Redefining Surgery

At UC San Diego Center for the Future of Surgery, our surgeons and scientists are advancing surgical techniques by investigating, developing, testing and teaching procedures that are revolutionizing the field of surgery.

Under the leadership of Director Santiago Horgan, MD, and Chairman Mark Talamini, MD, the Center strives to continually improve and expand surgery options using emerging technology so that patients experience less pain and achieve better outcomes.

The Center for the Future of Surgery is designed to develop revolutionary surgical techniques, provide advanced surgical training, and enhance patient safety.
Goals for the Future

Developing Revolutionary Surgical Techniques
We now use once-unimaginable technology every day at the Center for the Future of Surgery. Here, teams of surgeons are leading the way in new innovative techniques and groundbreaking procedures. Thanks to the dedication of our team and a vital collaboration with industry partners, surgical innovation will continue to thrive at the Center for the Future of Surgery.

Providing Advanced Surgical Training
The need to perform open surgeries shrinks with the development of newer, less invasive surgical techniques. Surgical training programs must address these developments by providing hands-on training to medical students and practicing surgeons on new surgical techniques and advanced technologies. The Center for the Future of Surgery fulfills these essential needs of the medical community, and by extension, the patient community.

Enhancing Patient Safety
A crucial piece of the Center for the Future of Surgery is the Safety Center. Like pilots gaining flight experience on simulators, at the Safety Center surgeons practice their procedures in a simulated surgical environment. Guided by an individualized educational curriculum, surgeons who require more experience in particular procedures or on certain equipment can take advantage of the Safety Center’s resources under the careful guidance of our expert team.

“This is one of the largest, most comprehensive training facilities for surgeons in the world. It is also where we develop and evaluate new surgical techniques and devices with the ultimate goal of providing the highest level of care for patients—less pain, quicker recoveries, better outcomes.”

—Santiago Horgan, MD
Visionary Leadership

Santiago Horgan, MD
Professor, UC San Diego Department of Surgery
Director, Center for the Future of Surgery
Chief, Division of Minimally Invasive Surgery
Vice Chairman, Business Development
Director, Bariatric and Metabolic Institute

For the past 20 years, Dr. Santiago Horgan has envisioned a home for surgeons — a place where they will train to become more skilled at existing procedures and develop experience on emerging technology. Innovation in surgery is critical, and the Center for the Future of Surgery encourages the development and investigation of new surgical techniques.

Dr. Horgan is an internationally recognized expert in advanced surgical techniques and a pioneer in minimally invasive robotic surgery, treatment of morbid obesity, as well as a specialist in surgery of the esophagus.
Dr. Mark Talamini understands the growing demand for innovative surgical procedures and the need to train practicing surgeons on these new techniques. He believes now is the time to push forward — to seize these new discoveries and transform our surgical training paradigm to keep pace. The Center for the Future of Surgery is fulfilling this need and will lead the surgical community into this bright future.

Dr. Talamini specializes in gastrointestinal surgery, with an emphasis on the treatment of inflammatory bowel disease (Crohn’s disease, ulcerative colitis). He is recognized as one of the leading authorities on laparoscopic and robot assisted surgery in the United States.
Areas of Training

The Center for the Future of Surgery is an intensive training site for new and practicing surgeons worldwide. Areas of training that we currently include in curriculum are:

- Cardiothoracic surgery
- Colorectal surgery
- Endoscopic surgery
- Interventional radiology
- Minimally invasive surgery
- Neurosurgery
- Obstetrical and gynecology surgery
- Ophthalmology surgery
- Orthopedic surgery
- Otolaryngology/Head & Neck surgery
- Pediatric surgery
- Plastic surgery
- Surgical oncology
- Transplant surgery
- Trauma surgery
- Urology surgery
- Vascular and endovascular surgery

State-of-the-Art Technology

The Center for the Future of Surgery is equipped with the latest surgical and medical technologies. To learn more, visit cfs.ucsd.edu
Our Facility

The Center for the Future of Surgery is a comprehensive, state-of-the-art facility located at UC San Diego’s Medical Education and Telemedicine (MET) Center, a LEED-certified building. Core components include:

• A research suite where physicians and scientists work together across disciplines and collaborate to deliver new discoveries

• Surgical suites where students and physicians can gain hands-on experience with the latest surgical, robotic, endoscopic, laparoscopic, minimally invasive, open and microscopic techniques

• 22 Surgical/endoscopic stations

• A simulation center with an operating room, intensive care unit, emergency room, and a hospital room where the patient care environment can be recreated to train for high-risk and everyday events

• A tiered 350-seat auditorium and conference rooms, equipped with advanced communications technology with the capacity to lecture more than 500 people

Floor Plan

1. Simulation ER / ICU
2. Control Rooms
3. Task Training Room
4. Simulation OR
5. Break Room
6. Fellows Room
7. Scrub Room
8. Simulation Hospital Room
9. Reception
10. Conference Rooms
11. Locker Rooms
12. Surgical ORs
13. Hybrid OR
14. Microsurgery Suite