A poem by **Sara Grossi, M.D.**, from *The Human Condition*, 2024

*Toes tapping, arms wrapping
themselves nervously around you;
I've delivered what I know is devastating news — it's hard for me too.
A blank stare, "this isn't fair," and "what happens next?"
Your family beside you looking perplexed.
It's all new, unexpected, the color drained from your face now blue
How could this be happening to you?
I don't have all the answers in my medical book
For how to meet your eyes with that sullen look
When it feels like I've tossed you the heaviest weight
But I've offered you hope, like a fish clinging to bait.
Today's the day I've delivered your diagnosis;
You'll have a thousand questions for me later regarding your prognosis.
But today I'm a white coat filled with dark news
Across from you and your tapping shoes.*

SELECTED PUBLICATIONS

1. Race, gene expression signatures, and clinical outcomes of patients with high-risk early breast cancer. Kyalwazi B, Yau C, Campbell MJ, Yoshimatsu TF, Chien AJ, Wallace AM, Forero-Torres A, Puzstai L, Ellis ED, Albain KS, Blaes AH, Haley BB, Boughey JC, Elias AD, Clark AS, Isaacs CJ, Nanda R, Han HS, Yung RL, Tripathy D, Edmiston KK, Viscusi RK, Northfelt DW, Khan GJ, Asare SM, Wilson A, Hirst GL, Lu R, Symmans WF, Yee D, DeMichele AM, van 't Veer LJ, Esserman LJ, Olopade OI. *JAMA Netw Open*. 2023 Dec 1;6(12):e2349646. doi: 10.1001/jamanetworkopen.2023.49646. PMID: 38153734.
2. Neoadjuvant trebananib plus paclitaxel-based chemotherapy for stage II/III breast cancer in the adaptively randomized I-SPY2 trial—Efficacy and biomarker discovery. Albain KS, Yau C, Petricoin EF, Wolf DM, Lang JE, Chien AJ, Haddad T, Forero-Torres A, Wallace AM, Kaplan H, Puzstai L, Euhus D, Nanda R, Elias AD, Clark AS, Godellas C, Boughey JC, Isaacs C, Tripathy D, Lu J, Yung RL, Gallagher RI, Wulfkuhle JD, Brown Swigart L, Krings G, Chen YY, Potter DA, Stringer-Reasor E, Blair S, Asare SM, Wilson A, Hirst GL, Singh Rao R, Buxton M, Clennell JL, Sanil A, Berry S, Asare AL, Matthews JB, DeMichele AM, Hylton NM, Melisko M, Perlmutter J, Rugo HS, Symmans WF, van't Veer LJ, Yee D, Berry DA, Esserman LJ. *Clin Cancer Res*. 2023 Dec 18. doi: 10.1158/1078-0432.CCR-22-2256. PMID: 38109213.
3. Distance of biopsy-confirmed high-risk breast lesion from concurrently identified breast malignancy associated with risk of carcinoma at the high-risk lesion site. Le J, O'Keefe TJ, Khan S, Grossi SM, Choi HY, Ojeda-Fournier H, Armani A, Wallace AM, Blair SL. *Cancers (Basel)*. 2024 Jun 19;16(12):2268. doi: 10.3390/cancers16122268. PMID: 38927976.
4. Factors influencing implementation of the Commission on Cancer's Breast Synoptic Operative Report (Alliance A20_Pilot9). Park KU, Padamsee TJ, Birken SA, Lee S, Niles K, Blair SL, Grignol V, Dickson-Witmer D, Nowell K, Neuman H, King T, Mittendorf E, Paskett ED, Brindle M. *Ann Surg Oncol*. 2024 Jun 11. doi: 10.1245/s10434-024-15515-2. Online ahead of print. PMID: 38862840.
5. Clinical impact of semi-annual mammography in patients undergoing breast conserving surgery following neoadjuvant therapy. Wang T, Weed C, Tseng J, Chung A, Moody A, Grossi S, Boyle MK, Giuliano AE, Amersi F. *Surg Oncol Insight*. 2024; DOI: <https://doi.org/10.1016/j.soi.2024.100037>. No PMID or PMCID.
6. Duration of endocrine treatment for DCIS impacts second events: Insights from a large cohort of cases at two academic medical centers. O'Keefe T, Yau C, Iaconetti E, Jeong E, Brabham C, Kim P, McGuire J, Griffin A, Wallace A, Esserman L, Harismendy O, Hirst G. *Res Sq [Preprint]*. 2024 Jan 11;rs.3.rs-3403438. doi: 10.21203/rs.3.rs-3403438/v1. PMID: 38260526.
7. Masculinizing hormone therapy effect on breast tissue: Changes in estrogen and androgen receptors in transgender female-to-male mastectomies. Chaum M, Grossi S, Chen J, Hu V, Ray E, Giuliano A, Bose S. *Breast*. 2023 Nov 3;72:103596. doi: 10.1016/j.breast.2023.103596. Online ahead of print. PMID: 37951051.
8. Restriction spectrum imaging with elastic image registration for automated evaluation of response to neoadjuvant therapy in breast cancer. Andreassen MMS, Loubrie S, Tong MW, Fang L, Seibert TM, Wallace AM, Zare S, Ojeda-Fournier H, Kuperman J, Hahn M, Jerome NP, Bathen TF, Rodríguez-Soto AE, Dale AM, Rakow-Penner R. *Front Oncol*. 2023 Sep 15;13:1237720. doi: 10.3389/fonc.2023.1237720. eCollection 2023. PMID: 37781199.
9. ASO Visual Abstract: Is choosing wisely wise for lobular carcinoma in patients over 70 years of age? A National Cancer Database analysis of sentinel node practice patterns. Goldhaber NH, O'Keefe T, Kang J, Douglas S, Blair SL. *Ann Surg Oncol*. 2023 Oct;30(10):6033. doi: 10.1245/s10434-023-13992-5. PMID: 37626253.
10. Is choosing wisely wise for lobular carcinoma in patients over 70 years of age? A National Cancer Database analysis of sentinel node practice patterns. Goldhaber NH, O'Keefe T, Kang J, Douglas S, Blair SL. *Ann Surg Oncol*. 2023 Jul 25. doi: 10.1245/s10434-023-13886-6. Online ahead of print. PMID: 37490163.



UC San Diego Health
Anne Wallace M.D.
Chief of Division

DIVISION OF BREAST SURGERY FACULTY

Anne Wallace, M.D.
Chief of Division

Sarah Blair, M.D.
Professor of Surgery

Ava Armani, M.D.
Assistant Professor of Surgery

Sara Grossi, M.D.
Assistant Professor of Surgery

Julie Le, M.D.
Assistant Professor of Surgery



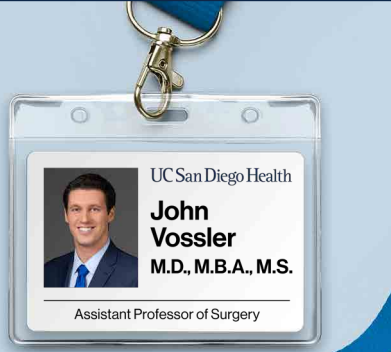
The Division of Breast Surgery team participating in Pedal the Cause.

DIVISION OF CARDIOVASCULAR AND THORACIC SURGERY



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 we have 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 the Sulpizio Cardiovascular Center at UC San Diego Health.



FEATURED STORY

MORE THAN 5,000 PULMONARY THROMBOENDARTERECTOMY SURGERIES COMPLETED

UC San Diego Health is the worldwide leader in pulmonary thromboendarterectomy (PTE) surgery and management of the rare disease, chronic thromboembolic pulmonary hypertension (CTEPH). PTE involves removing blood clots and scarring from major blood vessels in the arteries of the lungs, which are caused by CTEPH and can hinder the ability to breathe. The eight to ten-hour complex procedure can reverse heart failure and is considered more effective than lung transplantation.

"It was an honor to perform Washburn's surgery. He did extremely well, and we were all so pleased to celebrate the incredible 5,000th milestone with him, his family and our team,"

says **Division Chief Michael Madani, M.D.**

UC San Diego Health pioneered PTE surgery and continues to perform high volumes of this life-saving surgery to treat CTEPH. The Division of Cardiovascular and Thoracic Surgery boasts more



successful PTEs than any other medical center and the lowest post-surgery mortality rate worldwide. This past year marked completing more than 5,000 PTE surgeries, Mark Washburn being the 5,000th patient.

"UC San Diego is a world-renowned center for the care of CTEPH patients with one of the highest volume surgical programs in the world,"

says **Bryan Clary, M.D., M.B.A.**, chair of the Department of Surgery at UC San Diego.



From left: Michael Madani, Mark and Melissa Washburn, and Nick Kim.

Photo credit: Leslie Aquinde.

CLINICAL

Our patient and transplant organ (graft) survival rates exceed the national average for all programs, placing us among the nation's best transplant centers by the Scientific Registry of Transplant Recipients (SRTR).

One-Year Transplant Survival Rates from the July 2024 SRTR Report:

Organ	Patient/ Graft Survival Rate*	UC San Diego Health Survival Rate	National Survival Rate
Lung	Patient Survival	92.73%	89.30%
	Graft Survival	90.17%	88.15%
Heart	Patient Survival	97.19%	91.91%
	Graft Survival	96.57%	91.66%

*Graft survival refers to the survival of the transplanted organ.

FEATURED DOCTORS:

Ian Glenn, M.D., Jessica Hudson, M.D., M.S., M.P.H.S., Michael Madani, M.D., Mark Onaitis, M.D., Patricia Thistlethwaite, M.D., Ph.D., and John Vossler, M.D., M.B.A., M.S.

TRAINING

We're pleased to announce the creation of the Cardiothoracic Surgery Integrated Residency Program, designed to train individuals to become leaders in the discipline of cardiothoracic surgery. The program combines a fundamental education in general surgery with adult and congenital cardiac and general thoracic surgery and a rich exposure to clinical material. The first class, consisting of one resident, will start July 1, 2025.

RESEARCH

Mark Onaitis, M.D., along with Judith Varner, Ph.D., and Sandip Patel, M.D., received \$500,000 from Curebound to develop eganelisib, a PI3K α inhibitor, to reverse macrophage-induced immunosuppression in lung cancer. The investigators hope to evaluate this drug in conjunction with chemotherapy and immune checkpoint inhibitors in preclinical models, leading to a potential clinical trial.

Patricia Thistlethwaite, M.D., Ph.D., received \$2.48 million from NIH's National Heart, Lung, and Blood Institute to examine the small protein, NOTCH3-ECD, as a blood biomarker for pulmonary arterial hypertension. She hopes this study will advance our understanding of the molecular signals that lead to vascular smooth muscle cell growth in the lung. The new biomarker test could lead to more patient-friendly, less invasive and less costly diagnostics for pulmonary arterial hypertension and serve as a useful adjunct to current testing methods.

PEOPLE NEWS

Division Chief Michael Madani, M.D., coordinated and presided over the proceedings of the fourth triennial International Chronic Thromboembolic Pulmonary Hypertension (CTEPH) Association Conference as co-head of the association's scientific committee. The association aims to bring expert health care professionals together in ongoing multidisciplinary discussion to advance the quality of CTEPH patient care and education. This was the first time the conference has been held in San Diego, California.

Ian Glenn, M.D., joined the division as a cardiac surgeon focused on adult cardiac surgery with an emphasis on aortic and structural heart disease and lung transplantation. He completed his general surgery residency at Cleveland Clinic, followed by fellowship training in cardiothoracic surgery at Cleveland Clinic and UC San Diego. His academic interests include outcomes in aortic surgery and lung transplantation, as well as exploring the role of machine learning in cardiothoracic surgery.

Jessica Hudson, M.D., M.S., M.P.H.S., joined the division as a thoracic surgeon focusing on thoracic oncology, minimally invasive surgery and surgical education. She completed her general surgery residency at Washington University in St. Louis and her fellowship in cardiothoracic surgery at Duke University. Her academic interests focus on cultivating innovation in surgery education, simulation and assessments. Her academic goals are to forge science-guided improvement in cardiothoracic trainee education.

John Vossler, M.D., M.B.A., M.S., joined the division as a pediatric cardiac surgeon. He completed his residency at the University of Hawaii and his fellowships in cardiothoracic surgery at the University of Utah and pediatric cardiovascular surgery at the University of Michigan. His research focuses on clinical outcomes and large databases.

SELECTED PUBLICATIONS

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8. Transcriptomes and metabolism define mouse and human MAIT cell populations. Chandra S, Ascui G, Riffelmacher T, Chawla A, Ramirez-Suástegui C, Castelan VC, Seumois G, Simon H, Murray MP, Seo GY, Premlal ALR, Schmiedel B, Verstichel G, Li Y, Lin CH, Greenbaum J, Lamberti J, Murthy R, Nigro J, Cheroutre H, Ottensmeier CH, Hedrick SM, Lu LF, Vijayanand P, Kronenberg M. Sci Immunol. 2023 Nov 10;8(89):eabn8531. doi: 10.1126/sciimmunol.abn8531. Epub 2023 Nov 10. PMID: 37948512.
9. NOTCH3 and pulmonary arterial hypertension. Winicki NM, Puerta C, Besse CE, Zhang Y, Thistlethwaite PA. Int J Mol Sci. 2024 Jun 6;25(11):6248. doi: 10.3390/ijms25116248. PMID: 38892440.
10. BRCC3 regulation of ALK2 in vascular smooth muscle cells: Implication in pulmonary hypertension. Shen H, Gao Y, Ge D, Tan M, Yin Q, Wei TW, He F, Lee TY, Li Z, Chen Y, Yang Q, Liu Z, Li X, Chen Z, Yang Y, Zhang Z, Thistlethwaite PA, Wang J, Malhotra A, Yuan JX, Shyy JY, Gong K. Circulation. 2024 Apr 1. doi: 10.1161/CIRCULATIONAHA.123.066430. Online ahead of print. PMID: 38557054.



DIVISION OF CARDIOVASCULAR AND THORACIC SURGERY FACULTY

Michael Madani, M.D.
Chief of Division

Joelle Coletta, M.D.
Professor of Surgery

Alexander Geha, M.D., M.S.
Professor of Surgery

Eugene Golts, M.D.
Professor of Surgery

Steven Howe, M.D.
Professor of Surgery

Stuart Jamieson, M.D.
Professor of Surgery

John Nigro, M.D.
Professor of Surgery

Mark Onaitis, M.D.
Professor of Surgery

Victor Pretorius, M.B.Ch.B.
Professor of Surgery

Patricia Thistlethwaite, M.D., Ph.D.
Professor of Surgery

Joshua Boys, M.D.
Associate Professor of Surgery

Daniel Gramins, M.D.
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Jessica Hudson, M.D., M.S., M.P.H.S.
Associate Professor of Surgery

Travis Pollema, D.O.
Associate Professor of Surgery

Ian Glenn, M.D.
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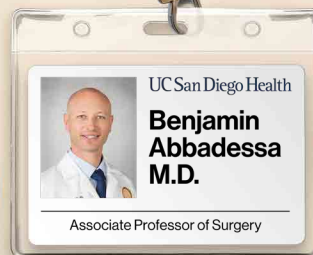
Mark Kearns, M.D.
Assistant Professor of Surgery

John Vossler, M.D., M.B.A., M.S.
Assistant Professor of Surgery

Ashley Zander, D.O.
Assistant Professor of Surgery

Jolene Kriett, M.D.
Professor of Surgery Emeritus

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, medical assistants, nurses, advanced practice providers and administration.

RESEARCH

Samuel Eisenstein, M.D., continues his work as the national primary investigator for two data collaboratives related to inflammatory bowel disease (NSQIP-IBD and IBD-SIRQC), funded by the Crohn's and Colitis Foundation. Because of his unique access to this data, Eisenstein and Rodney Gabriel, M.D., from the anesthesiology and biomedical informatics departments, submitted an R01 grant to explore inflammatory bowel disease surgery-predicted outcomes using machine learning and artificial intelligence.

Eisenstein was also awarded a Litwin Grant from the Crohn's and Colitis Foundation to explore the effect of cannabidiol suppositories on symptoms of perianal Crohn's disease. Additionally, he received funding from both the academic senate and the Academy of Clinician Scholars to perform a pilot study exploring the microbiome of perianal Crohn's disease and which microbiome profile is conducive to successful surgical closure.

The division also received several grants to further develop the technology necessary to perform fluorescence-guided surgery. **Shanglei Liu, M.D.**, received funding to conduct studies using fluorescent dyes to identify colon and rectal cancer during surgery, as well as for ureteral and nerve identification during pelvic surgery. He also received funding from the Society of Surgery of the Alimentary Tract to explore fluorescent molecules to improve tumor (adenoma) detection rates during colonoscopies.

The division published 18 manuscripts in a variety of domains, from cancer to inflammatory bowel disease to anorectal disease. We also increased our clinical trial portfolio significantly and hired research coordinator **Michelle Temby** to assist with our expanded efforts. We are currently pursuing clinical research in a variety of areas related to colon and rectal surgery.

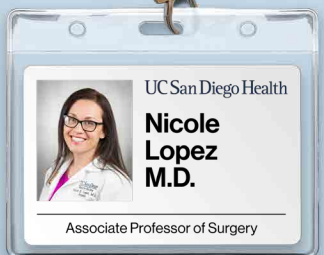
The division published a manuscript about using stem cell fat grafting, a technique using a patient's own fat to help heal anal fistulae. The procedure was both safe and effective. Next, the team plans to publish about using this technique in over 200 procedures to further demonstrate its effectiveness and improve patient care.

UC San Diego was chosen as one of 20 sites nationally to participate in a clinical trial using patients' own muscle precursor cells to help regenerate the anal sphincter in relation to fecal incontinence. The UC San Diego effort will be led by **Samuel Eisenstein, M.D.**

Lisa Parry, M.D., was awarded a Research in Robotic Surgical Technology Grant from the American Society of Colon and Rectal Surgeons to investigate the feasibility of same-day discharge colectomy at UC San Diego. Patients are sent home with wearable devices and nursing follow-up appointments for procedures that previously required a three to five day hospital stay.

Shanglei Liu, M.D., was awarded an Altman Clinical and Translational Research Institute pilot grant to investigate a new device he developed. This device could enable surgeons to better understand if a patient may be a good candidate for ileostomy closure, a procedure that allows stool to pass through the rectum.

Bard Cosman, M.D., is researching optimal surgical management of hidradenitis suppurativa, a condition that causes painful lumps and abscesses under the skin. He presented his findings at the Northwest Society of Colon and Rectal Surgeons.



FEATURED DOCTORS:

Benjamin Abbadessa, M.D., Bard Cosman, M.D., Samuel Eisenstein, M.D., Shanglei Liu, M.D., Nicole Lopez, M.D., Lisa Parry, M.D., and Sonia Ramamoorthy, M.D.

CLINICAL

The division experienced tremendous growth this past year with an overall 13 percent increase in case volume and sustained advancement of our world-class robotics program. Additionally, we expanded our clinical footprint to the UC San Diego Medical Center, with upcoming plans for clinics and outpatient surgeries at the McGrath Outpatient Pavilion and East Campus Medical Center.

The division continues to be the regional leader in treating rectal cancer as we've seen the volume and breadth of rectal cancer-related procedures and operations surge. Additionally, we remain the only San Diego member of the Nationally Accreditation Program for Rectal Cancer.

TRAINING

Shanglei Liu, M.D., was honored with the 2023-2024 Resident Intraoperative Teaching Award in recognition of his exceptional contributions to surgical education and mentorship. His dedication and ability to effectively guide residents in the operating room have made a significant impact on the training program.

Benjamin Abbadessa, M.D., is a surgeon educator for the UC San Diego Medical Center medical student rotation and plays a pivotal role in guiding students through the surgical subspecialty rotation. He also serves as the resident faculty advisor for the morbidity and mortality conference, fostering educational and professional discussions on clinical outcomes and quality improvement.

Nicole Lopez, M.D., teaches several courses and serves as a faculty advisor to the medical student surgical interest group at UC San Diego School of Medicine. She also participates in curriculum review committees, ensuring the highest standards of academic excellence. Notably, she received a prestigious 2023-2024 Golden Scalpel Award for her dedication to teaching medical students as well as surgical residents.

PEOPLE NEWS

Division Chief Sonia Ramamoorthy, M.D., was elected as president of the American Society of Colon and Rectal Surgeons. ASCRS is the premier colorectal society representing nearly 5,000 colorectal surgeons throughout the United States. Ramamoorthy is the fourth female president and the first Asian female president of the 125-year-old surgical society. She previously served as vice president, treasurer, and member at large and helped establish the Leadership and Professional Development Program (Surgical Leadership Institute) and the New Tech Symposium, among many other contributions to the society.

Ramamoorthy was also appointed to the 2023-2024 Doximity Women in Medicine Advisory Board. Doximity is the leading online networking service for medical professionals, with over two million current members, their Women in Medicine digest reaching over 200,000 women physicians. As part of her appointment, Ramamoorthy is invited to share her insights for Doximity content through discussion, collaboration and interviews with the Doximity team and other leading women in medicine. She will also contribute original Op-Med narrative pieces, examining issues at the intersection of health, medicine and gender to the Doximity platform.

Ramamoorthy was also awarded a UC San Diego 2024 Health Sciences Women Leadership Award from the Office of Faculty Affairs for her leadership and accomplishments.

Nicole Lopez, M.D., is actively involved in national initiatives, contributing her expertise to several key committees and working groups dedicated to enhancing standards of care. She recently became a member of the American Board of Surgery's complex general surgical oncology certifying exam committee. Lopez was also appointed vice chair of the surgical information transformation committee and joined the executive committee for the Cancer Surgery Standards Program at the American College of Surgeons.

PEOPLE NEWS (CONTINUED)

Bard Cosman, M.D., is the Southern California councilor for the Pacific Coast Surgical Association. He is also on the editorial board for the Diseases of the Colon & Rectum Journal and Vexillum, the magazine of the North American Vexillological Association.

Sherley Leasau joined the division as an executive assistant.

AWARDS

Nicole Lopez, M.D., and **Sonia Ramamoorthy, M.D.**, received a "Top Doctors" Award by the San Diego County Medical Society for Physicians of Exceptional Excellence in 2023. Additionally, both won an Exceptional Women in Medicine Award by the San Diego Magazine – Castle Connolly in 2024.

SELECTED PUBLICATIONS

1. Management of locally advanced rectal cancer-building the plane as we fly. Liu S, Ramamoorthy S. JAMA Surg. 2023 Sep 1;158(9):919. doi: 10.1001/jama-surg.2023.2529. PMID: 37436744.
2. Risk factors associated with postoperative outcomes in diverticular disease undergoing elective colectomy-A retrospective cohort study from the ACS-NS-QIP database. Hu WH, Eisenstein S, Parry L, Ramamoorthy S. J Clin Med. 2023 Nov 27;12(23):7338. doi: 10.3390/jcm12237338. PMID: 38068390.
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DIVISION OF COLON AND RECTAL SURGERY FACULTY

Sonia Ramamoorthy, M.D.
Chief of Division

Bard Cosman, M.D.
Professor of Surgery

Benjamin Abbadessa, M.D.
Associate Professor of Surgery

Samuel Eisenstein, M.D.
Associate Professor of Surgery

Nicole Lopez, M.D.
Associate Professor of Surgery

Lisa Parry, M.D.
Associate Professor of Surgery

Shanglei Liu, M.D.
Assistant Professor of Surgery

DIVISION OF MINIMALLY INVASIVE SURGERY



The Division of Minimally Invasive Surgery at UC San Diego remains a leading academic institution. We continue to see advancements in the care of our patients through development of new technology and laparoscopic/ robotic surgical techniques.

Our surgeons are active at the Bariatric and Metabolic Institute, and we continue to have active accreditation with no citations. We also maintain our Level 1 certification from the American College of Surgeons. We were named 26th in the country by the 2024 U.S. News & World Report "Best Hospitals" Survey for Gastroenterology and GI Surgery, for which we specialize in paraesophageal hernia repair, GERD treatment, LINX and bariatric surgery. We collaborate often with our surgical oncology colleagues to offer minimally invasive gastrectomy, esophagectomy and adrenalectomy for cancer. Our comprehensive Hernia Center also continues to provide the highest level of care for the most complex abdominal wall hernia patients.



RESEARCH

The Division of Minimally Invasive Surgery is at the forefront of several active research areas, including foregut surgery, metabolic and bariatric surgery, robotic surgery, surgical training and performance, fluorescence-guided surgery, abdominal wall hernia repair, and clinical outcomes of hernia mesh biomaterials. Our division presented research at multiple national surgical conferences, including the American Society of Metabolic and Bariatric Surgery, the American College of Surgeons Clinical Congress, and the Society of Gastrointestinal and Endoscopic Surgeons (SAGES).

We are actively pursuing research projects investigating the use of weight loss medications before hernia surgery, optimizing protocols for visualizing bile ducts during surgery and the impact of bariatric surgery tourism on our health system. We are also investigating the utility of augmented reality in the operating room with the goal of enhancing operative efficiency and improving education for surgical trainees. This year, our division completed the first minimally invasive surgery in the United States using the virtual reality headset, Apple Vision Pro.

"Science fiction has become reality! The AR headset can show the patient x-rays, vital signs and the surgical camera view in real-time, literally at our fingertips; the surgeon can be in a more relaxed, ergonomic position with more information than ever before," says Division Chief Santiago Horgan, M.D. "This technology will truly revolutionize the operating room for the patient and surgeon alike."

"We continue to push the limits on what is possible in the operating room. More technology in surgery often means more physical space is occupied, but the AR headset allows for decluttering the operating room and streamlining our workflow," says **Ryan Broderick, M.D.**

"The applications of AR in surgery are limitless, and we are just beginning to scratch the surface of what we can achieve." We also continue to collaborate with our psychiatry colleagues to assess the cognitive load and stress response of our surgical trainees during surgery. The education and training of surgical residents is a major focus of our division. We published two studies that involved the continuous brain and heart monitoring of our residents during robotic simulation labs. This monitoring identifies baseline performance and highlights physiologic changes in trainees when they perform an error during a simulated surgery.



Minimally invasive surgeons are the first in the nation to evaluate the potential use of spatial computing apps on Apple Vision Pro in the operating room.



Santiago Horgan wearing a virtual reality headset in the operating room.

In addition, our division received grants from industry partners to conduct research. We received a research grant from Gore Medical to examine surgical outcomes in patients following implantation of mesh for hernia repair. We also received an industry grant from Arthrex Inc. to conduct a study with the goal of developing new protocols for fluorescence-guided surgery that leverage the latest advances in surgical camera and imaging technology.

FEATURED DOCTORS:

Ryan Broderick, M.D., Santiago Horgan, M.D., Garth Jacobsen, M.D., and Bryan Sandler, M.D.



Ryan Broderick operating Distalmotion's Dexter robot.

CLINICAL

We remain pioneers in fluorescence technology, currently in use for biliary surgery and perfusion assessment in general surgery. Our robotics practice is expanding, increasing in volume dramatically year-on-year for robotic hernia repairs. We are evaluating new robotics technologies that can be more cost-effective for our patients, including the Dexter Surgical Robot developed by Distalmotion. **Garth Jacobsen, M.D.**, and **Ryan Broderick, M.D.**, will soon be the first surgeons in the United States to use this system for robotic inguinal hernia repair.

Artificial intelligence in surgery is growing in interest; we are positioned to be innovators in its use in the operating room with collaborations from industry.



From left: *Edgardo Reyes (Mexico), Andres Nicola (Argentina), Patricia Ruiz Cota (Mexico), Amanda Rocha (Brazil), Diana Almada (Mexico) and Augustina Altolaquirre (Argentina).*

TRAINING

Ryan Broderick, M.D., and **Bryan Sandler, M.D.**, trained our general surgery residents during weekly education labs at the Center for the Future of Surgery. Residents performed laparoscopic, robotic and endoscopic procedures under the guidance of faculty from the Division of Minimally Invasive Surgery.

Division Chief Santiago Horgan, M.D., and **Ryan Broderick, M.D.**, frequently mentor international scholars and observers throughout the year for as short as one month to as long as one year. This past year, the division welcomed scholars from across the globe.

PEOPLE NEWS

Santiago Horgan, M.D., was one of the three editors for the book "The SAGES Manual of Fluorescence-Guided Surgery." The Society of Gastrointestinal and Endoscopic Surgeons (SAGES) is the leading minimally invasive surgical society. The concise, illustrated manual includes 17 chapters, compiling the latest knowledge on fluorescence-guided surgery techniques and applications in a range of surgical fields. **Michael Bouvet, M.D.**, and **Ryan Broderick, M.D.**, also contributed to the book.

AWARDS

Ryan Broderick, M.D., received the 2024 Golden Scalpel Teaching Award from UC San Diego. This award is given to the top 10 percent of educators based on medical student and resident feedback.

Broderick was also selected by peers for the first time as one of San Diego County Medical Society's Physicians of Exceptional Excellence "Top Doctors" of 2024.

SELECTED PUBLICATIONS

1. Magnetic sphincter augmentation: A promising alternative to fundoplication for preserving lung function and protecting against chronic lung transplant rejection. Huang EY, Afshar K, Golts E, Broderick RC, Spurzem GJ, Chung D, Holmgren J, Sandler BJ, Jacobsen GR, Kunkel DC, Horgan S. *Transplant Rep.* 2024 Jun;9(3):100156. doi: 10.1016/j.tpr.2024.100156
2. Robotic technology in surgery; A classification system of soft tissue surgical robotic devices. Cowan B, Gomes C, Morris P, Fryrear R 2nd, Petraiulo W, Walton M, Alseidi A, Horgan S, Hagen M. *Surg Endosc.* 2024 May 21. doi: 10.1007/s00464-024-10861-4. PMID: 38772960.
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5. Long-term outcomes of PGA-TMC absorbable synthetic scaffold in both clean and contaminated ventral hernia repairs. Huang EY, Broderick RC, Spurzem GJ, Li JZ, Blitzer RR, Cheverie JN, Sandler BJ, Horgan S, Jacobsen GR. *Surg Endosc.* 2024 Mar 18. doi: 10.1007/s00464-024-10777-z. PMID: 38498213.
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7. Demonstrating the utility of fluorescence cholangiography with indocyanine green during laparoscopic cholecystectomy. Spurzem GJ, Broderick RC, Horgan S. *J Gastrointest Surg.* 2024 Feb 9;S1091-255X(24)00157-4. doi: 10.1016/j.gassur.2024.02.009. PMID: 38458910.
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9. What are essential laparoscopic skills these days? Results of the SAGES Fundamentals of Laparoscopic Surgery (FLS) Committee technical skills survey. Seymour NE, Nepomnayshy D, De S, Banks E, Breitkopf DM, Campagna R, Gomez-Garibello C, Green I, Jacobsen G, Korndorffer JR Jr, Minasi J, Okrainec A, Matthew Ritter E, Sankaranarayanan G, Schwartzberg S, Soper NJ, Vassiliou M, Wagner M, Zevin B. *Surg Endosc.* 2023 Oct;37(10):7676-7685. doi: 10.1007/s00464-023-10238-z. PMID: 37517042.



DIVISION OF MINIMALLY INVASIVE SURGERY FACULTY

Santiago Horgan, M.D.
Chief of Division

Garth Jacobsen, M.D.
Professor of Surgery

Bryan Sandler, M.D.
Professor of Surgery

Ryan Broderick, M.D.
Associate Professor of Surgery

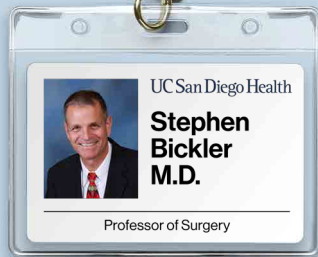
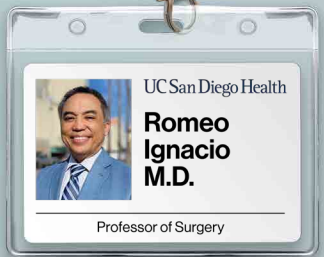
Tania Morimoto, Ph.D.
Assistant Professor of Surgery and Mechanical and Aerospace Engineering

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. Division Chief Timothy Fairbanks, M.D., continues to lead the Division of Pediatric Surgery as they aspire for excellence across multiple areas.

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



CLINICAL

Hariharan Thangarajah, M.D., M.P.H., was instrumental in establishing the Pediatric National Surgical Quality Improvement Program (NSQIP) for our division. Membership in NSQIP is vital for comparing the quality of care provided by our faculty to national benchmarks. The division also commenced an annual surgical quality project, which will allow us to improve the quality of the care we provide.

This year the division hosted pediatric surgeon Marc Levitt, M.D., an internationally recognized expert in the surgical care and treatment of pediatric colorectal disorders from Children's National Hospital. Levitt gave Pediatric Surgery Grand Rounds and performed multiple complex neonatal colorectal cases.

There were several interactive symposiums with pediatric surgery, urology, radiology and gastroenterology services. The visiting professorship put a spotlight on the important advances in anorectal malformations, cloaca and complex colorectal care. **David Lazar, M.D.**, was instrumental in hosting the program and in making sure the innovations discussed during the visit are integrated into the everyday practice at UC San Diego Health.

TRAINING

Karen Kling, M.D., is a key educator for the fellows, residents and students at UC San Diego Health. The UC San Diego Pediatric Surgery Fellowship remains very active. The program attracts high-quality applicants from around the country who then go on to provide top-level pediatric surgery care at academic institutions. In many ways, the fellowship, under the guidance of Kling, is the glue that holds the division together and provides inspiration and motivation for us all to continue to grow, evolve and improve.

UC San Diego Health and Rady Children's Hospital now host a Pediatric Surgical Critical Care Fellowship. This fellowship is a cooperation between the Pediatric Surgery Service and the Division of Trauma, Surgical Critical Care, Burns and Acute Care Surgery. Fellows spend a year in critical care training followed by a year of research. **Benjamin Keller, M.D.**, will be the site host, and the first fellow will start in fall of 2024.



FEATURED DOCTORS:

Stephen Bickler, M.D., Gerald Gollin, M.D., Romeo Ignacio, M.D., Benjamin Keller, M.D., Karen Kling, M.D., David Lazar, M.D., and Hariharan Thangarajah, M.D., M.P.H.

RESEARCH

The UC San Diego Health faculty approach research as a team. Currently, the team presents research at multiple national pediatric surgical conferences every year. **Stephen Bickler, M.D.**, **Romeo Ignacio, M.D.**, and **Gerald Gollin, M.D.**, along with the rest of the faculty, play prominent roles in this research.

Romeo Ignacio, M.D., is active in the Western Pediatric Surgical Research Consortium. This consortium has produced multiple nationally recognized multicenter studies published in peer-reviewed journals.

Gerald Gollin, M.D., focuses on neonatal surgical conditions. Several studies on the neurodevelopmental consequences of delays in intestinal resection for necrotizing enterocolitis were presented at the Academic Surgical Congress and the American Academy of Pediatrics National Conference & Exhibition. Other studies regarding intestinal anastomosis and antibiotic management in surgical necrotizing enterocolitis were published.

In addition, a study of the experience with thoracoscopic esophageal atresia repair at United States children's hospitals that found an increased risk for stricture compared to open repair was presented at the American Academy of Pediatrics National Conference & Exhibition.

AWARDS

Stephen Bickler, M.D., was awarded the American Heart Association Innovation Project Award. This research will look at the relationship between vascular function nitric oxide and the microbiome in sub-Saharan Africa.



SELECTED PUBLICATIONS

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2. Evaluating outcomes of non-accidental trauma in military children. Joskowitz K, Patwardhan UM, Floan GM, Heflinger M, Cruz S, David M, Jadhav P, Nienow S, Thangarajah H, Ignacio RC. J Am Coll Surg. 2024 Feb 19. doi: 10.1097/XCS.0000000000001048. PMID: 38372360.
3. Utility of enteral contrast protocols in pediatric adhesive small bowel obstruction: a prospective multicenter observational study. Acker SN, Ignacio R, Russell KW, Kelley-Quon L, Lofberg K, Lee J, Jensen AR, Pickett-Nairne K, Prendergast C, Iantorno SE, Thangarajah H, Patwardhan U, Melhado C, Zhong A, Padilla B, Rothstein DH, Nicassio L, Pandya S, Valencia M, Wang K, Inge TH; Western Pediatric Surgery Research Consortium. Ann Surg. 2024 Jan 23. doi: 10.1097/SLA.0000000000006207. PMID: 38258558.
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6. Inspirational women in surgery-Professor Barbara Barlow: A trailblazer in pediatric injury prevention. West E, Ignacio RC, Bickler SW. World J Surg. 2024 Feb 14. doi: 10.1002/wjs.12081. Online ahead of print. PMID: 38353368.
7. Application of a machine learning algorithm in prediction of abusive head trauma in children. Jadhav P, Sears T, Floan G, Joskowitz K, Nienow S, Cruz S, David M, de Cos V, Choi P, Ignacio RC. J Pediatr Surg. 2024 Jan;59(1):80-85. doi: 10.1016/j.jpedsurg.2023.09.027. Epub 2023 Sep 26. PMID: 37858394.
8. A comparative study of laparoscopic versus open management of index small bowel obstruction in children. Patwardhan UM, Floan GM, Calvo RY, Acker SN, Choi PM, Prieto JM, Bansal V, Sise MJ, Thangarajah H, Fairbanks TJ, Lazar DA, Ignacio RC. J Pediatr Surg. 2023 Oct 21:S0022-3468(23)00653-X. doi: 10.1016/j.jpedsurg.2023.10.043. Online ahead of print. PMID: 37978001.
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11. Trends in management of index adhesive small bowel obstruction in children. Patwardhan UM, Floan GM, Calvo RY, Acker SN, Prieto JM, Thangarajah H, Bansal V, Sise MJ, Fairbanks TJ, Lazar DA, Ignacio RC. J Surg Res. 2023 Sep 1;292:258-263. doi: 10.1016/j.jss.2023.07.043. Online ahead of print. PMID: 37660549.



DIVISION OF PEDIATRIC SURGERY FACULTY

Timothy Fairbanks, M.D.
Chief of Division

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Professor of Surgery

Gerald Gollin, M.D.
Professor of Surgery

Romeo Ignacio, M.D.
Professor of Surgery

Karen Kling, M.D.
Professor of Surgery

David Lazar, M.D.
Associate Professor of Surgery

Hariharan Thangarajah, M.D., M.P.H.
Associate Professor of Surgery

Benjamin Keller, M.D.
Assistant Professor of Surgery

DIVISION OF PLASTIC SURGERY



In a year defined by extraordinary achievements, our Division of Plastic Surgery has continued to lead with innovation and impact.

From performing the groundbreaking phalloplasty to the pioneering "Jaw in a Day" and "Face in a Day" surgeries, we have tackled some of the most complex cases with precision and collaboration. These milestone surgeries, accomplished through seamless teamwork with other specialties, highlight our division's unwavering commitment to advancing surgical excellence. Together, we are not only transforming lives but also setting new standards for what is possible in modern medicine.



FEATURED STORY

UC SAN DIEGO HEALTH PLASTIC SURGEONS PERFORM RECONSTRUCTIVE JAW SURGERY USING 3D PRINTED TEETH

Plastic surgeons **Christopher Reid, M.D.**, and Navy Captain Eamon O'Reilly, M.D., collaborated with the Department of Otolaryngology to perform a groundbreaking reconstructive jaw surgery on Felix Ung, using 3D-printed teeth. Under the leadership of Navy Commander Daniel Hammer, D.D.S., the team removed two-thirds of Ung's jaw and transplanted part of his leg bone to reconstruct it. Just two weeks after surgery, Ung walked across the stage at his commencement, showcasing his new jaw and smile.

"This procedure exemplifies UC San Diego Health's dedication to comprehensive care that blends both functional and aesthetic outcomes," says Reid.



From left: Daniel Hammer and patient Felix Ung.

CLINICAL

Priya Lewis, M.D., joined our faculty after completing a gender-affirming surgery fellowship at the University of Utah. Shortly thereafter, she led the team in performing San Diego's first phalloplasty, a groundbreaking gender-affirming procedure.

"I was honored to be a part of the first phalloplasty at UC San Diego Health this year, which was performed by a true team effort. Gender health, plastic surgery and urology came together to make this groundbreaking milestone possible," says Lewis. *"In addition, the surgery was ultimately successful because of the unwavering support and clinical expertise of our dedicated nurses and staff at Jacobs Medical Center. This was an important step in our pursuit of comprehensive, gender-affirming care for our patients."*

TRAINING

The Plastic and Reconstructive Surgery Diversity and Inclusion Mentorship Experience (PRS DIME) took place at the Center for the Future of Surgery, offering invaluable exposure to the field of plastic surgery for medical students with limited access. The workshop drew participants from over 30 medical schools, representing diverse backgrounds. Attendees engaged in a comprehensive program that featured expert-led lectures, hands-on suture training, a resident panel and cadaver dissections of extremities and the head, including advanced fracture plating techniques.

The division also hosted 26 virtual grand rounds speakers from national institutions and seven in-person visiting professors.

Christopher Reid, M.D., led a microsurgery workshop for the Plastic Surgery Interest Group at the Center for the Future of Surgery.



Mentees in the Center for the Future of Surgery for the Plastic and Reconstructive Surgery Diversity and Inclusion Mentorship Experience.

FEATURED DOCTORS:

Amanda Gosman, M.D., Katharine Hinchcliff, M.D., Melissa Kanack, M.D., Priya Lewis, M.D., and Christopher Reid, M.D.

PEOPLE NEWS

Katharine Hinchcliff, M.D., hosted the first AO Trauma North America Hand Fellow and Chief Resident Hand Surgery Course: Preparing for Hand Fellowship and Beyond at the Center for the Future of Surgery. The purpose of this advanced course, which included didactic sessions and cadaver labs, was to prepare trainees to begin a hand surgery fellowship and current hand fellows to launch into practice.



Microsurgery workshop at the Center for the Future of Surgery.

The Division of Plastic Surgery hosted the fifth Annual Plastic Surgery Research Symposium Inaugural Lectureship in memory of **Ralph Holmes, M.D.**

Throughout his career, Holmes held various leadership positions, including chief of Division of Plastic Surgery at UC San Diego Health 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. Our division was honored to host this inaugural lectureship.

AWARDS

Division Chief Amanda Gosman, M.D., was honored with the 2023 Goldwyn Award for her contributions to shaping the next generation of ethical, compassionate and academically distinguished surgeons. This prestigious recognition led to her appointment as the American Council of Educators in Plastic Surgery (ACEPS) Visiting Professor for the 2024 academic year. In this role, Gosman represented UC San Diego Health, traveling across the nation to deliver grand rounds, imparting her vast expertise and insights to premier plastic surgery training programs.

Melissa Kanack, M.D., was awarded the Academy of Clinical Scholars (AoCS) Grant for her research regarding intraoperative O-arm imaging in maxillofacial fracture repair.

Isaac Meyer, N.P., was named the 2023 UC San Diego Ambulatory Clinical Nurse of the Year.

Garrison Leach, M.D., plastic surgery resident, received the 2023 American Society of Plastic Surgeons (ASPS) Visiting Scholar Award.

Christopher Reid, M.D., was a finalist for the 2023 UC San Diego School of Medicine Dean's Teaching Award.



Melissa Kanack mentoring at the Center for the Future of Surgery for the Plastic and Reconstructive Surgery Diversity and Inclusion Mentorship Experience.

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- Kanack MD, Proctor MR, Meara JG, Balkin DM, Rodean J, Stringfellow IC, Berry JG. Hospital Variation and Resource Use for Infants with Craniosynostosis Undergoing Open, Endoscopic, and Distraction Osteogenesis Surgical Techniques. *Cleft Palate Craniofac J*. 2024 Jan 18;10556656241227032. doi: 10.1177/10556656241227032. Epub ahead of print. PMID: 38239039.
- Mercier O, Kolb F, Fadel E. The Holy Grail of Tracheal Replacement. *Eur J Cardiothorac Surg*. 2024 Mar 29;65(4):ezae156. doi: 10.1093/ejcts/ezae156. PMID: 38603620.
- Chopra CS, Abdirahman HJ, Mullikin AM, Abramov D, Aref Y, Lee CJ, Al-Hamad Daubs M, Reid CM. Reported Variability in General Surgery Training Across Integrated Plastic Surgery Residency Programs. *Ann Plast Surg*. 2024 Apr 1;92(4):457-462. doi: 10.1097/SAP.0000000000003837. PMID: 38527353.
- Kim EN, Leung KL, Wong A, McGregor J, Skolnick GB, Patel KB, Gosman AA. Management of Craniosynostosis in Lethal Perinatal Hypophosphatasia. *J Craniofac Surg*. 2023 Nov-Dec 01;34(8):2422-2425. doi: 10.1097/SCS.0000000000009641. Epub 2023 Aug 23. PMID: 37610006.
- Clark RC, Alving-Trinh A, Becker M, Leach GA, Gosman A, Reid CM. Moving the needle: a narrative review of enhanced recovery protocols in breast reconstruction. *Ann Transl Med*. 2023 Dec 20;11(12):414. doi: 10.21037/atm-23-1509. Epub 2023 Jul 24. PMID: 38213812; PMCID: PMC10777219.
- Clark RC, Segal R, Kordahi A, Sendek G, Alving-Trinh A, Abramson W, Sztain J, Swisher M, Gabriel RA, Gosman A, Said ET, Reid CM. An Interdisciplinary, Comprehensive Recovery Pathway Improves Microsurgical Breast Reconstruction Delivery. *Ann Plast Surg*. 2024 May 1;92(5):549-556. doi: 10.1097/SAP.0000000000003833. Epub 2024 Mar 26. PMID: 38563567.
- Stoffel V, Shim JY, Pacella SJ, Gosman AA, Reid CM. Comparing Trends in Medicare Reimbursement and Inflation within Plastic Surgery Subspecialties. *Plast Reconstr Surg*. 2024 Apr 1;153(4):957-962. doi: 10.1097/PRS.0000000000010697. Epub 2023 May 16. PMID: 37189227.
- Davis GL, Abebe MW, Vyas RM, Rohde CH, Coriddi MR, Pusic AL, Gosman AA. Results of a Pilot Virtual Microsurgery Course for Plastic Surgeons in LMICs. *Plast Reconstr Surg Glob Open*. 2024 Feb 12;12(2):e5582. doi: 10.1097/GOX.0000000000005582. PMID: 38348462; PMCID: PMC10860934.



DIVISION OF PLASTIC SURGERY FACULTY

Amanda Gosman, M.D.
Chief of Division

Marek Dobke, M.D., Ph.D.
Professor of Surgery

Frederic Kolb, M.D.
Professor of Surgery

Ahmed Suliman, M.D.
Professor of Surgery

Christopher Reid, M.D.
Associate Professor of Surgery

Katharine Hinchcliff, M.D.
Assistant Professor of Surgery

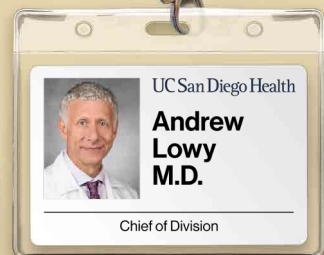
Melissa Kanack, M.D.
Assistant Professor of Surgery

Priya Lewis, M.D.
Assistant Professor of Surgery



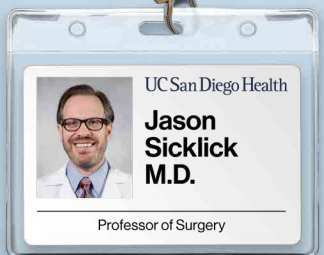
The Plastic and Reconstructive Surgery Diversity and Inclusion Mentorship Experience.

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.



RESEARCH

Michael Bouvet, M.D., was awarded a new R01 in collaboration with Hok Soo Choi, Ph.D., at Massachusetts General Hospital. Their project is titled, "Targeting Parathyroid Glands with Novel Fluorophores for Intraoperative Imaging."

Bouvet also received the Veterans Affairs grant titled "BCCMA: VA Colorectal Cancer Clinical & Computational Collaborative (VA-5C): NIR-labeled antibodies to target and label colon polyps and cancer for improved diagnosis and surgery."

Division Chief Andrew Lowy, M.D., was awarded the Cure Prize for Pancreatic Cancer Research and Lustgarten Foundation Clinical Accelerator Initiative (CAI) Grant. The \$1 million Cure Prize will help fund Lowy's research project titled, "Perioperative Fostamatinib + Chemotherapy for Resectable Pancreatic Cancer." Cure Prizes are awarded by Curebound, a San Diego-based philanthropic organization, to projects that aim to improve the standard of care for a typically deadly cancer with patient application in three to five years.

The additional \$1.2 million from the Lustgarten Foundation will support expanding this project to multiple sites throughout the United States.

Andrew Lowy, M.D., Cosimo Commisso, Ph.D., and Hervé Tiriac, Ph.D., were awarded the Discovery Grant from Curebound. The \$50,000 grant will support their project titled, "Wnk4: A New Drug Target in Pancreatic Cancer."

Winta Mehtsun, M.D., M.P.H., received a KL2 Grant, which is a research training grant for up to \$120,000 for junior faculty. She will study the disparities in colorectal cancer care quality and outcomes across rural and urban populations in the United States.

Jason Sicklick, M.D., will lead a National Cancer Institute-supported U01 cooperative project to study translational gastrointestinal stromal tumors (GIST). The study is advancing translational GIST research in collaboration with the physicians and scientists at the National Institutes of Health and 10 other academic institutions, as well as a patient advocacy group (Life Raft Group) and an industry partner (Inhibrx, Inc.).

Rebekah White, M.D., received multiple R01 awards. The first is clinical trial R01, "Irreversible Electroporation (IRE) Combined with CD40 Agonism as In Situ Vaccine Therapy for Pancreatic Cancer."

White is also co-principal investigator on a second R01 with Duke University on a project called, "Utilizing Nucleic Acid Scavengers to Inhibit Pancreatic Cancer Metastasis Promoted by Damage Associated Molecular Patterns."

Additionally, she received an American Cancer Society Grant. The grant is a supplement to her existing Discovery Boost Grant entitled, "Digestive Proteases Contribute to Immune Escape in Pancreatic Cancer."

TRAINING

Joel Baumgartner, M.D., received the UC San Diego Department of Surgery Intern Intraoperative Teaching Award and the UC San Diego Department of Surgery Golden Scalpel Award.

Winta Mehtsun, M.D., M.P.H., was selected among ten scholars nationally for The Harold Amos Medical Faculty Development Program of the Robert Wood Johnson Foundation. The program was created to increase the number of faculty from historically marginalized backgrounds. Mehtsun will receive \$420,000 over four years to build on her pilot project, "Examining Guideline Concordant Cancer Care Among Limited English Proficiency Patients."

FEATURED DOCTORS:

Joel Baumgartner, M.D., Michael Bouvet, M.D., Andrew Lowy, M.D., Winta Mehtsun, M.D., M.P.H., Jason Sicklick, M.D., and Rebekah White, M.D.

AWARDS

Andrew Lowy, M.D., was appointed as the inaugural holder of the Levine Family Chancellor's Endowed Chair in Surgical Oncology for the Department of Surgery. This five-year appointment is based on the recommendation of campus reviewers and the endorsement of university leadership.

Lowy also delivered the Memorial Sloan-Kettering Cancer Center David Rubinstein Award Lecture titled "Linking Actin Dynamics and Transcriptional Control to Pancreatic Cancer Biology." This prestigious award, which includes the lecture, is given annually for impacting the understanding, diagnosis and tumor management of hepato-pancreatic-biliary (HPB) tumors. It was part of a three-day symposium to commemorate the life and career of Leslie Blumgart, M.D., M.B.Ch.B., a noted HPB surgeon, who passed away recently.

Lastly, Lowy delivered the Ruth Brufsky Award Lectures at PancFest in Cincinnati, Ohio. This award, sponsored by the University of Pittsburgh, recognizes individuals who have made outstanding contributions pancreatic cancer care and research.

Winta Mehtsun, M.D., M.P.H., received the Robert A. Winn Diversity in Clinical Trials: Career Development Award. The award helps to support early-stage physician-investigators working to advance health equity in clinical research.

Below, from left: Kristin Cox, Michael Bouvet, Hannah Hollandsworth and Michael Turner.



Hiking in Annie's Canyon with part of the division.



Above, from left: Yuan Chen, Heather Farris, Jorge De La Torre, Himangshu Sonowal and Rebekah White.



Above, from left: Hannah Hollandsworth, Michael Bouvet, Helmi Lwin and Kristin Cox.

SELECTED PUBLICATIONS

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3. Glutamine mimicry suppresses tumor progression through asparagine metabolism in pancreatic ductal adenocarcinoma. Recouvreux MV, Grenier SF, Zhang Y, Esparza E, Lambies G, Galapate CM, Maganti S, Duong-Polk K, Bhullar D, Naeem R, Scott DA, Lowy AM, Tiriach H, Commisso C. *Nat Cancer.* 2023 Oct 9. doi: 10.1038/s43018-023-00649-1. PMID: 37814011.
4. The Pancreatic Cancer Early Detection (PRECEDE) study is a global effort to drive early detection: Baseline imaging findings in high-risk individuals. Zogopoulos G, Haimi I, Sanoba SA, Everett JN, Wang Y, Katona BW, Farrell JJ, Grossberg AJ, Paiella S, Klute KA, Bi Y, Wallace MB, Kwon RS, Stoffel EM, Wadlow RC, Sussman DA, Merchant NB, Permeth JB, Golan T, Raitses-Gurevich M, Lowy AM, Liao J, Jeter JM, Lindberg JM, Chung DC, Earl J, Brentnall TA, Schrader KA, Kaul V, Huang C, Chandarana H, Smerdon C, Graff JJ, Kastrinos F, Kupfer SS, Lucas AL, Sears RC, Brand RE, Parmigiani G, Simeone DM; PRECEDE Consortium. *J Natl Compr Canc Netw.* 2024 Apr;22(3):158-166. doi: 10.6004/jnccn.2023.7097. PMID: 38626807.
5. Dual inhibition of KRASG12D and pan-ERBB is synergistic in pancreatic ductal adenocarcinoma. Gulay KCM, Zhang X, Pantazopoulou V, Patel J, Esparza E, Pran Babu DS, Ogawa S, Weitz J, Ng I, Mose ES, Pu M, Engle DD, Lowy AM, Tiriach H. *Cancer Res.* 2023 Sep 15;83(18):3001-3012. doi: 10.1158/0008-5472.CAN-23-1313. PMID: 37378556.
6. Retrospective analysis of retroperitoneal-abdominal-pelvic ganglioneuromas: An international study by the Transatlantic Australasian Retroperitoneal Sarcoma Working Group (TARPSWG). Noh S, Nessim C, Keung EZ, Roland CL, Strauss D, Sivarajah G, Fiore M, Biasoni D, Cioffi SPB, Mehtsun W, Cananzi FCM, Sicoli F, Quagliuolo V, Chen J, Luo C, Gladly RA, Swallow C, Johnston W, Ford SJ, Evenden C, Tirota F, Almond M, Nguyen L, Rutkowski P, Krotewicz M, Pennacchioli E, Cardona K, Gamboa A, Hompes D, Renard M, Kollár A, Ryser CO, Vassos N, Raut CP, Fairweather M, Krakorova DA, Quildrian S, Perhavec A, Nizri E, Farma JM, Greco SH, Vincenzi B, Lopez JAG, Solerdecoll MS, Iwata S, Fukushima S, Kim T, Tolomeo F, Snow H, Howlett-Jansen Y, Tzani D, Nikulin M, Gronchi A, Sicklick JK; Transatlantic Australasian Retroperitoneal Sarcoma Working Group. *Ann Surg.* 2023 Aug 1;278(2):267-273. doi: 10.1097/SLA.0000000000005625. PMID: 35866666.
7. Baumgartner JM, Botta GP. Role of Circulating Tumor DNA Among Patients with Colorectal Peritoneal Metastases. *J Gastrointest Cancer.* 2024 Mar;55(1):41-46. doi: 10.1007/s12029-023-00959-8. Epub 2023 Jul 12. PMID: 37436640; PMCID: PMC11096195.
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DIVISION OF SURGICAL ONCOLOGY FACULTY

Andrew Lowy, M.D.
Chief of Division

Michael Bouvet, M.D.
Professor of Surgery

Bryan Clary, M.D., M.B.A.
Professor of Surgery

Jason Sicklick, M.D.
Professor of Surgery

Diane Simeone, M.D.
Professor of Surgery

Jula Veerapong, M.D.
Professor of Surgery

Theodore Welling, M.D.
Professor of Surgery

Rebekah White, M.D.
Professor of Surgery

Joel Baumgartner, M.D.
Associate Professor of Surgery

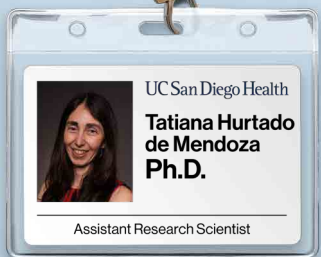
Winta Mehtsun, M.D., M.P.H.
Assistant Professor of Surgery

Robert Barone, M.D.
Senior Physician

Robert Hoffman, Ph.D.
Professor of Surgery Emeritus

Georgia Sadler, Ph.D., M.B.A.
Professor of Surgery Emeritus

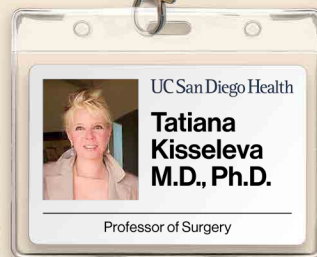
DIVISION OF SURGICAL SCIENCES



The Division of Surgical Sciences serves as a nucleus that unites primarily non-clinician scientists in the Department of Surgery. The division nurtures a research culture that is valued within the department and encourages non-clinician and clinician collaborations.

The division also helps 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 master's 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.



FEATURED STORIES

AI ALGORITHMS CAN DETERMINE HOW WELL NEWBORNS NURSE, ACCORDING TO STUDY

An estimated seven percent of babies are diagnosed with a condition called tongue-tie, in which the connection between the tongue and the floor of the mouth is too strong and limits tongue movement. The condition presents challenges with breastfeeding and often requires surgery, known as a frenotomy, where the connective tissue between the tongue and the floor of the mouth are cut.

In a study published in the IEEE Journal of Translational Engineering in Health and Medicine, **James Friend, Ph.D.**, and colleagues used a modified pacifier to test the suckling response and analyzed the data using AI algorithms.

The results can show if newborns are learning the proper mechanics of nursing and provide objective data that show how standard assessments can be improved and could potentially prevent surgical interventions.

In some cases, surgical interventions could potentially be prevented. Data from the device also flagged abnormal nursing behavior in five babies, which had not been found during a clinical exam.

"Early detection of breastfeeding difficulties within the first month is critical, as it coincides with the important phase of milk establishment and susceptibility to breast injury," says Phuong Truong, the paper's first author and a Ph.D. student in Friend's lab.

Next steps include conducting a clinical trial outside of UC San Diego Health with the ultimate goal of making both the device and algorithm widely available in pediatric practices, where they could be used during an infant's first visit.



Clinicians only need to use the device for 60 seconds to gather meaningful data.

THE DIVERSE APPLICATIONS OF ROBOTICS BEYOND THE LAB

Tania Morimoto, Ph.D., is developing soft, flexible snake-like robots for minimally invasive surgeries. These robots offer increased dexterity, precision and control for surgeons, especially when navigating through tight, highly curved areas inside the body. For example, they have the potential to make it easier to access occlusions in blood vessels of stroke patients. Additionally, these robots are more compliant, making them safer to use inside the body.

"In order to make truly impactful systems, we are focusing on designing new surgeon-side and patient-side robots with the goal of improving patient outcomes," says Morimoto.

Morimoto's research group is working with several collaborators from UC San Diego School of Medicine, including clinicians who specialize in colorectal surgeries; endovascular neurosurgical techniques to prevent strokes; surgical therapies to treat voice, airway and swallowing conditions; and treatment of cancer and non-cancer related pathologic skeletal fractures.

FEATURED DOCTORS:

Yuan Chen, Ph.D., Brian Eliceiri, Ph.D., James Friend, Ph.D., Tatiana Hurtado de Mendoza, Ph.D., Wolfgang Junger, Ph.D., Tatiana Kisseleva, M.D., Ph.D., and Tania Morimoto, Ph.D.

RESEARCH

Tatiana Hurtado de Mendoza, Ph.D., was awarded a \$300,000 National Institutes of Health R21 grant titled "Harnessing Cytomegalovirus (CMV)—Specific T Cells for Pancreatic Cancer Immunotherapy." Additionally, the Foundation for a Better World provided \$500,000 to advance her CMV treatment model into humanized mice for clinical translation.

Division Chief Yuan Chen, Ph.D., secured a three-year United States Department of Defense grant of nearly \$600,000 to investigate a new therapeutic target to prevent pancreatic cancer metastasis.

Brian Eliceiri, Ph.D., received a five-year National Institutes of Health R35 grant of \$1.78 million.

Wolfgang Junger, Ph.D., received a supplement award to his National Institutes of Health R35 grant to fund equipment.

AWARDS

James Friend, Ph.D., was elected as a fellow of the Royal Society of Chemistry. Achieving fellow status in the chemical profession denotes to the wider community a high level of accomplishment as a professional chemist.

Tatiana Hurtado de Mendoza, Ph.D., received the Claugus Award for Medical Research from the Foundation For A Better World. The \$250,000 award recognizes her work in pancreatic cancer research targeted at finding more effective treatments and outcomes for patients diagnosed with the condition.

"I am so grateful to the Foundation For A Better World for their recognition and support," says Tatiana Hurtado de Mendoza. "It is difficult to obtain funding as a new investigator working on non-conventional approaches; the foundation gave me a unique opportunity by funding my research and continuing their support with this award."

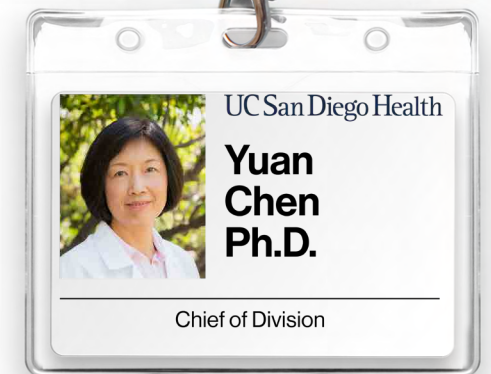
PEOPLE NEWS

Brian Eliceiri, Ph.D., was appointed to the executive committee of the Wound Healing Society and formed a new company, Saragen Therapeutics, to commercialize engineered exosomes for wound healing treatment.

Tatiana Kisseleva, M.D., Ph.D., was appointed director of the Sanford Stem Cell Fitness and Space Medicine Center. In this new role, she will recruit exemplary stem cell physicians, commence a fellowship program, and lead space fitness and orbital medicine research that can benefit both astronauts and people living on Earth.

SELECTED PUBLICATIONS

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2. Defining the activity of pro-reparative extracellular vesicles in wound healing based on miRNA payloads and cell type-specific lineage mapping. Park DJ, Choi W, Sayeed S, Dorschner RA, Rainaldi J, Ho K, Kezios J, Nolan JP, Mali P, Costantini T, Eliceiri BP. *Mol Ther.* 2024 Feb 19;S1525-0016(24)00088-1. doi: 10.1016/j.ymthe.2024.02.019. Online ahead of print. PMID: 38379282.
3. The Origin and Fate of Liver Myofibroblasts. Kim HY, Sakane S, Eguileor A, Carvalho Gontijo Weber R, Lee W, Liu X, Lam K, Ishizuka K, Rosenthal SB, Diggle K, Brenner DA, Kisseleva T. *Cell Mol Gastroenterol Hepatol.* 2024;17(1):93-106. doi: 10.1016/j.jcmgh.2023.09.008. Epub 2023 Sep 22. PMID: 37743012.
4. Closing the Loop on Concentric Tube Robot Design: A Case Study on Micro-Laryngeal Surgery. Lin JT, Girerd C, Ostrander BT, Molaei P, Gilbert HB, Weissbrod PA, Hwang JT, Morimoto TK. *IEEE Trans Biomed Eng.* 2024 Sep 2;PP. doi: 10.1109/TBME.2024.3426489. Online ahead of print. PMID: 39222458.
5. A new immuno-oncology target - SUMOylation. Chen Y. *Trends Cancer.* 2023 Aug;9(8):606-608. doi: 10.1016/j.trecan.2023.04.010. Epub 2023 May 11. PMID: 37179168.
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DIVISION OF SURGICAL SCIENCE FACULTY

Yuan Chen, Ph.D.
Chief of Division

Antonio De Maio, Ph.D.
Professor of Surgery

Brian Eliceiri, Ph.D.
Professor of Surgery

Wolfgang Junger, Ph.D.
Professor of Surgery

James Friend, Ph.D.
Professor of Surgery and Mechanical and Aerospace Engineering

Tatiana Kisseleva, M.D., Ph.D.
Professor of Surgery

Geoffroy Noel, Ph.D.
Professor of Anatomy

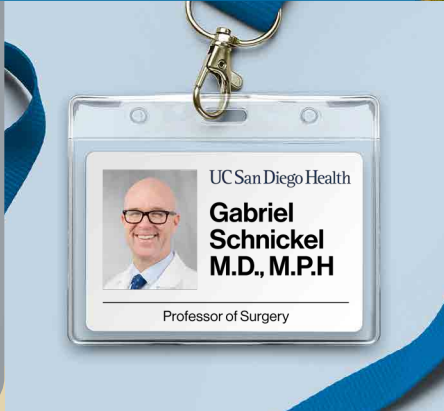
Cosimino Commisso, Ph.D.
Adjunct Associate Professor of Surgery

Carola Ledderose, Ph.D.
Assistant Professor of Surgery

Tania Morimoto, Ph.D.
Assistant Professor of Surgery and Mechanical and Aerospace Engineering

Tatiana Hurtado de Mendoza, Ph.D.
Assistant Research Scientist

DIVISION OF TRANSPLANTATION AND HEPATOBILIARY SURGERY



The Division of Transplantation and Hepatobiliary Surgery is the leading abdominal transplant program in San Diego and 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.



FEATURED STORY

OPENING OF THE REIMAGINE CENTER

In July 2023, the UC San Diego Center for Research, Education, Innovation and Transformation in Organ Donation (REIMAGINE) was created to address the urgent public health crisis caused by the dire organ shortage in the face of the ever-increasing need for transplants. According to the center, a patient on the waitlist dies every 17 minutes, and there is a shortfall of over 25,000 organs annually.

REIMAGINE fuses health equity, environmental science, mindfulness, academic medicine and industry innovation to improve organ availability, enhance organ preservation, reduce waste, ensure equitable transplant access and provide compassionate care to donor families and health care providers. By using advanced technology and new methods, REIMAGINE aims to tackle obstacles in organ donation — from culturally responsive care for donor families to state-of-the-art organ preservation — to increase donor inclusivity and organ utilization. This initiative, the first of its kind in the United States, will set a new benchmark for transplantation by revolutionizing the organ donation landscape.

The board of directors includes many Department of Surgery faculty members, such as **Aleah Brubaker, M.D., Ph.D., Victor Pretorius, M.B.Ch.B., and Gabriel Schnickel, M.D., M.P.H.**

CLINICAL

The UC San Diego Health Center for Transplantation had their biggest life-saving year thus far with a total of 481 life-saving organ transplants in 2023. This number includes 178 kidney transplants and 148 liver transplants. These numbers continue to help us establish ourselves as San Diego's largest kidney transplant program.

UC San Diego Health was one of the first transplant centers on the West Coast to adopt an onsite OrganOx system, enabling all patients on the UC San Diego Health waitlist to be eligible for expedited liver offers. An expedited liver offer is a process where a liver is offered quickly to transplant centers due to its limited viability, requiring immediate action. Previously, only patients living within sixty minutes of the hospital qualified for these offers. This advancement allows patients from across Southern California additional time to travel to the hospital, significantly increasing their chances of receiving a life-saving liver transplant. This device adds to UC San Diego's arsenal of machine perfusion techniques and technologies, including normothermic regional perfusion and TransMedics OCS Liver ex situ machine perfusion.

The liver transplant team remains at the forefront of advancing life-saving liver transplants, consistently finding new ways to provide patients with the care they need. Driven by a commitment to quality patient-centered care and innovation, the program continues to set new standards in the field.

As a leading adopter of machine perfusion technology, the liver transplant team has been able to provide improved access to waitlisted liver transplant patients, allowing access to timelier transplants and reducing our centers median MELD (model of end stage liver disease) score from 35 to 24. **Aleah Brubaker, M.D., Ph.D.**, has been a national leader in the machine perfusion space, bringing the UC San Diego clinical experience to the national stage.

FEATURED DOCTORS:

Jennifer Berumen, M.D., Aleah Brubaker, M.D., Ph.D., Kristin Mekeel, M.D., Gabriel Schnickel, M.D., M.P.H., and Peter Than, M.D.

TRAINING

Karina Covarrubias, M.D., research fellow mentored by **Justin Parekh, M.D.**, and **Aleah Brubaker, M.D., Ph.D.**, successfully defended her master's thesis entitled, "Impact of Perfusion Modalities on Transplant Center Practices and Liver Transplant Outcomes: A Single-Center Experience," for her National Library of Medicine Bioinformatics Fellowship.

Peter Than, M.D., sponsored a team of undergraduate students at the UC San Diego Jacobs School of Engineering to develop a functional prototype of a low-cost normothermic machine perfusion device for kidney preservation.

Currently, kidneys can only be stored for a limited period before transplantation under hypothermic conditions. Thus, the team wanted to create a way to store kidneys in an environment that more closely mimics conditions in the body.

The group received first place at Senior Day awarded by the UC San Diego Jacobs School of Engineering and the American Society of Mechanical Engineers.



Karina Covarrubias

RESEARCH

Aleah Brubaker, M.D., Ph.D., and **Peter Than, M.D.**, received a \$200,000 grant from the American Society of Transplant Surgeons. Portable normothermic machine perfusion (NMP) offers the ability to rehabilitate organs and assess suitability for transplant, helping to solve the persistent organ shortage in liver transplantation. Brubaker and Than will investigate how

NMP impacts cellular pathways that may prevent bile duct injury. Their goal is to identify therapeutic targets to reduce or treat bile duct injury and increase organ availability for waitlisted patients.

PEOPLE NEWS

Peter Than, M.D., joined the division as an assistant professor of surgery. He completed his general surgery training and fellowship in abdominal transplant surgery at Stanford University. His research focuses on understanding mechanisms of organ injury and repair, identifying opportunities to expand the pool of available organs for transplantation and developing regenerative strategies to improve patient outcomes.

AWARDS

Jennifer Berumen, M.D., received a collective rating of five stars from patient surveys for her dedication to health care and patient welfare. She elevates the division's standards of care and has deeply touched the lives of patients, families and colleagues.

PRESENTATIONS

Division Chief Kristin Mekeel, M.D., presented "Navigating Work When 'Life' Happens," at the American Society of Transplant Surgeons Winter Meeting and "Modern Team Building in Transplant Surgery," at the American Society of Transplant Surgeons Advanced Leadership Forum.

SELECTED PUBLICATIONS

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2. Covarrubias K, Trageser J, Nethercot D, Schnickel GT, Brubaker AL. Utilization of Normothermic Machine Perfusion to Rescue Liver Allografts in Unallocated Unstable Donors. Transplant Direct. 2024 Mar 12;10(4):e1608. doi: 10.1097/TXD.0000000000001608. PMID: 38481966; PMCID: PMC10937002.
3. Brubaker AL, Bensard C, MacConmara M, Elbetanony A, Attia M, Sanchez R, Schnickel G. Extended duration of machine perfusion: Maximizing organ utilization. Liver Transpl. 2023 Nov 1;29(11):1242-1244. doi: 10.1097/LVT.0000000000000212. Epub 2023 Jul 12. PMID: 37432896.
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6. Brubaker AL, Taj R, Lee A, Jackson B, Berumen J, Parekh JR, Mekeel KL, Gupta AR, Gardner JM, Chaly T, Mathur AK, Jadlovec C, Reddy S, Nunez R, Bellingham J, Thomas EM, Wellen JR, Pan JH, Kearns M, Pretorius V, Schnickel GT. Early patient and liver allograft outcomes from donation after circulatory death donors using thoracoabdominal normothermic regional perfusion: a multi-center observational experience. 2023. Frontiers in Transplantation. DOI:10.3389/frta.2023.1184620.
7. Goldhaber NH, Mehta S, Longhurst CA, Malachowski E, Jones M, Clary BM, Schaefer RL, McHale M, Rhodes LP, Mekeel KL, Reeves JJ. Call me Ishmael: addressing the white whale of team communication in the operating room with labelled surgical caps at an academic medical centre. BMJ Open Qual. 2024 Apr 8;13(2):e002453. doi: 10.1136/bmjopen-2023-002453. PMID: 38589054; PMCID: PMC11015231.
8. Goldhaber NH, Matson J, Luo W, Thareja N, Lopez N, Clary BM, Mekeel KL. Case Bias Case Basis: Expanding Morbidity and Mortality Conference to Examine the Impact of Disparities in Surgical Care. J Surg Educ. 2023 Dec;80(12):1755-1761. doi: 10.1016/j.jsurg.2023.10.002. Epub 2023 Nov 15. PMID: 37978011.



DIVISION OF TRANSPLANTATION AND HEPATOBIILIARY SURGERY FACULTY

Kristin Mekeel, M.D.
Chief of Division

Bryan Clary, M.D., M.B.A.
Professor of Surgery

Tatiana Kisseleva, M.D., Ph.D.
Professor of Surgery

Gabriel Schnickel, M.D., M.P.H.
Professor of Surgery

Jennifer Berumen, M.D.
Associate Professor of Surgery

Aleah Brubaker, M.D., Ph.D.
Assistant Professor of Surgery

Justin Parekh, M.D.
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Peter Than, M.D.
Assistant Professor of Surgery



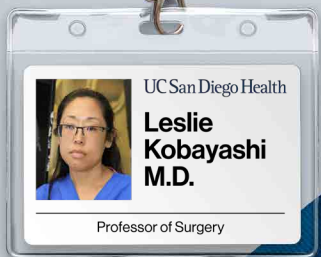
From right: Justin Parekh, Jennifer Berumen, Peter Than, Kristin Mekeel, Aleah Brubaker and Gabriel Schnickel.

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 24/7 world-class care to acutely injured or ill surgical patients. It does this with an ACS-verified Level 1 Trauma Center and an American Burn Association verified Regional Burn Center at the UC San Diego Medical Center.

UC San Diego opened the first regional Level 1 Trauma Center in 1976 and currently 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.



Jay Doucet

FEATURED STORY

TRAUMA SURGEONS DOCUMENT IMPACTS OF HEIGHTENED BORDER WALL

Ever since the border barrier was increased to 30 feet tall, there has been a significant uptick in patients with severe trauma injuries, such as those sustained from falling from the border wall. People are trying to cross the barrier from all over the world, including Mexico, Central America, South America, Africa and Asia.

Officials from UC San Diego Health said the number of patients injured in falls has increased each year since 2019, the year the higher fences were installed. In 2023, UC San Diego Health trauma center doctors treated 440 patients who fell from the wall, a sharp increase from 42 patients in 2019.

UC San Diego shares responsibility for trauma cases originating on the border, switching off months with other local trauma centers and providing aid if one of them gets crowded. Rady Children's Hospital receives trauma patients under the age of 15.

When people fell from the old barriers, doctors would see broken ankles and the occasional spinal fracture. The trauma centers are now tending to border patients with shattered limbs, fractures that stick out from the skin, broken skulls, as well as brain and spine injuries.

The extent of their injuries and the care they require also complicate resources at the hospitals that treat them. UC San Diego doctors found that the median length of stay for border-wall patients increased from about four days to approximately six in the years since the wall increased in height. Some even stay for several months.

The lack of insurance adds to the hospital stay. These patients cannot be transferred to rehabilitation or long-term care centers so they remain in the hospital for more of their treatment.

The UC San Diego doctors hope that publishing what is happening will influence the future considerations of politicians and policy makers – not only the consequences that border policies can have on the lives of people trying to cross, but also the effects that those policies can have on the health care systems that may end up receiving them.

"We know from prior studies and looking at our own records that about half of people will die if they fall 40 feet," says Division Chief Jay Doucet, M.D. "When you get to 30 feet, you're starting to get to the range at which some people are going to die from that height."

FEATURED DOCTORS:

Laura Adams, M.D., Allison Berndtson, M.D., Jay Doucet, M.D., Jeanne Lee, M.D., Jarrett Santorelli, M.D., and Jessica Weaver, M.D., Ph.D.



CLINICAL

BURN CENTER CELEBRATES 50TH ANNIVERSARY

The UC San Diego Regional Burn Center has led noticeable advancements in burn therapy since 1973, making 2023 its 50th anniversary.

"The Regional Burn Center at UC San Diego has provided burn care to the San Diego and Imperial County citizens for a half century," says **Jeanne Lee, M.D.**, director of the UC San Diego Regional Burn Center. Every year, the Burn Center admits about 400 patients – from infants to older adults – for burn injuries, inhalation injuries and skin disorders. Its surgeons treat another 800 individuals annually as outpatients at the UC San Diego Medical Center. The center's state-of-the-art facility has an intensive care unit, a special burn care unit, and an outpatient clinic for minor burn assessments and treatment.

"Accidents will always happen; fires will always be a reality of life. That's why people still come in with burn injuries," says Lee. *"The sooner we see patients, the sooner we can make sure they get the care and rehab they need to get them back to their lives."*



The UC San Diego Regional Burn Center staff.



From left: **Matthew Tadlock** and **Allison Berndtson** teach a rib fracture repair plating course to trauma fellows and surgical residents at the Center for Future of Surgery.

TRAINING

BEST FOR THE BEST

On July 12, 2023, the UC San Diego Center for the Future of Surgery hosted a BEST course to instruct trauma surgery fellows on lacing catheters and x-ray techniques (fluoroscopy and angiography).

The division teaches BEST, ATOM, ASSET and rib plating courses at the Center for the Future of Surgery multiple times per year. Captain **Matthew Tadlock, M.D.**, United States Navy trauma surgeon and UC San Diego voluntary faculty, and **Allison Berndtson, M.D.**, are among the faculty that lead these courses.



From left: **Jarrett Santorelli**, **Jeanne Lee**, **Laura Haines**, ABA surveyors and Regional Burn Center staff.

PEOPLE NEWS

Todd Costantini, M.D., accepts new roles at the University of Minnesota. He will serve as chief of the Division of Critical Care and Acute Care Surgery and vice chair for Clinical Quality in the Department of Surgery. He spent 20 years at UC San Diego, where he led a research program focused on sepsis and clinical trials that informed trauma care nationally, authored more than 180 research publications and served as the UC San Diego trauma medical director.

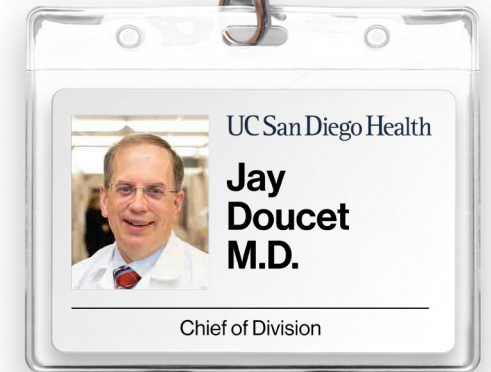
In June 2024, the Regional Burn Center, led by **Jeanne Lee, M.D.**, successfully completed its three-year burn center verification visit, conducted by the American Burn Association.

AWARDS

Jessica Weaver, M.D., Ph.D., **Laura Adams, M.D.**, and **Jarrett Santorelli, M.D.**, were awarded Golden Scalpel awards for being in the top 10 percent of resident teaching ratings.

SELECTED PUBLICATIONS

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4. Defining the activity of pro-reparative extracellular vesicles in wound healing based on miRNA payloads and cell type-specific lineage mapping. Park DJ, Choi W, Sayeed S, Dorschner RA, Rainaldi J, Ho K, Kezios J, Nolan JP, Mali P, Costantini T, Eliceiri BP. Mol Ther. 2024 Feb 19:S1525-0016(24)00088-1. doi: 10.1016/j.yymthe.2024.02.019. PMID: 38379282.
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DIVISION OF TRAUMA, SURGICAL CRITICAL CARE, BURNS AND ACUTE CARE SURGERY FACULTY

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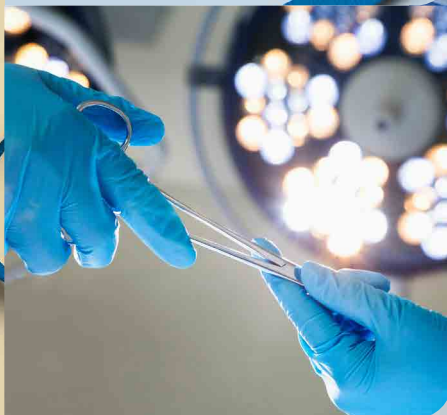
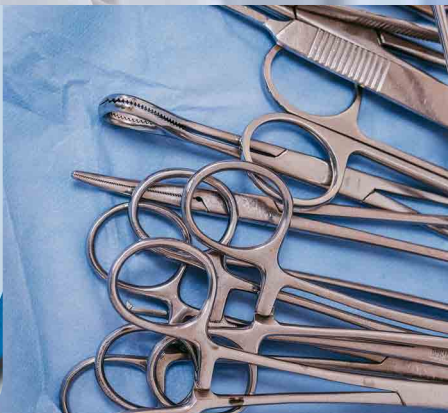
Laura Adams, M.D.
Assistant Professor of Surgery

Jarrett Santorelli, M.D.
Assistant Professor of Surgery

Jessica Weaver, M.D., Ph.D.
Assistant Professor of Surgery

David Cauvi, Ph.D.
Project Scientist

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.



We 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.



RESEARCH

The UC San Diego Center for Learning and Excellence in Vascular and Endovascular Research (CLEVER) was established in 2019. Since then, five postdoctoral fellows and four medical students have completed their training at CLEVER. We are currently hosting multiple postdoctoral fellows, visiting scholars and medical students from around the world.

Our projects have led to presentations at the Society for Vascular Surgery Annual Meeting, American Surgical Association, Western Vascular Society, Eastern Vascular Society, Southern Association for Vascular Surgery, American College of Surgeons Meeting, Southern California Vascular Surgical Society, Society for Clinical Vascular Surgery, Vascular and Endovascular Surgery Society, VEITH Symposium and the European Society for Vascular Surgery. On average, more than 40 abstracts are accepted for presentations at these prestigious meetings every year.



The CLEVER team in 2023. From left: Munir Moacdieh, Ahmed Abdelkarim, Rohini Patel, Mahmoud Malas, Nadin Elsayed, Pooria Nakhaei, Sina Zarrintan and Daniel Willie-Permor.

Elsie Ross, M.D., M.S., assumes the role of associate chief medical officer for biomedical informatics for the Department of Surgery. In this role, she unites multidisciplinary teams to harness informatics for driving innovation and efficiency. The Surgical Informatics and Artificial Intelligence Interest Group was recently launched which marks a key step in using data and technology to enhance surgical outcomes, streamline processes and improve patient care.

Current department AI projects include:

- » Early sepsis detection to save lives
- » Reducing operating room costs and waste by optimizing surgical supply choices
- » Detecting and monitoring peripheral artery disease at home and in the community

Elsie Ross, M.D., M.S., and **Tom Alsaigh, M.D.**, received \$200,000 from the Martha P. Mack Foundation to use artificial intelligence and genomics to personalize treatment recommendations for diabetics with peripheral vascular disease, a progressive circulatory disorder characterized by blood vessel blockages.

The division had 11 active clinical trials this year, which included studying conditions like carotid artery disease, aneurysms, aortic ulcers, renal disease and vascular trauma.

1. Roadster 3: Post-approval Study of Transc-Arotid Artery Revascularization in Standard Risk Patients with Significant Carotid Artery Disease
2. JAGUAR: ObJective Analysis to GaUge EVAR Outcomes Through Randomization
3. TRIOMPHE Study: NEXUS Aortic Arch Clinical Study to Evaluate Safety and Effectiveness
4. Zenith® Fenestrated+ (ZFEN+) Endovascular Graft Clinical Study
5. Physician Modified Endograft For Complex Aortic Aneurysm Repair
6. CLN-PRO-V012: Comparing the Efficacy and Safety of the HAV With AVF in Female Patients With End-Stage Renal Disease Requiring Hemodialysis
7. Promise III Trial: Percutaneous Deep Vein Arterialization for the Treatment of Late-Stage Chronic Limb-Threatening Ischemia
8. CLN-PRO-V005: Humacyte Bioengineered Artery to Treat Traumatic Injury
9. CLN-PRO-V007: Comparing Humacyte Bioengineered Artery to Vein for Dialysis Access in Women
10. CREST-2: Carotid Revascularization and Medical Management for Asymptomatic Carotid Stenosis Trial
11. TREO-PAS: Post-Approval Study of the TREO Abdominal Stent-Graft System (P190015) in Patients with Infrarenal Abdominal Aortic and Aorto-iliac Aneurysms

FEATURED DOCTORS:

Tom Alsaigh, M.D., Ann Gaffey, M.D., M.S., John Lane, M.D., M.S., Mahmoud Malas, M.D., M.H.S., and Elsie Ross, M.D., M.S.

CLINICAL

Our clinical volume continues to expand to serve our community and take excellent care of the most complex vascular conditions with over 5,000 patients seen in our clinics, 2,000 procedures performed at Jacobs Medical Center, UC San Diego Medical Center, Veterans Affairs hospitals and office-based labs, as well as more than 10,000 vascular studies completed in our accredited vascular laboratories.

Ann Gaffey, M.D., M.S., serves as the site investigator for the PROMISE III Trial for UC San Diego Health. The trial is studying whether an investigational, minimally invasive medical procedure that avoids major surgery can prevent foot or lower leg amputation and promote wound healing.

Gaffey works closely with **Brian Eliceiri, Ph.D.**, to reduce the rate limb loss for patients suffering from the end-stages of peripheral arterial disease. They are examining transcriptomic changes that are occurring in the amputated human tissue samples to better understand what is driving wound healing following revascularization and provide a reduction in major limb amputations.

TRAININGS

Narek Veranyan, M.D., a research fellow in the Division of Vascular and Endovascular Surgery, won the elite Distal Bypass Competition at 38th Annual Western Vascular Society meeting. As the winner of the Distal Bypass Competition, he was selected as the Western US Regional Representative to attend the national Top Gun Program of 51st Society for Clinical Vascular Surgery (SCVS) Annual Meeting in April 2024.

AWARDS

Our faculty are dedicated to teaching medical students, residents and fellows. **Omar Al-Nouri, D.O., M.S.**, **Ann Gaffey, M.D., M.S.**, **Erik Owens, M.D.**, and **Mahmoud Malas, M.D.**, have all won teaching awards as a testimony to their dedication to the general surgery residents' education.

Elsie Ross, M.D., M.S., awarded R01 from the National Heart, Lung, and Blood Institute to use artificial intelligence to enable early identification and treatment of peripheral artery disease. This new technology aims to reduce excess morbidity and mortality connected to the underdiagnosis of peripheral artery disease in women, racial and ethnic minorities and lower socioeconomic groups.



From left: Shima Raghozar and Narek Veranyan win the elite Distal Bypass Competition at 38th Annual Western Vascular Society meeting.



Mahmoud Malas presenting at the American Surgical Association meeting in Washington, D.C.



Society for Vascular Surgery Vascular Annual Meeting in Chicago, IL.

From left: Isaac Naazie, Mikayla Kricfalusi, Mohammed Hamouda, Mahmoud Malas, Vinny Locham, Besma Nejjim, Nishita Vootukuru and Sophia Bou-Ghannam.

PEOPLE NEWS

Elsie Ross, M.D., M.S., joins the Division of Vascular and Endovascular Surgery as an associate professor. An accomplished surgeon-scientist, she completed her medical school degree and residency at Stanford University and her master's in health policy, planning and financing at the London School of Economics and Political Science and the London School of Hygiene and Tropical Medicine.

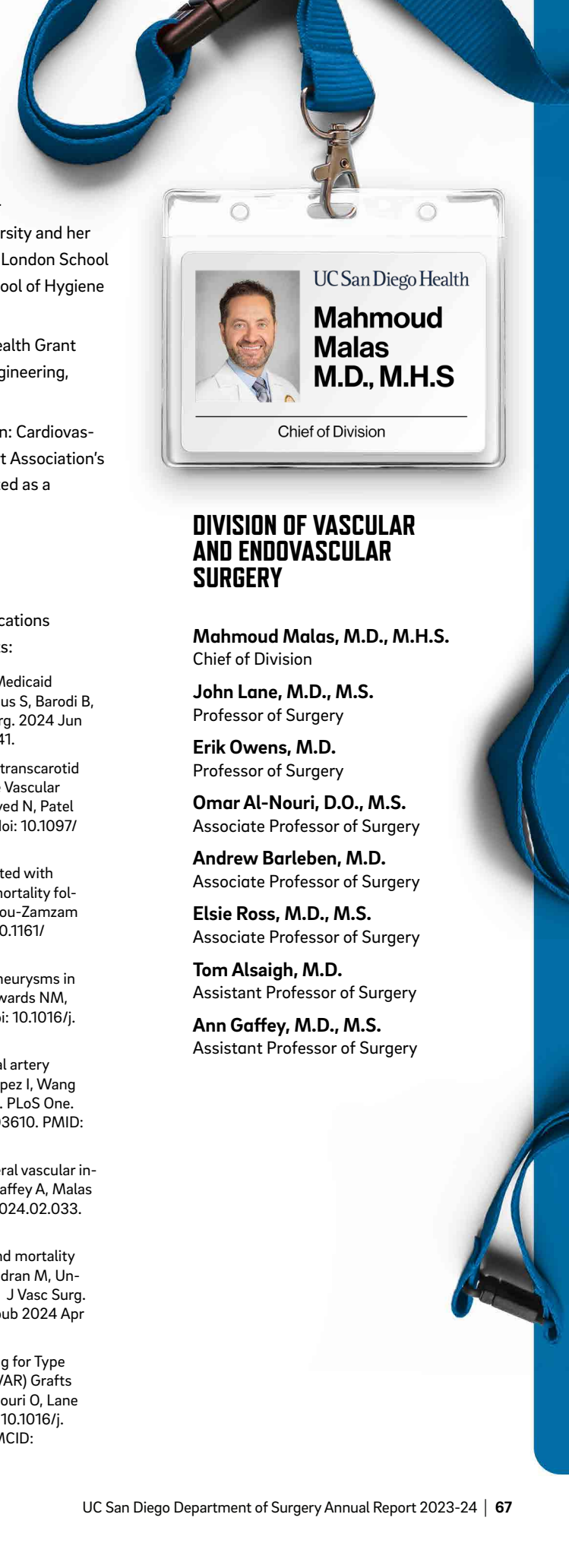
She was recently appointed to National Institutes of Health Grant Review Committee as a standing member of the Bioengineering, Technology, and Surgical Sciences Study Section.

Ross was also selected as associate editor of *Circulation: Cardiovascular Quality and Outcomes*, part of the American Heart Association's *Circulation* family of journals. Finally, Ross was appointed as a counselor to the American Board of Surgery.

SELECTED PUBLICATIONS

The division had over 40 accepted peer reviewed publications this year. Below are some of the most current highlights:

1. A contemporary evaluation of the centers for Medicare and Medicaid services high-risk indicators for carotid endarterectomy. Straus S, Barodi B, Zarrintan S, Willie-Permor D, Vootukuru N, Malas M. *Ann Surg.* 2024 Jun 18. doi: 10.1097/SLA.0000000000006397. PMID: 38887941.
2. Propensity-score matched analysis of three years survival of transcarotid 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. PMID: 37436847.
3. Renin-angiotensin-aldosterone system inhibitors are associated with favorable outcomes compared to beta blockers in reducing mortality following abdominal aneurysm repair. Elsayed N, Gaffey AC, Abou-Zamzam A, Malas MB. *J Am Heart Assoc.* 2023 Jul 14:e029761. doi: 10.1161/JAHA.122.029761. PMID: 37449564.
4. Changes in treatment patterns of thoracoabdominal aortic aneurysms in the United States. Mohnot J, Wang YG, Yin K, Malas MB, Edwards NM, Dobrilovic N, Zhan Y. *JTCVS Open.* 2023 Sep 11;16:48-65. doi: 10.1016/j.jtcvs.2023.08.019. PMID: 38204709.
5. Clinical use of polygenic risk scores for detection of peripheral artery disease and cardiovascular events. Omiye JA, Ghazouri I, Lopez I, Wang F, Cabot J, Amal S, Ye J, Lopez NG, Adebayo-Tijani F, Ross EG. *PLoS One.* 2024 May 17;19(5):e0303610. doi: 10.1371/journal.pone.0303610. PMID: 38758931.
6. Long-term outcomes in the smoking claudicant after peripheral vascular interventions. Patel RJ, Zarrintan S, Vootukuru NR, Allah SH, Gaffey A, Malas MB. *J Vasc Surg.* 2024 Jul;80(1):165-174. doi: 10.1016/j.jvs.2024.02.033. Epub 2024 Mar 2. PMID: 38432487.
7. The obesity paradox exists for perioperative complications and mortality following lower extremity arterial bypass surgery. Ramachandran M, Unkart JT, Willie-Permor D, Hamouda M, Elsayed N, Malas MB. *J Vasc Surg.* 2024 Sep;80(3):811-820. doi: 10.1016/j.jvs.2024.04.044. Epub 2024 Apr 18. PMID: 38642672.
8. A Single-Institution Case Series of Total Endovascular Relining for Type 3 Endoleaks in Traditional Endovascular Aneurysm Repair (EVAR) Grafts with Raised Bifurcations. Patel RJ, Sibona A, Malas MB, Al-Nouri O, Lane JS, Barleben AR. *Ann Vasc Surg.* 2024 Feb;99:332-340. doi: 10.1016/j.avsg.2023.08.038. Epub 2023 Oct 13. PMID: 37839654; PMCID: PMC10872593.



DIVISION OF VASCULAR AND ENDOVASCULAR SURGERY

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Chief of Division

John Lane, M.D., M.S.
Professor of Surgery

Erik Owens, M.D.
Professor of Surgery

Omar Al-Nouri, D.O., M.S.
Associate Professor of Surgery

Andrew Barleben, M.D.
Associate Professor of Surgery

Elsie Ross, M.D., M.S.
Associate Professor of Surgery

Tom Alsaigh, M.D.
Assistant Professor of Surgery

Ann Gaffey, M.D., M.S.
Assistant Professor of Surgery

2023-2024 RESIDENTS AND FELLOWS



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

Our programs provide the opportunity to train in clinical care and research with respected experts and innovators in surgery. UC San Diego trainees can take advantage of state-of-the-art training and research facilities, including the Center for the Future of Surgery, which offers simulation equipment in a risk-free environment.

Trainees also play a crucial role in our basic, clinical and translational research endeavors. Our research spans from the mechanisms underlying human disease to community initiatives focused on developing new methods for cancer education, outreach and injury prevention.



GENERAL SURGERY RESIDENTS

INTERNS - PGY-1

Sami Abujbarah
John Deng
Blackberrie Eddins
Thomas Handley
Ruth Laverde
Gabrielle Rajulu
Nikita Thareja

PGY-2

John Austin
Javier Bravo Quintana
Alyssa Joachim
Bradley Kawano
Nicholas Neel
Danae Olaso
Jooyoung "Paul" Park

PGY-3

Victoria Bendersky
Claire Bensard
Nicole Goldhaber
Estella Huang
Simone Hyman
Kevin Li
Parisa Oviedo
Ashwyn Sharma
Alexander Zhu

PGY-4

Rachel Blitzer
Rachel Jensen
Sohini Khan
Jay Meisner
Zongyang "Tom" Mou
Rohini Patel
Michael Turner

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Harrison Chau
Sasha Douglas
Isabella Guajardo
Jonathan Li
Jared Matson
James Jeffery Reeves

VASCULAR SURGERY RESIDENTS

INTERN - PGY-1

Joshua Fallentine

PGY-2

Kevin Ye

PGY-3

John Hallsten

PLASTIC SURGERY RESIDENTS

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Keeley Newsom

PGY-3

Jason Llaneras
Lucy Sheahan

PGY-5

Meera Reghunathan

PGY-2

Alexandra Alving-Trinh
Vivian Hu

PGY-4

Garrison Leach

PGY-6 CHIEF RESIDENTS

Riley Dean
Paige Benyamein

INDEPENDENT RESIDENCY PROGRAM

PGY-6

Michael Hornacek

PGY-7

Cooper Morgan

PGY-8 CHIEF RESIDENT

Solomon Tong

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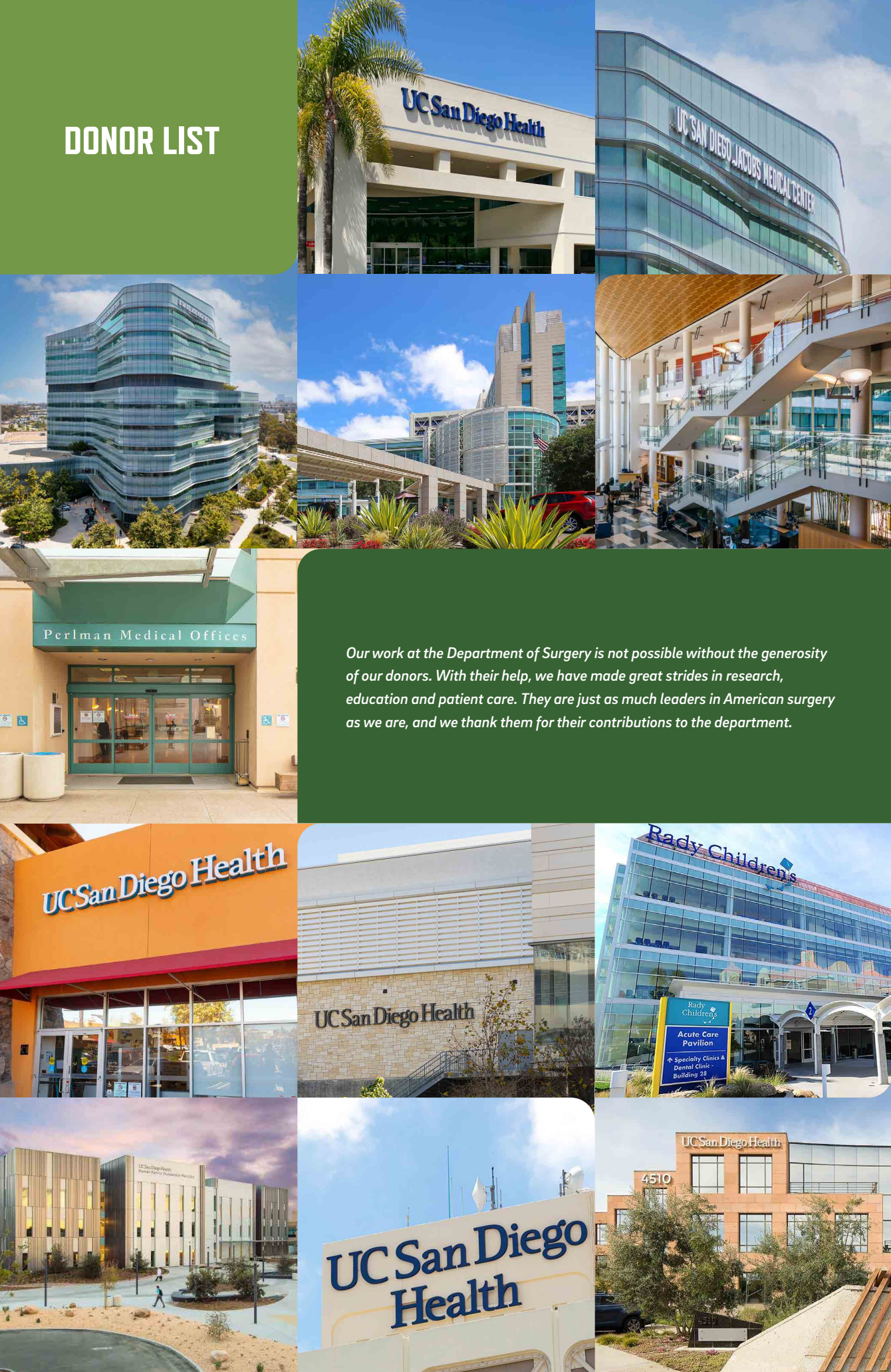
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Wyeth Alexander (Michigan)
Sophie Chung (Boston)
Ana Maria Dumitru (Philadelphia/CHOP)

CARDIOTHORACIC SURGERY FELLOWSHIP

Courtney Weber
Vamsi Aribindi

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Our work at the Department of Surgery is not possible without the generosity of our donors. With their help, we have made great strides in research, education and patient care. They are just as much leaders in American surgery as we are, and we thank them for their contributions to the department.

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