The Art of Healing

Featuring paintings by Arturo Garcia.

Surgery requires precision. Accuracy. Expertise. Each procedure is unique but requires an exact plan of action to perform. Surgery is a skillful science refined through a lifetime of learning.

Healing, however, is something less tangible. It is not exact. It requires seeing beyond the actions of a procedure to envision the incredible life left to live beyond the operating table. Healing is an art.

Created by artist and former patient Arturo Garcia, whose own battle is highlighted within these pages, the paintings in this book are a representation of humanity, resilience and hope.

Behind each piece lies the skillful hands of a surgeon, a compassionate team of caregivers and, above all, the indomitable will of each patient to live an extraordinary life.
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Letter From the Chair

It is with great pleasure and pride that we present to you the University of Colorado Department of Surgery Surgical Care Report. Throughout these pages, we hope to communicate how dedicated we are to our vision of improving lives.
The department has grown tremendously with more than 180 faculty, 78 research staff and 74 administrative staff members. We strive to enlighten tomorrow’s leaders in a number of teaching programs. Currently, we have 135 trainees in our department at the resident and fellow levels. By recruiting and developing not only these trainees but also faculty and staff throughout our department, we are able to deploy the best leaders into the world.

With UCHealth facilities up and down the Front Range, and beds in the Children’s Hospital Colorado, Veterans Affairs Eastern Colorado Health Care System and Denver Health Medical Center, we are making innovative surgical care widely available. A constant pursuit of excellence and a relentless drive to push the boundaries of surgical care are at the core of what we do.

Our research programs continue to cure through discovery by relentlessly searching for new treatments, medicines and technologies. Grant funding from the NIH P50, T32, R01, K08 and DOD, as well as industry, private and philanthropic mechanisms, support our researchers and their programs. While an operation can heal one person, a new discovery has the potential to heal thousands.

As we dare to be exceptional in all we do and strive to amaze from all levels of our organization, we are grateful to be able to play and work within the beautiful setting of the Colorado Front Range. We hope you have the opportunity to visit our campus in person or check us out at cusurgery.com.

Richard D. Schulick, MD, MBA
The Aragón/Gonzalez-Giustí Endowed Chair, Professor, University of Colorado School of Medicine
Extraordinary Story:
Christine Befort

Christine Befort is living proof that life can change in a heartbeat.

After leaving work on an otherwise ordinary day in 2015, Christine lost consciousness at a stoplight. Four days later, she awoke in the intensive care unit at UCHealth University of Colorado Hospital. With no previous history of heart problems or significant symptoms, she had suffered a spontaneous dissection of the aorta.

Doctors fitted Christine with a left ventricular assist device (LVAD) to help her weakened heart continue pumping blood. The following April, after months of careful treatment from UCHealth doctors, Christine’s life changed once more when she underwent a successful heart transplant.

Christine, now in her 50s, is reclaiming her active Colorado lifestyle. She loves hiking and the outdoors, and credits the surgeons at UCHealth for giving her the opportunity to see each day as something extraordinary.

“The surgeons at UCHealth gave me my life back.”
Cardiothoracic Surgery

Letter from the Division Chief
The University of Colorado Department of Surgery Division of Cardiothoracic Surgery is committed to providing exemplary surgical care, outstanding surgical training and education, and excellence in both basic scientific research and clinical investigation. It provides the highest clinical volume programs in adult and congenital cardiac surgery and general thoracic surgery in the region.

Our clinical programs offer the most advanced surgical therapies for the comprehensive treatment of the entire spectrum of diseases of the heart, lung, esophagus and the chest wall. These surgical therapies range from the correction of heart defects diagnosed in utero to advanced geriatric surgical care. Our program is recognized nationally and internationally for its provision of advanced surgical therapies, including transcatheter therapies for valvular heart disease and utilization of video-assisted thoracoscopic techniques for the treatment of pulmonary disorders.

Our program is the only regional center for the provision of extracorporeal membrane oxygenation (ECMO) and mechanical circulatory support for the failing heart or lungs. Likewise, it is the only regional center for lung transplantation and for adult and pediatric heart transplantation.

The University of Colorado Thoracic Surgery Residency Program is among the truly elite residency programs in the nation. It is a three-year residency with two residents selected each year. Year after year, the program receives an application from almost every applicant in the National Residency Matching Program (NRMP)-sponsored residency match. Our residency program graduates are highly sought each year and are in practice across the United States. Many hold leadership positions in academic institutions.

The division, likewise, has one of only 12 Accreditation Council for Graduate Medical Education (ACGME) fellowships in congenital cardiac surgery. It is similarly one of the most highly sought-after programs in the country.

Our research program is a national leader, both in basic scientific investigation and in clinical and translational research. Two full-time, basic science researchers oversee approximately 6,200 square feet of wet-bench laboratory space within the division. These research programs have extramural funding, primarily from the NIH. In addition to a robust basic scientific enterprise, we have a significant number of clinical trials underway. Finally, one of our faculty, Robert A. Meguid, MD, MPH, leads the program of Surgical Outcomes and Applied Research (SOAR), a collaboration between the department of surgery and the Colorado Health Outcomes Program.

Sincerely,
David A. Fullerton, MD
John T.M. Wright Endowed Chair in Heart Valve Surgery
Chief, Division of Cardiothoracic Surgery
Director, Thoracic Surgery Residency Program
Professor, University of Colorado School of Medicine
Division Highlights

- **Joseph C. Cleveland, MD**, selected as national PI on the HeartMate 3™ clinical trial of a new left ventricular assist device.

- Reached milestones in cardiac transplantation. At Uchealth, the 500th adult heart transplant was performed, and at Children’s Hospital Colorado, the 400th pediatric heart transplant was performed.

- **Robert A. Meguid, MD, MPH**, awarded NIH funding for his clinical outcomes research.

- **Xianzhong Meng, MD, PhD**, and **David A. Fullerton, MD**, awarded NIH funding for their investigation into the pathogenesis of aortic stenosis.

- **Michael J. Weyant, MD**, awarded NIH funding for his investigation of ex-vivo human lung perfusion.

- The Transcatheter Aortic Valve Program at Uchealth, a clinical program with cardiac surgery and cardiology, became one of the top 10 Transcatheter Aortic Valve Replacement (TAVR) volume programs in the country.

- **John D. Mitchell, MD**, elected as President of the Western Thoracic Surgical Association.

- **David A. Fullerton, MD**, was elected to the Council of the European Association of Cardio-Thoracic Surgery.

- **Frederick L. Grover, MD**, was elected Chair of the Steering Committee of the Transcather Valve Therapy registry.

- **T. Brett Reece, MD**, was named as the leader of the multidisciplinary Uchealth Thoracic Aortic Program.
Visiting Professors

• Joseph E. Bavaria, MD, Professor of Surgery and Director of the Thoracic Aortic Surgery Program, University of Pennsylvania, Perelman School of Medicine.

• Cameron D. Wright, MD, Mathisen Family Professorship in Thoracic Surgery, Harvard University; Professor of Surgery, Associate Chief, Division of Thoracic Surgery, Massachusetts General Hospital.

Service

• David N. Campbell, MD, served as a member of the Congenital Surgical Residency Sub-Committee of the Thoracic Surgery Directors Association.

• Joseph C. Cleveland, MD, was appointed Director-at-Large on the Board of Directors of the Society of Thoracic Surgeons and was appointed Co-Chair of the American Association for Thoracic Surgery.

• Frederick L. Grover, MD, serves as the Vice Chair of the Society of Thoracic Surgeons/American College of Cardiology Transcatheter Valve Registry Steering Committee.

• Xianzhong Meng, MD, PhD, was named a member of the Department of Veterans Affairs Scientific Merit Review Board and Co-Chair for the Subcommittee for Surgery.

• Robert A. Meguid, MD, MPH, serves as UCHealth University of Colorado Hospital’s Institutional Surgeon Champion of the American College of Surgeons National Surgery Quality Improvement Program (NSQIP) and is the Co-Editor-In-Chief of the *Johns Hopkins ABSITE Review Manual*.

• John D. Mitchell, MD, served as the President of the Western Thoracic Surgical Association and as the Chair of the Workforce on Evidence Based Surgery, Society of Thoracic Surgeons.

• Max B. Mitchell, MD, serves as a board member and medical advisor to Chinese Children Adoption, International.

• T. Brett Reece, MD, served as a member of the Society of Thoracic Surgeons Workforce on Cardiovascular Surgery and is a member of the Joint Council for Thoracic Surgical Education Curriculum Committee (Chair of Great Vessel Topics).

• Michael J. Weyant, MD, served as the Chair of Membership Committee for the Western Thoracic Surgical Association and as Chair of Surgical Programs, 2015 World Lung Cancer Conference, International Association for the Study of Lung Cancer.
Faculty Awards & Recognition

- 5280 Magazine’s Top Doctors, 2016
  - Max B. Mitchell, MD

- America’s Best Doctors®
  - John D. Mitchell, MD

- Frederick L. Grover, MD, received the Earl Bakken Scientific Achievement Award, presented by the Society of Thoracic Surgeons at the organization’s annual meeting in 2016.

- Robert A. Meguid, MD, MPH, was named a fellow of the American College of Surgeons and received the Clinical Excellence and Patient Safety Award from UCHealth University of Colorado Hospital.

Endowments

- David A. Fullerton, MD, is the John T. M. Wright Endowed Chair in Heart Valve Surgery.

- James Jaggers, MD, is the Barton-Elliman Endowed Chair of Pediatric Cardiac Surgery.

- John D. Mitchell, MD, is the Courtney and Lucy P. Davis Endowed Chair in Surgical Thoracic Oncology.
Extraordinary Story:

Sara Landis

Energy is a valuable thing when you have kids. Just ask Sara Landis, mother of three. But at a young age, Sara endured a condition that would forever put her energy to the test.

One afternoon after school, Sara’s mother noticed something peculiar. A lump on Sara’s neck. With no medical or family history indicating a problem and several biopsies coming up inconclusive, her endocrinologist was still not convinced. With further tests, Sara was diagnosed with thyroid cancer at age 9.

Sara underwent a surgery tough even for adults, and rehab was cautious as she learned to regulate her energy levels as an active pre-teen.

Twenty years later, she still has to be mindful of exercise, sleep and eating, but she says it makes her more grateful for every moment she gets to spend with her family and friends.

“We are all responsible for our own health. But the UCHealth doctors were champions for mine.”
Gastrointestinal, Trauma and Endocrine Surgery

Letter from the Division Chief

Gastrointestinal, trauma and endocrine surgery (GITES) emerged from the University of Colorado Division of General Surgery more than two decades ago. The most recent evolution has been the establishment of the new division of surgical oncology out of the GITES division. Comprised of six clinical sections, GITES remains the largest division in the department of surgery. Each of these sections has added faculty and staff to expand clinical, educational and research activities that have helped generate a 30 percent increase in demand for specialty surgery at UCHealth University of Colorado Hospital over the past two years. The division is now home to 52 full-time faculty providers who deliver innovative patient care, conduct basic science as well as clinical and outcomes research and serve as the surgical educational center of gravity for University of Colorado School of Medicine students and our 110 surgical residents. To keep up with demand, four new surgeons will be joining the division.

Formalized multispecialty clinics have been developed to optimally manage elective complex and challenging, as well as straightforward, surgically-treated diseases. These clinics treat both malignant and non-malignant conditions in patients with adrenal, bariatric, colon-rectal, gastrointestinal and abdominal wall, and thyroid and parathyroid diseases. Multidisciplinary clinics have attracted discerning patients from Colorado and beyond, who need precise decision-making, in addition to precise surgery.

Expansion of our trauma-acute care surgery, surgical critical care and burn programs parallels growth in other areas of the division. The result is a strong core of specialist surgeons that treat patients, from near and far, whose operations are unexpected, often complex and take place around the clock. Dedicated management of acute surgical care has not only improved outcomes for these patients but enabled sustained growth in all other areas of the division.

Over the past two and a half decades, we have rapidly evolved from a division composed of generalists to one of specialists. Blending surgical specialty excellence with that from other disciplines in a formal multidisciplinary crucible furthers our goal of delivering the highest quality surgical care and achieving the best possible outcomes for all of our patients.

Regards,

Robert McIntyre, Jr., MD
Chief, Division of GI, Trauma and Endocrine Surgery
Professor, University of Colorado School of Medicine
Division Highlights

Bariatric Surgery

• Bariatric surgery includes two surgeons, a nurse practitioner, three dietitians, a nurse coordinator, patient navigator and scheduler, psychologist, physical therapist, personal trainer, and plastic surgeons. We have had re-accreditation as a Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) Comprehensive Bariatric Care Center.

• The section was cited as an exemplary practice in multiple areas. Two examples are reducing readmission rates with emphasizing discharge instructions, early post-discharge phone call follow-ups, and IV hydration in the outpatient clinic. Another example is reducing urinary tract infections by avoiding catheters in a majority of patients.

• The section offers Roux-en Y gastric bypass, sleeve gastrectomy and LAP-BAND® operations for weight loss, with a slight majority being sleeve gastrectomy. Our interdisciplinary weight loss program with our medical and gastroenterology colleagues offers pharmaceutical and endoscopic options, including the intra-gastric balloon and aspiration tube.

• Jonathan Schoen, MD, is the founding President of the Colorado State Chapter of the American Society of Metabolic and Bariatric Surgeons, and he successfully lobbied the State Department of Insurance to change the Affordable Care Act benchmark plan to include bariatric surgery. To date, Colorado has been the only state plan to change to coverage.

• Our goal remains to provide better patient access, increasing patient volumes and superb outcomes, with patient safety and satisfaction as our highest priorities.
Burn Surgery

The UCHealth Burn Center is the only American Burn Association verified location in Colorado and the Rocky Mountain region. The Burn Center is the main referral destination to the surrounding regions, including Wyoming, New Mexico, Montana, North and South Dakota, Nebraska and Kansas.

The program has experienced a 25 percent increase in total new patient admissions in the past year. The UCHealth Burn Center has expanded from a nine-bed ICU to 19 inpatient beds with designated ICU, step-down and floor beds and three outpatient consult rooms. The center has expanded its advance practice provider coverage. Other new additions within the last year include a full-time pharmacist, research assistant and clinical coordinator. A new dedicated clinical psychologist will join soon.

For patients who arrive within our emergency department, a new burn notification system with burn activations and alerts have been initiated. The five-day-a-week outpatient burn clinic is able to schedule approximately 10 percent of all patient visits as same day appointments.

Burn education and prevention is an important part of the center’s work which organizes over 150 community outreach activities annually.

The team works with groups such as electrical linemen and glassblowers. We reach out to businesses to educate staff on the importance of safety procedures, how to care for themselves and co-workers if an injury occurs, and typical treatment in a burn center.

We provide continuing education to all levels of providers. The burn team provides Advanced Burn Life Support (ABLS) certification courses in the Burn Center, as well as on the road. Our format combines online didactic education with high fidelity, hands-on simulation. In the last year, we certified 96 providers in the Rocky Mountain region.

Burn and fire prevention is a pillar of the center. The team participates in campaigns to teach “stop, drop and roll” techniques, smoke detectors inspection, how to extinguish grease fires and proper temperature settings on hot water heaters. The team partners with local fire departments to identify areas for further reinforcement. Frost bite is also a risk to our community but can be prevented with correct precautions. The team raises money each winter to purchase socks, boots and other cold weather apparel that is distributed to our homeless and indigent neighbors.
Colorectal Surgery

- The colorectal surgery section experienced continued growth in procedural volume. Including the Anschutz inpatient operating rooms, the Anschutz outpatient operating rooms and the Lone Tree Ambulatory Surgery Center, the total number of cases increased from 465 cases to 507 cases, a nine percent increase in case volume.

- The section has expanded from two to three surgeons with the addition of Elisa Birnbaum, MD, who joined the section as a Professor of Surgery and Co-Director of the Anorectal Physiology Laboratory at UCH Health University of Colorado Hospital. She adds both extensive experience and expertise in the surgical management of pelvic floor diseases, in addition to all aspects of colorectal surgical care.

- UCH Health University of Colorado Hospital Colorectal Cancer Multidisciplinary Clinic continued to grow and thrive in 2016 with the addition of Whitney Herter, NP-C, as the full-time Clinic Manager.

- Robotic colorectal surgery operations became standard procedures under the guidance of Michelle Cowan, MD, Assistant Professor of Surgery, who performed more than 20 of these procedures in the last year.

- The colorectal surgery section was proud to have six surgeons from around the country participate in a laparoscopic colorectal surgery training program that included didactics, live surgery and cadaver-based training. All of this occurred over two days at University of Colorado with support from Applied Medical, Inc.

- Michelle Cowan, MD, received her certification in colorectal surgery from the American Board of Colorectal Surgery.

- Jon Vogel, MD, presented Grand Rounds on colorectal cancer surgery at Valley View Hospital in Glenwood Springs.

Endocrine Surgery

- The endocrine surgery section provides expertise and comprehensive care for thyroid nodules and cancer, thyrotoxicosis, hyperparathyroidism, adrenal neoplasms, pancreas neuroendocrine tumors, gastrointestinal neuroendocrine tumors and multiple endocrine neoplasia.

- The endocrine section runs multidisciplinary clinics with endocrinology, oncology, radiology and nuclear medicine for adrenal cortical carcinoma and advanced thyroid cancer.

- A multidisciplinary pediatric thyroid nodule and cancer program has been developed at Children’s Hospital Colorado with pediatric surgery and endocrinology. The program has already grown into one of the largest volume programs in the country. An important component of the program is a smooth transition of the pediatric patient into adult survivorship.

- Christopher Raeburn, MD, serves on the Thyroid Carcinoma Guideline Panel for the National Comprehensive Cancer Network. Maria Albuja-Cruz, MD, has developed clinical pathways for outpatient thyroidectomy and prevention of postoperative hypocalcemia, significantly reducing admissions following thyroidectomy and decreasing the length of stay of admitted patients. Community outreach and education have been a major focus over the past two years. Under the leadership of Robert McIntyre, Jr., MD, our endocrine surgeons meet frequently with local endocrinologists and primary care providers and give multiple invited presentations.

- Translational research programs in collaboration with endocrinology utilize large and growing thyroid tumor and adrenal neoplasm tissue banks. Along with a comprehensive patient database, observations in the lab are correlated to patient outcome. In the first four months of 2017 alone, the endocrine surgery section has given research presentations on hyperparathyroidism at the Academic Surgical Congress in Las Vegas, three different presentations on adrenocortical carcinoma at the Endocrine Society in Orlando, and a presentation on outcomes of children and adolescents with papillary thyroid carcinoma at the Southwestern Surgical Congress.
Gastrointestinal and Abdominal Wall
• Patients with common GI diagnoses such as hiatal hernia, gastro-esophageal reflux disease and complex hernias are treated by specialty surgeons in this section.

• **Paul Montero, MD,** is specially trained in minimally invasive approaches to managing serious abdominal wall problems including complex primary and recurrent hernias. Using conventional and advanced minimally invasive techniques, he restores abdominal wall function in the most challenging patients with complex health issues such as liver disease or immunosuppression from chemotherapy or organ transplantation. Hernia-specific training, state-of-the-art materials and technology, and a host of medical specialist consultants enable him to address a wide spectrum of hernia problems with individualized plans, including concomitant cases with other surgical disciplines.

• Protocols with our anesthesia colleagues offer advanced multimodal pain management plans, including perioperative regional blocks and epidural analgesia. We recently completed a randomized controlled trial studying an absorbable local anesthetic implant during inguinal hernia repairs.

• **Paul Montero, MD,** also instructs surgical trainees in abdominal wall reconstruction techniques using simulation and tissue labs at our Center for Surgical Innovation. Over the last two years, five surgical skills labs were dedicated to abdominal wall specific training, including component separation and mesh techniques.

Trauma - Acute Care Surgery and Surgical Critical Care
• The section of trauma-acute care surgery and critical care is one of the busiest services at UCHealth. Trauma volume grows as the stature of UCHealth University of Colorado Hospital Trauma Program in the local Denver metropolitan area, the state of Colorado and the Rocky Mountain region increases. **Catherine Velopulos, MD,** and **Lisa Ferrigno, MD,** most recently joined the program. Both have master’s degrees from the Johns Hopkins School of Public Health and bring years of clinical research experience. Two additional surgeon recruits will be arriving soon.

• UCHealth Emergency Department growth has also led to significant increase in our ACS practice. New physician assistants have increased the capability of the service to meet the patient demand.

• The 24-bed surgical trauma ICU’s average daily census continues to increase and allows the critical care program to provide care for general surgery, oncology, transplantation, head and neck, gynecologic oncology, urology and spine.

• We have also expanded research programs with the addition of **Elizabeth Kovacs, PhD,** who focuses on advanced age, alcohol intoxication, burn and radiation exposure on inflammatory responses after injury or infection. **Erik Peltz, DO,** leads a project within the P50 Trauma Center Grant. **Catherine Velopulos, MD,** is a member of the Intentional and Unintentional Violence Workgroups in the University of Colorado School of Public Health and has been accepted into the 2017-2019 cohort of the Clinical Faculty Scholars Program.
Trauma Research Center

- The University of Colorado Trauma Research Center is one of six national P50 centers investigating death and complications after trauma, beginning in 1992. The center consists of investigators in surgery, hematology, oncology, epidemiology and biochemistry, with partnerships between University of Colorado, Denver Health Medical Center and Bonfils Blood Center. We focus on induced coagulopathy.

- By analyzing patterns of outcomes from our clinical databases, we assess the mechanisms of post-traumatic death or morbidity. Recent efforts have focused on assessing links between blood clotting and inflammation, the molecular protein and metabolite properties of stored blood products, and ways of controlling systemic inflammation after traumatic injury. The center has produced over 800 peer-reviewed publications to date and houses a NIH T32 training program. Since 1992, this T32 has produced over 100 surgical investigators, many of whom are now senior faculty.

- In 2012, our center was among three selected by the U.S. Department of Defense (DoD) for a $6.25 million contract to evaluate early plasma resuscitation. The 24/7 team can capture and store precious and evolving human samples for in-depth analysis by our discovery engines. We use mass spectrometry proteomics, metabolomics, fluorescent imaging and dynamic viscoelastic measurements of blood clotting at the point of care, serially through field, emergency departments and operating rooms.

- Expanding our in-depth approach to patient Omics, the DoD partnered with the NIH to create a consortium of 26 universities and hospitals to study trauma-induced coagulopathy. We have been conferred a large share of responsibility with an award of $2.6 million over five years to provide clinical POC data, samples and scientific leadership.

- Looking to the future, we must examine tailored resuscitation’s ability to decrease early mortality as well as lung injury.
**Visiting Professors**

- **Elizabeth Pomfret, MD, PhD**, Professor of Surgery, Tufts University School of Medicine.

- **Steven Strasberg, MD**, Pruett Professor of Surgery, Washington University School of Medicine, John H. and Cynthia H. Schultz Lectureship in Surgery.

- **Bryan Clary, MD**, Professor of Surgery, University of California San Diego.

- **Steven D. Schwaitzberg, MD**, Chairman, Department of Surgery, University at Buffalo.

- **Jason B. Fleming, MD**, Professor, Department of Surgical Oncology, University of Texas, MD Anderson Cancer Center.

- **Mark W. Bowyer, MD**, Chief of Trauma and Combat Surgery, Uniformed Services University.

- **K. Craig Kent, MD**, Leslie H. and Abigail S. Wexner Dean’s Chair in Medicine, The Ohio State University College of Medicine, The 35th Annual Henry Swan Visiting Professor in Surgery.

- **Charles Balch, MD**, Professor of Surgery, University of Texas, MD Anderson Cancer Center, H. James Fox Visiting Professor in Surgery.

- **Ron Maier, MD**, Professor of Surgery, University of Washington, Ernest E. and Sarah Moore Visiting Professor in Surgery.
Service

- Elizabeth J. Kovacs, MD, President-elect, 2017-present, Shock Society, Ad hoc member, NIGMS National Advisory Council, NIH, 2017

- Lisa Ferrigno, MD, Vice Chair, American College of Surgeons Committee on Trauma, Colorado, 2016-2017, Teacher of the Year Award for 2014-2015, Santa Barbara Cottage Hospital Surgical Residents

- Robert McIntyre, Jr., MD, Treasurer, Western Trauma Association, 2016-present

- Chris Raeburn, MD, National Comprehensive Cancer Network Thyroid Carcinoma Guideline Panel member, 2013-present.

Faculty Awards and Recognitions

- 5280 Magazine Top Doctors 2015, 2016 in Surgery and Surgical Critical Care
  - Clay Cothren Burlwe, MD
  - Robert McIntyre, Jr., MD
  - Ernest E. Moore, MD
  - Fredric Pieracci, MD

- Robert McIntyre, Jr., MD, Colorado Biz Magazine

- Robert McIntyre, Jr., MD, Denver Business Journal Best Doctors 2016

- Paul Montero, MD, Chancellor’s School of Medicine Teaching Award in 2016

- Kevin Rothchild, MD, Faculty Teacher of the Year, University of Colorado Surgery Residency, 2016-2017
Denver Health Medical Center - Trauma, Surgical Critical Care, and General Surgery

Denver Health Medical Center remains the region’s premier academic level I trauma center with more than 2400 trauma admissions per year, with more than 500 patients classified as severely injured (ISS > 15). With transfers from more than 20 regional medical facilities and an overall post-injury survival rate of 95%, Denver Health has the best survival rate for severe trauma among all academic hospitals. The Denver Emergency Center for Children at Denver Health is an American College of Surgeons-verified Level II Pediatric Trauma Center. An international expert in the acute coagulopathy of trauma, Dr. Mitchell Cohen recently joined the faculty as the Chair of Surgery at DHMC and the Bruce M. Rockwell Distinguished Chair of Surgery. His successful recruitment from the University of California, San Francisco adds another “triple threat” of academic surgery to the faculty. Additional recent faculty recruitments have included Eric Campion, MD, from UCSF whose research interest is in prehospital management; he was recently chosen to be the Vice Chair of the Colorado Committee on Trauma. Ryan Lawless, MD, also joined the faculty following his Surgical Critical Care Fellowship at UT Houston; his research focus is in adjuncts to damage control surgery. Finally, Barry Platnick, MD, brings more than 20 years of trauma and surgical experience to the group; he will focus on palliative care integration with surgical critical care. With persistent growth in the department, DHMC is actively recruiting additional surgeons.

Research remains one of the cornerstones of the DHMC mission. Dr. Ernest “Gene” Moore and investigators at DHMC were awarded the Department of Defense LITES grant which will be a multi-year, multi-institutional collaboration. Dr. Cohen brings to DHMC and the University of Colorado millions of dollars of research funding from the NIH, DoD and PCORI. In addition to his work on coagulation and inflammation perturbations after trauma, Dr. Cohen continues his funded work on precision medicine in trauma and the ICU, collaborating with the Department of Energy, NIH, and DoD. Dr. Clay Cothren Burlew continues her internationally renowned work in pelvic and abdominal trauma. Dr. Charles Fox continues to investigate and teach widely as an expert in vascular trauma and REBOA. Dr. Campion has extended his prehospital research, while Dr. Pieracci serves as the PI of a recently awarded multicenter grant on thoracic trauma. Drs. Fox, Burlew, Campion, and Lawless have collaborated in multicenter trials with the Western Trauma Association, American Association for the Surgery of Trauma, Eastern Association for the Surgery of Trauma, and the Southwestern Surgical Congress.

The nationally renowned faculty continue to educate clinicians locally, nationally and internationally. The faculty lecture widely with numerous visiting professorships and invited lectures, and have given over 175 presentations this year. Over the past year, the group published 75 peer-reviewed articles in the medical literature. Dr. Burlew was the President of the Southwestern Surgical Society as well as the prestigious 2017 American College of Surgeons Travelling Fellow to Australia and New Zealand, and has also been an invited lecturer in Florida, California, Arizona, and Illinois. Dr. Fox developed the Advanced Endovascular Skills for Trauma Surgeons course, and has been an invited lecturer in Germany and Sweden. Dr. Cohen continues as the Chair of the Multicenter Trials Group at the Western Trauma Association and is the current President of the Society for Complexity in Acute Illness. Dr. Fred Pieracci remains nationally involved in surgical rib fixation and is the current President-Elect of the Chest Wall Injury Society seminars and courses. Lastly, Dr. Gene Moore remains the Editor of the Journal of Trauma and Acute Care Surgery which continues to be housed at Denver Health.

The Surgical Critical Care Fellowship and the Trauma & Acute Care Surgery Fellowship continue to attract top candidates from across the country. The close collaboration between the intensive care units at DHMC and UCH ensure trainees have a second-to-none breadth of experience that will prepare them for any practice paradigm. The remodel of our 23-bed SICU, as well as the expansion of the Advanced Practice Practitioner program in the SICU, add to the educational environment for the fellows.
DHMC has embodied the concept of acute care surgery, combining trauma, surgical critical care and emergency general surgery, in its surgical department for more than 40 years. The core faculty continue to care for the safety net population of Denver, providing complex elective general surgery in addition to meeting urgent surgical needs of the region. With more than 44,000 clinic visits in the last year and almost 7,000 operative cases, the surgical service anticipates further growth in the coming year.

**VA Eastern Colorado Health Care System - General Surgery**

The Denver Veterans Affairs (VA) Medical Center serves the general surgery of 81,000 Veterans in Eastern Colorado and serves as the tertiary referral center for complex operation for Veterans in Colorado, Wyoming and Montana. To fulfill the national mission of the Veterans Health Administration, the general surgery faculty member at the Denver VA deliver specialized clinical care, promote high quality surgical education curricula and perform novel surgical research studies.

**Clinical Care**

Specialized surgical care is provided by both fulltime VA surgeons and part time faculty from the University of Colorado School of Medicine who provide specialized care. Disciplines of surgical specialties with fellowship trained surgeons currently providing care for our veteran community include: surgical oncology, colorectal surgery, advanced endoscopy, endocrine surgery, robotic surgery, complex abdominal wall operations, and advanced laparoscopy.

**Educational Curriculum**

The general surgery group provides high quality surgical education curriculum to both general surgery residents and University of Colorado medical students. Highlights of the curriculum include both didactic and simulation training supporting end-of-rotation certification in the Fundamental Use of Surgical Energy (FUSE), Fundamentals of Laparoscopic Surgery (FLS), Fundamentals of Endoscopic Surgery (FES) and Fundamentals of Robotic Surgery (FRS). The Denver VA General Surgery groups performs gastrointestinal endoscopy procedures to support the University of Colorado General Surgery program’s Fundamentals in Endoscopy Curriculum (FEC).

**Research Activities**

The general surgery faculty actively performs and publishes surgical research. The group has received two extramural research grants in the past year. Areas of research include geriatric surgery, postoperative delirium, peri-operative activity monitoring in older adults, surgical critical care, surgical energy, and operating rooms fires.
Extraordinary Story: Lindsay and Jack Atkinson

Jack Atkinson faced adversity before he was even born.

At 15 weeks pregnant, Lindsay Atkinson went in for a routine ultrasound that turned out to be anything but. Imaging revealed her unborn son Jack had developed a diaphragmatic hernia. The condition left Jack’s heart developing on the right side, while his stomach, intestine and spleen occupied the left side of his chest, leaving little room for lung development.

Doctors checked in on a weekly basis to monitor the family’s progress. Lindsay, a working nurse, was then induced at Children’s Maternal Fetal Care Center at 38 weeks. A team of specialized surgeons and doctors from Children’s Hospital Colorado and UCHealth University of Colorado Hospital jumped into action.

“They were literally standing in the hallway waiting for Jack’s arrival. He had a welcome party of wonderful doctors. They got to work and saved my son’s life,” said Lindsay.

Today, the Atkinsons are living a happy, healthy life. Jack is an active toddler, determined to do everything himself. Lindsay is pregnant with the couple’s second child. And despite the challenges faced early on, the Atkinsons feel this helped them become the extraordinary family they are today.

“We just really love our son so much. We went through so much so early on, but it brought us so much closer as a family. We couldn’t be luckier or happier.”
Pediatric Surgery

Letter from the Division Chief

The University of Colorado Department of Surgery Division of Pediatric Surgery is proud of the inspiring leadership provided by Dr. Frederick Karrer for more than 21 years. Marked growth in the faculty and subspecialty programs occurred over this important period in the history of the division. Since Dr. John Lilly’s solo practice in the 1980s, the group has grown to an impressive 17 board-certified pediatric surgeons in 2017. In addition to this remarkable growth in surgeon numbers, the compassion and patient care expertise of 16 advanced practice providers has also been added to the group, extending the ability to provide expert care for the routine as well as the most complex of pediatric surgical and fetal conditions.

In February 2017, I had the privilege of joining the group as the David R. and Kiku Akers Chair in Pediatric Surgery, to lead the division and accelerate the established tradition of innovative surgical care, excellence in teaching and superior academic productivity that have been the hallmarks of the division.

The division is in a unique position to provide the most modern and pioneering surgical treatments to infants and children of the Rocky Mountain region. From hernias to tumors, trauma and burn care, fetal diagnosis and intervention, repair of congenital malformations, metabolic/bariatric surgery, minimally invasive surgery to advanced care of colorectal and pelvic disorders, and transplant services, our surgeons offer an impressive breadth of expertise and depth of experience in all aspects of pediatric surgical care.

The division members practice at Children’s Hospital Colorado, as well as at a network of care locations including all Denver Metro locations, South Campus, North Campus, Fort Collins and Briargate in Colorado Springs. The division also provides services at UCHealth University of Colorado Hospital (Anschutz), Denver Health Medical Center, St. Joseph’s Hospital and Memorial Hospital in Colorado Springs.

Sincerely,

Thomas Inge, MD
The David R. and Kiku Akers Endowed Chair in Pediatric Surgery
Chief, Division of Pediatric Surgery
Professor, University of Colorado School of Medicine
Division Highlights

Trauma and Burns
Steven L. Moulton, MD, leads the Pediatric Trauma and Burn Centers—the only American College of Surgeons verified Level One Pediatric Trauma Center and Pediatric Burn Center in the Rocky Mountain region.

Chest Wall Deformities
UCHealth University of Colorado Hospital pediatric surgeons are specialists in the treatment of chest wall deformities. For pectus excavatum, we use the minimally invasive Nuss procedure to correct the deformity. For pectus carinatum, options include bracing or surgical correction using the Ravitch procedure.

Bariatric Surgery
Thomas Inge, MD, PhD, brings 15 years of experience with evaluation and bariatric surgical management of adolescents with severe obesity and the medical comorbidities of obesity. The new bariatric program started seeing patients here in June 2017. Dr. Inge’s research team has been continuously funded by NIH for over 12 years.

Maternal and Fetal Health
Timothy M. Crombleholme, MD, Kenneth W. Liechty, MD, Rony Marwan, MD and colleagues in maternofetal medicine provide expert surgical care for pregnant mothers with a fetal abnormality. They are internationally known for their innovation in the treatment of congenital diaphragmatic hernia, twin-twin transfusion syndrome, congenital cystic adenomatoid malformation of the lung, bladder outlet obstruction, sacrococcygeal teratoma, Twin Reversed Arterial Perfusion (TRAP) sequence and meningomyelocele.

Colorectal Malformations and Disorders
The International Center for Colorectal and Urogenital Care is led by the world-renowned team of Alberto Peña, MD and Andrea Bischoff, MD. They are dedicated to treating patients with anorectal malformations, Hirschsprung’s disease, and other conditions that affect bowel control. We offer families prenatal consultations, bowel management and colorectal surgery to manage the most complex of conditions.

Surgical Oncology and Solid Tumors
Jennifer A. Bruny, MD, is part of the pediatric oncology program and helps lead a multidisciplinary solid tumor team. This program is one of the largest in the region and is one of the top in the country. The team provides excellent collaborative care amongst oncologists, pediatric surgeons, radiation oncologists and experimental therapeutics for optimal care of solid tumor patients.

Liver and Kidney Transplantation
Michael Wachs, MD, is now the Director of the Pediatric Transplant Program, which has provided expert care to complex patients for over 25 years. Joining with Fritz Karrer, MD, and Jonathan P. Roach, MD, this team is a member of the United Network of Organ Sharing, providing hope and better lives for patients with end-stage liver and kidney failure.

Vascular Anomalies
Ann Kulungowski, MD, co-directs a multidisciplinary team at the Vascular Anomalies Center. This center offers patients with birthmarks, hemangiomas and vascular malformations diagnosis and treatment plans, which includes a myriad of therapeutic options such as drug therapy, sclerotherapy, interventional radiologic procedures and surgical resections.
Promotions

- Kenneth Liechty, MD, was promoted to Professor with Tenure.
- Steven Moulton, MD, was promoted to Professor with Tenure.
- Bill Hardin, MD, was promoted to Professor.
- Alberto Peña, MD, was promoted to Professor.
- Andrea Bischoff, MD, was promoted to Associate Professor.
- Stig Somme, MD, was promoted to Associate Professor.
- Brianne Hall, PA, was promoted to Senior Instructor.
- Becky Jacobson, NP, was promoted to Senior Instructor.

Service

- Frederick Karrer, MD, continued his tradition of patriotic military service with his 6th U.S. Army Reserves deployment. He served admirably in Afghanistan from July 2016 to November 2016.
- Jennifer Bruny, MD, participated in a medical mission trip to Haiti again in 2016. She has worked with Community Coalition for the last two years and the Northwestern Haiti Christian Mission for the six years prior.
- David Partrick, MD, performed pediatric surgical procedures in Guatemala for Hernia Repair for the Underserved.
- Stig Somme, MD, performed pediatric surgical procedures at the Shalom Foundation’s Moore Pediatric Surgical Center in Guatemala as part of Children’s Hospital Colorado’s Global Health Initiative.

Faculty Awards and Recognitions

- 5280 Magazine Top Doctors
  - Dr. Denis Bensard
  - Dr. Jennifer Bruny
  - Dr. Frederick Karrer
  - Dr. David Partrick
- Denis Bensard, MD, won the Inaugural Norman McSwain Award as Outstanding Reviewer of the Year from the Journal of Trauma and Acute Care Surgery.
- David Partrick, MD, is the treasurer of the Pacific Association of Pediatric Surgeons.
- Frederick Karrer, MD, is the secretary/treasurer of the Denver Academy of Surgery.

Visiting Professors

- Dr. Kenneth Sartorelli - John R. Lilly Memorial Lectureship, December 12, 2016
- Dr. Whit Holcomb - Moritz M. Ziegler Lectureship, June 26, 2017
Research

• Basic and clinical research increased significantly between 2013 and 2016. Pediatric surgical faculty are involved in basic, translational and outcomes research at Children’s Hospital Colorado. From 2013 through 2016, pediatric surgical faculty published 155 peer-reviewed journal publications, 81 abstracts at national meetings and 31 book chapters. The pediatric surgeons presented their work at 27 poster sessions, 132 national and international meetings, nine grand round sessions and 30 visiting professor lectureships.

• As part of ongoing research, the pediatric surgeons have 24 IRB-approved protocols for research studies in conjunction with the University of Colorado – Denver. Many of the pediatric surgical researchers have been awarded external and internal grant funding to conduct their research projects. 
  
  **Timothy Crombleholme, MD**, was awarded an R01 from the NIH in collaboration with Dr. Sundeep Keswani at Baylor University for their work in the field of regenerative wound healing.

  **Kenneth Liechty, MD**, was also awarded an NIH R56 and R01 for his work in the field of diabetic wound healing. **Rony Marwan, MD**, was funded by the Fetal Health Foundation, as well as the University of Colorado Department of Surgery Enrichment Fund, for his work in neural tube defects. **Jonathan Roach, MD**, was also given a University of Colorado Department of Surgery Academic Enrichment Fund Award for his work regarding biliary atresia. Finally, **Steven Moulton, MD**, has been awarded nearly $10 million in Department of Defense funding to develop a device that predicts shock from trauma well in advance of typical changes in vital signs.

• With recruitment of pediatric surgeons **Alberto Pena, MD**, **Andrea Bischoff, MD**, and **Thomas Inge, MD**, further growth in the department’s robust research enterprise (intra and extramural funding, publications, high profile presentations) is expected during the upcoming years.
Extraordinary Story:
Kim Hess

Many patients describe overcoming their condition as climbing a mountain. Kim Hess overcame a debilitating injury so she could climb the king of mountains.

In June 2013, Kim broke several bones in her left hand while on a descent from the summit of Denali in Alaska. Needing surgery, she arranged a meeting with doctors at UCHealth and caught a red-eye flight home to Colorado.

In Denver, she underwent a six-and-a-half-hour surgery that used plates, pins and a wealth of other hardware to set her broken hand. All of this as Kim was planning the biggest trip of her life—a trip up Mount Everest’s 29,029-foot summit.

Two months later, the metal was removed, and Kim entered therapy. She built on small, incremental movements that most take for granted. In November 2015, one last surgery relieved the chronic pain in her wrist. At long last, she was cleared to climb.

After a chaotic trip in 2015, Kim returned to Everest a year later. She reached the summit on May 21, and achieved not only a dream, but an extraordinary story of going above and beyond.

“It taught me how to deal with obstacles. I learned a lot about life in those months.”
Plastic and Reconstrucutive Surgery

Letter from the Division Chief

In my three years as Chief, University of Colorado Department of Surgery Division of Plastic and Reconstructive Surgery has seen a doubling of the microsurgical volume each year, with significant growth in breast microsurgical reconstruction and lower extremity reconstruction. Our growth has allowed us to recruit surgeons.

We’ve opened a free-standing clinic at UCHealth’s University of Colorado Hospital Outpatient Pavilion which allows us to better direct care of plastic surgery patients. Housed in the Anschutz Health and Wellness Center, our cosmetic clinic for plastic surgery has experienced steady growth under the direction of Dr. Brooke French and serves to improve resident training with the establishment of a resident cosmetic clinic. Under the guidance of program director, Dr. Joyce Aycock, the three-year independent residency program has grown to two residents per year and we have begun the six-year integrated residency program which welcomed our first interns in 2017.

Our research programs include areas for basic sciences and clinical/translational investigation. The Vascularized Composite Allograft (VCA) Laboratory focuses on the development of strategies that allow for the transplantation of hand and face without the need for long-term immunosuppression. On the clinical side, we are working in collaboration with the multidisciplinary breast team to develop research that will better delineate outcomes after breast cancer. Dr. Frederic Deleyiannis is leading multiple research projects at the Children’s Hospital Colorado, including one to examine the genetic phenotype of patients with a cleft lip/palate.

Sincerely,

David W. Mathes, MD, FACS

Chief, Division of Plastic and Reconstructive Surgery
Professor, University of Colorado School of Medicine
Division Highlights

• Tae Chong, MD, leads the plastic surgery component of the limb salvage program and is an active member of the breast reconstruction team.

• Ashley Ignatiuk, MD, is a hand surgeon who has pioneered a program in wide-awake hand surgery.

• David Khechoyan, MD, is building a program in orthognathic surgery.

• Additionally, we have added three physician assistants: Sara Douglass, Peggy Walsh and Kristen Devick.

Faculty Promotions

• Joyce Aycock, MD, was promoted to Associate Professor.

Visiting Professors

• Amanda Gosman, MD, University of California - San Diego, February 2016

• Bruce Bauer, MD, University of Chicago, March 2017

• L. Scott Levin, MD, Penn Medicine, May 2017

Service

• Integrated Plastic Surgery Residency Program has received initial accreditation from the ACGME. First interns started June 2017.

• Mountain West Society of Plastic Surgeons held its 1st Annual Scientific Meeting in March 2016. Faculty, resident and community plastic surgeons from Colorado, Utah, Arizona, New Mexico, Nevada, Montana and Wyoming were in attendance.

• Hosted First Breast Reconstruction Awareness (BRA) Day with a silent auction. A portion of proceeds went to the BRA Organization and the other portion will fund research and charity care for breast cancer patients.

Faculty Awards and Recognitions

• David Mathes, MD, was a keynote speaker and visiting professor for the Romanian Society of Plastic Surgeons and was made an honorary member of the Romanian Association of Plastic Surgeons and the Romanian Society of Aesthetic Surgery.

• David Mathes, MD, served as a Plastic Surgery Foundation visiting Professor through which he was a visiting Professor at University of Chicago, University of Pittsburgh, St. Louis University and University of Utah.

• David Mathes, MD, founded the Mountain West Society of Plastic Surgery and organized the first meeting in Winter Park.
Extraordinary Story:
**Arturo Garcia**

For Arturo Garcia, healing truly became an art.

In December 2012, Garcia was struck by debilitating abdominal pains while at his bartending job in Lakewood. Fighting through the last hour of his shift, Garcia admitted himself to the emergency department at UCHealth University of Colorado Hospital, where doctors identified an ampullary tumor near his pancreas.

After undergoing a specialized surgery called the Whipple procedure, Garcia’s prognosis was good—until he was diagnosed with a severe infection. As he lay in bed with drainage tubes protruding from his body and chemotherapy on the horizon, Garcia made the choice to completely change the way he framed his existence.

That day, he decided to live life on his own terms, focus on his passion for painting and inspire others battling disease. Now, Garcia is 100 percent cancer-free. He owns an art gallery in Denver and contributed all of the incredible images featured in this report.

“Art helps sick people. The very least that I can do is try to give back what was given to me.”
Surgical Oncology

Letter from the Division Chief

Surgical oncology is the newest division in the University of Colorado Department of Surgery and is composed of ten surgeons, all with specialty training in cancer care. In addition, we have a team of advance practice professionals and scientists all working toward the common goal of treating cancer. Cancer care requires management through multidisciplinary teams made up of surgeons, oncologists, radiation oncologists, pathologists, radiologists and other medical specialists.

Through the leadership of our surgeons, we have developed seven cancer clinics: pancreas and biliary; esophagus and gastric; colon-rectum and peritoneal cancer; sarcoma; breast and melanoma.

Cancer care management through multidisciplinary treatments has led to a paradigm shift in cancer care at the University of Colorado. In addition, the division is a member of the National Comprehensive Cancer Network (NCCN), where the surgeons in this division are national leaders developing cancer care recommendations for clinicians in the United States to follow.

Over the last two years, clinically, we have become one of the fastest growing programs on campus. Scientifically, we discovered a new immunotherapy, which is the largest asset on the University of Colorado campus undergoing tech transfer; we received a R21 NIH grant and an American Cancer Society Grant. Educationally, two of our graduating chief residents have progressed to top surgical oncology fellowships. As a new division, we hope to build on this success and take it into the future, becoming a leader in cancer care and surgical treatment.

Sincerely,

Barish Edil, MD
Chief, Division of Surgical Oncology
Professor, University of Colorado School of Medicine
Clinical Highlights

Breast
• At 17 years and counting, the Diane O’Connor Thompson Breast Center has the longest running multidisciplinary breast cancer clinic in the department. This clinic allows a patient newly diagnosed with breast cancer to see all of the necessary specialists—surgical oncology, medical oncology, radiation oncology and plastic surgery—at one visit. In addition, radiologists who have specialized in breast imaging and pathologists who specialize in breast pathology provide evaluation of their respective studies that are crucial information for the most definitive treatment plan.

• We pioneered nurse navigation, which has allowed our multidisciplinary program to grow from one clinic per week to now three sessions per week and growing. This coordinated approach to patient care allows us to achieve survival rates consistently above state, regional and national averages.

• The past year has been focused on quality and growth. We were recognized as a Certified Quality Breast Center by NQMBC in March 2014. This certification provides access to national benchmark information, which we can use to design further quality improvement activities.

• We opened our first satellite breast center in the community, located adjacent to the UCHS Health Lone Tree Medical Center. We were successful in recruiting Colleen Murphy, MD, to be the full-time surgeon in that location and she—in conjunction with medical oncologist Eamon Berge, MD, radiation oncology services of the UCHS Health Tomotherapy Center located nearby, and plastic surgeon Tae Chong, MD—are providing multidisciplinary breast care to patients in that community.

Surgical Oncology
• The University of Colorado Department of Surgery features eight fellowship-trained cancer surgeons who specialize in complex general surgical oncology procedures. These surgeons work extensively with other cancer specialists in medical oncology, radiation oncology, gastroenterology, pathology and other related fields in weekly multidisciplinary clinics to optimize the patient’s surgical care.

• Weekly multidisciplinary clinics include pancreas cancer, gastric and esophageal cancer, liver cancer (primary and metastatic), melanoma and sarcoma. As a group, we incorporate disease specific expertise and cutting-edge technology whenever possible, featuring laparoscopic (minimally invasive) approaches for pancreas, esophagus, stomach, liver and other intestinal surgeries.

• Developed and published ablative techniques using radiofrequency ablation, microwave and NanoKnife (irreversible electroporation) to treat many complex tumors not otherwise amenable to standard operative approaches. In addition, we support the region’s most extensive experience in cytoreductive surgery combined with heated intracorporeal chemotherapy (HIPEC) for peritoneal malignancies.
Extraordinary Story:
Asleigh and Maurisa Monger

Ashleigh and Maurisa Monger are sisters with an uncommon bond.

In 2007, Ashleigh’s life turned upside down when she was diagnosed with Wilson’s Disease, a rare and incurable genetic metabolic liver disorder. For more than seven years she battled and successfully managed the disease, even having a baby in spite of it.

Unfortunately, after the delivery, her condition declined to the point where she entered into end-stage liver disease and was placed on the national transplant registry.

It was then that, without hesitating, Ashleigh’s younger sister Maurisa stepped up and got tested to see if she could help. Her liver was a perfect match.

Just three weeks later at UCHealth University of Colorado Hospital, Maurisa had a new scar, and Ashleigh had a new liver and was recovered enough to enter Denver’s Donor Dash 5K.

Surrounded by a small army of family and supportive friends, Ashleigh tearfully crossed the finish line. Not surprisingly, she hasn’t stopped since.

“Family has always been so important to me. My sister literally saved my life.”
Letter from the Division Chief

We are proud to be the longest-running liver transplant program in the world, started by Dr. Tom Starzl who performed the first kidney transplant in Colorado in 1962 and the first liver transplant in a human in 1963. Dr. Igal Kam succeeded Dr. Starzl and served as the chief of the division from 1988 to 2016. Under Dr. Kam’s leadership, the program grew rapidly, thrived and remained on the forefront of surgical innovation by performing the first adult-to-adult live donor liver transplant in the United States in 1997.

Our division continues to enhance the quality and quantity of our robust and well-versed research effort. Dr. Trevor Nydam has been working on novel solutions to improve organ preservation and graft function while also investigating ways to manage deceased donors to increase availability, improve organ function and long-term survival. Dr. Kendra Conzen and Dr. James Pomposelli are working with experts at the University of Colorado and other transplant programs around the country to improve patient education and medical literacy through patient-centered care initiatives.

In addition, Dr. Megan Adams and Dr. Tom Pshak will be joining our division of transplant surgery. Dr. Adams will join Dr. Michael Wachs at Children’s Hospital Colorado to assist in the growth of our pediatric liver and kidney transplant programs. Dr. Tom Pshak is a trained urologist, in addition to abdominal transplant surgeon, and will provide important urological support. We are pleased to have recently assisted in the recruitment of Dr. Monica Grafals in the nephrology department, who has extensive experience in improving transplant access in the Latino and Hispanic communities.

2016 was an amazing year in all components of our program and we are well positioned for continued growth and enhancements into the 2017-2018 academic year. Our faculty are committed to excellence and personally responsible for the continuous improvement of quality in all aspects of the services we provide.

Sincerely,

Elizabeth Pomfret, MD, PhD

Igal Kam, MD, Endowed Chair in Transplant Surgery
Chief, Division of Transplant Surgery
Professor, University of Colorado School of Medicine
Division Highlights

• First liver/double lung transplant in the Rocky Mountain Region.

• First heart/kidney transplant in the Rocky Mountain Region.

• Celebration of 1000th live donor kidney transplant.

• First trans-pacific paired exchange kidney transplant.

• Doctors performed 111 liver transplants between UCH health University of Colorado Hospital and Children’s Hospital Colorado, 19 of those were from a live liver donor.

• Doctors performed 195 kidney transplants between UCH health University of Colorado Hospital and Children’s Hospital Colorado, 72 of those from a live kidney donor.

• Six kidney/pancreas transplants were performed here at UCH health University of Colorado Hospital.
Faculty Promotions

- Elizabeth A. Pomfret, MD, PhD, was promoted to Professor of Surgery.
- James J. Pomposelli, MD, PhD, was promoted to Professor of Surgery.
- Trevor Nydam, MD, was promoted to Associate Professor of Surgery.

Visiting Professors

- Marwin Aboulijoud, MD, FACS, CPE, MMM, Benson Ford Endowed Chair, Transplant and Hepatobiliary Surgery, Director, Henry Ford Transplant Institute

Service

- Elizabeth Pomfret, MD, PhD, is a board member for Donor Alliance and the American Transplant Foundation. She is also the Vice Chair of the United Network for Organ Sharing (UNOS) Policy and Oversight Committee and Vice Chair of the American Society of Transplant Surgeons (ASTS) Ethics Committee.
- Peter Kennealey, MD, is a board member for the National Kidney Foundation and Physician Chair for Great Chefs of the West Fundraising Gala. He is also on the Continuing Medical Education Committee with the American Society of Transplant Surgeons (ASTS) and on the End Stage Renal Disease Network 15 Medical Review Board and Donor Alliance Advisory Board.
- James Pomposelli, MD, PhD, is Chair of the Legislative, Regulatory and Reimbursement Committee for the American Society of Transplant Surgeons (ASTS) and is the Region 8 representative to the United Network for Organ Sharing (UNOS). He is also a Councilor-at-Large of the UNOS Liver and Intestine Committee.
Faculty Awards and Recognitions

- Trevor Nydam, MD, American Society of Transplant Surgeons Faculty Award

- Best Doctors in America®
  - Elizabeth A. Pomfret, MD, PhD
  - James Pomposelli, MD, PhD

- America’s Top Surgeons
  - Elizabeth A. Pomfret, MD, PhD
  - James Pomposelli, MD, PhD

- Boston Magazine Top Doctors
  - Elizabeth A. Pomfret, MD, PhD

Endowments

- Elizabeth A. Pomfret, MD, PhD, is the Igal Kam, MD, Endowed Chair in Transplant Surgery.
Extraordinary Story:

Steven Zeelau

Above and beyond. For former pilot Steven Zeelau, it’s more than just a phrase—it’s a mindset.

Steven, an IT professional in health care for more than 40 years, traveled regularly for business. After returning home to Denver after one such trip in 2009, Steven noticed blood in his urine. His concern grew along with his discomfort in the coming days. A CAT scan later revealed a tumor on his bladder that would require surgery.

At his former provider, Steven underwent several procedures and chemotherapy treatment, but the cancer returned time and time again. Doctors, baffled, suggested a procedure to remove his bladder and replace it with an artificial device.

Steven reached out to UCHealth University of Colorado Hospital for a second opinion. The staff put together an integrated plan that included treatment and even nutrition to help him heal. Two years later, he is cancer-free.

A pilot in his youth, Steven can now be found continuing his passion for aviation by visiting with staff at Centennial Airport. He also loves to take in Rockies games downtown and is currently working as a faith-based recruiter.

“When everyone else had given up, UCHealth helped me live again. They went above and beyond.”
Letter from the Division Chief

The University of Colorado Department of Surgery Division of Urology is committed to excellence in clinical care, basic and translational research, and the education of both medical students and the next generation of urologic surgeons.

In the area of clinical care, the division of urology has internationally recognized programs at four primary teaching hospitals: UCHealth University of Colorado Hospital, Children’s Hospital Colorado, Denver Health Medical Center and the Veterans Affairs Eastern Colorado Health Care System. This year, the urology program at UCHealth University of Colorado Hospital was ranked 38th among all urology programs in the nation by U.S. News and World Report. Additionally, the urology program at Children’s Hospital Colorado was ranked 13th in the nation among pediatric urology programs by U.S. News and World Report.

In the area of urologic research, the division of urology is actively engaged in groundbreaking basic research in areas ranging from malignant disease to bladder dysfunction. Division members also participate extensively in outcomes and health services research, with highly productive programs aimed at providing safer, more efficient and more effective care for patients of all ages.

The division of urology has also achieved national prominence in the area of graduate medical education. Our urology residency program has been in continuous operation since 1956 and has recently expanded from two training positions per year to three. In addition to our core urology residency, we have a highly successful, ACGME-accredited pediatric urology fellowship directed by Dr. Duncan Wilcox. Additionally, Dr. Brian Flynn directs a reconstructive urology fellowship that has been providing state-of-the-art training in this area since 2008.

I am grateful to you for taking time to learn more about the division of urology and University of Colorado School of Medicine Department of Surgery. We love the work that we do and feel privileged to be in a position to make important contributions to clinical care, biomedical research and medical education that will positively impact the lives of our patients and trainees for many years to come.

Best Regards,

Randall B. Meacham, MD
Chief, Division of Urology
Director, Urology Residency Program
Executive Vice Chair for Clinical Affairs and Quality
Professor, University of Colorado School of Medicine
Division Highlights

Clinical Programs

• General urology, reproductive urology, urologic oncology, pediatric urology, female pelvic medicine & reconstructive urology.

Faculty Promotions

• Vijaya Vemulakonda, MD, JD, was promoted to Associate Professor.

• Anna Malykhina, PhD, was appointed as Associate Professor.

New Faculty Hires

• Brian Caldwell, MD, was recruited to the faculty as Assistant Professor.

• Grantham Lloyd, MD, was recruited to the faculty at the Veteran’s Affairs Medical Center as Assistant Professor.

• Janine Oliver, MD, was recruited to the faculty as Assistant Professor.

• Thomas Pshak, MD, was recruited to the faculty as Assistant Professor in a shared appointment with transplant surgery.

• John Dodge, PA-C, was recruited to the faculty as Instructor.

• Adriana Behr, CPNP, was recruited to the faculty as Instructor.

• John Colby III, PA-C, was recruited to the faculty as Instructor.

• Brooke Greenberg, FNP, was recruited to the faculty as Instructor.

Service

• Randall Meacham, MD, is Chair of the Urology Residency Review, Vice Chair of Quality and Clinical Affairs, Chair of the University of Colorado Hospital Credentials and Privileges Committee.

• Paul Maroni, MD, Chair of the Robotic Surgery Committee, Chair of the Urologic Oncology Staff Council.

• Fernando Kim, MD, American Board of Urology Core Program on Patient Safety in Surgery.

• Al Barqawi, MD, Distinguished Faculty of the TU (Testosterone update) CME program.

• Jeffrey Campbell, MD, Past-president, Society for Fetal Urology.

• Brian Flynn, MD, President-elect Rocky Mountain Urologic Society, President-elect South Central section American Urologic Association.

• Ty Higuchi, MD, Colorado Board of Medical Examiners.

• Ana Malykhina, PhD, RUM Protocol Development Committee (ROSETTA trial), Editorial Board, Scientifica (Biochemistry section).

• Vijaya Vemulakonda MD, JD, Chair of the Clinical Competency Committee, Chair of the Epic Pediatric Urology Steering Board.

• Duncan Wilcox, MD, Board of the Foundation of Children’s Hospital Colorado, board member of the Society of Pediatric Urology International.

• Shandra Wilson, MD, IHQSE Rapid OR Room Turn-Over and First Time Start Projects.
Faculty Awards and Recognition

- 5280 Magazine Top Doctors
  - Randall Meacham, MD
  - Duncan Wilcox, MD
  - Vijaya Vemulakonda, MD, JD
  - Nicholas Cost, MD
  - Fernando Kim, MD

- Duncan Wilcox, MD, was selected for the Society of Pediatric Urology Basic Science Research Award.

- Shandra Wilson, MD, was awarded the Golden Stethoscope for student mentoring.

- Nicholas Cost, MD, was recognized for his clinical contributions by the University of Colorado Hospital Medical Staff, as well as chosen for the Resident Teaching Award 2017.

- Paul Maroni, MD, was chosen for the Resident Teaching Award 2015.

- Brian Flynn, MD, was recognized with the Resident Teaching Award 2016.

- Vijaya Vemulakonda, MD, JD, was selected for the American Urological Association Rising Star Award 2017.

Endowments

- Duncan Wilcox, MD, is the The Ponzio Family Chair in Pediatric Urology.

Research

- Clinical Trials
  - BOTOX® for the Treatment of Urinary Incontinence, Complete Continence as Primary Metric For Onabotulinumtoxin
  - A Prospective, Non-interventional, Registry Study of Patients Initiating a Course of Drug Therapy for Overactive Bladder
  - Efficacy And Safety of One or More Intradetrusor Treatments of 600 or 800 Units of Dysport®, Adjuvant Sequential Intravesical BCG and Electromotive Mitomycin-C
  - Immune Responses to Focal Therapy for Early Prostate Cancer
Major Grant Awards
• Role of Mechanotransduction in detrusor over activity
  - Sponsor, National Institute of Diabetes and Digestive Kidney Disease

• Neurogenic bladder dysfunctions in neurological disorders
  - Sponsor, National Institute of Diabetes and Digestive Kidney Disease

• Understanding the Rho GD12 metastasis suppressor gene
  - Sponsor, NIH/National Cancer Institute

• Detection of bladder cancer using novel DNA methylation biomarkers in urine sediments
  - Sponsor, NIH/National Cancer Institute sub-award

• Regulation and Targeting of CD 24 in Bladder Cancer
  - Sponsor, National Institutes of Health

• Understanding the AGL metastasis suppressor for therapeutic gain
  - Sponsor, National Cancer Institute

Publications
• 25+

Education
• Resident Conference Presentations (44)
• Publications (27)
• Ongoing Research Projects (24)
• Quality Improvement Projects (25)
• Achievement/Awards
  - SCS Resident Quiz Bowl winners (2)
  - SCS Resident Quiz Bowl runner-up (1)
  - RMUS Resident Quiz Bowl winners (2)
  - Gold Humanism Awards (2)
Extraordinary Story:

Jena Stiles

There’s a fine line between stubborn and persistent. Jena Stiles jokingly describes herself as the former. And it’s that determination that helped her beat something no one else in history had survived.

At age 28, Jena underwent knee surgery at a former provider. The procedure breached a blood vessel in her leg, causing a rare and life-threatening pseudoaneurysm.

With most doctors hesitant to operate, she was referred to the UCHealth Vascular Division where staff quickly evaluated and stabilized her condition. Days later, Jena became the only person on record to have survived such a procedure.

Jena may call herself stubborn, but she says it was the persistence of the medical team at UCHealth that saved her life. Now 30, she is complication-free, loves climbing and is pregnant with her first child. She credits the team at UCHealth for giving her the opportunity to be a mother.

“I wasn’t going to let this be my end. And the doctors at UCHealth weren’t either.”
Vascular Surgery and Endovascular Therapy

Letter from the Division Chief

The University of Colorado Department of Surgery Division of Vascular Surgery and Endovascular Therapy continues to increase the volume of complex tertiary procedures. We are the go-to practice in the Rocky Mountain region for a wide variety of complicated vascular cases with a major focus on advanced endovascular aortic repair. Dr. David P. Kuwayama was awarded an Investigational Device Exemption for physician-modified endovascular aortic grafts from the Food and Drug Administration in August 2017. Other lines of clinical focus include advanced dialysis access, care of acute and chronic aortic dissections, complicated critical limb ischemia, complex venous reconstruction, thoracic outlet syndrome and a variety of acute vascular emergencies that get referred to the division from multiple adjacent regions. We also provide vascular surgery care for a wide variety of pediatric indications at Children’s Hospital Colorado.

Education remains a focus with the Robert Rutherford Vascular Surgery Fellowship Training Program having started its fourth fellow in August 2017. Both graduates to date have taken academic positions in our western region. We successfully completed two educational courses with national and international attendance: the second annual Mile High Aortic Symposium and the third annual Colorado Humanitarian Surgery Skills Workshop.

Research endeavors for the division are concentrated in outcomes research with participation in the Surgical Outcomes and Applied Research (SOAR) initiative of the department of surgery. Topics of focus are risk predictor for elective vascular surgery and also prediction and prevention of unplanned readmissions in vascular surgery. We have faculty members working on quality improvement projects with UCHealth, including more efficient clinical order sets for the hybrid operating room and successfully modifying a primary care clinic model to a tertiary vascular clinic setting. We have forged a relationship with our department of bioengineering and participate in joint educational and research projects. We also have faculty at our academic research organization on campus, the Colorado Prevention Center, who work on operational and scientific aspects of multi-center clinical trials.

Regards,

Mark R. Nehler, MD
The Michael W. Dunaway Endowed Chair in Vascular Surgery
Chief, Division of Vascular Surgery and Endovascular Therapy
Director, General Surgery Residency Program
Vice Chair of Education
Professor, University of Colorado School of Medicine
Division Highlights

- **Natalia O. Glebova, MD, PhD**, is working on establishing a multidisciplinary program for treatment of complex thoracoabdominal aortic aneurysms, as well as collaborating on a multidisciplinary limb salvage program. She also parlayed her clinical interest in vascular resections and reconstructions in oncologic surgery into several outcomes analyses which were published and received significant international interest in the past year.

- **Ashley K. Vavra, MD**, is the Inpatient and Ambulatory Practice Director for Vascular Surgery. She has completed a certificate training program in quality improvement and is pursuing several process improvement initiatives in perioperative care of vascular surgery patients. She is also the Medical Director for the UCHealth Vascular Diagnostics Lab and has obtained accreditation from the IAC for arterial, venous and extracranial testing.

- **David P. Kuwayama, MD, MPA**, has now performed 39 physician-modified fenestrated aortic endografts for minimally invasive treatment of thoracoabdominal, pararenal and juxtarenal aortic aneurysms. He recently became one of three physicians in the country and the only physician in the Rocky Mountains with a FDA-approved Investigational Device Exemption (IDE) to perform this procedure. He is also an active surgeon with Médecins Sans Frontières, Doctors Without Borders, serving in conflict zones and underserved regions of the world.
Research Highlights

• Mark R. Nehler, MD, has taken a scientific leadership position at the Colorado Prevention Center to provide vascular surgery input. He has been selected for the steering committee for the largest adjunctive trial ever for medical therapy and revascularization, sponsored by Bayer.

• Natalia O. Glebova, MD, PhD, presented her SOAR research on post-surgical readmissions at the vascular annual meeting of the Society for Vascular Surgery, as well as at the Western Vascular Society. She has been an invited faculty at the Pacific Northwest Endovascular Conference and at the 1st Annual Colorado Symposium on Marfan Syndrome and Related Disorders. In addition, she published seven manuscripts in peer-reviewed journals in 2016. She also helps run clinical trials at the Colorado Prevention Center.

• David P. Kuwayama, MD, MPA, presented data from the University of Colorado physician-modified fenestrated aortic endografting program at the 2016 meeting of the Halsted Society. He also presented data from various humanitarian surgical projects at the Academic Surgical Congress, Association of Program Directors in Surgery, and the World Association for Disaster and Emergency Medicine in Toronto.

Service

• Omid Jazaeri, MD, has been reappointed by Governor Hickenlooper to the Colorado Medical Board. He served on the Executive Council for the Western Vascular Society in 2016 and also serves on the Education Committee, as well as the Committee on Recruitment of Surgical Residents and Students for the Association of Program Directors in Vascular Surgery. He is also the co-founder and Medical Director of the Center for Collaborative Bioinnovation.

• Natalia O. Glebova, MD, PhD, was elected to the Executive Council of the Rocky Mountain Vascular Society.

• Ashley K. Vavra, MD, PhD, is the Inpatient and Ambulatory Practice Director for Vascular Surgery at UCHealth. She also serves as the Medical Director for the UCHealth Vascular Diagnostics Lab.

• Kristen Alix, RN, MS, APRN-BC, CVN, continues to serve on the Board of Directors for the Society of Vascular Nursing, along with serving as the Education Committee Chair for the society.
Faculty Awards and Recognitions

• Natalia O. Glebova, MD, PhD, VESS (Vascular and Endovascular Surgery Society) Program Committee, annual meeting winter 2017. Chair of Young Surgeons Committee of the Society of Vascular Surgery for 2017. Editorial Board, Annals of Vascular Surgery; Guest Editor, Diagnostics Journal special issue titled “Diagnosis and Treatment of Thoracic Outlet Syndrome”.

Endowments

• Mark R. Nehler, MD, holds the Michael W. Dunaway Endowed Chair in Vascular Surgery.
Surgical Education

The University of Colorado’s Department of Surgery’s residency and fellowship programs have continued to see growth in recent years, both in the expansion of existing programs as well as the addition of several new training opportunities.

The General Surgery Residency program currently has ten categorical residents per year and is tied for the fourth largest program in the United States. It is the only program on the National Resident Matching Program (NRMP) with all positions designated for two years of academic time after either the resident’s second or third year of training. Current academic opportunities for the research residents range from translational research in trauma, pediatric surgery, cardiac surgery, surgical oncology, thoracic surgery, endocrine surgery, transplant, and clinical research opportunities in trauma, surgical oncology, general surgery, plastic surgery, and vascular surgery. The program has recently added a robust clinical practice site at Memorial Hospital in Colorado Springs, which offers a wide variety of general surgery cases in a high-volume center that is complementary with the existing tertiary Denver sites in the program.

We continue to be a leader in mentoring and placing preliminary residents and presented an update on this topic at Surgical Education Week. Our graduates continue to pursue diverse career targets.

The Pediatric Surgery Fellowship program has adapted to the fellowship guidelines to reduce graduates due to changes in the work force in a creative manner. They alternately graduate an Accreditation Council for Graduate Medical Education (ACGME)-accredited fellow and a fellow from the International Pediatric Surgery Fellowship every other year. The division is graduating the first fellow from the Pediatric Colorectal Surgery Fellowship this year and were approved by the ACGME for a Pediatric Surgical Critical Care Fellowship, which began last August. This allows them to be global in scope and also manage a continuously growing clinical enterprise.
The University of Colorado Department of Surgery Division of Plastic and Reconstructive Surgery received ACGME approval for an integrated residency and have recruited their first two residents. This complements their existing three-year independent fellowship program, which also has two fellows per class.

The Cardiothoracic Residency has two trainees per year in a three-year program. They experience a wide spectrum of tertiary cardiac and thoracic case volume including an active lung and cardiac transplant program, ventricular assist devices, transfemoral aortic valve replacement and adult Extra Corporal Membrane Oxygenation (ECMO). Additionally Children’s Hospital Colorado has a one-year Congenital Cardiac Surgery Fellowship that includes a transplant and ventricular assist program.

The Transplant Fellowship is a two-year program with two trainees a year and is accredited by the American Society of Transplant Surgeons (ASTS). The program provides comprehensive training in deceased donor multi-organ recovery and liver, kidney and pancreas transplantation. The fellow gains considerable experience in living donor nephrectomy and hepatectomy, laparoscopic hepatectomy and advanced hepatobiliary surgery. We continue to train fellows that go onto become leaders in transplant surgery in this country and throughout the world.

The Surgical Critical Care Fellowship is a one-year program and trains one fellow per year. The fellow splits their time between UCH Health University of Colorado Hospital and Denver Health Medical Center.

The Urology Residency Program has recently expanded to three categorical residents per year and have also transitioned to one and four-year programs. The division of urology also has a Pediatric Urology Fellowship and Reconstructive Urology Fellowship. Both are successful and competitive programs. Duncan Wilcox, the program director of the pediatric urology fellowship received the National Resident Committee Teaching Award.

The Vascular Surgery Fellowship program has an active two-year program with much of the focus on advanced endovascular aortic care, including fenestration cases for thoraco-abdominal aneurysms.

The Medical Student Clerkship program also continues to expand with a very active surgical interest group with elected officers and a number of educational activities through the year. The first annual surgical internship preparation boot camp was successfully executed this year. Our department takes an active role in student preceptorship and provides active mentorship for students considering surgical disciplines.
Philanthropy

It was nearly 20 years ago that Sandy Keller had her first transplant surgery at UCHealth. This high-risk surgery had an uncertain prognosis—multiple surgeries and years of recovery with the nagging thought that it might not work. Dr. Igal Kam, former chief of transplant surgery, had to improvise during her treatment and ultimately do two operations with an uncommon technique to ensure the transplant was a success.

Each day was a fight. As Sandy tried to remain positive, her doctor told her that it is often the patients with the most difficult recoveries who do the best in the long term. It was that sentiment, and the thought of getting back to showing horses and living the life she loved, that inspired her to continue the long road to recovery. Sandy said, “I don’t do well sitting still, so staying active with my animals and family is really important to me and kept me motivated throughout treatment.”

Now, two decades after the initial surgery, Sandy is training a new puppy and rides horses to stay active. She and her husband Peter hope that by giving back they can help physicians enhance treatment options, ensuring that future patients like Sandy receive more effective surgeries with shorter recovery times.

Philanthropic investments, like the Igal Kam, MD, Endowed Chair that the Kellers contributed, provide vital resources to support our talented physician-scientists as they develop innovative techniques and novel therapies that transform lives.

“I give back because I’m alive. They gave me the gift of 20 years and counting.”
Our donors support:

People: Through scholarships that help medical students better afford their medical education regardless of background and circumstance, and through faculty endowed chairs and professorships that help us recruit and retain top talent.

Places: Through capital initiatives that help us provide clinical and learning environments in which patients and students benefit from the latest technology and environments that promote healing.

Programs: Through research initiatives that help our outstanding faculty accelerate new treatment and preventive protocols from bench to bedside and back again, and through department support that helps leadership take advantage of new opportunities as they arise.
# By the Numbers

## Clinical Activity

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<th>Division</th>
<th>OR Cases</th>
<th>Visits</th>
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<td>Cardiothoracic Surgery</td>
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<td>6,477</td>
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<tr>
<td>GI, Trauma &amp; Endocrine Surgery</td>
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<td>Surgical Oncology</td>
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<td>3,070</td>
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## Faculty & Staff

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<td>Faculty</td>
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<td>Admin Staff</td>
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## Resident/Fellow Educational Activity

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<td>General Surgery</td>
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## Research Activity

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<td>Federal Funding</td>
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<td>Peer-Reviewed Publications</td>
<td>425</td>
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</table>
5 Years of Growth

- Research Staff: 24%
- Admin Staff: 42%
- Faculty: 67%
- Work RVUs: 29%
- Patient Income: 61%
- Total Grant Awards: 145%
Division Rosters

*Denotes new hire.

**ADMINISTRATION**

Richard D. Schulick, MD
Professor and Chair

Mary Kay Anderson
Academic Services Senior Professional

Judith Arias
Executive Assistant

Michael Benge, MHA
Training Program Coordinator

Steven Bono
Research Services Professional

Jesse Burris
Laboratory Support

Amber Camus
Academic Services Professional

Barbara Caufield
Database Administrator

Sharon Durlak
Laboratory Coordinator

Stephanie M. Farmer, MHA
Director of Finance & Administration

Trina Hoag-Smidt
Academic Services Professional

Ana Holguin
HR Professional

Jane Johnson
HR Professional

Shelly Lange
Program Assistant I

Suriyan Lewis
IT Professional

Alejandra Lleras
HR Manager

Sarah Massena, MBA
CSI Executive Director

Peter E. Mouser
Laboratory Manager

Erin Oglesby
Residency Program Coordinator

Kathleen O’Keefe
Director of the Office of Education

Jennifer A. Peterson, MBA
Associate Director of Finance & Administration

Mercy Phan
Administrative Assistant III

Jonathan Radin, MBA
Director of Clinical Strategy & Program Development

Daniel Robinson
Web Content Editor

Claire E. Travis
Education Manager

Colleen Warren
LAN Administrator

Heidi Wendt
Revenue Cycle Manager

**CARDIOTHORACIC SURGERY**

David A. Fullerton, MD
Professor and Division Chief

David N. Campbell, MD
Professor

Joseph C. Cleveland, MD
Professor

Frederick L. Grover, MD
Professor

James Jaggers, MD
Professor

John D. Mitchell, MD
Professor

Max B. Mitchell, MD
Professor

Jay D. Pal, MD*
Associate Professor

T. Brett Reece, MD
Associate Professor

Michael J. Weyant, MD
Associate Professor

Muhammad Aftab, MD*
Assistant Professor

Robert A. Meguid, MD, MPH
Assistant Professor

Christopher Scott, MD*
Assistant Professor

Shanna Newman, CPNP-AC
Senior Instructor

Bowman S. Beeman, NP
Instructor

Caitlin Blaine, PA-C*
Instructor

Elizabeth Divine, PA-C*
Instructor

Alexis Keyworth, PA-C*
Instructor

Courtney Matter, PA-C
Instructor

Michelle O’Rourke, NP
Instructor

Katherine McCabe, NP
Instructor

Michael L. Wells, PA
Instructor

Jeanne Wiser, PA-C
Instructor

Amanda Young, FNP-C*
Instructor

David R. Clarke, MD
Clinical Professor

**Academic Clinical Faculty Support Staff**

Mark Zolle, MSPH
Division Manager

Michelle Bedell
Business Support Specialist

Julie E. Bishop
Patient Affairs Coordinator I

Kylea Depottyondy*
Patient Affairs Coordinator I
GI, TRAUMA AND ENDOCRINE SURGERY

Academic Clinical Faculty

Robert McIntyre, Jr., MD - Denver Health
Professor and Division Chief

Elisa Birnbaum, MD*
Professor

Mitchell Cohen, MD - Denver Health*
Professor and Chief of Surgery

Clay Cothren Burlew, MD - Denver Health
Professor

Ernest Moore, MD - Denver Health
Professor

Thomas Robinson, MD - VA
Professor and Chief of Surgery

Greg Stieglmann, MD
Professor and John Schultz Chair in Surgery

Christopher Raeburn, MD
Associate Professor

Jonathan Schoen, MD
Associate Professor

Jon Vogel, MD
Associate Professor

Anne Wagner, MD
Visiting Associate Professor

Maria Albuja-Cruz, MD
Assistant Professor

Eric Campion, MD - Denver Health
Assistant Professor

Michelle Cowan, MD
Assistant Professor

Lisa Ferrigno, MD
Assistant Professor

John Frerichs, MD
Assistant Professor

Juan Idrovo, MD*
Assistant Professor

Kshama Jaiswal, MD - Denver Health
Assistant Professor

Edward Jones, MD - VA*
Assistant Professor

Teresa Jones, MD - VA*
Assistant Professor

Ryan Lawless, MD - Denver Health*
Assistant Professor

Paul Montero, MD
Assistant Professor

John Moore, MD - VA
Assistant Professor

Erik Peltz, DO
Assistant Professor

Fredric Pieracci, MD - Denver Health
Assistant Professor

Kevin Rothchild, MD
Assistant Professor

Lauren Steward, MD*
Assistant Professor

Catherine Velopulos, MD
Assistant Professor

Arek Wiktor, MD
Assistant Professor

Franklin Wright, MD
Assistant Professor

Zachary Asher, PA-C
Instructor

Typhanie Beasley, DNP*
Instructor

Cameron Bell, APRN, CCNS*
Instructor

Alyssa Clore, PA-C, MMS, MSPH*
Instructor

Kyra Decker, MSN*
Instructor

Lucas Dietrich, PA*
Instructor

Linda Fernekes, MS*
Instructor

Daniel Fong, MS*
Instructor

Brittany Gansar, MS*
Instructor

Brennen Griffin, PA-C*
Instructor

Amber Kohler, NP*
Instructor

Erin Lennon, PA-C*
Instructor
Sarah Longyhore, PA-C, MMS*
Instructor

Margaret Mazzarello, NP*
Instructor

Katherine Arnim, MS
Instructor

Courtney Wagner, PA-C
Instructor

Academic Clinical Faculty Support Staff

Bryan Downey, MBA
Division Manager

Amy Bohrer
Office Supervisor

Laurinda Campbell
Patient Affairs Coordinator

Susan Ficca
Executive Administrative Assistant

Patricia Knox
Patient Affairs Coordinator

Laura Montoya
Administrative Assistant II

Tanya Obernyer
Patient Affairs Coordinator

Elizabeth Vonau
Business Services Professional

Sandra Wiseley-Carr
Patient Affairs Coordinator

Research Faculty

Anirban Banerjee, PhD
Professor

James Chandler, MD
Clinical Professor

Elizabeth Kovacs, PhD
Professor

Brenda Curtis, PhD
Assistant Professor

Crisoforo Miguel Fragoso, DVM
Research Instructor

Fabia Gamboni, PhD
Research Instructor

Arsen Ghasabayan, MD, MPH, CCRC
Senior Professional Research Assistant

Marguerite Kelher, MS
Senior Professional Research Assistant

Sanchayita Mitra, MS
Senior Professional Research Assistant

Tracey MacDermott
Senior Professional Research Assistant

Kevin M. Najarro, MS
Senior Professional Research Assistant

Timothy Burke, BS
Professional Research Assistant

Arturo Colvis
Professional Research Assistant

Dana M. Davis
Professional Research Assistant

Research Faculty Support

Chisom Okponyia
Professional Research Assistant

Joshua John Ryon, BS
Professional Research Assistant

Daran Jaruwit Schiller, BA
Professional Research Assistant

Tyler Smith
Professional Research Assistant

Megan Swope, BS
Professional Research Assistant

Lisbeth Boule, PhD
Postdoctoral Fellow

Benjamin Huebner, MD
Postdoctoral Research Fellow

Victoria Bress, BS
Research Manager

Devin Boe
Research Assistant

James Chandler
Laboratory Technician II

66  Surgical Care
### PEDIATRIC SURGERY

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>Thomas Inge, MD, PhD*</td>
<td>Professor and Division Chief</td>
</tr>
<tr>
<td>Denis D. Bensard, MD – Denver Health</td>
<td>Professor</td>
</tr>
<tr>
<td>Timothy M. Crombleholme, MD</td>
<td>Professor</td>
</tr>
<tr>
<td>William “Bill” D. Hardin, MD</td>
<td>Professor</td>
</tr>
<tr>
<td>Frederick “Fritz” M. Karrer, MD</td>
<td>Professor</td>
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<td>Kenneth W. Liechty, MD</td>
<td>Professor</td>
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<td>David A. Partrick, MD</td>
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<td>Alberto Peña, MD</td>
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<tr>
<td>John F. Bealer, MD</td>
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</table>

### Research Faculty

- Jeannie Zuk, PhD Associate Professor
- Junwang Xu, PhD Assistant Professor
- Junyi Hu Research Associate
Lindsay Dyer-Kindy, PAC*
Instructor
Rachel Hoon, PAC*
Instructor
Katherine Jacobson, PAC*
Instructor

Academic Clinical Faculty Support Staff

Jody Robertson
Division Manager

Ronda Adams
Patient Affairs Coordinator II

Bretlyn M. Davis
Business Support Specialist III

Kristin Garnett
Patient Affairs Coordinator II

Audra Gray*
Business Support Specialist III

Fabi Imo
Patient Affairs Coordinator II

Research Faculty

Ronald G. Gill, PhD
Professor

Marilyne Coulombe Mansfield, PhD
Research Associate

Tinalyn Kupfer, PhD
Research Associate

K. Scott Beard, MS
Professional Research Assistant

Colin Jenks*
Professional Research Assistant

UROLOGY

Academic Clinical Faculty

Randall B. Meacham, MD
Professor and Division Chief

Fernando Kim, MD
Professor, Denver Health

Duncan T. Wilcox, MD
Professor

Albaha Barqawi, MD
Associate Professor

Jeffrey Campbell, MD
Associate Professor

Brian J. Flynn, MD
Associate Professor

Paul D. Maroni, MD
Associate Professor

Wilson Molina, MD
Associate Professor, Denver Health

Vijaya Vemulakonda, MD
Associate Professor

Shandra S. Wilson, MD
Associate Professor

Cindy Buchanan, PhD
Assistant Professor

Brian Caldwell, MD
Assistant Professor

Nicholas G. Cost, MD
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