



JANUARY 2020

IN THIS ISSUE:

In Memory of Bruce Paton, MD	2
Welcome New Hires	2
NPF Pancreatic Center of Excellence	4
Honors & Awards	5
2019 Gradutes	6
Gregory Stiegmann, MD Retires	7
Guest Lectureships	8
Pancreatic Cancer Meets Stubborn Opponent	10
VA Researcher Edward Jones, MD	12
Curbing the Need for Opioids	14
Lost Hikers Rescued	15
Mom's Health Crisis	16
Gun Debate	18
Lightning Strike	19
FBI @ CSI	20
Lung Transplant	22
CU Surgery Marathon	24
Over the Edge	24
Top Docs Voting 2020	24

NOTES FROM THE CHAIR



I hope the New Year is off to a great start for everyone. 2020 is already showing great promise for the Department of Surgery. To see how far we've come, let's look back at some of the significant events in 2019.

In December, we said goodbye to a dear friend and colleague, Dr. Bruce Paton. Dr. Paton was an integral part of the Department and authored two books covering its history. His contributions will live on through a great number of individuals who trained and worked alongside him. His work has shaped a part of our future.

Our growth continues as we welcome new faculty & staff and celebrate their accomplishments. We are proud to announce that the Department of Surgery's Division of Surgical Oncology's pancreas program has been

named a National Center of Excellence by the National Pancreas Foundation. As we continue to strive for excellence, we see it not only in our clinical work but also academically. The UCH Medical Staff awards recognized a number of our faculty and staff. Additionally, the GME awarded the Outstanding Program Coordinator award to Michael Bengue our Pediatric Surgery Fellowship Coordinator.

In 2019, we were honored to host Alden Harken, MD for the 3rd Annual Sarah V. & Ernest E. Moore Lectureship; Jeffrey Matthews, MD for the 11th Annual H. James Fox Visiting Professorship; Herbert Chen, MD for the 37th Annual Henry Swan Visiting Professorship; Gail Darling, MD for the 14th Annual Pomerantz Visiting Professorship; Alberto Ferreres, MD, PhD for the 13th Annual John H. & Cynthia H. Schultz Lectureship; Jennifer Lawton, MD for the 15th Annual Alan R. Hopeman Lectureship; and Jamie D. Nathan, MD for the 13th Annual John R. Lilly Memorial Lectureship. We greatly appreciate their willingness to share their work and their time when visiting our campus.

Our faculty and staff continue to gain media attention as their work and interests affect our

society. From popular topics such as pancreatic cancer; opioid use; and the debate over guns to stories of hikers; a lightning strike survivor and a visit from the FBI, we are working to be relevant and impactful in our community.

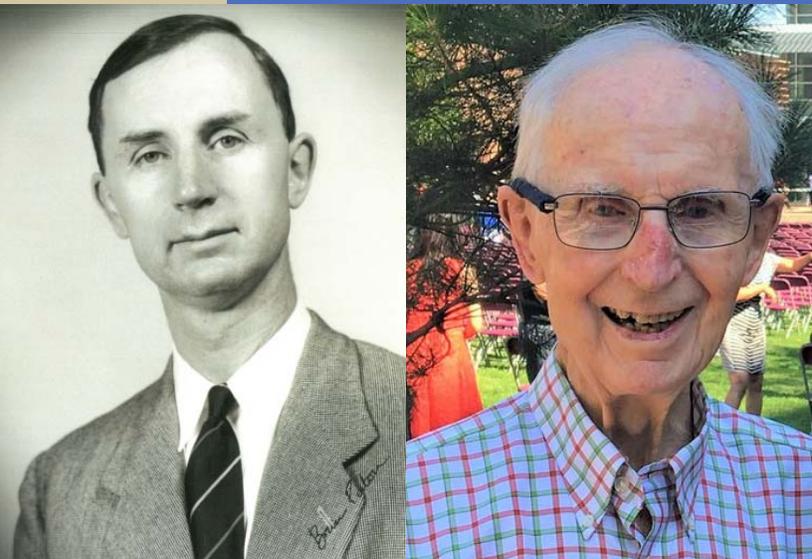
This small sampling of our work in 2019 creates great anticipation to see what 2020 holds for our department. As always, it continues to be my privilege to share our successes with you. I hope you enjoy the newsletter that follows.

Richard D. Schulick

Richard D. Schulick, MD, MBA
Professor & Chair, University of Colorado Department of Surgery
Director, University of Colorado Cancer Center
The Aragón/Gonzalez-Gíustí Chair

Improve Every Life

- Innovating Surgical Care
- Curing through Discovery
- Enlightening Tomorrow's Leaders
- Daring to be Exceptional



Bruce C. Paton, MD

IN MEMORY OF DR. BRUCE C. PATON

It is with great sadness we announce the passing of Bruce C. Paton, MD, on November 4, 2019 at the age of 94.

Dr. Paton served as chief of cardiothoracic surgery from 1962 to 1979, as acting dean of the School of Medicine from 1978 to 1979, and as director of the Given Institute in Aspen for 10 years. He maintained a private practice, where he was a cardiac surgeon at Porter Hospital until his retirement in 1995. He was an expert on wilderness medicine and president of the Wilderness Medicine Society from 1996 to 1998. During his career, he published more than 150 papers and 18 book chapters. He authored, "Sixty Years on a Cutting Edge: University of Colorado, Department of Surgery, 1950-2010" and "The Anatomy of Change: Department of Surgery, University of Colorado 1950-2015".

Outside of his academic interests, Dr. Paton was a true renaissance man and accomplished at artistic pursuits, including watercolor painting, drawing and

photography. He also keenly pursued numerous outdoor activities including skiing, running, backpacking, and birding. His outdoor interests, in combination with academic pursuits, took him on trips to Kenya, Thailand, South America, and Nepal. His keen interest in explorers spurred him to write two books: "Lewis and Clark: Doctors in the Wilderness", and "Adventuring with Boldness: The Triumph of Explorers."

Survived by sons Peter (Suzanne Hoover), Ian (Amy), and Allen and grandchildren (Kayla, Emma, Emily and Will), who loved him and will miss him dearly. Bruce was preceded in death by his wife of nearly 57 years, Patricia.

Services were held December 14, 2019, 11 AM at Montview Blvd. Presbyterian Church.

In lieu of flowers, contributions can be made to the Colorado Outward Bound School: <https://www.cobs.org/donate/>

WELCOME 2019 NEW HIRES

Faculty



Shannon Acker, MD
Assistant Professor
Pediatric Surgery



Nicole Christian, MD
Assistant Professor
Surgical Oncology



Kathryn Colborn, PhD
Assistant Professor
Cardiothoracic
Surgery



Brittany Glassett, PA-C
Instructor
GI, Trauma &
Endocrine Surgery



Jennifer Goode, PA-C
Instructor
Surgical Oncology



Douglas Haase, PA-C
Instructor
Pediatric Surgery



Emily Malgor, MD
Assistant Professor
Vascular Surgery



Rachel McMahan, PhD
Assistant Professor
GI, Trauma &
Endocrine Surgery



Rachel McPherson, PA-C
Instructor
Vascular Surgery



Nalu Navarro-Alvarez, MD
Assistant Professor
Plastic &
Reconstructive Surgery



Sam Phinney, MD
Senior Instructor
GI, Trauma &
Endocrine Surgery



Kelly Radtke, NP
Instructor
Vascular Surgery



Katie Thompson, NP
Instructor
GI, Trauma &
Endocrine Surgery



Jeniann Yi, MD
Assistant Professor
Vascular Surgery



Nicole Werner, MD
Visiting Associate Professor
GI, Trauma &
Endocrine Surgery



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Staff



Luis De La Torre, MD
Associate Professor
Pediatric Surgery



James Downey, MD
Senior Instructor
GI, Trauma &
Endocrine Surgery



Steffanie Durkin, PA-C
Instructor
Transplant Surgery



Silvia Amaro
Administrative Assistant III
Finance &
Administration



Zuhair Barqawi
Research Svcs. Pro.
Finance &
Administration



Jaimielyn Burke
Research Svcs. Sr. Pro.
Finance &
Administration



Craig Hornbarger, MD
Senior Instructor
GI, Trauma &
Endocrine Surgery



Simon Kim, MD
Associate Professor
Urology



Rafael Malgor, MD
Associate Professor
Vascular Surgery



Veronica Faiffer
Program Assistant I
Pediatric Surgery



Alexander Harrant
PRA
Plastic &
Reconstructive Surgery



Aloha Hoppin
Accounting Tech II
Finance &
Administration



Nora Metz, NP
Instructor
Cardiothoracic Surgery



Breana Mitchell, NP
Instructor
Urology



Kathryn Moser, PA
Instructor
GI, Trauma &
Endocrine Surgery



Stephanie Mabey
Administrative Assistant III
Cardiothoracic Surgery



Diana Messamore
Administrative Assistant III
Cardiothoracic Surgery



Noelle Musgrave
Program Assistant I
Urology



Brandy Ramos, PA-C
Instructor
Pediatric Surgery



Amanda Rutherford, PA-C
Instructor
Pediatric Surgery



Matthew Stone, MD
Assistant Professor
Cardiothoracic Surgery



Quintin Myers
Research Services Sr. Pro.
Finance &
Administration



Alicia Nubine
Business Svcs. Coordinator
GI, Trauma &
Endocrine Surgery



Bernadette Nguyen
Research Services Sr. Pro.
Finance & Administration



Shanna Zwick, NP
Instructor
GI, Trauma &
Endocrine Surgery

If you were a new hire in 2019 and are not pictured here please contact Jacqueline Pelle at jacqueline.pelle@cuan-schutz.edu to schedule time with the photographer for your headshot.



Jacqueline Pelle
Administrative Assistant III
Finance & Administration



Brian Shimamoto
Organizational & Employee
Development Manager
Finance & Administration



Haleigh Stout
Business Svcs. Sr. Pro.
Urology



Ngan Vo
Residency Database
Coordinator
Finance &
Administration



NATIONAL PANCREAS FOUNDATION CENTER OF EXCELLENCE

The most important factor predicting the survival of pancreatic cancer patients is whether the cancer can be surgically removed (whether the cancer is “resectable”). The answer isn’t always clear. Some centers may consider a tumor too entangled with neighboring organs and blood vessels for surgery to be an option, leading to the use of surgery in only about 15 to 20 percent of pancreatic cancers, nationally. Due in part to advanced surgical techniques, more effective medicines, and a multidisciplinary approach to treating the disease, the surgeons in the Division of Surgical Oncology are able to operate on almost 30 percent of pancreatic cancer patients, nearly double the national average.

“That happens frequently all around the World – patients are told they are not resectable and we can make them resectable. It makes the chance of survival much higher,” says Marco Del Chiaro, MD, CU Cancer Center investigator and Chief of the Division of Surgical Oncology at the CU School of Medicine.

Due to excellence in prevention, education, care, and outcomes, the program at the University of Colorado School of Medicine was recently named a National Pancreas Foundation Center of Excellence for pancreatic cancer, the only such center in the Rocky Mountain Region including Idaho, Montana, Utah, Nevada, New Mexico, Arizona, and the Dakotas.

“We have one of the highest volumes of taking care of pancreatic cancer patients in the country,” says Richard Schulick, MD, MBA, Director of CU Cancer Center and Chair of the Department of Surgery at the CU School of Medicine. “This has allowed us to develop specific expertise in the management of the disease.”

Research shows that despite being more likely to present with advanced disease, patients who are treated at high-volume centers have better outcomes than patients treated at hospitals that operate on fewer cases of pancreatic cancer – two versus six percent 30-day mortality, and nearly 5 months longer overall survival.

Del Chiaro and Schulick attribute CU’s greater rate of resection and longer survival to a number of factors.

“First, our patients are treated in a multidisciplinary setting. In one day 25-30 experts discuss the case and work together to make a judgement. A patient comes in the morning and doesn’t know anything about what he has, then comes back in the evening with a complete plan in place,” Del Chiaro says. Not only does CU’s model of multidisciplinary care allow multiple experts to collaborate on treatment decisions, but it can dramatically decrease the time from diagnosis to the start of treatment.

“Early detection also plays a role,” Schulick says. “One of the problems with pancreas cancer is that there tend not to be symptoms until the cancer is pretty advanced. But we’re learning to use screening with high-risk populations. If we see a patient who says my parents had pancreatic cancer, my sister had pancreatic cancer, we can recommend screening to catch cancer when it is still operable.”

In fact, Del Chiaro is the main investigator of the evidence based guidelines for the treatment of cystic tumors of the pancreas, a precancerous condition that, with prompt surgical removal when necessary, can be prevented from developing into more malignant and dangerous pancreatic cancer.

The Division of Surgical Oncology also offers a range of clinical trials for pancreatic

cancer patients, allowing patients to access promising treatments years earlier than they are widely available elsewhere.

“We have clinical trials for resectable cancer, non-resectable, and even metastatic pancreatic cancer,” Del Chiaro says, pointing to an especially promising trial currently accruing patients that adds the anti-hypertension drug losartan and the immunotherapy nivolumab to the chemotherapy combination FOLFIRINOX in localized pancreas cancer.

“If you look at over my 30-or-so year career, the first 20 years, we did a lot of stuff, but it didn’t really move the needle as much as I would like in terms of outcomes. But I’m excited about the progress we’ve made in the last 10 years. We’re much more aggressive with our surgery today than we were 10 years ago – things that were called unresectable we’re taking out, especially here at CU. And we have better systemic therapies – chemo actually works now, whereas before it worked on very few people,” Schulick says.

“My goal is that whenever a patient is told they are non-resectable, that they come to Colorado for a second opinion,” Del Chiaro says. “There are so many more patients who we could be helping.” 





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HONORS :: AWARDS :: ACCOMPLISHMENTS

THE ANNALS OF THORACIC SURGERY - COVER

Congratulations to Drs. Eleiry, Aftab, Bergeron, Pal, Cleveland, Fullerton, and Reece on securing the cover of The Annals of Thoracic Surgery with their Buffalo Trunk Technique for Aortic Arch Reconstruction.

The frozen elephant trunk technique facilitates repair of aortic arch and proximal descending aortic pathologic processes. Commercially available hybrid grafts may simplify this approach by allowing for a single suture line, potentially streamlining the distal anastomosis and improving operative times. However, these devices are currently not readily available in United States. We developed a surgical technique, the Buffalo Trunk, to simplify the frozen elephant trunk procedure that obviates the need for a hybrid graft and decreases operating times.

To read this article in it's entirety please visit: www.annalsthoracicsurgery.org and search for "Buffalo Trunk".

OUTSTANDING PROGRAM COORDINATOR AWARD



Michael Bengé

Congratulations to Michael Bengé, Pediatric Surgery Fellowship Coordinator, for being selected as this year's recipient of the CU School of Medicine GME Outstanding Program Coordinator Award and receiving the institutional nomination for the ACGME's Program Coordinator Excellence Award!

The Outstanding Program Coordinator Award recognizes PCs with outstanding in-depth understanding of the accreditation process, excellent communication and interpersonal skills, and involvement with projects to improve residency programs. Candidates are nominated annually by Program Directors and the Program Coordinator Council, and the final recipient is chosen from the candidate pool by Dr. Carol Rumack, DIO, as her nominee for the national ACGME Program Coordinator Excellence Award.

2019 UNIVERSITY OF COLORADO HOSPITAL MEDICAL STAFF AWARDS

Extraordinary Service
UCH Ambulatory Medical Emergency Response Team

Full Time Allied Health Provider Clinical
Zach Asher, PA
Katherine Klingenberg, PA

Full Time Physician
Hillary Dunlevy, MD
Gretchen Ahrendt, MD

Partners in Care non Physician
Kirbie Hartley
Victoria Saunders, RN,
Morgan Aranda, RN, and
Michelle Burke, Pharm D
Courtney Shakowski, PharmD
Angela Grant

Partners in Care Physician
Marisha Burden, MD

Pioneer
Laura Strom, MD and
Alison Heru, MD

President's Award for Leadership
Edward Ashwood, MD

Impact Award
Jon Vogel, MD,
Chris Raeburn, MD and
Ethan Cumbler, MD

Volunteer Physician
Kari Mader, MD and
Joe Johnson, MD

Clinical Quality & Patient Safety Award
Christopher Davis, MD,
Benjamin Scott, MD, and
Amy Hassel

Bedside Manner Award
Paul Montero, MD

Presidential Citation for Meritorious Service
UCHealth Sprint Team

13TH ANNUAL FACULTY PROFESSIONALISM AWARD



Rita Lee, MD



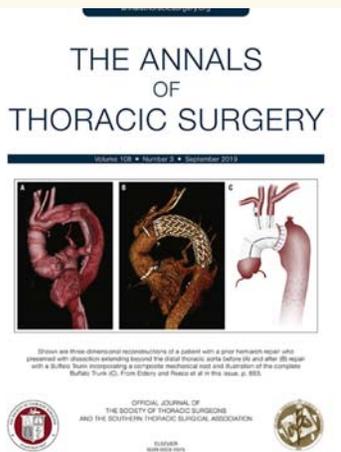
Richard Schulick, MD

The Thirteenth Annual Faculty Professionalism Award was awarded to Rita Lee, MD, Associate Professor in the Department of Medicine; and Richard Schulick, MD, MBA, FACS, Professor and Chair, Department of Surgery, and Director, University of Colorado Comprehensive Cancer Center.

Dr. Lee was recognized as a respected and dedicated clinician and educator. One nominating letter said, "Dr. Lee's professionalism is manifested in her courage and her commitment. Her dedication to the dignity and autonomy of each individual guides her every move."

Dr. Schulick was recognized as a model of leadership in professionalism. One nominating letter said, "He is a model of professionalism in his own actions and words and he inspires others to raise their own standards to meet his high expectations for his colleagues."

Congratulations to both recipients as they continue to be outstanding examples of professionalism.





CONGRATULATIONS TO OUR 2019 GRADUATES

It is with much pride and appreciation that the Department of Surgery wishes our graduating residents and fellows much success in their continued training and careers!

General Surgery Residents

Anthony Bacon, MD
 Teralyn Carter, MD
 Brandon Chapman, MD, MSCS
 Scott Deeney, MD
 Kweku Hazel, MD
 Irada Ibrahim-zada, MD, PhD
 Yihan Lin, MD, MPH
 Logan McKenna, MD
 Hunter B. Moore, MD, PhD
 Douglas Overbey, MD, MPH
 Luke V. Selby, MD, MS

Urology Chief Residents

Salvatore Catarinichia, MD
 Jason Warncke, MD

Cardiothoracic Fellowship

Marshall Bell, MD
 Jordan Hoffman, MD, MPH

Congenital Cardiac Fellowship

Matthew Stone, MD, PhD

Pediatric Bariatric Surgery Fellowship

S. Christopher Derderian, MD

Pediatric Colorectal Surgery Fellowship

Andrew Trecartin, MD

Pediatric Surgery Fellowship

Shannon Acker, MD

Pediatric Surgical Critical Care Fellowship

Brian Blackwood, MD

Plastic & Reconstructive Surgery Fellowship

Laura Boschini, MD, MPH
 Sanjeev Puri, MD

Surgical Critical Care Fellowship

Amy Gore, MD
 Alexander Schwed, MD

Trauma Acute Care Surgery Fellowship

Michal Radomski, MD, MS
 Nicole Werner, MD

Transplant Surgery Fellowship

Amir Dagan, MD

Pediatric Urology Fellowship

Jonathan Walker, MD

Reconstructive Urology Fellowship

Humberto Villareal, MD

Vascular Surgery Fellowship

Jeniann Yi, MD, MS

MEDICAL STUDENT AWARDS

Golden Apple Teacher of the Year Award

Luke Selby, MD
 Resident

Brooke French, MD
 Faculty

Alden Harken Basic Science Award

Darek Marlor
 Medical Student

Madhurima Baliga
 Medical Student

Owens-Swan Award

Madhurima Baliga
 Medical Student

George Packard Award

Christine Burton
 Medical Student

Madison Lyon
 Medical Student

Medical Student Eiseman Award

Tiffany Willard, MD
 Faculty

John E. and Nancy F. DeLauro Scholarship

Erin Wylie
 Medical Student



RESEARCH SYMPOSIUM RESIDENT AWARDS

Ernest E. Moore Award in Basic Science Research

Matthew Bartley, MD
 Research Resident

Frederick L. Grover Award in Clinical Science Research

Hunter B. Moore, MD, PhD
 PGY 5 General Surgery Resident

Eiseman Research Award in Basic Science

Maggie Hodges, MD
 PGY 3 General Surgery Resident

Eiseman Research Award in Clinical Science

Hunter Moore, MD,
 PGY 5 General Surgery Resident

J. Cuthbert Owens Award for Excellence in Teaching & Patient Care

Benedetto Mungo, MD
 PGY 4 General Surgery Resident

CHIEF RESIDENT AWARDS

Surgery Intern of the Year

Helen Madsen, MD
 PGY 1 General Surgery Resident

APP Appreciation Award

James B. Haenel, RRT
 Faculty

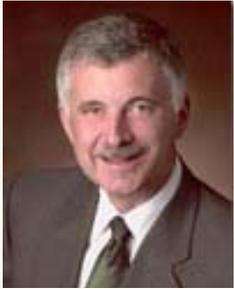
The Bartle Faculty Teaching Award

Tiffany Willard, MD
 Faculty



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GREGORY STIEGMANN, MD - RETIRES



Gregory Stiegmann, MD

On June 19, 2019 friends and colleagues gathered to wish a fond farewell to Gregory Stiegmann, MD as he embarked on his retirement.

Dr. Stiegmann's career started at the University of Colorado Health Sciences Center in 1983 and continued until his recent retirement from the Department of Surgery on June 30, 2019. He made a difference in the lives of all who knew him on both the 9th and Colorado campus and the Anschutz Medical Campus. His dry sense of humor and relaxed speaking style were appreciated by faculty and students.

He is a graduate of University of Illinois College of Medicine.

He completed his residency training at the University of Colorado School of Medicine in 1982. He did fellowships at the University of Auckland-New Zealand in 1978-1979 and a second one at the University of Cape Town

– Groote Schuur Hospital in South Africa from 1980-1982.

From 1995 to 2017, Dr. Stiegmann was Head of the Division of GI, Tumor and Endocrine Surgery at the University of Colorado School of Medicine and Vice President of Clinical Affairs from 1997-2016. He was the Senior Medical Director University of Colorado Hospital from 2016 until his retirement. From 2005 until 2006, Dr. Stiegmann was the Interim Chancellor at the University of Colorado, School of Medicine. He held the Professor and John H. and Cynthia H. Schultz Endowed Chair in Surgery. He was a man of few words – but his vocabulary was immense and

he often used words we all had to go look up, then he would smile when we used the “new” words in conversation.

Dr. Stiegmann has held numerous committee positions and offices in professional societies. He was a founding member of the American

Trauma Society. In the Society American Gastrointestinal Endoscopic Surgeons he was a Founding Board Member – Foundation for Surgical Fellowships, a member of the

Board of Governors, Chair of the Membership Committee, Scientific Session Program Chairman, Treasurer, and eventually President. He was the Chairman, Research and Education Committee, American Hepato-Pancreatico-Biliary Association. He served as a Governor, American College of Surgeons. Dr Stiegmann served on the Editorial Board of Surgical Laparoscopy & Endoscopy, Surgical Endoscopy Digestive Endoscopy and was the Associate Editor of Gastrointestinal Endoscopy (1998-2005).

He authored or co-authored over 300 scientific papers. He contributed 57 textbook chapters and was an Editor of Surgical Decision Making 4th and 5th Editions. He delivered 237 invited lectures or Visiting Professorships. He patented the Flexible Endoscopic Ligating Instrument in April, 1988. He received several teaching awards and was given Honorary Membership in the Japan Society for Endoscopic Surgery. In 2004, he was featured in Landmarks in Hepatology: A Better Mousetrap. This was followed in 2012 when he was highlighted in History of Portal Hypertension and Endoscopic Treatment of Esophageal Varices.

On December 16th 2019, Dr. Stiegmann delivered Grand Rounds at University of Colorado Hospital. He

delivered a brilliant address recounting his and his wife Sarah's travels around the world during his fellowships and how this experience led to his wonderful creative and productive career.

He is greatly missed by all of us, his calm and

down to earth, common sense manner of taking complex problems and resolving the chaos with proven steady judgement was appreciated and made a difference in the workplace and for our patients.

In his 40 year career with the University of Colorado he touched many lives.

We wish him the very best in his retirement. 🍀



Gregory Stiegmann, MD



Richard Schulick, MD; Tom Gronow; Gregory Stiegmann, MD; and Robert McIntyre, Jr., MD



Ernest 'Gene' Moore, MD; Richard D. Schulick, MD; Alden H. Harken, MD; Frederick Grover, MD; Mitchell Cohen, MD

3RD ANNUAL SARAH V. & ERNEST E. MOORE LECTURESHIP GUEST LECTURER - ALDEN H. HARKEN, MD



Alden H. Harken, MD

Dr. Harken returned to the University of Colorado Anschutz Campus to speak at our 6th Annual Research Symposium as the 3rd Annual Sarah V. & Ernest E. Moore Lecturer.

Alden H. Harken, M.D. is Professor Emeritus of Surgery in the UCSF East Bay Surgery Program. He is board certified by the American Board of Surgery and the American Board of Thoracic Surgery. In 2005 and 2006, surgical residents voted Dr. Harken the Julia Burke Outstanding Teacher of the Year. Recently, Dr. Harken was honored with the 2012 Lifetime Achievement Award from the Society of University Surgeons (SUS).

After completing his undergraduate work at Harvard in 1963, Dr. Harken graduated from Case Western Reserve Medical School in 1967. He completed surgical and pediatric cardiovascular residencies at the Peter Bent Brigham Hospital and the Boston Children's Medical Hospital in 1973; then joined the Walter Reed Army Institute of Research in Washington, D.C., where he was an investigator gaining the rank of Lieutenant Colonel.

In July 1976, Dr. Harken accepted a position at the University of Pennsylvania in the Division of Cardiothoracic Surgery where he became well known as a dedicated and highly respected scientist, warmly regarded for his friendly and dynamic personality.

During his eight years at the University of Pennsylvania, Dr. Harken worked in all areas of academic medicine, authored scientific papers, was awarded NIH grants and was advanced

to Professor of Surgery. He became a specialist in the surgical correction of cardiac arrhythmias.

In 1983, Dr. Harken accepted the position as Chairman of the Department of Surgery

at the University of Colorado Health Sciences Center and for the next two decades he was a vigorous advocate of surgical residency training, he promoted multiple surgical programs and served as the Principle Investigator of Colorado's NIH

11TH ANNUAL H. JAMES FOX VISITING PROFESSORSHIP



Jeffrey B. Matthews, MD

Jeffrey B. Matthews, MD

Surgeon-in-Chief,
University of Chicago Medicine
Dallas B. Pheister Professor of Surgery
Chairman, Department of Surgery
The University of Chicago

Truth & Truthiness in Surgery

Dr. Matthews presentation at our February Grand Rounds helped to enhance our understanding of the application of evidence in Surgery. He also discussed how we can identify the influence of cognitive bias on our decision making and how to develop an approach to integrate complexity and uncertainty into surgical education.

12TH ANNUAL JOHN H. & CYNTHIA H. SCHULTZ LECTURESHIP



Alberto R. Ferreres, MD, PhD

Alberto R. Ferreres, MD, PhD

Chairman, Department of Surgery
University of Buenos Aires
Hospital Dr. Carlos Bocalandro
Program Director,
General Surgery Residency
University of Buenos Aires

Ethical Duties & Qualifications of a Surgeon

Dr. Ferreres visited our campus in September and shared the concept of the surgeon as a fiduciary for the patient. Additionally, he spoke on the four ethical principals as described by Beauchamp and Childress and how to differentiate the duties of surgeons with respect to their patients, colleagues and society.



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Trauma Program Project Grant and Surgical Research Training Grant.

Dr. Harken has authored or coauthored 500 peer-reviewed manuscripts. He is a past Director of both the American

Board of Surgery and the American Board of Thoracic Surgery, a Regent of the American College of Surgeons, past President of the Halsted Society (1994-95), the Society of University Surgeons (1985-86) and the Association of

Academic Surgery (1983-84). He has served on NIH Surgery Study Sections since 1985 and chaired a NIH Fellowship Study Section. He is a member of the American Surgical Association, the Society of University Surgeons, the Society for

Thoracic Surgeons, American Association for Thoracic Surgery and the Southern Surgical Association. He also serves on the editorial board for nine scientific journals. 🌿

37TH ANNUAL HENRY SWAN VISITING PROFESSORSHIP



Herbert Chen, MD

Surgeon-in-Chief,
Professor of Surgery and Biomedical Engineering
Fay Fletcher Kerner Endowed Chair in Surgery
University of Alabama at Birmingham

Herbert Chen, MD

Top Ten Strategies for Success in Academic Surgery

In March, we hosted Dr. Herbert Chen who spoke on developing activities to build a clinical/research program. He also discussed how to delineate processes of career development and a traveling fellowship and the analysis of technology for efficiency. All of these were tied together as strategies for success in the world of academic surgery.

15TH ANNUAL ALAN R. HOPEMAN LECTURESHIP



Jennifer Lawton, MD

Richard Bennett Darnall Professor and Chief Division of Cardiac Surgery
Johns Hopkins University School of Medicine

Jennifer Lawton, MD

Specialization in Coronary Revascularization

Our October Grand Rounds featured Dr. Jennifer Lawton who shared her knowledge on the impact of coronary heart disease. Other aspects of her presentation included identifying the need for specialization in cardiac surgery and potential pathways for success in this area.

14TH ANNUAL POMERANTZ VISITING PROFESSORSHIP



Gail Darling, MD, FRCSC

Surgeon-in-Chief,
Professor of Surgery and Biomedical Engineering
Fay Fletcher Kerner Endowed Chair in Surgery
University of Alabama at Birmingham

Gail Darling, MD, FRCSC

Innovation in Esophageal Surgery: Incorporating Change in Surgical Practice

Our April Grand Rounds featured Dr. Darling. Her presentation helped us to identify opportunities for change within the surgical practice. She provided helpful strategies for implementing change and ways to assess the incorporation and evaluation of enhanced recovery principles.

13TH ANNUAL JOHN R. LILLY MEMORIAL LECTURESHIP



Jamie D. Nathan, MD, FACS

Surgical Director, Pancreas Care Center
Kidney and Intestinal Transplant Programs
Associate Surgical Director, Liver Transplant Program
Associate Professor, Surgery and Pediatrics
University of Cincinnati College of Medicine

Jamie D. Nathan, MD, FACS

Surgical Management of Debilitating Pancreatitis in Children: What Have We Learned?

In November, we hosted Dr. Nathan. His presentation on the options and decision-making approach to surgical management of debilitating pancreatitis in children summarized techniques and complications of total pancreatectomy with islet auto transplantation. He also shared the analysis of outcomes and future directions of total pancreatectomy with islet autotransplantation in the pediatric patient.



Brenda Harry, with grandson Nolan, fought back from stage 4 pancreatic cancer, with Schulick's help. Photo courtesy of Brenda Harry.

PANCREATIC CANCER MEETS STUBBORN OPPONENTS

By: Tyler Smith, April 8, 2019

Answer:

The number-three cancer killer in the United States.

Question:

What is pancreatic cancer?

No, Alex Trebek, the longtime host of the popular game show “Jeopardy,” didn’t use the familiar answer-question format to frame his March announcement that he had been diagnosed with the disease. But he undoubtedly helped intensify attention on pancreatic cancer, a deadly and often silent killer.

The numbers are daunting. The five-year survival rate for people like Trebek who have been diagnosed with stage 4 pancreatic cancer – meaning the malignant cells have metastasized to other parts of the body – is 3 percent. The disease exacts a heavy human toll, said Dr. Richard Schulick, chair of the Department of Surgery at the University of Colorado School of Medicine and director of the University of Colorado Cancer Center.

Many lives lost

Schulick said an estimated 57,000 people will be diagnosed this year with cancer of the pancreas, an organ that regulates digestion and blood sugar levels in the body, and 46,000 people will lose their lives to the disease.

The biggest potential to reducing those numbers is prevention, Schulick emphasized. “If everyone stopped smoking, watched their weight and exercised regularly, about 40 percent of pancreatic cancers wouldn’t happen,” he said.

Prevention aside, Schulick predicts that pancreatic cancer will nudge colorectal cancer from its berth as the number-two cancer killer relatively soon.

“Pancreatic cancer will become number two in the next five years or so because our ability to detect and care for colorectal cancer is rising very fast,” Schulick said.

The primary obstacle to decreasing pancreatic cancer mortality, he said, is that providers lack reliable screening tools for early detection of warning signals, such as molecular biomarkers or cancer cells shed by the tumors. But he acknowledged that a highly sensitive test might be a decade or two away.

“If you catch any cancer at an early stage, you have a much better chance of curing it,” Schulick said. “With colorectal cancer, we can do colonoscopies; with skin cancer, we can look [for signs on] people’s skin; for breast cancer we can do mammograms. With pancreatic cancer, there is no great test available to us.”

Anatomy also presents a formidable challenge, Schulick said, because the pancreas sits deep in the body, barring easy detection of a tumor. A mass that blocks a bile duct at the head of the organ will produce jaundice, with its telltale yellowing of the skin and whites of the eyes, but if the tumor sits in the middle or tail of the organ, the disease can easily spread to other parts of the body with few or no warning signs.

“About 60 percent of pancreatic tumors metastasize before detection,” Schulick said.

Expanding treatment options

In the treatment realm, the familiar triad of surgery, radiation and chemotherapy – and combinations thereof – are the primary weapons available to providers. A “new kid on the block,” as Schulick put

it, is emerging in the form of immunotherapy. The approach, which uses engineered T cells as “checkpoint inhibitors” to malignant cell growth, have produced great results in some cancers, Schulick said.

A major immunotherapy success, for example, was development of CAR-T (chimeric antigen receptor T-cell) therapy, approved by the FDA in 2017, to treat acute lymphoblastic leukemia (ALL) in children whose disease resisted other treatments, including bone marrow transplants.

The same can’t yet be said for pancreatic cancer, but work is underway to change that, Schulick said. He noted the UHealth Anschutz Medical Campus has recruited two immunotherapy experts: Dr. Terry Fry from the National Cancer Institute – who played an integral role in the CAR-T research for ALL – and Dr. Eduardo DeVila, a PhD researcher who joined the CU Cancer Center from the University of Maryland School of Medicine. Schulick hopes their expertise will contribute to developing immunotherapies that target solid tumors in the pancreas and other organs.

While those discoveries remain on the horizon, Schulick noted strong advances in the effectiveness and decreases in mortality of surgeries like the Whipple Procedure, which involves resecting tumors by removing the head of the pancreas, the gallbladder and parts of the small intestine and bile duct and reconnecting what remains. Distal pancreatectomy



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leaves the head of the pancreas intact but removes tumors lodged in portions of the body or tail of the organ. Both of these operations can now be done laparoscopically, potentially shortening recovery times. Radiation regimens are far shorter and spare more healthy tissue than before, while chemotherapy treatments have made “dramatic jumps” in effectiveness, Schulick added.



Richard D. Schulick, MD, MBA, FACS

Team defense

But Schulick emphasized that he believes the best chance for patients with pancreatic cancer today is to get treatment at a multidisciplinary clinic with extensive experience evaluating cases and making evidence- and team-based decisions on what is likely to be the most effective therapy.

He noted, for example, that he and his surgical colleagues perform about 200 surgical resections of the pancreas a year at UCH Health University of Colorado Hospital on the CU Anschutz Medical Campus. Many others who are not surgical candidates get chemotherapy, radiation or combination therapies, depending on their specific

case, and have their care coordinated through the UCH Health Pancreas and Biliary Multidisciplinary Clinic.

Experience is vital, Schulick said. “In general in the United States there is a lot of room for improvement in terms of getting patients the right therapies and the right sequence of therapies. It doesn’t do any good if you have a treatment, but you don’t give it to the right patient.”

Daunting diagnosis

With Schulick’s help, a rare series of treatment pieces fell into place for Brenda Harry, 58, of Princeton, West Virginia. In June 2016, Brenda saw her gastroenterologist after having oily stools, itching, jaundice and weight loss. An endoscopic image showed a mass on her pancreas that obstructed the bile duct. She had a stent inserted, then journeyed to Colorado to see Schulick.

He came well recommended. In 2005, Schulick, then at Johns Hopkins Hospital in Baltimore, had performed a Whipple Procedure on Brenda’s brother-in-law, Sam, to successfully treat his pancreatic cancer. Sam later moved to Colorado, as did Schulick, who continues to treat him at UCH Health. On July 1, 2016, Schulick diagnosed Brenda with stage 4 pancreatic cancer. He determined he could not remove the tumor and advised Brenda to return to West Virginia to begin chemotherapy.

Thus began more than two years of chemotherapy every two weeks at CAMC Memorial Hospital in Charleston, West

Virginia, a 90-minute drive from her home. She stuck to the grueling schedule and returned to see Schulick in October 2018. The tumor had neither shrunk nor grown, but he was startled to find no other signs of the cancer that had spread when he saw her more than two years earlier. The tumor was now a potential target for surgery.

“Dr. Schulick said, ‘You are a miracle,’” Brenda recalled.

Overcoming the odds

The battle wasn’t over. Schulick recommended that Brenda go back to West Virginia to complete a 28-day regimen of chemotherapy and radiation he hoped would shrink the tumor. When that succeeded, Schulick scheduled her for a Whipple Procedure at UCH on February 13, 2019. He removed the tumor successfully and found no other signs of cancer.

After a 10-day hospital stay, Brenda flew home, her hopes of recovery heightened immeasurably. She still has some soreness and she has to monitor her diet carefully after the Whipple, but the chances are good that she can put chemo and radiation behind her. She’ll go back to Colorado to see Schulick in August and can also call any time on Cheryl Meguid, nurse practitioner and coordinator of the Pancreas and Biliary Multidisciplinary Clinic, who managed her appointments and other details of her care “to a t”, as Brenda puts it.

Given the dismal odds for patients with stage 4 pancreatic cancer, Schulick acknowledged he’s surprised by Brenda’s recovery.

“She had metastatic cancer and we don’t see it anymore,” he said. “It’s rare to get that kind of outcome.”

Brenda credits his humanity and skill and her own spiritual strength for the improbable results.

“I felt confident because Dr. Schulick knew what he was doing. He sits down with me and will explain everything in detail,” she said. “And I felt God would take care of me.”

Happy homecoming

A nurse for 22-plus years, Brenda hopes to resume work at Princeton Community Hospital on light duty in May. Whatever that timetable, she’s savoring the prospect of more time with her two sons, Joshua and Clayton, four grandchildren, ages 18 months to 14 years, and husband Jim, who she says has been with her “every step of the way” during her long battle with illness.



Brenda and husband Jim with Elizabeth, Nolan and Brady in one of the West Virginia parks they enjoy. Photo courtesy of Brenda Harry.

Continued on page 23



Dr. Edward Jones, an Army reservist, is the section chief of general surgery and the interim director of advanced surgical endoscopy at the VA Eastern Colorado Health Care System. (Photo by Shawn Fury)

VA RESEARCHERS WHO SERVED: DR. EDWARD JONES

By: Mike Richman, Veterans Health Administration

Dr. Edward Jones is in the Army Reserves. He's the section chief of general surgery and the interim director of advanced surgical endoscopy, a minimally invasive form of surgery, at the VA Eastern Colorado Health Care System in Denver. He offers a range of endoscopic treatment options for common surgical diseases. He also pursues clinical and basic science research projects in surgical and endoscopic surgery, as well as in cancer outcomes. More than 40 of his papers have appeared in academic journals. He earned an excellence in research award from the Society of Gastrointestinal and Endoscopic Surgeons and the Army Achievement Medal. He's also an assistant professor of surgery at the University of Colorado.

What motivated you to join the military?

I've always been interested in the military. I planned to join at multiple points in my life for a number of reasons. After high school, I wanted to join because the military sounded super

cool. After college, I wanted to join so I could continue being an athlete and learn to become a leader. After medical school, I had \$250,000 in student debt that I needed to start paying off. After surgical training, I wanted to be part of something bigger than myself and to help care for soldiers who put their lives on the line for our country and freedom. The loans haven't gone away, either.

What inspired your research career?

Great mentorship! Dr. Tom Robinson, the chief of surgery at the Eastern Colorado VA, encouraged me to start a research project during my surgical residency. He introduced me to energy device research by revealing that only a few physicians and manufacturers fully understand how these devices function. This left me dumbfounded. I couldn't imagine that the energy devices we use in nearly every surgical and treatment procedure weren't completely understood! These tools are used to make incisions and to stop bleeding. This gave me

a strong desire to investigate these devices and teach other physicians their benefits and drawbacks. That desire has resulted in more than 50 different research ideas and projects in the last eight years. And we still have much work left to do! Dr. Robinson also recruited both me and my wife, Teresa, to return to VA as academic surgeons. He has been with us through hard times and good times and is always willing to listen and lend a hand.

In addition to Dr. Robinson, have you had mentors who inspired you in life, the military, or your research career?

I've had many mentors in my life and would not be where am I without their help. Beginning with my grandparents, who both served in the military, to my parents and siblings, my family has always provided mentorship and support. Without that, I would never have made it through college, let alone medical school and residency.

Dr. Robinson introduced me to another Veteran who had who patched up soldiers on the beaches of Normandy during World War II, Dr. Ben Eiseman. Before passing away a few years ago, Dr. Eiseman published more than 450 manuscripts and remains one of the giants of surgery and medical research. In addition, two people decided to take a chance on me and Teresa by accepting us as a "couple" and have provided near-continuous mentorship for the last 10 years: Dr. Frederick Grover, a prominent researcher in cardiac surgery and a long-

time VA surgeon, as well as the former chief of surgery at the University of Colorado; and Dr. Mark Nehler, the surgical residency program director at the University of Colorado.

Finally, my unit commander, Dr. Scott Armen, provides mentorship and motivation and leads by example. He does this as he balances his family, his academic career as chief of the division of trauma critical care at Penn State University, his ongoing deployments to Iraq and Afghanistan, and his recent promotion as a consultant to the U.S. surgeon general.

When and where did you serve in the military? Describe your military experience.

I joined the Army Reserve during my last year of a surgical fellowship in Ohio in 2014 and am on active duty now at Evans Army Community Hospital in Fort Carson, Colorado. Upon commissioning, I was assigned to the 629th forward surgical team in Blacklick, Ohio. During the six months I spent in Ohio before moving back to Denver, I drilled regularly with this small, 40-member unit and forged new friendships and bonds that I will maintain long after I get out of medicine and the military. The 629th is an incredible unit. It's designed to be ready to receive patients and perform surgery in difficult conditions just two hours after arrival. To always be prepared, we train regularly as a team. The general-trauma surgeons in the unit deploy to locations in the U.S. and overseas nearly every other year. This is extremely demanding on the unit and their families. However, the work is both



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important and rewarding, no matter whether you are in Afghanistan or Colorado Springs. The support required by family and friends can't be understated and is essential to my and the team's ability



I'm currently working on an animal model of cardiac pacemakers and defibrillators to analyze potential malfunction or inadvertent shocks when patients undergo surgery or endoscopy.

Similarly, we recently published several studies and a comprehensive review on operating room fires. We identified common alcohol-based skin preps as an easy fuel for fires. Dr.

Kris Wikiel, Dr. Jason Samuels, Dr. Heather Carmichael, and I created a carbon dioxide-based device that reduces the risk of fires to near zero. We'll be presenting on that at the Society of Gastrointestinal and Endoscopic Surgeons conference in April.

We have other projects in the works, including animal studies by Dr. Carlton Barnett that evaluate the impact of thermal

"I feel a close kinship with my patients. I've served with them and experienced life with them as a reservist and active duty surgeon."

ablation on liver tumors. Dr. Kris Wikiel is pioneering the evaluation of energy devices in relation to chronic pain and recurrence after groin surgery. Dr. Tom Robinson, who is already a world-renowned expert in geriatric surgery and

frailty, has nearly completed a pilot study looking at recovery after surgery as predicted by the number of steps a patient takes. In short, this is a very exciting time at the Eastern Colorado VA, as we continue to push the boundaries in many areas of research and surgical patient care.

Did your military experience inspire you to pursue a career as a VA researcher? Is your military experience connected in some way to your VA research?

My military experience began just a few months before I started at VA, so these are largely unconnected. That being said, the relationships I've created in the military have promoted additional study in areas I had not considered. For example, collaboration with Dr. Scott Armen and Dr. Mike Matos has expanded the use of endoluminal vacuum therapy in gastrointestinal openings. This is a cutting-edge technique where a hole, usually as a result of trauma or surgery in the esophagus, stomach, or rectum, can be sealed with a sponge connected to a vacuum, instead of surgically removing the organ! This has revolutionized the treatment of gastrointestinal wounds.

How do you feel about the possibility of making life better for Veterans through your research?

In the end, the goal of our research is to make life better for our Veterans and for all patients. Our research

is particularly beneficial to Veterans who, unfortunately, have higher rates of co-existing conditions, such as heart disease and diabetes, as well as exposure to unique situations and chemicals. Thus, reducing their surgical risk or improving the chances that their cancer will be cured results in more quality-of-life improvements, for example, than someone who does not have co-existing conditions or chemical exposures.

Does being a Veteran give you a greater emotional tie to the work you're doing or more insight into Veterans' needs?

I feel a close kinship with my patients. I've served with them and experienced life with them as a reservist and active duty surgeon. While I have not served in a combat zone, there's an immediate comfort in the doctor-patient relationship when my patients realize that I'm in the military, as well.

Based on your life experiences to date, what do you believe are the keys to success? What motivational tips would you share?

I've always believed there are two types of mentors in this world—those you choose to emulate, and those you choose not to. Finding mentors to help you is essential. Nearly every successful person has stood on the shoulders of another and would be happy to tell you about it! It's also important to realize when someone is doing the wrong thing and, if necessary, to have the courage to call him or her out on it.

to function at a high level, especially given the high deployment tempo.

What kinds of research are you involved in? How does it potentially impact Veterans?

I chose to focus on areas that will impact many Veterans. With my training being surgical in nature, I've found a niche in surgical energy devices, in endoscopy, and in research aimed at reducing complications and death after surgery. I work in conjunction with my wife,

Dr. Teresa Jones, a general surgeon and a critical care doctor at the Eastern Colorado VA. During the past two years, she's implemented a mechanism that has reduced the surgical mortality by almost 50 percent when compared with VA quality predictions. This mechanism has the potential to positively impact every Veteran who undergoes surgery!

Continued on page 23



Matt Iorio, MD

SURGEON'S WORK SPANS SAVING LIMBS TO CURBING THE NEED FOR OPIOIDS

By: Blair Illsley, April 4, 2019

Matt Iorio, MD, has found a new professional home at the University of Colorado Anschutz Medical Campus after training at many prestigious universities and hospitals across the United States. He specializes in microvascular surgery that involves saving limbs of traumatically injured patients. When he is not treating patients, Iorio studies alternatives to one of the leading causes of addiction in America — opioids.

Iorio covered just about every region of the United States during his academic endeavors. After growing up in Phoenix, he attended college in Chicago and medical school in Washington, D.C., where he worked with injured veterans and developed an interest in limb salvage.

“We saw a lot of traumatic injuries where we successfully salvaged limbs,” said Iorio, who completed a fellowship in hand and microvascular surgery in Seattle. “Saving a limb has an incredible impact on a patient’s life. An amputation is a major mortality complication.”

Prior to Denver, Iorio was in Boston at Harvard Medical School as part of the plastic surgery and orthopaedic faculty.

He came to CU Anschutz in 2018 and is currently an associate professor of surgery in the School of Medicine and attending physician at both University of Colorado Hospital and Denver Health. He continues to perform limb salvage surgeries while pursuing research interests in the reconstruction of upper and lower extremities through microvascular surgery.

Limb-saving surgeries

Iorio frequently performs free flap surgery, a difficult procedure in plastic surgery to reintegrate soft tissue and blood vessels to a damaged area. During these procedures, he reattaches impossibly small blood vessels with stitches as thin as a single hair. Rebuilding the vascular system of a traumatically injured limb can not only save the aesthetic look of a limb, but more importantly, he says, its function.

“We stand in the doorway of someone on the brink of losing a limb,” he said, referring to the complex procedures in the operating room.

The recovery from these surgeries can be very difficult and patients are subject to chronic pain.

“Patients undergoing these surgeries have polytraumas, and with a lot of injuries,” said Iorio, “They’re immobilized and bedridden for very long periods of time following tough surgeries. They can end up being on enormous doses of opioids and benzodiazepines.”

In an effort avoid these poor outcomes, he frequently employs peripheral nerve catheters during surgery.

Alternatives to problem-ridden pain killers

Nerve catheters are very small tubes that are placed near a surgical site to specifically anesthetize a nerve. Aside from helping block the pain, the catheters can also prevent spasms and protect the microvascular free flap.

“In lower-extremity reconstruction, microsurgery salvage failure rates can be as high as 20 percent due to the difficulty of the operation,” said Iorio. “Anything we can do to help that flap is beneficial to the outcome of the procedure.”

Recently, Iorio studied how peripheral nerve catheters can be used to curb the need for opioids, and the results

are encouraging. He found that when peripheral nerve catheters were used, there was reduced concurrent narcotic use and the length of hospital stay was shortened. Also, patients reported lower amounts of immediate postoperative pain.

“In our study, our flap failure rates were 3 percent,” said Iorio. “So, we saw better outcomes, lower pain scores and lower opioid consumption. This looks very promising for the future of limb salvage.”



The paper behind this article can be viewed on Pubmed. PMID: 29452441



LOST COLORADO HIKERS RESCUED AFTER FROSTBITE SETS IN NEAR SAINT MARY'S GLACIER

By: Ryan Haarer, 9News, January 5, 2019



Hikers Byron Sortor and Lewis Walker.

At 13,294 feet, James Peak is tough to climb in the middle of summer. Lewis Walker, 27, and Byron Sortor, 28, did it at the end of December.

"We were thinking it would be a day hike. Nothing too serious. So I didn't pack everything I should have. And we went up the mountain," Sortor, who would later regret his lack of gear, said.

Clouds filled the forest on their way up.

"That's when we should have turned back," Walker said.

But they pushed on, summitting the 13er with jackets, hiking boots and little more.

The views seemed worth it at the top where they were above the clouds, looking down on the gray descent that would soon leave them wondering if they'd survive.

"The fog was so dense, ten foot visibility -- we couldn't see

anything. We started walking, oh crap, we don't really know where we were going. Then the sun went down and we really didn't know," Walker said.

Their hiking shoes and socks froze. They had no idea where they were. And they couldn't see a thing. So the two stopped for the night, hoping to climb out in the morning.

"We did the only thing we knew how to do to stay warm. We put each other's feet in each other's arm pits and did that for about six hours then search and rescue came," Sortor said.

Alpine Rescue only came because the two let their roommate know where they were going. When it got late, Tim Mednick called police and drove to the trailhead.



"The second I saw the jeep in the parking lot I knew something was wrong. My heart just sank," Mednick, who would wait for a snowcat that set out for his friends, said. "This is happening. They're stuck on the side of a mountain at 11 o'clock at night. It's negative sixteen. Yeah. Yeah that was slightly terrifying."

Blaring sirens moved closer to the men half asleep far from where they were supposed to be.

"They were across the stream and couldn't come directly to us," Walker said. "So, we had to go to them. At that point our shoes were frozen, socks were frozen. We couldn't get back on. We were too cold to maneuver. So, we had to do it barefoot, crawling on bare hands, bare feet. Through the snow about 50 yards or so. Got to the stream, traversed the stream than another 20 yards to the snowcat. That was very painful. Nothing but gasping the entire way."

Frostbite had set into their hands and feet. As they started to thaw out, the pain set in.

"Rewarming cold extremities is one of the most painful things anyone can experience," Dr. Patrick Duffy with the University of Colorado Hospital Burn and Frostbite Center

said. "Even when they came in, they had cold to the touch feet and hands and were already developing blisters which is a sign they had that second-degree, that real frostbite."



Patrick Duffy, MD

Duffy gave them a blood clot busting drug called tPA that's also used to regain circulation in the extremities of frostbite victims. It worked for Sortor and Walker who are recovering.

"At least at that point I knew we were safe. We were fine. We weren't going to end up corpses on a mountain," Walker said. "We're going to be doing stuff a lot smarter. And we're going to turn around when we think we should." 





Shelbi and Raegenia enjoy a little time at the chicken roost outside Raegenia's home. Photo courtesy of Shelbi Boggs.

MOM'S HEALTH ORDEAL FEEDS DAUGHTER'S PASSION FOR MEDICINE

By: Tyler Smith, April 29, 2019

Before August of 2018, Raegenia Boggs had spent no time in a hospital other than brief stints for the births of her four children.

Then a bacterial brew burst the bounds of her gut, entered her bloodstream and infected her liver. Boggs, 62, went into sepsis, a massive inflammatory response to the infection. She was on IV antibiotics for weeks, shuttling between the hospital and her home in Highlands Ranch.

The infection eventually cleared and Boggs thought she too was in the clear. Then, another shock. The infectious disease specialist who treated her sepsis examined CT scans taken periodically during her illness and saw suspicious nodes in Boggs's abdominal cavity. He set up a biopsy in late September that revealed she had peritoneal mesothelioma: the lining of her abdominal cavity was riddled with cancerous tumors.

There had been no time to prepare for the news, Boggs

said. She'd never noticed a symptom of the cancer.

"I thought I was done with treatment," she recalled. "The liver infection was cleared up."

Heavy load

The shock rippled through her family. "She was fine one day and the next day we thought she was dying," says daughter Shelbi, 20, a pre-med junior at the University of Colorado-Boulder, who along with her father, Paul, is her Raegenia's primary caregiver.

"I'm basically a nurse," Shelbi said. In the course of her mother's septic struggle, she learned to flush PICC lines and administer intravenous treatments, in addition to assisting Raegenia with everyday needs like showering, cooking and driving. She did all she could to lighten the load on Paul, who holds a demanding work schedule in addition to supporting Raegenia at home.

Meanwhile, Shelbi juggled a rigorous academic schedule.

The cancer diagnosis meant Shelbi would shoulder an even greater share of the burden that disease placed on Raegenia and Paul.

More on that later. What neither mother nor daughter knew that September was that the cancer diagnosis was just the next phase of a longer struggle. Obstacles lay ahead that tested their wills. But just as seeds sprout from fire-ravaged soil, Raegenia and Shelbi endured the physical and emotional devastation of disease and emerged more tightly connected than ever and with renewed purpose.

Surgery, part one

The next chapter of their story opened in early November at UHealth University of Colorado Hospital on the Anschutz Medical Campus. Dr. Steven Ahrendt, an abdominal cancer surgery specialist with the Department of Surgery at the University of Colorado School of Medicine and director of CU's rapidly growing Cytoreductive Surgery/HIPEC Program, performed a lengthy, two-part procedure aimed at ridding the cancer scourge from Boggs' abdominal cavity.

In the cytoreductive surgical portion, which stretched across roughly 10 hours, Ahrendt painstakingly removed all the tumors he could find from the lining of her abdomen. He also took out her gallbladder, appendix and a portion of the large intestine called the sigmoid colon that was twisted and inflamed.

After finishing the surgery, Ahrendt used HIPEC (hypothermic intraperitoneal chemotherapy) to destroy malignant cells that may have escaped the surgery. In HIPEC, the surgical team pumps about 2 liters of chemotherapy drugs through a heat exchanger that raises their temperature to 41 to 42 degrees Celsius (106 to 108 degrees Fahrenheit). The drugs penetrate 1 to 2 millimeters into

the tissue and circulate for 90 to 120 minutes. The increased temperature raises the cancer-killing effectiveness of the drugs, Ahrendt said.



Steven Ahrendt, MD

"HIPEC

provides control of specks of cancer that might be left behind," Ahrendt said. "But the key part of the surgery is getting the tumors out. HIPEC is an added procedure on top of that."

Surgery, part two

With the lengthy surgery completed, Boggs rolled off to the intensive care unit, where the considerable stress she already faced increased. The second day after surgery, Boggs' right side weakened; three fingers of her right hand dangled, unable to move so much as to pick up a tissue. Another round of CT scans showed that her left carotid artery, which feeds the brain, was 90 percent blocked. That had caused a stroke. Further tests showed she had also suffered a mild heart attack.



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The stroke and the severity of the blockage meant that yet another surgery – and soon – was mandatory, said Dr. Max Wohlauler, a vascular surgeon at UCH.

“If a patient is having symptoms and the artery is more than 50 percent narrowed, the risk of stroke in the next two years is greater than one in four,” Wohlauler said. Boggs had escaped permanent damage from the episode in ICU, he added, but the odds of being so fortunate again were unacceptably high.

The situation led to difficult discussions, Wohlauler said. “Raegena was mentally ready to do the abdominal operation and recover from it,” he said. “Now I’m walking in telling her that she needs another surgery. I told her, ‘I’m doing this to reduce the risk of stroke. The one you had in the hospital you



Max Wohlauler, MD

completely recovered from. The next one could be life-altering and disabling.”

About a month later, Boggs was in a pre-operative space at UCH, terrified by the surgery that lay ahead. Wohlauler needed to make an incision on the left side of her neck, enter the carotid artery, and scrape away the fatty plaque that clogged it.

The surgery was successful. Boggs spent only one night in the hospital. When she returned a month later for a post-operative exam, ultrasound imaging showed there was no longer narrowing of the artery, Wohlauler said.

A powerful bond

As much as she appreciates Wohlauler’s surgical skill, Boggs remains strongly stirred by his presence before he made a single incision. As she waited for the surgery, he approached her and devoted time to prepare her for what lay ahead.

“Dr. Wohlauler held my hand in pre-op for five to seven minutes, talking to me calmly in a quiet, soothing voice,” Boggs recalled. “I thought, ‘Oh, my God, this guy is amazing.’”

The connection deepened in a different way after the surgery. One day during her winter break from CU, Shelbi accompanied Raegena to her vascular check-up with Wohlauler. He gave Shelbi his card, and three weeks later, when she was back to school, she emailed him to ask about potential “learning opportunities” – a request he quickly filled. In early March, Shelbi shadowed Wohlauler, joining him and his team in the OR for a vascular surgery and accompanying him to an appointment with a patient. Three weeks later, she was in the OR again, watching Wohlauler enter and clear the carotid artery of a patient, just as he had done with her mother.

Spirit lifter

The experience has provided Shelbi a much-needed spur

to stick with academically challenging coursework that is complicated by helping to care for Raegena, whose chemotherapy drained her energy, produced painful



Shelbi and Wohlauler in early March after she shadowed him in the OR for a second time. Photo courtesy of Max Wohlauler and Shelbi Boggs.

mouth blisters and wrecked her appetite.

She is also still recovering from the pain of the abdominal cancer surgery, which is made more difficult by isolation. Raegena cannot work and spends hours in her bedroom alone while Paul and Shelbi are away.

“Being scared and knowing that you have a rare cancer is a tough one – and [so is] being encased in your home while you are that sick,” Raegena said. “The anxiety and depression, I sometimes think, is worse than the surgery itself.”

When loneliness threatens to overwhelm her mother, Shelbi sets aside her school work and the sutures she’s taught herself to sew since watching Wohlauler in the OR in favor of simple companionship.

“I sometimes have to come in and say [to Raegena], ‘You’re

getting in the car. You have to get in the car with me to drive or sit in a restaurant, something to get out,’” Shelbi said.

Extra boost

She admits the responsibilities of caregiving and school sometimes conflict. She’s had to miss more classes than she’d like, which creates more pressure than ever to do well on tests. But her time at the hospital with Wohlauler has been a boon, she added.

“It’s nice to see a physician who loves what he is doing,” Shelbi said. “That is really inspirational and makes me want to work harder.”

For his part, Wohlauler, who regularly extends shadowing opportunities to med school students, sees in Shelbi the right stuff for a career in medicine.

“She’s a go-getter,” he said. “She’s smart and compassionate. She is also very mature and understands health and sickness on multiple levels, through her coursework and taking care of her mom. She’s very close to [Raegena] and has been instrumental in her recovery.”

Raegena now looks forward to regaining the appetite and physical stamina ravaged by her disease, surgeries and chemotherapy.

“Once I get a grip on this whole thing and get better, I’ll be able to exercise and go to the rec center and get out of my home,” Raegena said. Pending the outcome of scans

Continued on page 19



Ernest "Gene" Moore, MD and John Moore, MD examine a block of ballistic gel as Lori Jane Gliha looks on.

OPERATION GUN DEBATE: TWO TRAUMA SURGEON BROTHERS TALK GUNS AND INJURIES

by Lori Jane Gliha on May 06, 2019

He is one of the most recognizable trauma surgeons in the country – if not because of his signature silver mustache and gravelly speaking voice – then because of his world-renowned reputation for literally writing the book on trauma surgery (it's called Trauma).

Dr. Ernest Eugene Moore, "Gene," has operated on thousands of people throughout his decades-long career and has written at least 1,700 scientific and medical papers.

He has made such an impact on patients and young surgeons that Denver Health, the premiere public hospital in Colorado where he has served for more than 40 years, named the trauma center after him: the Ernest E. Moore Shock Trauma Center.

In recent months, however, Dr. Moore has become recognizable for his outspoken stance on semi-automatic rifles, like the AR-15.

"I don't think civilians should have access to an assault-type

rifle because I think it has the potential for destructive violence on a mass of people who are innocent," he said.

Moore, who owns multiple firearms and is an avid hunter, wrote about his concerns in an op-ed for NBC News after the Parkland, Florida school massacre at Marjory Stoneman Douglas High School in 2018.

But Moore's own brother – Dr. John Moore, a Harvard-educated trauma surgeon, now retired – disagrees.

"I have an AR-15 and I enjoy it," John Moore says.

On a scorching July day on John Moore's farm outside of Denver, the brothers demonstrated how a high-powered rifle might impact the human body, using ballistic gelatin.

"It's not a matter of what's the most dangerous bullet, it really is how can you deliver the potential energy to kill people in a short time period, and I think that's a big confusion in society," said Gene Moore.

The two explained how the angle of the entry and contact with skin or bone could cause a bullet to spiral up and down, causing greater tissue destruction.

"Injuries aren't dramatically different with handguns," said Gene. "Where there is an exponential difference is when it comes to a rifle, like an AR-15 wound."

He said the amount of energy transmitted to the body and the ability to fire the weapon quickly give it a greater wounding capacity.

"I don't care who is available or what kind of alert system you have, the devastation is overwhelming with that kind of capacity to shoot," he said.

Combined, the two have at least 75 years of trauma surgery experience.

During their careers, they have operated on the same patients together, but they don't always see eye to eye on the debate about who should have access semi-automatic rifles.

"I read the constitution, and I'm a big believer in the second amendment, and I think that the law-abiding citizen, like me, ought to be able to protect myself," said John Moore, who owns 25 firearms including his AR-15. He also taught gun safety for the NRA in the 1980s.

While semi-automatic rifles have been used in four of the five deadliest mass shootings in the United States, John Moore says any negative reputation surrounding high-powered rifles like the AR-15 is unwarranted.

"That's one of the misconceptions -- that everyone is being shot with a (semi-automatic rifle)," John Moore said. "I bet 85 percent minimum of homicides are committed with handguns as opposed to rifles."

A Rocky Mountain PBS analysis of average FBI homicide data from 2015-2017, found handguns are used 92 percent of the time in homicides when the type of gun is known. The type of gun is unknown in about 30 percent of firearm homicide cases collected by the FBI.



Ballistic gel simulates tissue damage from an AR-15.

John Moore said he is concerned law-abiding citizens will be negatively impacted if restrictions are placed semi-automatic rifles.

"There are a couple million of these that are in the hands of law-abiding citizens right now," he said. "It is always a slippery slope. You take one right away,



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and then another right... I don't want to see (the second amendment) nicked away and then finally we don't have any guns."

While the two have saved countless victims of gun violence, they have different opinions on how to prevent it.

"My ultimate desire would be to take away the assault rifle design," said Gene Moore, adding that the amount of rounds a gun can hold is also an important factor in reducing violence. "I think a magazine capacity should be limited to five."

John said regardless of any potential restrictions or new gun regulations, he believes a criminal is going to get a gun.

While the two don't always support each other's opinions, they do support having a civil conversation and discussing solutions that will ultimately bring fewer gunshot patients, especially school children, into the trauma room.

"It just isn't politics. It's a matter of trying to sit down with people and have facts and try to figure out how we can avoid the continued carnage we see in schools," Gene Moore said. "We're not going to break up a brotherhood because he's pro and I'm anti."

"There are so many issues in society that are backed on emotion and not fact," John Moore added.

"We need research." 🌱

Mom's health ordeal - cont. from page 17

to show the effectiveness of her chemotherapy, she said she plans to join the University of Colorado Cancer Center's BFitBWell program, which provides exercise regimens for patients going through cancer treatment and those who have recently completed treatment.

Giving back

She's leaned heavily on Shelbi to make that happen, but Raegen said her daughter is just doing what comes naturally. Shelbi is an accomplished competitive figure skater who also dedicated her skills to coaching Colorado Special Olympics skaters at the University of Denver.

"She spent hundreds of hours every year in the program," Raegen said. "She dearly loved the kids, and the adults she coached as well."

That's the way circles close, said Shelbi, who entered the world three weeks prematurely when Raegen was 42. Shelbi spent the first three weeks of her life in a neonatal ICU, her life threatened by respiratory syncytial virus (RSV). She knows she couldn't have made it out on her own.

"I wanted to go into medicine because I wanted to give back to the people who kept me alive," Shelbi said as Raegen looked on with pride. "I wanted to give back to the babies that are sick and wanted to do neonatal."

She paused. "Watching Dr. Wohlauser has made me like vascular surgery." 🌱

COLORADO LIGHTNING STRIKE SURVIVOR SHARES HIS STORY

by Web Staff and Vicente Arenas FOX31 News

BOULDER COUNTY, Colo. — A young man who survived a lightning strike was back at the hospital where he was treated Friday sharing his story in hopes of helping save lives.

Isaiah Cormier spoke with the doctor that helped him back on his feet and others wanting to know how to avoid being struck in the first place.

This is that time of year when lightning strikes light up Colorado's skies.

It was almost exactly a year ago that Cormier was struck by lightning in Boulder County.

"It struck me right here in the neck and exited out my foot which was numb and was immobile for a while which is how they knew where the exit was," he said.

Cormier was at a campground near Nederland, when a bolt of lightning knocked out the 19 year old.

He remembers very little.

A few hours after the hit, a "Ferning" pattern appeared on his chest.

"I wasn't as in much pain as you would expect but all of my muscles were so stiff," he said.

Cormier's girlfriend -- at the time -- saved his life by doing CPR.

Cormier was taken to the UHealth Burn Center and that's where he returned to Friday.

He spoke at a lecture that addressed lightning injuries.

"I would not be here today if my girlfriend at the time had not had CPR certification, and thankfully it was fresh on her mind so even if people have gotten certified before it doesn't hurt to get a refresher course," Cormier said.

The doctor who treated Cormier also spoke, and said most lightning strike patients survive.

"There are two big things that happen in a lightning strike: they can have significant neurological injuries. The other thing that can happen is their heart can stop," said Anne Wagner, the UHealth Burn Center medical director.



Anne Wagner, MD

According to the National Weather Service since 1980 lightning – on average - kills 3 people and injures a dozen others every year in Colorado

Cormier said he thought he was in a safe area when he was hit.

Still he says, if you see lightning he encourages people to take cover as soon as possible. 🌱





FBI SWAT-team emergency medical technicians observe as Peltz goes to work. Photo by Katherine Scott, for UHealth.

FBI AT CSI (NOT THAT CSI) TO TRAIN ON SAVING LIVES

By: Todd Neff, for UHealth; April 17th, 2019

To grasp that this was not a typical training cohort at the University of Colorado School of Medicine’s Center for Surgical Innovation (CSI), one needed to look no further than the locked closet in which the 20 or so participants had deposited their 40-odd guns.

No, these were not the board-certified surgeons, residents, and medical students who typically pass through the CSI to learn new tools and techniques at this internationally recognized surgical center of excellence. This group, predominantly male and thoroughly muscular, was comprised of FBI agents from all over the country.

They were members of Special Weapons and Tactics (SWAT) teams that specialize in responding to active shooters, hostage crises, airline hijackings and terrorist attacks, among other emergencies. Every FBI SWAT team has at least one certified emergency medical technician (EMT). They came to CU to learn, through hands-on training with CU School of

Medicine/UHealth trauma surgeons and emergency medicine specialists, about what to do when weapons like the ones they’d just locked up leave the lives of victims – good guys or bad – hanging in the balance.

Extended mission

While happy accident played a role in the FBI School of Operational Medicine spending a day of its three-day Colorado workshop on the Anschutz Medical Campus, the program was part of a deliberate extension of the CSI’s longstanding training mission.

“In a moment, we go from law enforcement to saving somebody’s life,” said one of the agents, who will remain anonymous because they sometimes work undercover.

The happy accident involved Dr. Shannon Sovndal, the City of Boulder Fire Rescue’s medical director, reaching out to the UHealth University of Colorado Hospital Trauma Program about the possibility

of leading training sessions for an FBI group. Sovndal did so because he knew that a CU team of doctors and other trauma specialists had been developing a curriculum that used real human cadavers – rather than the typical mannequins – to train ambulance crews and other first responders on trauma care.

The program focuses on opening the airway, maintaining breathing, stanching bleeding and ensuring blood flow. The first training session, for street paramedics from Aurora, Northglenn, Eagle County and elsewhere, happened Feb. 20. The training is part of UHealth’s mission of taking care of trauma patients and providing the highest level of trauma training in the region, said Robbie Dumond, senior director of trauma services at UHealth University of Colorado Hospital at the Anschutz Medical Campus (UCH).

“It’s about doing everything we can to save as many lives as possible,” Dumond said. “Our goal is to offer the course three or four times a year, at minimum, to the front-line people who really need it.”

And so a central facet of the FBI School of Operational Medicine’s quarterly training landed at the

Anschutz Medical Campus on the second Tuesday in April. In a conference room, Dumond led a moment of silence to honor the donors and families whose generosity stands to save future lives. Then the FBI men and women suited up in scrubs, plastic bibs, masks, hair nets, and clear glasses and entered the CSI’s Surgical Bioskills Lab at around 8:30 a.m.

Hands-on

Dr. Erik Peltz, a CU School of Medicine trauma surgeon and assistant director of the UCH Trauma Center; his fellow trauma surgeon Dr. Laura Harmon; and UCH Emergency Medicine specialist Dr. Danny Willner had been prepping the cadavers and doing additional setup since 6 a.m. The three of them, Dumond, and Scott Bookman, UHealth’s director of emergency medical services, had collaborated on creating the training curriculum.

The FBI agents clustered around a cadaver on each of two tables brightly lit with overhead articulating surgical



UHealth/CU School of Medicine trauma surgeons Dr. Laura Harmon, left and Dr. Erik Peltz, right, work with an FBI SWAT-team emergency medical technician. Photo by Katherine Scott, for UHealth

lights. Peltz served as guide at one; Willner did so at the other. Three big flat screen



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monitors projected prepared slides, the first of them having



An FBI SWAT-team emergency medical technician poised to practice the pressure release of the chest cavity. Photo by Katherine Scott, for UCHHealth.

to do with ways to open airways – the i-gel supraglottic airway and the King LT-D. Peltz went over pros and cons of each of these emergency intubation tools and walked through mnemonic acronyms (“RODS” and “MOANS”) to remind of challenges with establishing a good mask seal on an unconscious patient – beards, obstructions such as a big tongue, a lack of teeth, and mask stiffness among them. Then, one after the next, the FBI agents intubated the expired bodies using both nasal tubes and masks.

After his turn, an agent from Los Angeles explained, “Being able to interact with a cadaver – real tissue – is invaluable, priceless training.”

He added that the weight, resistance and anatomy of an actual human body versus that of a mannequin were all vastly different. “You have real bones and functional movement – real bones, real tissue. And it’s dead weight: if somebody’s unconscious, they can’t help you. It’s very similar to working with someone who’s unconscious.”

Said another, “The mannequin’s rigid plastic. There’s no feel. There’s not tongue that gets in the way. You’re not looking them in the eye. When I do this, I think about my kids: How am I going to save one of their lives?”

Not just how, but also why

If intubation through nose or mouth can’t be done due to injury or swelling, one must cut a new opening through the neck. Two surgical residents were corralled from a neighboring training session to perform tracheostomies on the cadavers as Peltz, Willner and CU School of Medicine/ UCHHealth trauma surgeon Dr. Franklin Wright, who had come by to volunteer his expertise, explained how it’s done, where to go in, and what to avoid (in particular the thyroid gland and vocal cords).

Field tracheotomies are rare, but, as Wright put it, “If you need an airway and they’re going to die without it, everything is negotiable.”

The training moved on to using four-inch needles to release pressure from something called tension pneumothorax (a.k.a. collapsed lung) which happens when air from a lung punctured by a bullet or shrapnel escapes into the chest cavity and can’t get out. Victims die not from suffocation, but from a lack of blood flow as veins leading to the heart become kinked as the pressure pushes the heart to the opposite side of the chest cavity. Again, the agents took turns inserting needles through particular ribs in two spots

medical science has shown to be both effective and safe.

“Putting a needle in the heart is less than ideal,” Peltz told the group; Willner added, “Better high than low: if you go low, you’re giving him a liver or spleen biopsy.”

After lunch, the training shifted to stopping blood through using pressure or tourniquets. The aim, Dumond said, was to show not only how to stop the bleeding, but also the nature of the damage that bullets, shrapnel, blast injuries and other grave physical insults do and where in the body the bleeding typically comes from.

Michael Biamonte, the FBI School of Operational Medicine’s program director, interjected here and there based on his 32 years of work as a paramedic with the FBI and elsewhere. He described cadaver-based training as “a luxury.”

“These people who have donated their bodies to science have done us a great service by allowing us to use their bodies to learn and save lives out in the field,” he said. “These opportunities are so hard to come by, and it’s so, so important for a facility like this to open its doors and avail their team and their cadre. Look at the cadre they’ve provided us with – they’re fantastic. We’re frankly honored that they’ve allowed us to come in and learn from them.”

CSI MOVES TO BIOSCIENCE 3

The bioskills industry has grown by leaps and bounds, and is expanding faster than ever. The CSI lab held 384 training events in 2019, are increasing staff, and preparing for another big move.

CSI is moving into a new facility in the Bioscience 3 building in the Fitzsimons Innovation Community on the University of Colorado Anschutz Medical Campus.

The new facility will offer:

- 7,423 square feet (nearly double the existing space)
- Free visitor parking
- Cafe in the building
- Auditorium seating for 110

Please join us for our open house:

April 9, 2019
4-6pm

Center for Surgical Innovation
Bioscience 3
2115 N. Scranton Street
Suite 1035
Aurora, CO 80045

For more information on the new facility contact:

Sarah Massena by email at sarah.massena@cuanschutz.edu or by phone at 303-724-2756.





Tony Hammes, awaiting a lung transplant in September 2017, walks in the UCHealth University of Colorado Hospital cardiothoracic ICU. Photo Courtesy of Tony Hammes.

LUNG TRANSPLANT PATIENT OVERCOMES LONG ODDS

By: Todd Neff, UCHealth, October 2018

When Tony Hammes developed a cough that stuck around longer than he thought it should, he went to a doctor in November 2010 to have it checked out.

Antibiotics didn't do much, nor did rounds of steroids and other treatments. Years passed and Hammes moved from Illinois to Wisconsin to Colorado. Ultimately he was diagnosed with idiopathic pulmonary fibrosis.

The air sacs in Hammes' lungs were like "stacks of red grapes, except the grapes are all raisins," according to Joseph Crossno, MD, associate professor of medicine in the Division of Pulmonary Sciences and Critical Care Medicine and a provider with the UCHealth Comprehensive Lung and Breathing Program.

The condition was noticeable but manageable. Hammes might become winded more quickly than he did in the past, but he could still do the things he liked to do: play sports

with his son Jonah, enjoy the outdoors with wife Kristin, play golf with friends and colleagues, work in the yard.

Breathing becomes more difficult

But by 2015, Hammes was having a harder time. That July, he walked into a doctor's office with an oxygen saturation of 85 percent. For most people, 94 percent to 99 percent is normal; when it drops below 90 percent, supplemental oxygen may be needed. That day, he left the doctor's office with an oxygen tank.

"Here we are, married 20 years, and you're with a guy with one of those big old-person tanks," Hammes said to his wife.

He continued to travel for work, toting the largest portable oxygen concentrator airlines allow in a cabin. But by December 2016, it was clear that Hammes needed a lung transplant.

He had already started pulmonary rehabilitation,

but now it was about keeping himself in the best possible shape prior to surgery. Still, his lungs got worse. At home, he relocated to the guest bedroom on the first floor to avoid climbing stairs.

On Sept. 1, 2017, after driving Jonah to school, he called the UCHealth Lung Transplant Center and was advised to come in. It would be the beginning of a long, eventful stay.

A team of pulmonologists including Crossno, Todd Grazia, MD, associate professor of medicine, and Marty Zamora, MD, professor of medicine, focused on Hammes' case. They stabilized him, but by September 7, Hammes' lungs could no longer do the job, no matter how much supplemental oxygen he received.

He would need to rely on extracorporeal membrane oxygenation, or ECMO. This process sends blood that would otherwise flow to the lungs for oxygenation and carbon dioxide removal outside the body to a machine to perform those functions.

Life-saving technology

Muhammad Aftab, MD, assistant professor of surgery, performed that surgery. Coming out of it, half-inch-thick clear tubes resting in part on Hammes' head carried his blood. Between bites of a peanut butter sandwich, Hammes remarked to Crossno: "This is really cool."

Crossno recalled that he begged to differ: "I'm like, 'Tony, this is not cool.'"

Here's why: ECMO might be a life-preserving technology (or "really cool" as Hammes describes it), but relying on it could cause Hammes to be dropped from the transplant list. Crossno and the University of Colorado Hospital (UCH) team were concerned.

A lung transplant patient must be able to expand the chest and walk at least a bit. Otherwise the patient can become "deconditioned," as Crossno explained, and the risk of a failed transplant becomes too great to proceed. As soon as ECMO began, the window for transplantation was closing. If lungs for transplant didn't become available soon, Hammes would transition from hospital to hospice.

Hammes' survival hinged on the right pair of lungs arriving in the nick of time. He knew this, but remained positive. For years he hoped for, even anticipated, a positive outcome from this lung problem of his. He trusted his medical team. And he told himself this: "I'm not in control of this outcome, but if I'm not meant to be



Muhammad Aftab, MD

here, that's OK. I don't understand it, I may not like it, and I have a desire to be here. But it's OK."

That way of thinking also applied to Hammes'

wife and son, who, he told himself, "will be strong enough themselves, and have a strong enough support system, to go on without me." Hammes'



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optimism made his room in the UCH Cardiothoracic ICU popular among providers.

So did the unicorns.

Using an app on his phone, Hammes gave unicorn names to doctors, nurses, and others, based on the first letter of their name and their month of birth. Hammes' unicorn name, "Prince Blueberry," ended up under his actual name on the whiteboard in his room. Keeping the theme, friends from work brought a unicorn statue to his ICU room.

Transplant success

Lungs arrived just in time. Michael Weyant, MD, professor of surgery, performed the surgery on September 26. Hammes spent another month in the hospital, the last stop being the rehabilitation unit, where each day he had two sessions each of occupational and physical therapy. In late October, he was home again.

Lung transplant recovery takes time. But by February, with help of concerted pulmonary rehabilitation, he was shooting baskets with Jonah, now 13, and by early April he was working nearly full-time.

"We're still in the honeymoon period, but he's doing well," Crossno said. "We really pulled that one out of the fire."

For Hammes, he is here just as he had hoped and on some level expected. He says he's grateful beyond words – for the donor and his family; for his own family and friends; for his colleagues at O'Neal Flat Rolled Metals; and for the skillful, personally engaged care he received at UCH from

the doctors to the nursing staff, the ECMO specialists and the respiratory, occupational and physical therapists.

"I'll probably get emotional about this, because it's pretty personal," Hammes said. "The care was outstanding. And we knew that it would be good. You're in the safest place you could be. This is the place. This is it. It just doesn't get any better than this."

He maintains a sense of wonder about the UCH Transplant team that saved him.



Michael Weyant, MD

"What happened is incredible. It's incredible

that people have dedicated their lives to learn and become experts at this so people can benefit from it," he said.

Hammes visits the ICU after most of his outpatient appointments, to say hi and to thank them again. He wears a surgical mask as Crossno and colleagues suggested.

On a recent visit, a certified nursing assistant who didn't recognize him behind the mask asked if she could help him.

"I used to live here for a couple of months," he said. "You might have taken care of me."

She searched his face.

"I'm Tony," Hammes said. "I'm the unicorn guy."

Her face lit up. "Prince Blueberry!" she said. 🍀

VA Researchers who served Dr. Edward Jones - cont. from page 13

You should also identify the mistake and make sure to avoid replicating it when it's your turn to shine.

Lastly, enough cannot be said about the value of hard work and determination. In retrospect, it often seems that I was the closest to giving up immediately before I succeeded. Sometimes, you just have to put your head down and do the work in order to be successful. My father is fond of saying, "You can outwork 95 percent of the world; the other 5 percent, you have to outsmart." Most of us would be happy just to be in the top 95 percent. That's totally achievable by putting your nose to grindstone.

What's the next step for you in your VA career?

I'm applying for large federal grants, including a VA Career Development Award and a VA Merit Award, to further evaluate energy use and cardiac pacemakers. In addition, Dr. Kris Wikiel and I are seeking to establish the only comprehensive bariatric surgery program in the largest VA region: VISN 19. Bariatric surgery involves a series of minimally invasive procedures on people who are obese. We are proud to include bariatric endoscopy at VA Eastern Colorado, one of only two VA medical centers that offer Veterans this safe and effective technique outside of a research protocol. 🍀

Pancreatic Cancer - cont. from page 11



"I love nursing. It's my passion," she said. "And my family is near and dear to my heart. I want to see my grandkids grow up." The days ahead with them include miniature golfing, hiking and camping in West Virginia's matchless state parks and treating them to the lasagna, spaghetti, peanut butter fudge and other favorites she's perfected over the years.

For his part, Schulick said that while Brenda's specific experience with pancreatic cancer will not often be duplicated – Trebek, for example, is 78 and will have to rely on chemotherapy to wage his battle – her story does underscore that fighting the stubborn disease requires that providers join hands, across institutions and communities that may be separated by many miles.

"We can't ask everyone to show up on our campus every time they need a component of treatment," he said. "We can do a better job of helping other hospitals. In general, my theory is that if there is anything that can be done locally and well that is near a patient's home, it should be done there. Specialty treatments can be done here." 🍀



CU SURGERY MARATHON FUNDRAISER FOR GLOBAL HEALTH EQUITY

Excerpts from email provided by Yihan Lin, MD



Thank you to our residents that coordinated this visit; Becky King, Oliver Fackelmayer, Sam Michel, Stephanie Davis, and Greg Stettler.

The group plans to make this a yearly bilateral exchange, and will continue to build on current funds so that this will eventually become a self-sufficient endowment.

On May 19 2019, 55 runners from the Department of Surgery ran the Colfax Marathon/ Half-Marathon/ Relay for the sake of global health equity.

Together, they met and then exceeded their goal raising a total of \$45,000!

As a result, Dr. Felix Rugwizangoga and Dr. Bernard Umutonwase were invited to join us for a clinical observership at UHealth.

Felix and Bernard are finishing their 3rd of 4 years of general surgery residency at the University of Rwanda. They wanted to express how grateful they are to all of you for this opportunity. They will be joined by the chair of surgery, Dr. Faustin Ntirenganya.

Our guests rotated through several surgical services and attended one of our many multi-D and teaching conferences.

This event was a big step in creating a productive and sustainable relationship between the University of Rwanda and the University of Colorado. We are planning to collaborate with other interested departments including orthopedics, anesthesia, emergency medicine, and pediatrics for future fundraisers.

Our mission is to cultivate leaders in surgery that are knowledgeable in global innovations and challenges, and are able to meaningfully engage in research, education, and development.

Thank you to the entire department of surgery for your commitment. Know that all of your training miles, donated dollars, and encouragement, will go towards training the next generation of surgeons in Rwanda and Colorado, and that many patient lives will be impacted as a result.

CANCER LEAGUE OF COLORADO - OVER THE EDGE 2019

Excerpts from email provided by Tyler Smith



Tyler M. Smith, MS

Friday, September 6, 2019, Tyler Smith, a researcher in the Department of Surgery's Burn, Trauma and Acute care Surgery unit, conquered his fear of heights by rappelling down 38 stories of Denver's Hyatt Regency to raise money for the Cancer League of Colorado.

In 2019, Cancer League of Colorado awarded \$1,180,000 in service and research grants. This unique non-profit organization is 100% volunteer run with no paid staff, no offices, and no overhead or administrative costs. Every dollar raised through events, such as Over the Edge, goes directly towards cancer research, patient care, and family support programs.

For more information on this event and the Cancer League of Colorado visit:

cancerleague.org



2020 TOP DOCS VOTING IS NOW OPEN

Help saturate the Top Docs listings with the best physicians we have to offer on the Anschutz campus. The more presence we have on the list, the more patients we draw, the more market we capture. Your vote matters.

Remember . . . 5280 doesn't pick the docs—Denver physicians do. For the past 25 years, 5280 has surveyed doctors and asked them, specialty by specialty, which metro-area physicians they would trust to treat themselves and their families. Our theory is that medical professionals are best qualified to judge other medical professionals.

Also... 5280 obtains the database of all licensed physicians in the state from the Colorado Department of Regulatory Agencies and selects the doctors located in the seven metro-area counties (Denver, Arapahoe, Broomfield, Boulder, Adams, Douglas, and Jefferson), which results in a list of more than 10,200 docs. In order to login your name and license number must match what is listed in this database.

