

#### **SPRING 2022**

#### IN THIS ISSUE

Page 2: Message from the Chair

Page 3: Participation at the ASA Annual Meeting

Page 4: Spinal Cord Stimulator Implants Helping Ease Chronic Pain

Page 6: 2021 VUMC Service Awards

Page 8: Department Accomplishments and Promotions

Page 9: New Hires

Page 22: VUH Named Top Teaching Hospital

Page 23: Recent Publications

Page 35: Department Leadership

Department of Anesthesiology at Vanderbilt University Medical Center Office of the Chair 1211 21st Avenue South, 722 MAB Nashville, TN 37212 615-936-1595

# **VUH Earns "A" Safety Score from Leapfrog**



From article **by Doug Campbell** originally published in the VUMC Reporter on Nov. 10, 2021

Vanderbilt University Hospital (VUH) has again been recognized among the safest hospitals in the nation after receiving a fall 2021 safety grade of "A" from the Leapfrog Group.

Leapfrog is a coalition of public and private purchasers of employee health coverage that works to encourage health care safety, quality and affordability.

Leapfrog's Hospital Safety Score uses numerous measures of publicly available hospital data to produce a single score representing a hospital's overall capacity to keep patients safe from infections, injuries and medical errors.

These measures come from the Centers for Medicare & Medicaid Services (CMS), the Leapfrog Hospital Survey and secondary data sources such as the American Hospital Association's Annual Survey and Information Technology Supplement. The measures are weighted and then combined to produce a single composite score that is published as an A, B, C, D or F letter grade.

"Continual emphasis on the safety of our patients and employees is our foremost priority. This 'A' score is perhaps

**CONTINUED ON PAGE 2** 

#### **MESSAGE FROM THE CHAIR**

Before we fully settle into 2022, let's recap 2021. The year had plenty of accomplishments, not just for Vanderbilt University Medical Center but for the department as well. All of these achievements happened while we continued to fight the COVID-19 pandemic.



Warren Sandberg, MD, PhD Chair, Department of Anesthesiology

For starters, Vanderbilt University Hospital

was awarded an "A" saftey grade from the Leapfrog Group. This means that VUH is among the safest hospitals in the nation. This recognition showcases our commitment to quality patient care.

Our department continues to grow and expand. You can see evidence of this on the pages dedicated to our new hires. I recommend taking the time to see how many new clinicians, research staff, and administrative staff we have hired to keep up with our growth.

I would be remiss if I did not mention the dedication of our existing staff. Check out our spread dedicated to the service awards and you'll see a long list of department employees who have served here at VUMC from five all the way up to 35 years.

Our department also participated in the 2021 American Society of Anesthesiologists Annual Meeting, which was a hybrid event this year. Attendees had a choice between virtual or inperson sessions. The in-person events were held in San Diego, California. Anesthesiologists from our department contributed over 70 activities at the event, focusing on a variety of topics, from clinician burnout to patient safety.

I look forward to seeing what the department and VUMC continue to accomplish in 2022. •

### **Leapfrog** continued from page 1

more meaningful than others in the past, given the challenges of the pandemic. I want to congratulate and express my gratitude to everyone for the outcomes attributing to this score," said C. Wright Pinson, MBA, MD, Deputy Chief Executive Officer and Chief Health System Officer for Vanderbilt University Medical Center.

To determine a safety grade, Leapfrog not only looks at outcome measures, but also processes measures such as staff responsiveness and structural measures like the overall hospital environment and how thoroughly technology is embedded into the delivery of care.

"The Leapfrog Recognition is truly a reflection of our team's commitment to patient safety through unprecedented times and making care patient safety personal," said Jenny Slayton, DNP, RN, Senior Vice President for Quality, Safety and Risk Prevention at VUMC.

In the recent survey, 2,900 hospitals across the nation were assigned grades of A, B, C, D or F for safety, and only 30 percent received an "A."

Shon Dwyer, MBA, RN, President of VUH, said the recognition is well deserved.

"We are tremendously proud of the never-ending quality and safety focus that our faculty and staff provide every day, to every patient. This recognition by Leapfrog is a great acknowledgement and reflects the dedication of all. The adult hospital has and will continue to build quality and safety systems with input from our caregivers, patients and families," Dwyer said. •

# Department Participates in Over 70 Activities at the 2021 American Society of Anesthesiologists Annual Meeting

With plenty of safety precautions in place, clinicians from across the country attended the 2021 Annual Meeting for the American Society of Anesthesiologists in San Diego, California, ready to explore the many sessions presented by their colleagues.

Including virtual and in-person sessions, the Department of Anesthesiology at Vanderbilt University Medical Center contributed over 70 activities during this year's meeting. Members of the department presented on diverse topics, from clinician burnout to billing for anesthesia services.

Clinician burnout and how it affects patient safety has been a hot topic at previous ASA Annual Meetings, and this year was no different. **Jane Easdown, MD,** moderated a SNAP-Talk, titled "Tackling the Top Patient Safety Problems in Your Practice: Recommendations From the ASA Patient Safety Editorial Board," in which clinician burnout was discussed. **Matt Weinger, MD,** was lead speaker of the special meeting titled "Perioperative Clinician Wellbeing: Why Is This a Patient Safety Issue?" He described clinician

burnout as systemic and explained that work systems that do not support workers' needs are unsafe for everyone. He said focusing on fixing the "defective" clinicians will make the problem worse and not better.

Another non-clinical topic discussed was mentorship. **Pratik Pandharipande**, **MD**, **MSCI**, presented a talk titled "How to Get the Best Out of a Busy Mentor." He suggested those seeking a mentor get more than one for different aspects of their career. The mentorship talk also looped back into the clinician burnout issue because he said a good mentor helps identify burnout in mentees.

The meeting also focused on the clinical and research aspects of anesthesiology. Not only did our physicians present topics ranging from same-day joint surgery to standardizing kidney injury outcomes, but our trainees presented 25 medically challenging cases.

ASA's 2022 annual meeting is scheduled to take place from Oct. 22 to Oct. 25 in New Orleans, LA.



Above: Matt Weinger, MD, presents "Perioperative Clinician Wellbeing: Why Is This a Patient Safety Issue" on Saturday, Oct. 9. Right: Raj Gupta, MD, presents "Choosing the Right Patient: Clinical Pearls of Sameday Joint Surgery" on Sunday, Oct. 10.



# Spinal Cord Stimulator Implants Helping Ease Chronic Pain

From article **by Paul Govern** originally published in the VUMC Reporter on Feb. 24, 2022

Alyssa Thompson's route to specialty care for chronic pain, and to a small device being permanently implanted in her midback to manage pain by delivering imperceptible electrical pulses to her spinal cord, began with a gymnastics session in her backyard in Murfreesboro, Tennessee, in 2012 at age 14.

Tumbling resulted in an ankle sprain that would launch years of medical interventions for complex regional pain syndrome.

Brannon Lockhart's route to receiving a spinal cord stimulator implant for chronic pain was by way of a genetic condition that disposes him and other family members to form blood clots in their circulatory system. In Lockhart's case, the condition led to painful loss of circulation in his lower legs, and to amputation below the knee - his right leg in January 2019, his left in July 2020. (Between these two surgical treatments, Lockhart's 21-year-old daughter, Lindsay, died after undetected blood clots caused a blood vessel in her brain to rupture.)

First reported in the 1960s, the application of electrical pulses to treat pain has grown dramatically over the past decade, with some 34,000 spinal cord stimulators per



Chris Sobey, MD

year now implanted worldwide, half of them in North America. According to Fortune Business *Insights*, the global spinal cord stimulation devices market, which in 2020 dipped sharply to \$2.4 billion due to the COVID-19 pandemic, is expected to grow 8% per year and reach \$4.1 billion by 2027. Typical indications include postlaminectomy syndrome (also known as failed back surgery syndrome), complex regional pain syndrome, and peripheral neuropathy, that is, diseases of or damage to nerves beyond the brain and spinal cord.

"We're not turning off any neurons, or any ability for the spine and brain to communicate with a painful part of the body," said interventional pain specialist **Chris Sobey, MD,** associate professor of Clinical Anesthesiology, who placed Thompson's implant in 2018.



Jeremy Walker, MD

"We're trying to impede specific pain signals from too aggressively communicating. My analogy is, it's like having a neural highway and you're putting speed bumps on it: you still have cars going down that highway, but they're going a lot slower and a lot less aggressively."

Pain specialists at Vanderbilt University Medical Center implanted 130 spinal cord stimulators last year. In a typical case, a device about the size of an Oreo cookie is surgically implanted in the midback, with electrodes being run out to targets in the epidural space of the spine, adjacent to the spinal cord. A form of neuromodulation, spinal cord stimulation can help patients for whom pain medication is inadequate or poses debilitating side effects.

**CONTINUED ON PAGE 5** 

#### Pain

#### continued from page 4

"We spent six and a half years trying every single thing we could think of, just to make it through each day," said Thompson, director of operations at a financial services firm. She says chronic pain affected all aspects of her life. She was homebound for a time, receiving high school instruction via teachers' home visits. She periodically received epidural injections to numb her legs, followed by stints of physical therapy at Monroe Carell Jr. Children's Hospital at Vanderbilt.

With the implant, "I had relief almost immediately," she said. "I was suddenly able to do everything that I wanted to, and I'd never really had that since before I was 14. It changed everything in my life."

Lockhart's implant was placed last November by interventional pain specialist **Jeremy Walker**, **MD**, assistant professor of Clinical Anesthesiology.

"It's been totally life changing for me," said Lockhart, a business consultant and an avid hunter. During a Zoom interview, to demonstrate the agility afforded by his artificial lower legs, the U.S. Army veteran rose and moved jauntily about his home office.

Before the implant, Lockhart had been taking opioids on a daily basis.

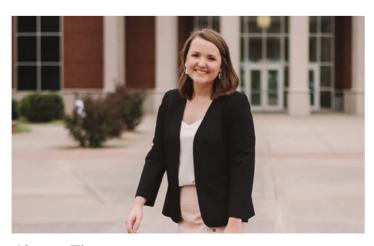
"I went from six or seven hydrocodones a day to, now, maybe one or half of one every couple days. And I'm probably 80 percent to 85 percent more active now."

Implantation at VUMC is preceded by a psychological evaluation and a weeklong trial involving an external generator. Permanent placement involves an outpatient procedure and twilight sedation, similar to that used for a colonoscopy. The implants last about 10 years, Walker said. Patients use a small remote control to select device settings.

With the advances achieved in neuromodulation, "We now use waveforms and programming that doesn't give any vibratory or tingling sensation or pose any sensation at all for the patient," Walker said.

A majority of people historically treated with spinal cord stimulators at VUMC have refractory low-back and leg pain, Walker said, often after spine surgeries. He added that the use of neuromodulation to treat complex regional pain syndrome is growing. Walker describes this syndrome, which is estimated to affect some 200,000 people in the U.S. annually, as "a remodeling of the nervous system that leads to haywire pain signals, usually in a foot or an arm."

A majority of VUMC spinal cord stimulation implants are performed by the team at the Center for Neuromodulation Clinic, with two locations in Franklin, Tennessee. The clinic, which sees patients by clinician referral, also offers other minimally invasive pain interventions. •



Alyssa Thompson



Brannon Lockhart

### 2021 VUMC Service Awards

#### 35 Years

Gail Mayo | Research Project Manager, PCRI | Research

#### 25 Years

Arna Banerjee | Professor | Anesthesiology Critical Care Medicine

Brian Donahue | Professor | Pediatric Anesthesiology

Jane Easdown | Professor | Neuroanesthesiology

Tammy Freehling | Service Specialist, Certified Registered Nurse Anesthetist

Kristie Lee | Manager | Research

Edith Newberry | Certified Registered Nurse Anesthetist

Mias Pretorious | Professor | Cardiothoracic Anesthesiology

Charles Sharbel | Certified Registered Nurse Anesthetist

Bridget Sharp | Certified Registered Nurse Anesthetist

Paul St Jacques | Professor | Multispecialty Adult Anesthesiology

#### 20 Years

Stephen Bruehl | Professor | Research John Butorac | Manager, Certified Registered Nurse Anesthetist

#### 15 Years

Ghali Abdelmessih | Research Assistant II | Research

Denise Brown | Associate Program Manager | Ambulatory Anesthesiology

Daniel Deffendall | Certified Registered Nurse Anesthetist

Rajnish Gupta | Professor | Ambulatory Anesthesiology

Patrick Henson | Associate Professor of Clinical Anesthesiology |

**Anesthesiology Critical Care Medicine** 

Elisabeth Hughes | Associate Professor of Clinical Anesthesiology |

Pediatric Anesthesiology

Veronica Nylander | Certified Registered Nurse Anesthetist

Gwendolyn Sanders | Service Specialist, Certified Registered Nurse Anesthetist

Sharon Seats | Senior Administrative Assistant | Multispeciality Adult

Anesthesiology

Sheena Weaver | Associate Professor of Clinical Anesthesiology | Anesthesiology Critical Care Medicine

#### 10 Years

John Corey | Associate Professor of Clinical Anesthesiology | Pain Medicine
Lara Craig | Certified Registered Nurse Anesthetist
Lindsay Dickson | Program Manager | Administration
Kurt Dittrch | Assistant Professor of Clinical Anesthesiology | Pain Medicine
Matthew Fosnot | Service Specialist, Certified Registered Nurse Anesthetist
Judy Lashbrook | Senior Business Process Manager | Administration
Marcos Lopez | Assistant Professor | Anesthesiology Critical Care Medicine
Laura Payne | Service Specialist, Certified Registered Nurse Anesthetist
Thomas Romanelli | Assistant Professor of Clinical Anesthesiology | Pediatric
Anesthesiology

Kara Siegrist | Assistant Professor | Cardiothoracic Anesthesiology

#### 5 Years

Misty Ball | Program Manager | Research Matthew Bell | Certified Registered Nurse Anesthetist

Lucille Brunker | Assistant Professor | Anesthesiology Critical Care Medicine

Ashley Burdette | Certified Registered Nurse Anesthetist

Joshua Campbell | Certified Registered Nurse Anesthetist

Christy Crockett | Assistant Professor | Pediatric Anesthesiology

Jeremy Donegan | Certified Registered Nurse Anesthetist

Erin Dunavant | Certified Registered Nurse Anesthetist

Holly Ende | Assistant Professor | Obstetric Anesthesiology

Robert Freundlich | Associate Professor | Anesthesiology Critical Care Medicine

Kristy Garner | Anesthesia Tech

Brian Gelfand | Associate Professor | Cardiothoracic Anesthesiology

Alexander George | Assistant Professor | Multispeciality Adult Anesthesiology

Dillon Heath | Service Specialist, Certified Registered Nurse Anesthetist

LaurieAnn Hembree | Associate Program Manager | Education

Alan Hendon | Service Specialist, Certified Registered Nurse Anesthetist

Harrison Johnson | Assistant Director | Administration

Frederick Lombard | Associate Professor | Cardiothoraic Anesthesiology

Katharina Modes | Assistant Professor of Clinical Anesthesiology | Pediatric Anesthesiology

Maryann Otto | Instructor | Obstetric Anesthesiology

Hunter Peek | Certified Registered Nurse Anesthetist

Krystal Peek | Certified Registered Nurse Anesthetist

Elizabeth Sutherland | Certified Registered Nurse Anesthetist

### **Department Accomplishments**

**Brian Allen, MD,** received the ASA & SEA Distinguished Educator Award.

**Matthew Barajas**, **MD**, won a Young Investigator Award at the 2021 American Heart Association Resuscitation Science Symposium for his submission of the abstract "Intravenous Waveform Analysis Correlates With Volume Status in Resuscitation in In-Vivo Rat Model."

**Susan Eagle, MD**, and **Liza Weavind, MBBCh, FCCM, MMHC**, were selected to be part of the inaugural class of the Academy for Excellence in Clinical Medicine (AECM) at VUMC.

**Marc Lopez, MD,** was appointed associate program director of the Anesthesiology Critical Care Medicine Fellowship.

**Christina Hayhurst, MD**, was invited to serve on the APSF Patient Safety Advisory Committee on Opioid-Related Harm.

**Matthias Riess, MD, PhD,** has been accepted into membership of the Foundation for Anesthesia Education and Research (FAER) Academy of Research Mentors in Anesthesiology.

**Jonathan Wanderer, MD, MPhil,** received the Department of Biomedical Informatics (DBMI) Technology, Organizational Development and Evaluation (TODE) Award.

**Jonathan Wanderer**, **MD**, **MPhil**, was selected to serve as the Society for Technology in Anesthesia (STA) President-Elect on the 2022 Board of Directors.

### **Department Promotions**

**Pamela Butler** was promoted to Business Intelligence Analyst.

**Melanie Cundiff** was promoted to Program Manager.

**Lindsay Dickson** was promoted to Program Manager.

**Leslie Fowler**, **EdD**, was promoted to Assistant Professor.

**Calvin Gruss, MD,** was promoted to Assistant Professor.

**Rajnish Gupta, MD,** was promoted to Professor.

Robert Freundlich, MD, MS, MSCI, was promoted to Associate Professor.

**Latisha Jones** was promoted to Program Manager.

**Karen McCarthy**, **EdD**, was promoted to Assistant in Anesthesiology.

**John Rutledge, CRNA,** was promoted to Service Specialist for Ambulatory Anesthesiology.

**Sharae Shipp** was promoted to Project Manager.

**Joseph Teamer** was promoted to Project Manager.

Jonathan Wanderer, MD, MPhil, was promoted to Professor.

#### **New Hires**

#### Hawa Abubuakar, MD Fellow Cardiothoracic Anesthesioloigy

#### **Education and Training:**

*Fellowship,* Anesthesiology Critical Care Medicine, Vanderbilt University Medical Center, Nashville, TN (2021)

*Residency,* Anesthesiology, Washington University, St. Louis, MO (2020) *MD*, King's College London GKT School of Medicine, London, UK (2010) **Fun Fact:** I speak Swahili fluently.



#### Kayvon Alizadeh, MD Assistant Professor of Clinical Anesthesiology Multispecialty Adult Anesthesiology

#### **Education and Training:**

Fellowship, Pain Medicine, University of Florida Health Sciences Center, Gainesville, FL (2013)

*Residency,* Anesthesiology, University of Florida Health Sciences Center, Gainesville, FL (2012)

Fellowship, Laparoscopic Surgery, Franciscan Health System, Tacoma, WA (2009) Residency, General Surgery, University of Vermont, Burlington, VT (2008) MD, University of Colorado Health Sciences Center School of Medicine, Denver, CO (2002)

Fun Fact: I enjoy running, biking, and martial arts.

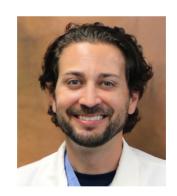


#### Matthew Bell, DNP Certified Registered Nurse Anesthetist

#### **Education and Training:**

*DNP*, Nurse Anesthesia, Union University, Jackson, TN (2021) *BSN*, University of Iowa, Iowa City, IA (2014)

**Fun Fact:** I take great pride in my holiday decorating skills (especially when it comes to Halloween and Christmas).



Darlia Bethel Research Assistant I Research

#### **Education and Training:**

BS, Chemistry, Middle Tennessee State University (2021)

Fun Fact: I enjoy composing music and poetry.





# Meghan Breed, MD Fellow Anesthesiology Critical Care Medicine

#### **Education and Training:**

Residency, Emergency Medicine, Vanderbilt University Medical Center, Nashville, TN (2020)

*MD*, George Washington University School of Medicine and Health Sciences, Washington DC (2017)

Fun Fact: I have two redbone coonhounds - Pete and Charley.



# Kaitlyn Brennan, DO, MPH Assistant Professor Anesthesology Critical Care Medicine

#### **Education and Training:**

Fellowship, Obstetric Anesthesiology, Vanderbilt University Medical Center, Nashville, TN (2021)

Fellowship, Anesthesiology Critical Care Medicine, Vanderbilt University Medical Center, Nashville, TN (2020)

Residency, Anesthesiology, Mayo Clinic, Rochester, MN, (2019) DO, Lake Erie College of Osteopathic Medicine, Erie, PA (2015) MPH, The Dartmouth Institute for Health Policy and Clinical Practice, Hanover, NH (2009)

**Fun Fact:** I was a member of the NYU Equestrian team in college!

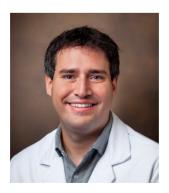


## Lucille Brunker, MD Assistant Professor Anesthesology Critical Care Medicine

#### **Education and Training:**

Fellowship, Anesthesiology Critical Care Medicine, Nashville, TN (2021) Residency, Anesthesiology, Vanderbilt University Medical Center, Nashville, TN (2020)

MD, University of Utah School of Medicine, Salt Lake City, UT (2016)



John Bryant, MD Fellow Anesthesiology Critical Care Medicine

#### **Education and Training:**

*Residency,* Anesthesiology, University of Michigan, Ann Arbor, MI (2021) *MD*, Indiana University, Indianapolis, IN (2017)

Fun Fact: I have two French bulldogs named Petunia and Wilbur-Daffodil.

#### Angela Cain Financial Analyst Administration

#### **Education and Training:**

*MPA*, Public Administration, University of Tennessee, Knoxville, TN (1999) *BS*, Public Administration, University of Tennessee, Knoxville, TN (1997) **Fun Fact:** I like college sports but do not care for professional too much.



Anarius Cathey Research Assistant I Research

#### **Education and Training:**

MS, Biomedical Sciences, University of Mississippi Medical Center, Jackson, MS (2021)

BS, Sociology, Women and Gender Studies, Vanderbilt University, Nashville, TN (2020)

Fun Fact: I enjoy horseback riding in my free time!



### Manuel Cavazos, MD Fellow Pediatric Anesthesiologu

#### **Education and Training:**

Residency, Anesthesiology, Vanderbilt University Medical Center, Nashville, TN (2021)

*MD*, University of Texas School of Medicine, San Antonio, TX (2017) **Fun Fact:** I am bilingual.



#### Neenah Cutler, DNP Certified Registered Nurse Anesthetist

#### **Education and Training:**

DNP, Nurse Anesthesia, Emory University, Atlanta, GA (2021)

BSN, Emory University, Atlanta, GA (2015)

**Fun Fact:** I adore traveling! My last vacation, prior to the pandemic, was spent backpacking through Costa Rica.



James Damron, MD Fellow Obstetric Anesthesiology

#### **Education and Training:**

Residency, Anesthesiology and Perioperative Medicine, University of Alabama, Birmingham, AL (2021)

MD, University of Louisville, Louisville, KY (2017)

Fun Fact: I am a board game collector.





Vivian Doan, MD
Fellow
Anesthesiology Critical Care Medicine

#### **Education and Training:**

Residency, Anesthesiology, University of North Carolina School of Medicine, Chapel Hill, NC (2021)

MD, University of North Carolina, Chapel Hill, NC (2017)

**Fun Fact:** I've been doing krav maga for about five years now.



# Charles Doyle, MD Instructor Multispecialty Adult Anesthesiology

#### **Education and Training:**

Fellowship, Regional Anesthesia & Acute Pain Medicine, Vanderbilt University Medical Center, Nashville, TN (2021)

*Residency,* Anesthesiology, University of Florida, Gainesville, FL (2020) *MD*, University of Central Florida, Orlando, FL (2016)

**Fun Fact:** I grew up in Florida but have been playing ice hockey since I was four.



### Steven Durning, MD Fellow Regional Anesthesia & Acute Pain Medicine

#### **Education and Training:**

*Residency,* Anesthesiology, San Antonio Uniformed Health Education Consortium, San Antonio, TX (2018)

MD, Ohio State College of Medicine, Columbus, OH (2010)

**Fun Fact:** I've flown in F16s and several other military aircraft, and I have been stationed in South Korea, Germany, and England with the U.S. Air Force.



#### Sarah Faulk Senior Administrative Assistant Administration

#### **Education and Training:**

*MHA*, University of North Carolina Wilmington, Wilmington, NC (2021) *BS*, Exercise Science, University of North Carolina Wilmington, Wilmington, NC (2020)

**Fun Fact:** I know how to unicycle!



#### Nicholas Flores-Conner, MD Fellow Anesthesiology Critical Care Medicine

#### **Education and Training:**

Residency, Anesthesiology, Boston Medical Center, Boston, MA (2021) *MD*, Universidad Internacional del Ecuador, Quito, Ecuador (2015) **Fun Fact:** I am a fan of fermentation and have made multiple treats and drinks during residency. Most recently, have been focused on sourdough, kimchi, and

beer making. My next big experiment is barreling beer in a bourbon barrel.

#### Jasmine Gray Senior Administrative Assistant Office of Anesthesiology Faculty Affairs

#### **Education and Training:**

AAS, Psychology, Nashville State Community College, Nashville, TN (2018) **Fun Fact:** I play soccer.



Jessica Grundt, MD Fellow Interventional Pain

#### **Education and Training:**

*Residency*, Anesthesiology, University of Texas Southwestern, Dallas, TX (2021) *MD*, University of Texas Health Science Center, San Antonio, TX (2017) **Fun Fact:** I used to coach skydiving and be on a collegiate skydiving team, I invest in more exercise equipment and memberships than is probably financially responsible, I love dogs more than most humans, and I cannot wait to travel again with my husband.



#### Travis J. Hamilton, DO, MMHC, FASA Assisant Professor of Clinical Anesthesiology Multispecialty Adult Anesthesiology

#### **Education & Training:**

*MMHC*, Vanderbilt University, Owen Graduate School of Management, Nashville, TN (2021)

Residency, Anesthesiology, San Antonio Uniformed Services Health Education Consortium - Brooke Army Medical Center, San Antonio, TX (2011) DO, University of Pikeville, Kentucky College of Osteopathic Medicine, Pikeville, KY (2007)

**Fun Fact:** I served for 12 years in the US Army and deployed to Afghanistan to provide trauma care in the world's busiest trauma hospital. While attached to the British Army, I developed an insatiable love for Land Rovers.



#### Richard Haring, DO, MPH Fellow Interventional Pain

#### **Education and Training:**

Residency, Physical Medicine and Rehabilitation, Vanderbilt University Medical Center, Nashville, TN (2021)

*DO*, Lake Erie College of Osteopathic Medicine, Bradenton, FL (2015) *MPH*, Public Health Policy, Johns Hopkins University, Baltimore, MD (2014) **Fun Fact:** I'm not good at running, and I'm a mediocre fly fisherman, but I'm great at eating rocky road ice cream.





#### Braden Hestermann, MD Assistant Professor of Clinical Anesthesiology Multispecialty Adult Anesthesiology

#### **Education and Training:**

Residency, Anesthesiology, San Antonio Uniformed Services Health Education Consortium, San Antonio, TX (2017)

*MD*, Uniformed Services University of the Health Sciences, Bethesda, MD (2013) **Fun Fact:** I have been on Active Duty in the Army since 2004 and have had the opportunity to take part in many unique schools and deployments. While in medical school I was certified as both an accelerated free fall and tandem skydiving instructor.



### Alan Hoang, MD Assistant Professor Pain Medicine, Pediatric Anesthesiology

#### **Education and Training:**

Fellowship, Pediatric Anesthesiology, Boston Children's Hospital/Harvard Medical School, Boston, MA (2021)

Fellowship, Pediatric & Adult Pain Medicine, Boston Children's Hospital/ Harvard Medical School, Boston, MA (2020)

Residency, Pediatrics, University of California, Irvine, CA (2019)

*Residency,* Anesthesiology, University of California, Irvine, CA (2019) *MD*, Boston University, Boston, MA (2014)

Fun Fact: I am an avid cook and have only made a handful of dishes more than once.



## Michael Kuntz, MD Assistant Professor Pediatric Cardiac Anesthesiology

#### **Education and Training:**

Fellowship, Pediatric Cardiac Anesthesiology, Boston Children's Hospital/ Harvard Medical School, Boston, MA (2021)

Fellowship, Pediatric Anesthesiology, Boston Children's Hospital/Harvard Medical School, Boston, MA (2020)

Residency, Anesthesiology, Jackson Memorial Hospital - University of Miami, Miami, FL (2019)

MD, Harvard Medical School, Boston, MA (2015)

**Fun Fact:** I lived in Brussels for several years while growing up, and subsequently learned Flemish simultaneous to when I was learning English... sadly I've forgotten it all.



Daniel Larach, MD, MSTR
Assistant Professor
Pain Medicine, Informatics Research,
Multispecialty Adult Anesthesiology

#### **Education and Training:**

Fellowship, Pain Medicine, New York-Presbyterian/Weill Cornell/Hospital for Special Surgery/Memorial Sloan Kettering, New York, NY (2019) Residency, Anesthesiology, University of Michigan, Ann Arbor, MI (2018) MD, University of Pennsylvania, Philadelphia, PA (2014) MSTR, Translational Research, University of Pennsylvania, Philadelphia, PA (2014) Fun Fact: I played college soccer.

### Dianne Lou, MD, PhD Fellow Interventional Pain

#### **Education and Training:**

Residency, Anesthesiology, Vanderbilt University Medical Center, Nashville, TN (2020) *MD*, University of Texas Medical Branch, Galveston, TX (2016) *PhD*, Institute for Cell and Molecular Biology, University of Texas at Austin, Austin, TX (2014)

**Fun Fact:** I have a newfound interest in interior design.



#### **Education and Training:**

Fellowship, Anesthesiology Critical Care Medicine, Vanderbilt University Medical Center, Nashville, TN (2021)

*Residency,* Anesthesiology and Perioperative Medicine, Pennsylvania State University, Hershey, PA (2020)

MD, Pennsylvania State University, Hershey, PA (2016)

Fun Fact: I studied abroad in the UK in college.



#### **Education and Training:**

*BS,* Psychology, University of Southern Indiana, Evansville, IN (2013) **Fun Fact:** Although I am not athletic, I won a competition at my gym where I beat a girl who competed in the 2020 Olympics.

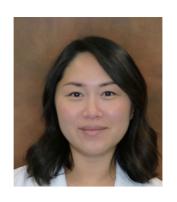


#### **Education and Training:**

Residency, Anesthesiology, Vanderbilt University Medical Center, Nashville, TN (2021)

MD, University of Kansas School of Medicine, Lawrence, KS (2017)

Fun Fact: We have a rescue dog named Cody.











**Elias Mihan** Research Assistant I Research

#### **Education and Training:**

BS, Biochemistry, History, Bates College, Lewiston, ME (2021)

**Fun Fact:** I lived in London for part of my childhood.



Monique Osigbeme, MD Fellow Obstetric Anesthesiology

#### **Education and Training:**

Residency, Anesthesiology, University of Louisville School of Medicine, Louisville, KY (2021)

MD, University of Louisville School of Medicine, Louisville, KY (2017)

Fun Fact: I am an All American athlete in Track and Field.



William Peters, DNP **Certified Registered Nurse Anesthetist** 

#### **Education and Training:**

DNP, Nurse Anesthesia, Emory University, Atlanta, GA (2021) BSN, Duke University, Durham, NC (2013)

**Fun Fact:** I have enough music in my iTunes/Apple Music library to play for 21 days straight.



**Brandon Pruett, MD** Instructor Multispecialty Adult Anesthesiology

#### **Education and Training:**

Fellowship, Regional Pain, Vanderbilt University Medical Center, Nashville, TN (2021) Residency, Anesthesiology, Ohio State University Wexner Medical Center, Columbus, OH (2020)

MD, University of Mississippi Medical School, Jackson, MS (2016)

Fun Fact: I enjoy playing guitar.



#### **Charles Quillen** Research Assistant I Research

#### **Education and Training:**

MS, Physiology, Tulane University School of Medicine, New Orleans, LA (2021) BA, Psychology, Wake Forest University, Winston-Salem, NC (2020) Fun Fact: I am a musician.

### Greg Rechcigl Assistant Director Administration

#### **Education and Training:**

MS, Health Services Administration, University of Central Florida, Orlando, FL (2011)

BS, Health Services Administration, University of Central Florida, Orlando, FL (2007)

**Fun Fact:** I can always tell what time it is by looking at the sun.



#### **Education and Training:**

*Residency,* Anesthesiology, Wayne State University School of Medicine, Pontiac, MI (2021)

MD, American University of Antigua College of Medicine, Coolidge, Antigua, West Indies (2016)

**Fun Fact:** I love yoga and have been practicing for about six years.



#### **Education and Training:**

Postdoctoral Research Fellowship, Biomedical Informatics, Vanderbilt University Medical Center, Nashville, TN (2021)

*PhD*, Industrial Engineering, University of Wisconsin-Madison, Madison, WI (2020) *MS*, Industrial Engineering, University of Wisconsin-Madison, Madison, WI (2017) **Fun Fact:** I was on the University of Wisconsin-Madison dance team and performed at two Rose Bowls and a NCAA men's basketball National Championship game.



#### **Education and Training:**

Residency, Anesthesiology, Stanford Health Care, Stanford, CA (2021) MD, Stanford University School of Medicine, Stanford, CA (2017) Fun Fact: I love wrestling my kids and teaching them about the Avengers and Star Wars; currently lobbying hard to get a doggy. Frequent Netflix-er, occasional chess player (not very good, but addicted to it); in a past life I loved running, and I sometimes fantasize about doing that again. If/when the COVID pandemic ends, the first place I will go is a movie theater.











#### Tatiana Sidorova, PhD Staff Scientist Research

#### **Education and Training:**

*PhD*, Biochemistry, Russian Academy of Science, Pushchino, Moscow (2000) *MS*, Biology, Tomsk State University, Russian Federation (1992) **Fun Fact:** My hobbies include: knitting, crochet, and gardening.



## Christopher Siemer, DO Fellow Anesthesiology Critical Care Medicine

#### **Education and Training:**

Residency, Anesthesiology, University of Michigan, Ann Arbor, MI (2021) DO, Michigan State University, East Lansing, MI (2017)

Fun Fact: I am a former Biotechnology Startup co-founder.



Lauren Siemer, MD
Instructor
Multispecialty Adult Anesthesiology

#### **Education and Training:**

Residency, Anesthesiology, University of Michigan, Ann Arbor, MI (2021) MD, University of Florida, Gainesville, FL (2017)

**Fun Fact:** I won first place in the 2012 BattleBots/Bots IQ national robotics competition (120 lb. college division).



Matthew Smith, MD
Fellow
Anesthesiology Critical Care Medicine

#### **Education and Training:**

Residency, Anesthesiology, Brooke Army Medical Center, San Antonio, TX (2021) MD, Uniformed Services University, Bethesda, MD (2017)

**Fun Fact:** I've lived in seven different states and moved 12 times in the past 15 years.



Stephanie Smith, MD
Physician
Vanderbilt Wilson County Hospital

#### **Education and Training:**

Residency, Anesthesiology, Northwestern University, McGaw Medical Center, Chicago, IL (2003)

MD, University of Tennessee, Memphis, TN (1999)

**Fun Fact:** I am an avid reader and trail biker.

#### Connor Snarskis, MD Fellow Anesthesiology Critical Care Medicine

#### **Education and Training:**

Residency, Anesthesiology, University of Michigan, Ann Arbor, MI (2021) MD, Loyola University of Chicago Stritch School of Medicine, Maywood, IL (2017) **Fun Fact:** I worked as a janitor before medical school.



Shelly Stephens, MD
Fellow
Perioperative Medicine

#### **Education and Training:**

*Fellowship*, Perioperative Echocardiography, University of Utah, Salt Lake City, UT (2021)

Residency, Anesthesiology, University of Utah, Salt Lake City, UT (2020) MD, University of Tennessee Health Science Center, Memphis, TN (2016) **Fun Fact:** I enjoy scuba diving, particularly on shipwrecks, despite the fact that I once accidentally swam into a shark.



# Edward Stredny, MD Fellow Anesthesiology Critical Care Medicine

#### **Education and Training:**

*Residency,* Anesthesiology, Penn State University, Hershey, PA (2021) *MD*, Penn State University, Hershey, PA (2017)

**Fun Fact:** I used to play the drums (school band, jazz band, jam sessions) throughout middle school and high school.

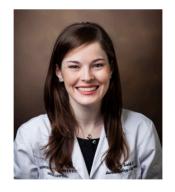


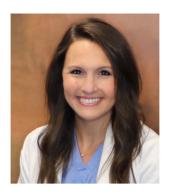
Alaine Walsh, MD Fellow Anesthesiology Critical Care Medicine

#### **Education and Training:**

*Residency*, Anesthesiology, University of Texas Health Science Center, San Antonio, TX (2021)

*MD*, University of Texas Health Science Center, San Antonio, TX (2017) **Fun Fact:** I love to listen to fantasy and sci-fi audiobooks.





Kylie Weston, DNP Certified Registered Nurse Anesthetist

#### **Education and Training:**

*DNP*, Nurse Anesthesia, Duke University School of Nursing, Durham, NC (2021)

BSN, University of Arkansas, Fayetteville, AR (2015)

**Fun Fact:** I am a former Vanderbilt MICU nurse.



#### Brian Whitson, MS Certified Registered Nurse Anesthetist

#### **Education and Training:**

MS, Nurse Anesthesia, Gooding Institute of Nurse Anesthesia, Panama City, FL (2006)

BS, Business Administration, University of Tennessee, Chattanooga, TN (1999)

**Fun Fact:** I have completed my 200 hour Yoga Teacher Training and am an avid practitioner.



#### Chris Williams, MSN Certified Registered Nurse Anesthetist

#### **Education and Training:**

MSN, Anesthesia, University of Tennessee, Chattanooga, TN (2018) BSN, University of Alabama, Tuscaloosa, AL (2013)

**Fun Fact:** I have a dog named Jeffrey. I love to hike and ski.



Jared Wilmoth, MD Fellow Anesthesiology Critical Care Medicine

#### **Education and Training:**

*Residency,* Anesthesiology, Washington University in St Louis School of Medicine, St Louis, MO (2021)

MD, University of Kansas School of Medicine, Kansas City, KS (2013)

Fun Fact: Nerd alert! I went to space camp...twice.



### Rachel Wood, MD Fellow Pediatric Anesthesiology

#### **Education and Training:**

Residency, Anesthesiology, Vanderbilt University Medical Center, Nashville, TN (2021)

MD, Harvard Medical School, Boston, MA (2017)

**Fun Fact:** I was born on New Years Day!

## Stephanie Woodward, MD Assistant Professor Obstetric Anesthesiology

#### **Education and Training:**

Fellowship, Obstetric Anesthesiology, Northwestern University Feinberg School of Medicine, Chicago, IL (2021)

*Residency,* Anesthesiology, University of North Carolina, Chapel Hill, NC (2020) *MD*, University of Utah, Salt Lake City, UT (2016)

Fun Fact: I have a dog named Jeffrey. I love to hike and ski.



#### Brittney Wright, DNP Certified Registered Nurse Anesthetist

#### **Education and Training:**

DNP, Nurse Anesthesia, Union University, Jackson, TN (2021)

BSN, Union University, Jackson, TN (2013)

Fun Fact: My husband once sent me on a Jackalope hunt in South Dakota.



#### Amy Zhang, MD Fellow Pediatric Anesthesiology

#### **Education and Training:**

Residency, Anesthesiology, Vanderbilt University Medical Center, Nashville, TN (2021)

MD, Harvard Medical School, Boston, MA (2017)

**Fun Fact:** My husband and I love to travel. One of our all-time favorite trips was a last minute four day "mini-moon" to Mexico City a week after we got married. We fell in love with its colorful and rich culture and history, explored museums and parks, and indulged in world-class restaurants and unbeatable street food. We would go back in a heartbeat!



Taylor Ziga, MD
Assistant Professor of Clinical Anesthesiology
Obstetric Anesthesiology

#### **Education and Training:**

Fellowship, Obstetric Anesthesiology, University of Washington, Seattle, WA (2021) Residency, Anesthesiology, Virginia Mason, Seattle, WA (2020) MD, Medical College of Georgia, Augusta University, Augusta, GA (2012) **Fun Fact:** I played rugby all throughout college. Our team was formed my freshman year, and by my senior year, we made it to Nationals!



# VUH Named a Top Teaching Hospital Nationally by the Leapfrog Group

From article **by Doug Campbell** originally published in the VUMC Reporter on Dec.
7, 2021

Highlighting its longstanding commitment to patient safety and health care quality, Vanderbilt University Hospital (VUH) has been named a Top Teaching Hospital by the Leapfrog Group.

Leapfrog is a large coalition of public and private purchasers of employee health coverage that works to encourage health care safety, quality and affordability.

Announced Dec. 7, the Top
Hospital award is widely
acknowledged as one of the most
competitive awards American
hospitals can receive. The quality
of patient care across many
areas of hospital performance is
considered, including infection
rates, surgery, maternity care,
the hospital's capacity to prevent
medication and other errors, and
other qualities.

"We recently celebrated an 'A' safety score from the Leapfrog Group; however, the Top Teaching Hospital award is a step above. This is an acknowledgment of the very high level of service patients receive across a range of areas from our outstanding teams. I want to express my gratitude to everyone contributing

to this honor. I hope everyone takes a moment to reflect on their contribution to this accomplishment," said C. Wright Pinson, MBA, MD, Deputy Chief Executive Officer and Chief Health System Officer for Vanderbilt University Medical Center.

More than 2,200 hospitals were considered for the award. A total of 149 nationwide were selected as Top Hospitals.

"The Leapfrog recognition is a reflection that our culture of safety is thriving, and it's driving quality outcomes for our patients and families. I am proud of our teams for all of the hard work this award reflects," said Jenny Slayton, DNP, RN, Senior Vice President for Quality, Safety and Risk Prevention at VUMC.

To qualify for the Top Hospitals distinction, hospitals must rank highly among peers on the Leapfrog Hospital Survey, which assesses hospital performance on the highest standards for quality and patient safety and assigns a letter grade. VUH recently received an "A" safety grade on Leapfrog's fall survey.

"Providing excellent patientcentered care requires a relentless drive by everyone, and I mean everyone, on the health care team," said Shon Dwyer, MBA, RN, President of VUH. "Earning this distinction as a Leapfrog Top Teaching Hospital on the heels of recently earning a Leapfrog Safety Grade of A reflects the team's consistency in developing and following safety processes with enormous attention to detail. I encourage everyone to take a moment to reflect on these positive validations of our care and to keep up the great work."

The Leapfrog Hospital Survey collects and reports hospital performance, helping purchasers to find the highest-value care and giving consumers useful information to make informed decisions. The Leapfrog Hospital Safety Grade, Leapfrog's other main initiative, assigns letter grades to hospitals based on their record of patient safety, helping consumers protect themselves and their families from errors, injuries, accidents and infections.

"We are pleased to recognize Vanderbilt University Hospital as a Top Hospital this year," said Leah Binder, president and CEO of The Leapfrog Group. "Even with the continued strain of the COVID-19 pandemic, your institution has demonstrated an extraordinary dedication to excellent health care in your community. We congratulate the leadership, staff and clinicians who put their patients first."

### **Recent Publications**

Abrams B, Kowalsky M, Weitzel N, **Kertai MD.** Cardiac Anesthesiology - Paving the Way across Multiple Subspecialties. Semin Cardiothorac Vasc Anesth. 2022 Feb 12:10892532221076655. doi: 10.1177/10892532221076655. Epub ahead of print. PMID: 35152793.

Abrams B, Latham GJ, **Kertai MD**, Weitzel N. Continuing Research in the Face of Adversity. Semin Cardiothorac Vasc Anesth. 2021 Sep;25(3):161-163. doi: 10.1177/10892532211038779. PMID: 34380350.

Ahmed HM, Atterton BP, Crowe GG, Barratta JL, Johnson M, Viscusi E, Adhikary S, Albrecht E, Boretsky K, Boublik J, Breslin DS, Byrne K, Ch'ng A, Chuan A, Conroy P, Daniel C, Daszkiewicz A, Delbos A, Dirzu DS, Dmytriiev D, Fennessy P, Fischer HBJ, Frizelle H, Gadsden J, Gautier P, Gupta RK, Gürkan Y, Hardman HD, Harrop-Griffiths W, Hebbard P, Hernandez N, Hlasny J, Iohom G, Ip VHY, Jeng CL, Johnson RL, Kalagara H, Kinirons B, Lansdown AK, Leng JC, Lim YC, Lobo C, Ludwin DB, Macfarlane AJR, Machi AT, Mahon P, Mannion S, McLeod DH, Merjavy P, Miscuks A, Mitchell CH, Moka E, Moran P, Ngui A, Nin OC, O'Donnell BD, Pawa A, Perlas A, Porter S, Pozek JP, Rebelo HC, Roqués V, Schroeder KM, Schwartz G, Schwenk ES, Sermeus L, Shorten G, Srinivasan K, Stevens MF, Theodoraki K, Turbitt LR, Valdés-Vilches LF, Volk T, Webster K, Wiesmann T, Wilson SH, Wolmarans M, Woodworth G, Worek AK, Moran EML. Recommendations for effective documentation in regional anesthesia: an expert panel Delphi consensus project. Reg Anesth Pain Med. 2022 Feb 22:rapm-2021-103136. doi: 10.1136/rapm-2021-103136. Epub ahead of print. PMID: 35193970.

al'Absi M, Nakajima M, **Bruehl S.** Stress and pain: modality-specific opioid mediation of stress-induced analgesia. J Neural Transm (Vienna). 2021 Aug 17. doi: 10.1007/s00702-021-02401-4. Epub ahead of print. PMID: 34405305.

Alshibli AK, Teklehaimanot MG, Seyoum R, Tegu GA, Desta HB, Gong W, Tesfaye G, Tsegaw AN, Abay AY, Etanaa NB, Mossie M, Benwu KM, Tarekegn F, Gebremedhin HG, **McEvoy MD**, **Newton MW**, **Sileshi B.** Changes in Surgical Volume and Outcomes During the Coronavirus Disease 2019 Pandemic at Two Tertiary Hospitals in Ethiopia: A Retrospective Cohort Study. Anesth Analg. 2022 Feb 16. doi: 10.1213/ANE.000000000005946. Epub ahead of print. PMID: 35171877.

Andrews PS, Thompson J, Raman R, Rick C, Kiehl A, **Pandharipande P**, Jackson JC, Taylor WD, Ely EW, Wilson JE. Delirium, depression, and long-term cognition. Int Psychogeriatr. 2021 Nov 12:1-6. doi: 10.1017/S1041610221002556. Epub ahead of print. PMID: 34763741.

**Balakrishna A**, Di Fenza R, Morais CCA, Imber DA, Arora P, Kacmarek RM, De Santis Santiago R, Berra L. Reply to Mezidi et al.: Assessment of Airway Closure and Expiratory Airflow Limitation to Set Positive End-Expiratory Pressure in Morbidly Obese Patients with Acute Respiratory Distress Syndrome. Am J Respir Crit Care Med. 2021; 203: 392-394. PMID: 33080156.

**Balakrishna A**, Walsh EC, Hamidi A, Berg S, Austin D, Pino RM, Hanidziar D, Chang MG, Bittner EA. An examination of sedation requirements and practices for mechanically ventilated critically ill patients with COVID-19. Am J Health-Syst Pharm. 2021. doi: 10.1093/ajhp/zxab202. PMID: 33993212.

**Barajas M**, Wang A, Griffiths KK, Matsumoto K, Liu R, Homma S, Levy RJ. The newborn Fmr1 knockout mouse: a novel model of excess ubiquinone and closed mitochondrial permeability transition pore in the developing heart. Pediatr Res. 2021; 89: 456-463. PMID: 32674111.

**Barajas M**, Yim PD, Gallos G, Levy RJ. An isolated retrograde-perfused newborn mouse heart preparation. MethodsX. 2020; 7: 101058. PMID: 32983923.

Barrett TW, **McEvoy MD**, **Fowler LC**, Shotwell MS, Shi Y, Costello M, Rogers D, Slayton J, **Edwards DA**. Impact of an Asynchronous Spaced Education Learning Intervention on Emergency Medicine Clinician Opioid Prescribing. Cureus. 2021 Sep 21;13(9):e18165. doi: 10.7759/cureus.18165. PMID: 34707949; PMCID: PMC8530747.

**Baumgarten A, Newton M.** Propofol-induced uric acid crystals: A case of cloudy urine. Paediatr Anaesth. 2021 Jul 26. doi: 10.1111/pan.14260. Epub ahead of print. PMID: 34309948.

Beach PA, Humbel A, Dietrich MS, **Bruehl S**, Cowan RL, Moss KO, Monroe TB. A Cross-Sectional Study of Pain Sensitivity and Unpleasantness in People with Vascular Dementia. Pain Med. 2021 Nov 13:pnab327. doi: 10.1093/pm/pnab327. Epub ahead of print. PMID: 34791388.

Bharwani KD, Kersten AB, **Stone AL**, Birklein F, **Bruehl S**, Dirckx M, Drummond PD, Gierthmühlen J, Goebel A, Knudsen L, Huygen FJPM. Denying the Truth Does Not Change the Facts: A Systematic Analysis of Pseudoscientific Denial of Complex Regional Pain Syndrome. J Pain Res. 2021 Oct 27;14:3359-3376. doi: 10.2147/JPR.S326638. PMID: 34737631; PMCID: PMC8558034.

Blackburn NA, Joniak-Grant E, Nocera M, Dorris SW, Dasgupta N, Chelminski PR, Carey TS, Wu LT, **Edwards DA**, Marshall SW, Ranapurwala SI. Implementation of mandatory opioid prescribing limits in North Carolina: healthcare administrator and prescriber perspectives. BMC Health Serv Res. 2021 Nov 3;21(1):1191. doi: 10.1186/s12913-021-07230-5. PMID: 34732177; PMCID: PMC8565171.

Borgmeier E, Lawrence H, Morton C, **McEvoy MD.** Perioperative anemia management. Int Anesthesiol Clin. 2022 Jan 1;60(1):1-7. doi: 10.1097/AIA.00000000000350. PMID: 34897216.

**Bowens C Jr**, Badiola IJ, **Allen BFS**, **Canlas CL**, **Gupta RK**, Jaeger LM, **Briggs ER**, **Corey JM**, Shi Y, Schildcrout JS, Malchow RJ. Color Doppler ultrasonography of an agitated solution is predictive of accurate catheter placement for a continuous popliteal sciatic nerve block. Perioper Med (Lond). 2021 Dec 15;10(1):59. doi: 10.1186/s13741-021-00229-w. PMID: 34906248; PMCID: PMC8672631.

Bruder AL, Rothwell CD, Fuhr LI, Shotwell MS, Edworthy JR, **Schlesinger JJ.** The Influence of Audible Alarm Loudness and Type on Clinical Multitasking. J Med Syst. 2021 Nov 23;46(1):5. doi: 10.1007/s10916-021-01794-9. PMID: 34812925.

**Bruehl S**, Milne G, Schildcrout J, Shi Y, **Anderson S**, Shinar A, Polkowski G, **Mishra P**, **Billings FT 4th.** Oxidative stress is associated with characteristic features of the dysfunctional

chronic pain phenotype. Pain. 2021 Aug 2. doi: 10.1097/j.pain.00000000002429. Epub ahead of print. PMID: 34382610.

**Bruehl S,** Morris MC, al'Absi M. Stress-induced analgesia: an evaluation of effects on temporal summation of pain and the role of endogenous opioid mechanisms. Pain Rep. 2022 Feb 8;7(2):e987. doi: 10.1097/PR9.0000000000000987. PMID: 35155968; PMCID: PMC8826964.

Chakraborty P, Codella J, Madan P, Li Y, Huang H, Park Y, Yan C, Zhang Z, Gao C, Nyemba S, Min X, Basak S, Ghalwash M, Shahn Z, Suryanarayanan P, Buleje I, Harrer S, Miller S, Rajmane A, Walsh C, **Wanderer J**, Reed GY, Ng K, Sow D, Malin BA. Blending Knowledge in Deep Recurrent Networks for Adverse Event Prediction at Hospital Discharge. AMIA Annu Symp Proc. 2021 May 17;2021:132-141. PMID: 34457127; PMCID: PMC8378633.

Challa AP, Zaleski NM, Jerome RN, Lavieri RR, Shirey-Rice JK, Barnado A, Lindsell CJ, Aronoff DM, Crofford LJ, Harris RC, Alp Ikizler T, Mayer IA, **Holroyd KJ**, Pulley JM. Human and Machine Intelligence Together Drive Drug Repurposing in Rare Diseases. Front Genet. 2021 Jul 28;12:707836. doi: 10.3389/fgene.2021.707836. PMID: 34394194; PMCID: PMC8355705.

Chaudhry R, **Wanderer JP**, Mubashir T, Kork F, Morse J, Waseem R, Zaki JF, Shaw AD, Eltzschig HK, Liang Y. Incidence and Predictive Factors of Acute Kidney Injury After Off-pump Lung Transplantation. J Cardiothorac Vasc Anesth. 2021 Sep 17:S1053-0770(21)00835-1. doi: 10.1053/j. jvca.2021.09.021. Epub ahead of print. PMID: 34625351.

**Clifton JC**, Engoren M, Shotwell MS, Martin BJ, Clemens EM, Guillamondegui OD, **Freundlich RE**. The Impact of Functional Dependence and Related Surgical Complications on Postoperative Mortality. J Med Syst. 2021 Nov 25;46(1):6. doi: 10.1007/s10916-021-01779-8. PMID: 34822038.

Coleman BC, Manz KM, **Grueter BA.** Kappa opioid receptor modulation of excitatory drive onto nucleus accumbens fast-spiking interneurons. Neuropsychopharmacology. 2021 Aug 16. doi: 10.1038/s41386-021-01146-8. Epub ahead of print. PMID: 34400782.

Connell J, Kim A, Brummel NE, Patel MB, Vandekar SN, **Pandharipande P,** Dittus RS, Heckers S, Ely EW, Wilson JE. Advanced Age Is Associated With Catatonia in Critical Illness: Results From the Delirium and Catatonia Prospective Cohort Investigation. Front Psychiatry. 2021 Nov 19;12:673166. doi: 10.3389/fpsyt.2021.673166. PMID: 34867501; PMCID: PMC8639534.

COVIDSurg Collaborative, GlobalSurg Collaborative (*Kynes JM* and *Walters C* are COVIDSurg and GlobalSurg Collaborative authors). SARS-CoV-2 infection and venous thromboembolism after surgery: an international prospective cohort study. Anaesthesia. 2021 Aug 24. doi: 10.1111/anae.15563. PMID: 34428858.

COVIDSurg Collaborative, GlobalSurg Collaborative (*Kynes JM* and *Walters C* are *COVIDSurg* and *GlobalSurg Collaborative* authors). Effects of pre-operative isolation on postoperative pulmonary complications after elective surgery: an international prospective cohort study. Anaesthesia. 2021 Nov; 76(11): 1454-1464. doi: 10.1111/anae.15560. PMID: 34371522.

Cox CB, Laborda T, **Kynes JM**, Hiremath G. Evolution in the Practice of Pediatric Endoscopy and Sedation. Front Pediatr. 2021 Jul 14;9:687635. doi: 10.3389/fped.2021.687635. PMID: 34336742; PMCID: PMC8317208.

Davies JI, Gelb AW, Gore-Booth J, Mellin-Olsen J, Martin J, Åkerman C, Ameh EA, Biccard BM, Braut GS, Chu KM, Derbew M, Ersdal HL, Guzman JM, Hagander L, Haylock-Loor C, Holmer H, Johnson W, Juran S, Kassebaum NJ, Laerdal T, Leather AJM, Lipnick MS, Ljungman D, Makasa EMM, Meara JG, **Newton MW**, Østergaard D, Reynolds T, Romanzi LJ, Santhirapala V, Shrime MG, Søreide K, Steinholt M, Suzuki E, Varallo JE, Visser GHA, Watters D, Weiser TG. Global surgery, obstetric, and anaesthesia indicator definitions and reporting: An Utstein consensus report. PLoS Med. 2021 Aug 20;18(8):e1003749. doi: 10.1371/journal.pmed.1003749. Epub ahead of print. PMID: 34415914.

Driver B, Semler MW, Self WH, Ginde AA, Gandotra S, Trent SA, Smith LM, Gaillard JP, Page DB, Whitson MR, Vonderhaar DJ, Joffe AM, West JR, **Hughes C**, Landsperger JS, Howell MP, Russell DW, Gulati S, Bentov I, Mitchell S, Latimer A, Doerschug K, Koppurapu V, Gibbs KW, Wang L, Lindsell CJ, Janz D, Rice TW, Prekker ME, Casey JD, BOUGIE Investigators and the Pragmatic Critical Care Research Group. BOugie or stylet in patients UnderGoing Intubation Emergently (BOUGIE): protocol and statistical analysis plan for a randomised clinical trial. BMJ Open. 2021; 11: e047790. PMID: 34035106.

Driver BE, Semler MW, Self WH, Ginde AA, Trent SA, Gandotra S, Smith LM, Page DB, Vonderhaar DJ, West JR, Joffe AM, Mitchell SH, Doerschug KC, **Hughes CG**, High K, Landsperger JS, Jackson KE, Howell MP, Robison SW, Gaillard JP, Whitson MR, Barnes CM, Latimer AJ, Koppurapu VS, **Alvis BD**, Russell DW, Gibbs KW, Wang L, Lindsell CJ, Janz DR, Rice TW, Prekker ME, Casey JD; BOUGIE Investigators and the Pragmatic Critical Care Research Group. Effect of Use of a Bougie vs Endotracheal Tube With Stylet on Successful Intubation on the First Attempt Among Critically Ill Patients Undergoing Tracheal Intubation: A Randomized Clinical Trial. JAMA. 2021 Dec 28;326(24):2488-2497. doi: 10.1001/jama.2021.22002. PMID: 34879143; PMCID: PMC8655668.

**Ende HB, Bauchat JR, Sorabella LL, Raymond BL,** Feng X, Shotwell MS, **Richardson MG.** Post-cesarean gabapentin is not associated with lower opioid consumption or pain scores in women on chronic buprenorphine therapy: A 10-year retrospective cohort study. J Clin Anesth. 2021 Nov 27;77:110600. doi: 10.1016/j.jclinane.2021.110600. Epub ahead of print. PMID: 34847491.

**Ende HB**, Butwick AJ. Current State and Future Direction of Postpartum Hemorrhage Risk Assessment. Obstet Gynecol. 2021 Dec 1;138(6):924-930. doi: 10.1097/AOG.000000000004579. PMID: 34736271.

**Ende HB,** Landau R, Cole NM, Burns SM, Bateman BT, Bauer ME, Booth JL, Flood P, Leffert LR, Houle TT, Tsen LC. Labor prior to cesarean delivery associated with higher post-discharge opioid consumption. PLoS One. 2021 Jul 9;16(7):e0253990. doi: 10.1371/journal.pone.0253990. PMID: 34242277; PMCID: PMC8270408.

**Ende HB,** Lumbreras-Marquez MI, Farber MK, Fields KG, Tsen LC. A cluster quasi-randomized controlled trial of an interactive, monthly obstetric anesthesiology curriculum: impact on resident satisfaction and knowledge retention. Int J Obstet Anesth. 2021; 45: 124-129. PMID: 33121886.

Epstein RH, Jean YK, Dudaryk R, **Freundlich RE, Walco JP, Mueller DA**, Banks SE. Natural Language Mapping of Electrocardiogram Interpretations to a Standardized Ontology. Methods Inf Med. 2021 Oct 5. doi: 10.1055/s-0041-1736312. Epub ahead of print. PMID: 34610644.

Erath A, Shipley K, Walker LA, Burrell E, **Weavind L.** Code status at time of rapid response activation - Impact on escalation of care? Resusc Plus. 2021 Mar 10;6:100102. doi: 10.1016/j. resplu.2021.100102. PMID: 34223364; PMCID: PMC8244475.

Figueroa EE, **Denton JS.** A SWELL time to develop the molecular pharmacology of the volume-regulated anion channel (VRAC). Channels (Austin). 2022 Dec;16(1):27-36. doi: 10.1080/19336950.2022.2033511. PMID: 35114895; PMCID: PMC8820792.

Flippo KH, Trammell SAJ, Gillum MP, Aklan I, Perez MB, Yavuz Y, Smith NK, Jensen-Cody SO, Zhou B, Claflin KE, Beierschmitt A, Fink-Jensen A, Knop FK, Palmour RM, **Grueter BA**, Atasoy D, Potthoff MJ. FGF21 suppresses alcohol consumption through an amygdalo-striatal circuit. Cell Metab. 2022 Feb 1;34(2):317-328.e6. doi: 10.1016/j.cmet.2021.12.024. PMID: 35108517.

**France DJ**, Schremp E, Rhodes EB, **Slagle J**, Moroz S, Grubb PH, Hatch LD, Shotwell M, **Lorinc A**, Robinson J, Crankshaw M, Newman T, **Weinger MB**, Blakely ML. A pilot study to determine the incidence, type, and severity of non-routine events in neonates undergoing gastrostomy tube placement. J Pediatr Surg. 2021 Oct 29:S0022-3468(21)00731-4. doi: 10.1016/j. jpedsurg.2021.10.019. Epub ahead of print. PMID: 34839947.

**Freundlich RE, Li G,** Domenico HJ, Moore RP, **Pandharipande PP,** Byrne DW. A Predictive Model of Reintubation after Cardiac Surgery Using the Electronic Health Record. Ann Thorac Surg. 2021 Jul 27:S0003-4975(21)01287-X. doi: 10.1016/j.athoracsur.2021.06.060. Epub ahead of print. PMID: 34329600.

**Freundlich RE**, Lindsell CJ. We know what we want, it's just not there. J Clin Transl Sci. 2021 Dec 16;6(1):e9. doi: 10.1017/cts.2021.882. PMID: 35211335; PMCID: PMC8826005.

Gamble RM, Pregnall AM, Deng A, **Ehrenfeld JM**, Talley J. U.S. medical school admissions and enrollment practices: status of LGBTQ inclusivity. J Osteopath Med. 2021 Jul 14. doi: 10.1515/jom-2021-0062. Epub ahead of print. PMID: 34256423.

Grenn E, Kutcher M, Hillegass WB, Iwuchukwu C, Kyle A, **Bruehl S**, Goodin B, Myers H, Rao U, Nag S, Kinney K, Dickens H, Morris MC. Social Determinants of Trauma Care: Associations of Race, Insurance Status, and Place on Opioid Prescriptions, Post-Discharge Referrals, and Mortality. J Trauma Acute Care Surg. 2021 Dec 20. doi: 10.1097/TA.0000000000003506. Epub ahead of print. PMID: 34936591.

**Gupta RK**, Harbell M, Schwenk ES. Reviving the medical lecture: practical tips for delivering effective lectures-an infographic. Reg Anesth Pain Med. 2022 Feb 22:rapm-2022-103540. doi: 10.1136/rapm-2022-103540. Epub ahead of print. PMID: 35193969.

**Gupta RK**, Schwenk ES. Bariatric surgery and total knee/hip arthroplasty: an analysis of the impact of sequence and timing on outcomes: an infographic. Reg Anesth Pain Med. 2021 Sep 7:rapm-2021-103134. doi: 10.1136/rapm-2021-103134. Epub ahead of print. PMID: 34493623.

**Gupta RK**, Schwenk ES. Local anesthetic systemic toxicity in children: a review of recent case reports and current literature - an infographic. Reg Anesth Pain Med. 2021 Jul 6:rapm-2021-102993. doi: 10.1136/rapm-2021-102993. Epub ahead of print. PMID: 34230193.

**Gupta RK**, Schwenk ES. Simple screening model for identifying the risk of sleep apnea in patients on opioids for chronic pain: an infographic. Reg Anesth Pain Med. 2021 Aug 9:rapm-2021-103010. doi: 10.1136/rapm-2021-103010. Epub ahead of print. PMID: 34373346.

**Gupta RK**, Soffin EM, Schwenk ES. Impact of ultrasound-guided erector spinae plane block on outcomes after lumbar spinal fusion: a retrospective propensity score-matched study of 242

- patients-an infographic. Reg Anesth Pain Med. 2022 Feb;47(2):87-88. doi: 10.1136/rapm-2021-103306. Epub 2021 Dec 9. PMID: 34887341.
- Henry OP, **Li G, Freundlich RE, Sandberg WS, Wanderer JP.** Understanding the Accuracy of Clinician Provided Estimated Discharge Dates. J Med Syst. 2021 Nov 16;46(1):2. doi: 10.1007/s10916-021-01793-w. PMID: 34786607.
- **Hester D.** Spraying Cotton in Bolivar County, Mississippi, the Summer Following My First Year of Medical School. JAMA. 2021; 325: 310-310.
- **Hyman SA.** Burnout. The "Other" Pandemic. Anesthesiology. 2021; 134: 673-675. PMID: 33667300.
- Isaeva E, Bohovyk R, Fedoriuk M, Shalygin A, Klemens CA, Zietara A, Levchenko V, **Denton JS**, Staruschenko A, Palygin O. Crosstalk between ENaC and basolateral K<sub>ir</sub> 4.1/ K<sub>ir</sub> 5.1 channels in the cortical collecting duct. Br J Pharmacol. 2021 Dec 14. doi: 10.1111/bph.15779. Epub ahead of print. PMID: 34904226.
- Kon V, Yang HC, **Smith LE**, Vickers KC, Linton MF. High-Density Lipoproteins in Kidney Disease. Int J Mol Sci. 2021 Jul 30;22(15):8201. doi: 10.3390/ijms22158201. PMID: 34360965; PMCID: PMC8348850.
- **Koumangoye R.** The role of Cl<sup>-</sup> and K<sup>+</sup> efflux in NLRP3 inflammasome and innate immune response activation. Am J Physiol Cell Physiol. 2022 Feb 16. doi: 10.1152/ajpcell.00421.2021. Epub ahead of print. PMID: 35171697.
- Leisy PJ, Barnes RD, Weavind LM. Are Surgical Site Infections an Anesthesiologist's Problem? Adv Anesth. 2021 Dec;39:1-15. doi: 10.1016/j.aan.2021.07.001. Epub 2021 Sep 2. PMID: 34715969.
- **Li G, Walco JP, Mueller DA, Wanderer JP, Freundlich RE.** Reliability of the ASA Physical Status Classification System in Predicting Surgical Morbidity: a Retrospective Analysis. J Med Syst. 2021 Jul 22;45(9):83. doi: 10.1007/s10916-021-01758-z. PMID: 34296341.
- Li P, Chen B, Rhodes E, **Slagle J**, Alrifai MW, **France D**, Chen Y. Measuring Collaboration Through Concurrent Electronic Health Record Usage: Network Analysis Study. JMIR Med Inform. 2021 Sep 3;9(9):e28998. doi: 10.2196/28998. PMID: 34477566.
- Li Z, Hampton MJW, **Barajas MB, Riess ML.** Development of a Cell Co-Culture Model to Mimic Cardiac Ischemia/Reperfusion In Vitro. J Vis Exp. 2021 Oct 13;(176). doi: 10.3791/62913. PMID: 34723947.
- Liao ZW, Le C, **Kynes JM**, **Niconchuk JA**, Pinto E, Laferriere HE, **Walters CB**. Paediatric chronic pain prevalence in low- and middle-income countries: A systematic review and meta-analysis. EClinicalMedicine. 2022 Feb 12;45:101296. doi: 10.1016/j.eclinm.2022.101296. PMID: 35198925; PMCID: PMC8850335.
- Liu J, Shelton EL, Crescenzi R, Colvin DC, Kirabo A, Zhong J, **Delpire EJ**, Yang HC, Kon V. Kidney Injury Causes Accumulation of Renal Sodium That Modulates Renal Lymphatic Dynamics. Int J Mol Sci. 2022 Jan 27;23(3):1428. doi: 10.3390/ijms23031428. PMID: 35163352; PMCID: PMC8836121.

Liu J, Wu R, Seaman R Jr, Manz KM, Johnson B, Vu J, Huang Y, Zhang Y, Robison AJ, Neve R, **Grueter BA**, Dietz D, Li JX. TAAR1 regulates drug-induced reinstatement of cocaine-seeking via negatively modulating CaMKIIα activity in the NAc. Mol Psychiatry. 2022 Jan 25. doi: 10.1038/s41380-022-01448-3. Epub ahead of print. PMID: 35079125.

**Lombard FW**, Roy S, Shah AS, Feng X, Shotwell MS, **Kertai MD**. Processed EEG Use During Anesthesia and Outcomes: Analysis of the STS Adult Cardiac Surgery Database. Ann Thorac Surg. 2021 Oct 27:S0003-4975(21)01765-3. doi: 10.1016/j.athoracsur.2021.09.049. Epub ahead of print. PMID: 34717905.

**Lopez MG**, **Boncyk C**. Ear Plugs, Eye Masks, and Risk of Bias. Crit Care Med. 2021 Nov 1;49(11):e1180. doi: 10.1097/CCM.000000000005140. PMID: 34643587; PMCID: PMC8525898.

Lotze FP, **Riess ML.** Poloxamer 188 Exerts Direct Protective Effects on Mouse Brain Microvascular Endothelial Cells in an In Vitro Traumatic Brain Injury Model. Biomedicines. 2021 Aug 19;9(8):1043. doi: 10.3390/biomedicines9081043. PMID: 34440247; PMCID: PMC8393826.

Lovejoy H, Geib LN, **Walters CB.** Perioperative Pulmonary Optimization With Average Volume-Assured Pressure Support of a Pediatric Patient With Ullrich Congenital Muscular Dystrophy: A Case Report. A A Pract. 2021 Jul 22;15(7):e01504. doi: 10.1213/XAA.000000000001504. PMID: 34293794.

Makkad B, Heinke TL, **Kertai MD.** Inhalational or total intravenous anesthetic for cardiac surgery: does the debate even exist? Curr Opin Anaesthesiol. 2022 Feb 1;35(1):18-35. doi: 10.1097/ACO.000000000001087. PMID: 34873076.

Mannering H, Yan C, Gong Y, Alrifai MW, **France D**, Chen Y. Assessing Neonatal Intensive Care Unit Structures and Outcomes Before and During the COVID-19 Pandemic: Network Analysis Study. J Med Internet Res. 2021 Oct 20;23(10):e27261. doi: 10.2196/27261. PMID: 34637393.

Manz KM, Brady LJ, Calipari ES, **Grueter BA.** Accumbal Histamine Signaling Engages Discrete Interneuron Microcircuits. Biol Psychiatry. 2021 Oct 16:S0006-3223(21)01668-1. doi: 10.1016/j. biopsych.2021.10.004. Epub ahead of print. PMID: 34953589.

Manz KM, Coleman BC, Jameson AN, Ghose DG, Patel S, **Grueter BA.** Cocaine restricts nucleus accumbens feedforward drive through a monoamine-independent mechanism. Neuropsychopharmacology. 2021 Sep 20. doi: 10.1038/s41386-021-01167-3. Epub ahead of print. PMID: 34545194.

Marcovitz DE, White KD, Sullivan W, Limper HM, Dear ML, Buie R, **Edwards DA**, Chastain C, Kast KA, Lindsell CJ; Vanderbilt Learning Health System Investigators. Bridging Recovery Initiative Despite Gaps in Entry (BRIDGE): study protocol for a randomized controlled trial of a bridge clinic compared with usual care for patients with opioid use disorder. Trials. 2021 Oct 30;22(1):757. doi: 10.1186/s13063-021-05698-4. PMID: 34717736.

Mazzeffi MA, Rao VK, Dodd-O J, Del Rio JM, **Hernandez A,** Chung M, Bardia A, Bauer RM, Meltzer JS, Satyapriya S, Rector R, Ramsay JG, Gutsche J. Intraoperative Management of Adult Patients on Extracorporeal Membrane Oxygenation: An Expert Consensus Statement From the Society of Cardiovascular Anesthesiologists-Part II, Intraoperative Management and Troubleshooting. Anesth Analg. 2021 Sep 24. doi: 10.1213/ANE.000000000005733. Epub ahead of print. PMID: 34559091.

Mazzeffi MA, Rao VK, Dodd-O J, Del Rio JM, **Hernandez A,** Chung M, Bardia A, Bauer RM, Meltzer JS, Satyapriya S, Rector R, Ramsay JG, Gutsche J. Intraoperative Management of Adult Patients on Extracorporeal Membrane Oxygenation: An Expert Consensus Statement From the Society of Cardiovascular Anesthesiologists-Part I, Technical Aspects of Extracorporeal Membrane Oxygenation. Anesth Analg. 2021 Sep 24. doi: 10.1213/ANE.0000000000005738. Epub ahead of print. PMID: 34559089.

Mazzeffi MA, Rao VK, Dodd-O J, Del Rio JM, **Hernandez A**, Chung M, Bardia A, Bauer RM, Meltzer JS, Satyapriya S, Rector R, Ramsay JG, Gutsche J. Intraoperative Management of Adult Patients on Extracorporeal Membrane Oxygenation: an Expert Consensus Statement From the Society of Cardiovascular Anesthesiologists- Part II, Intraoperative Management and Troubleshooting. J Cardiothorac Vasc Anesth. 2021 Dec;35(12):3513-3527. doi: 10.1053/j. jvca.2021.07.047. Epub 2021 Sep 28. PMID: 34774253.

(Note: The preceding article is co-published in Anesthesia & Analgesia and Journal of Cardiothoracic and Vascular Anesthesia. (c) 2021 International Anesthesia Research Society. The articles are identical except for minor stylistic and spelling differences in keeping with each journal's style. Either citation can be used when citing this article. PMID for A&A article: 34559091)

Mazzeffi MA, Rao VK, Dodd-O J, Rio JMD, **Hernandez A,** Chung M, Bardia A, Bauer RM, Meltzer JS, Satyapriya S, Rector R, Ramsay JG, Gutsche J. Intraoperative Management of Adult Patients on Extracorporeal Membrane Oxygenation: an Expert Consensus Statement From the Society of Cardiovascular Anesthesiologists-Part I, Technical Aspects of Extracorporeal Membrane Oxygenation. J Cardiothorac Vasc Anesth. 2021 Dec;35(12):3496-3512. doi: 10.1053/j. jvca.2021.07.046. Epub 2021 Sep 23. PMID: 34774252.

(Note: The preceding article is co-published in Anesthesia & Analgesia and Journal of Cardiothoracic and Vascular Anesthesia. (c) 2021 International Anesthesia Research Society. The articles are identical except for minor stylistic and spelling differences in keeping with each journal's style. Either citation can be used when citing this article. PMID for A&A article: 34559089)

**McIlroy DR.** Predicting acute kidney injury after cardiac surgery: much work still to be done. Br J Anaesth. 2021 Oct 4:S0007-0912(21)00572-9. doi: 10.1016/j.bja.2021.09.005. Epub ahead of print. PMID: 34620500.

Meyer LJ, Lotze FP, **Riess ML.** Simulated traumatic brain injury in in-vitro mouse neuronal and brain endothelial cell culture models. J Pharmacol Toxicol Methods. 2022 Feb 8;114:107159. doi: 10.1016/j.vascn.2022.107159. Epub ahead of print. PMID: 35149185.

Miller M, Jayaram J, Allen BFS, Freundlich RE, Wanderer JP, McEvoy MD. Safety of postoperative lidocaine infusions on general care wards without continuous cardiac monitoring in an established enhanced recovery program. Reg Anesth Pain Med. 2022 Jan 12:rapm-2021-103364. doi: 10.1136/rapm-2021-103364. Epub ahead of print. PMID: 35022263.

Morris MC, **Bruehl S, Stone AL**, Garber J, Smith C, Palermo TM, Walker LS. Place and Pain: Association Between Neighborhood SES and Quantitative Sensory Testing Responses in Youth With Functional Abdominal Pain. J Pediatr Psychol. 2021 Nov 10:jsab113. doi: 10.1093/jpepsy/jsab113. Epub ahead of print. PMID: 34757421.

Neuman MD, Feng R, Carson JL, Gaskins LJ, Dillane D, Sessler DI, Sieber F, Magaziner J, Marcantonio ER, Mehta S, Menio D, Ayad S, Stone T, Papp S, Schwenk ES, Elkassabany N,

Marshall M, Jaffe JD, Luke C, Sharma B, Azim S, Hymes RA, Chin KJ, Sheppard R, Perlman B, Sappenfield J, Hauck E, Hoeft MA, Giska M, Ranganath Y, Tedore T, Choi S, Li J, Kwofie MK, Nader A, Sanders RD, **Allen BFS**, Vlassakov K, Kates S, Fleisher LA, Dattilo J, Tierney A, Stephens-Shields AJ, Ellenberg SS; REGAIN Investigators. Spinal Anesthesia or General Anesthesia for Hip Surgery in Older Adults. N Engl J Med. 2021 Oct 9. doi: 10.1056/NEJMoa2113514. Epub ahead of print. PMID: 34623788.

Nicoara A, Song P, Bollen BA, Paone G, Abernathy JJ 3rd, Taylor MA, Habib RH, Del Rio JM, Lauer RE, Nussmeier NA, Glance LG, Petty JV 3rd, Mackensen GB, Vener DF, **Kertai MD.** The Society of Thoracic Surgeons Adult Cardiac Surgery Database: 2021 Update on Echocardiography. Ann Thorac Surg. 2021 Sep 16:S0003-4975(21)01574-5. doi: 10.1016/j.athoracsur.2021.09.001. Epub ahead of print. PMID: 34536378.

Nicol AL, Adams MCB, Gordon DB, Mirza S, Dickerson D, Mackey S, **Edwards D,** Hurley RW. AAAPT Diagnostic Criteria for Acute Low Back Pain with and Without Lower Extremity Pain. Pain Med. 2020; 21: 2661-2675. PMID: 32914195.

Paccione CE, **Bruehl S**, My Diep L, Rosseland LA, Stubhaug A, Jacobsen HB. The indirect impact of heart rate variability on cold pressor pain tolerance and intensity through psychological distress in individuals with chronic pain: the Tromsø Study. Pain Rep. 2021 Feb 15;7(2):e970. doi: 10.1097/PR9.000000000000970. PMID: 35187378; PMCID: PMC8849278.

**Pandharipande PP,** Whitlock EL, **Hughes CG.** Baseline Vulnerabilities May Play a Larger Role than Depth of Anesthesia or Sedation in Postoperative Delirium. Anesthesiology. 2021 Dec 1;135(6):940-942. doi: 10.1097/ALN.0000000000004039. PMID: 34731236.

Peden CJ, Miller TR, Deiner SG, Eckenhoff RG, Fleisher LA, Members of the Perioperative Brain Health Expert Panel (*C Hughes* is a member of the Perioperative Brain Health Expert Panel). Improving perioperative brain health: an expert consensus review of key actions for the perioperative care team. Br J Anaesth. 2021; 126: 423-432. PMID: 33413977.

Piermarini PM, **Denton JS**, Swale DR. The Molecular Physiology and Toxicology of Inward Rectifier Potassium Channels in Insects. Annu Rev Entomol. 2021 Oct 4. doi: 10.1146/annurevento-062121-063338. Epub ahead of print. PMID: 34606365.

Pregnall AM, **Gruss CL**, **Ramanujan KS**, **Gelfand BJ**, **McEvoy MD**, **Wanderer JP**. ACGME Case Log Reminder Does Not Improve Resident Accuracy in Logging Cases. J Med Syst. 2021 Nov 16;46(1):1. doi: 10.1007/s10916-021-01791-y. PMID: 34786618.

Pregnall AM, **Gupta RK**, **Clifton JC**, **Wanderer JP**. Use of provider education, intra-operative decision support, and an email-feedback system in improving compliance with sugammadex dosage guideline and reducing drug expenditures. J Clin Anesth. 2022 May;77:110627. doi: 10.1016/j. jclinane.2021.110627. Epub 2022 Jan 3. PMID: 34990997.

**Rengel KF,** Shotwell MS, **Hughes CG.** The authors reply. Crit Care Med. 2021 Dec 1;49(12):e1269-e1270. doi: 10.1097/CCM.00000000005347. PMID: 34793397.

Reynolds WS, Kaufman MR, **Bruehl S,** Dmochowski RR, McKernan LC. Compensatory bladder behaviors ("coping") in women with overactive bladder. Neurourol Urodyn. 2021 Sep 15. doi: 10.1002/nau.24788. Epub ahead of print. PMID: 34524704.

**Robertson A, Kla K, Yaghmour E.** Efficiency in the operating room: optimizing patient throughput. Int Anesthesiol Clin. 2021 Jul 23. doi: 10.1097/AIA.000000000000333. Epub ahead of print. PMID: 34310452.

**Rothman BS**, Bledsoe S, **Rice MJ**. Turn Your Attention to Distractions. Anesth Analg. 2022 Feb 1;134(2):266-268. doi: 10.1213/ANE.000000000005836. PMID: 35030122.

Ruden JB, Dixit M, Zepeda JC, **Grueter BA**, Dugan LL. Robust Expression of Functional NMDA Receptors in Human Induced Pluripotent Stem Cell-Derived Neuronal Cultures Using an Accelerated Protocol. Front Mol Neurosci. 2021 Nov 26;14:777049. doi: 10.3389/fnmol.2021.777049. PMID: 34899184; PMCID: PMC8661903.

**Sandberg WS.** December Is for Congregation, Celebration, Operation, Recuperation. Anesthesiology. 2021 Oct 1. doi: 10.1097/ALN.0000000000004012. Epub ahead of print. PMID: 34597359.

Santapuram P, **Stone AL**, Walden RL, **Alexander L.** Interventions for Parental Anxiety in Preparation for Pediatric Surgery: A Narrative Review. Children (Basel). 2021 Nov 20;8(11):1069. doi: 10.3390/children8111069. PMID: 34828782; PMCID: PMC8623601.

Schwenk ES, **Gupta RK**, Diep C. Recent cannabis use and nightly sleep duration in adults: an infographic. Reg Anesth Pain Med. 2022 Feb;47(2):105. doi: 10.1136/rapm-2021-103294. Epub 2021 Dec 6. PMID: 34873025.

Schwenk ES, **Gupta RK**, Myszewski JJ. Comparison of computer-generated sentiment analysis to traditional meta-analysis: an infographic. Reg Anesth Pain Med. 2022 Jan 12:rapm-2021-103381. doi: 10.1136/rapm-2021-103381. Epub ahead of print. PMID: 35022264.

Schwenk ES, **Gupta RK**, Yap E. Complications after outpatient total joint arthroplasty with neuraxial versus general anesthesia: an infographic. Reg Anesth Pain Med. 2022 Jan 31:rapm-2021-103411. doi: 10.1136/rapm-2021-103411. Epub ahead of print. PMID: 35101952.

Schwenk ES, **Gupta RK.** Comparison of continuous intravenous lidocaine versus TAP block for kidney transplant: an infographic. Reg Anesth Pain Med. 2021 Aug 27:rapm-2021-103095. doi: 10.1136/rapm-2021-103095. Epub ahead of print. PMID: 34452982.

Schwenk ES, **Gupta RK.** Waking up in pain: an infographic. Reg Anesth Pain Med. 2021 Aug 18:rapm-2021-103009. doi: 10.1136/rapm-2021-103009. Epub ahead of print. PMID: 34408069.

Semler MW, Casey JD, Lloyd BD, Hastings PG, Hays M, Roth M, Stollings J, Brems J, Buell KG, Wang L, Lindsell CJ, **Freundlich RE, Wanderer JP**, Bernard GR, Self WH, Rice TW; PILOT Investigators and the Pragmatic Critical Care Research Group. Protocol and statistical analysis plan for the Pragmatic Investigation of optimal Oxygen Targets (PILOT) clinical trial. BMJ Open. 2021 Oct 28;11(10):e052013. doi: 10.1136/bmjopen-2021-052013. PMID: 34711597.

Sherwood ER, Burelbach KR, McBride MA, Stothers CL, Owen AM, Hernandez A, Patil NK, Williams DL, Bohannon JK. Innate Immune Memory and the Host Response to Infection. J Immunol. 2022 Feb 15;208(4):785-792. doi: 10.4049/jimmunol.2101058. PMID: 35115374.

**Siegrist KK**, Woolard AA, Hillenbrand KD, Shah AS, **Eagle SS**. An Unusual Finding in a Patient Presenting for Pulmonary Thromboendarterectomy: Pulmonary Venous Thrombosis. J

Cardiothorac Vasc Anesth. 2021 Jun 22:S1053-0770(21)00523-1. doi: 10.1053/j.jvca.2021.06.019. Epub ahead of print. PMID: 34272116.

**Smith HAB**, Besunder JB, Betters KA, Johnson PN, Srinivasan V, Stormorken A, Farrington E, Golianu B, Godshall AJ, Acinelli L, Almgren C, Bailey CH, Boyd JM, Cisco MJ, Damian M, deAlmeida ML, Fehr J, Fenton KE, Gilliland F, Grant MJC, Howell J, Ruggles CA, Simone S, Su F, Sullivan JE, Tegtmeyer K, Traube C, Williams S, Berkenbosch JW. 2022 Society of Critical Care Medicine Clinical Practice Guidelines on Prevention and Management of Pain, Agitation, Neuromuscular Blockade, and Delirium in Critically Ill Pediatric Patients With Consideration of the ICU Environment and Early Mobility. Pediatr Crit Care Med. 2022 Feb 1;23(2):e74-e110. doi: 10.1097/PCC.0000000000002873. PMID: 35119438.

**Sobey JH, Menser CC,** Hartzog AJ, Hocking KM, **Niconchuk JA,** Bonfield CM, Stricker PA, **Reddy SK.** Antifibrinolytics Are Not Associated With Reduced Blood Loss in Minimally-Invasive Endoscopic-Assisted Craniectomy for Repair of Single- Suture Craniosynostosis. J Craniofac Surg. 2021 Nov 10. doi: 10.1097/SCS.0000000000008378. Epub ahead of print. PMID: 34759255.

**Sorabella LL, Bauchat JR.** Enhanced Recovery after Surgery: Cesarean Delivery. Anesthesiol Clin. 2021 Dec;39(4):743-760. doi: 10.1016/j.anclin.2021.08.012. PMID: 34776107.

**Staudt GE**, **Eagle SS**. Intravenous Induction for Patients With Williams Syndrome: Just Do It. J Cardiothorac Vasc Anesth. 2021 Aug 5:S1053-0770(21)00634-0. doi: 10.1053/j.jvca.2021.07.051. Epub ahead of print. PMID: 34462200.

**Staudt GE, Londergan BP, Eagle SS.** Take It or Levo It: An Updated Look at the Use of Levosimendan to Prevent Low Cardiac Output Syndrome in Pediatric Patients. J Cardiothorac Vasc Anesth. 2021 Nov 2:S1053-0770(21)00960-5. doi: 10.1053/j.jvca.2021.10.041. Epub ahead of print. PMID: 34819260.

Steitz BD, **Li G**, Wright A, **Dunworth B**, **Freundlich RE**, **Wanderer JP**. Non- Interruptive Clinical Decision Support to Improve Perioperative Electronic Positive Patient Identification. J Med Syst. 2022 Jan 26;46(3):15. doi: 10.1007/s10916-022-01801-7. PMID: 35079867.

Stollings JL, Kotfis K, Chanques G, Pun BT, **Pandharipande PP**, Ely EW. Delirium in critical illness: clinical manifestations, outcomes, and management. Intensive Care Med. 2021 Aug 16:1–15. doi: 10.1007/s00134-021-06503-1. Epub ahead of print. PMID: 34401939; PMCID: PMC8366492.

Stothers CL, Burelbach KR, **Owen AM, Patil NK**, McBride MA, **Bohannon JK**, Luan L, **Hernandez A**, Patil TK, Williams DL, **Sherwood ER.** β-Glucan Induces Distinct and Protective Innate Immune Memory in Differentiated Macrophages. J Immunol. 2021 Dec 1;207(11):2785-2798. doi: 10.4049/jimmunol.2100107. Epub 2021 Nov 5. PMID: 34740960; PMCID: PMC8612974.

Stuart AR, Kuck K, Naik BI, Saager L, Pace NL, Domino KB, Posner KL, Alpert SB, Kheterpal S, Sinha AK, Brummett CM, Durieux ME, the MPOG E.O.S. Investigator Group (*DA Edwards* is part of the MPOG Enhanced Observation Study Investigator Group). Multicenter Perioperative Outcomes Group Enhanced Observation Study Postoperative Pain Profiles, Analgesic Use, and Transition to Chronic Pain and Excessive and Prolonged Opioid Use Patterns Methodology. Anesth Analg. 2020; 130: 1702-1708. PMID: 31986126.

Subramaniam K, Sultan I, Weitzel N, **Kertai MD.** Is It Time for Paradigm Shift in Pain Management for Cardiac Surgery Patients? Semin Cardiothorac Vasc Anesth. 2021 Nov 17:10892532211058494. doi: 10.1177/10892532211058494. Epub ahead of print. PMID: 34789035.

Toda C, **Gupta RK**, Elsharkawy H. Rhomboid Intercostal Block Combined With Interscalene Nerve Block for Sternoclavicular Joint Reconstruction. Ochsner J. 2021 Summer;21(2):214-216. doi: 10.31486/toj.20.0020. PMID: 34239386; PMCID: PMC8238101.

Walco JP, Mueller DA, Lakha S, Weavind LM, Clifton JC, Freundlich RE. Etiology and Timing of Postoperative Rapid Response Team Activations. J Med Syst. 2021 Jul 14;45(8):82. doi: 10.1007/s10916-021-01754-3. PMID: 34263364.

Walker LS, **Stone AL**, Han GT, Garber J, **Bruehl S**, Smith CA, Anderson J, Palermo TM. Internet-delivered cognitive behavioral therapy for youth with functional abdominal pain: a randomized clinical trial testing differential efficacy by patient subgroup. Pain. 2021 Dec 1;162(12):2945-2955. doi: 10.1097/j.pain.000000000002288. PMID: 34793406; PMCID: PMC8602868.

**Wanderer JP, Li G, Freundlich RE.** Risk of Postoperative Pulmonary Complications: Reply. Anesthesiology. 2021 Nov 1;135(5):930-931. doi: 10.1097/ALN.000000000003979. PMID: 34554194.

Wu Q, Poulsen S, Murali S, Grimm PR, Su XT, **Delpire E**, Welling P, Ellison D, Fenton R. Large-Scale Proteomic Assessment of Urinary Extracellular Vesicles Highlights Their Reliability in Reflecting Protein Changes in the Kidney. J Am Soc Nephrol. 2021 Jul 6:ASN.2020071035. doi: 10.1681/ASN.2020071035. Epub ahead of print. PMID: 34230103.

Yamanashi T, Nagao T, Wahba NE, Marra PS, Crutchley KJ, Meyer AA, Andreasen AJ, Hellman MM, Jellison SS, **Hughes CG**, **Pandharipande PP**, Howard Iii MA, Kawasaki H, Iwata M, Hefti MM, Shinozaki G. DNA methylation in the inflammatory genes after neurosurgery and diagnostic ability of post-operative delirium. Transl Psychiatry. 2021 Dec 9;11(1):627. doi: 10.1038/s41398-021-01752-6. PMID: 34887385; PMCID: PMC8660911.

Yan X, Goldsmith J, Mohan S, Turnbull ZA, **Freundlich RE, Billings FT 4th**, Kiran RP, Li G, Kim M. Impact of Intraoperative Data on Risk Prediction for Mortality After Intra-Abdominal Surgery. Anesth Analg. 2022 Jan 1;134(1):102-113. doi: 10.1213/ANE.000000000005694. PMID: 34908548; PMCID: PMC8682663.

York MK, Pourali SP, Hanna ES, Day ME, Rehman S, Fleming AE, **Pilla M,** Brown CM. Exploring Careers in Medicine: Implementation and Perceived Value of a Multi-Specialty Elective. Med Sci Educ. 2021 May 24;31(4):1351-1359. doi: 10.1007/s40670-021-01311-0. PMID: 34457977; PMCID: PMC8368157.

Zapf AM, Grimm PR, Al-Qusairi L, **Delpire E**, Welling PA. Low Salt Delivery Triggers Autocrine Release of Prostaglandin E2 From the Aldosterone-Sensitive Distal Nephron in Familial Hyperkalemic Hypertension Mice. Front Physiol. 2022 Jan 6;12:787323. doi: 10.3389/fphys.2021.787323. PMID: 35069250; PMCID: PMC8770744.

### **Department Leadership**



Warren Sandberg, MD, PhD Chair, Department of Anesthesiology, Vanderbilt University Medical Center; Chief of Staff, Vanderbilt University Adult Hospital



**Stephen Doherty, MMHC** Department Administrator



Mark Rice, MD Executive Vice Chair, Department of Anesthesiology



Clayton Adams, MD Medical Director, Preoperative Assessment and Teaching for Children's Hospital (PATCH)



**Brian Allen, MD**Fellowship Director, Regional
Anesthesia and Acute Pain



Nathan Ashby, MD Director, Policy Management



Arna Banerjee, MD, MMHC, FCCM Assistant Vice Chair, Faculty Development Programs



**Vikram Bansal, MD** Director, Clinical Operations, Ambulatory Anesthesiology



**Jeanette Bauchat, MD, MS** Chief, Obstetric Anesthesiology; Medical Director, OB/GYN



Clayne Benson, MD Medical Director II, Liver Transplant Team



**Josh Billings, MD** Director, BH Robbins Scholar Program



Eric Briggs, MD Medical Director, Vanderbilt Outpatient Surgery Center (FEL)



**Stephen Bruehl, PhD** Research Compliance Officer



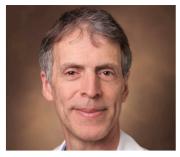
Christopher Canlas, MD Chief, Ambulatory Anesthesiology



**Jeffery Clemmons, MD** Medical Director, Vanderbilt Surgery Center



**Christy Crockett, MD** Medical Director, VCH PACU



Robert Deegan, MB, ChB, BAO, PhD, FFARCSI Director, Perioperative ECHO



Eric Delpire, PhD Director, Basic Science Research; BH Robbins Director in Anesthesiology Research



**Jerod Denton, PhD** Co-Director, BH Robbins Scholar Program



Brent Dunworth, CRNA, DNP, MBA Chief Certified Registered Nurse Anesthetist; Director, Advanced Practice, Anesthesiology



Susan Eagle, MD Assistant Vice Chair, Faculty Development and Advancement; Medical Director, Adult Congenital Cardiothoracic Anesthesiology



**David A. Edwards, MD, PhD** *Chief, Pain Medicine* 



**Brian Emerson, MD** Medical Director, Pediatric Ambulatory Anesthesiology



**Holly Ende, MD** Fellowship Director, Obstetric Anesthesiology



Andrew Franklin, MD, MBA Service Director, Pediatric Acute Pain



MSCI
Chief, Informatics Research;
Director, Vanderbilt
Anesthesiology & Perioperative
Informatics Research (VAPIR)



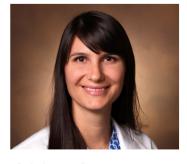
**Brian Gelfand, MD** Vice Chair, Educational Affairs



Rajnish Gupta, MD Medical Director, Belle Meade ASC; Medical Director II, Orthopedic Anesthesiology



Travis Hamilton, DO, MMHC, FASA Director, Off Campus Anesthesia Clinical Operations



Christina Hayhurst, MD Fellowship Director, Anesthesiology Critical Care Medicine; Director, Clinical Operations, Anesthesiology Critical Care Medicine



**Patrick Henson, DO** Medical Director II, PACU; SICU Co-Medical Director



Antonio Hernandez, MD, MSCI Co-Medical Director, CV-ICU



**Douglas Hester, MD**Associate Chief, Multispeciality
Adult Anesthesiology;
Director & Coordinator, Resident
Simulation Program



Michael Higgins, MD, MPH Chair, Peer Review Committee



Christopher Hughes, MD Chief, Anesthesiology Critical Care Medicine; Medical Director, Neuro ICU



Elizabeth Hughes, MD Clinical Director, Pediatric Anesthesiology; Associate Director, Anesthesiology Residency Program; Medical Director, Physician Workforce Development



Christina Jelly, MD Director, Point-of-Care Ultrasound (POCUS)



Miklos Kertai, MD, PhD Assistant Vice Chair, Quality and Safety; Precision Perioperative Medicine Leadership



**Meredith Kingeter, MD** Assistant Director, Anesthesiology Residency Program



Koffi Kla, MD Medical Director, VUAH & MCE Operating Rooms; Leader, Urology MCE Pod



**Jaime Llobet, MD** Director & Coordinator, Pediatrics Resident Simulation Program



**Katherine Loh, MD** Associate Director, Faculty Recruitment



Frederick W. Lombard, MBChB, FANZCA Assistant Vice Chair, VUAH Anesthesia Clinical Operations



**Bevan Londergan, MD** Chief, Pediatric Cardiac Anesthesiology



Marcos Lopez, MD Associate Fellowship Director, Anesthesiology Critical Care Medicine



Michael Mantinan, MD Director, Clinical Operations, Cardiothoracic Anesthesiology



Letha Mathews, MBBS Chief, Neuroanesthesiology; Medical Director II, Neuro Anesthesiology Team



Matthew McEvoy, MD Vice Chair, Perioperative Medicine; Program Director, Perioperative Medicine Fellowship; Medical Director, Perioperative Consult Service



David McIlroy, MB.BS., MD, MClinEpi, FANZCA Medical Director, Perioperative Clinical Research Institute



Carrie Menser, MD Perioperative Anesthesia Medical Director, VCH; Executive Director, Patient Safety, VCH



Merrick Miles, MD Medical Director, Cool Springs Surgery Center



Kelly Mishra, MD Medical Director, Faculty Recruitment; Associate Fellowship Director, Cardiothoracic Anesthesiology



**Puneet Mishra, MD** Associate Fellowship Director, Pain Medicine



Alex Moore, MD Director, Center for Evidence-Based Anesthesia (Adult & Pediatric)



Roy Neeley, MD Chair, Supplies and Equipment Committee; Fellowship Director, Neurology



Mark Newton, MD Vice Chair, Pediatric Anesthesiology; Director, International Anesthesiology Programs; Director, Vanderbilt Anesthesia Global Health & Development



Pratik Pandharipande, MD, MSCI Vice Chair, Office of Anesthesiology Faculty Affairs; James Tayloe Gwathmey Director in Anesthesiology



**Gregory Panomitros, MD** *Medical Director, VUH Satellite Anesthesiology Services* 



Michael Pilla, MD Chief, Multispecialty Adult Anesthesiology; Associate Director, Anesthesiology Residency Program



**Andrew Pisansky, MD** Clinical Chief, Comprehensive Pain Service



Mias Pretorius, MBChB, MSCI Chief, Cardiothoracic Anesthesiology



Britany Raymond, MD Director, Maternal-Fetal Surgery Anesthesiology; Director, Medical Students' Fourth-year Clerkship



**Srijaya Reddy, MD, MBA** Chief, Pediatric Anesthesiology



**Amy Robertson, MD** *Vice Chair, Clinical Affairs* 



Christiana Roussis, MD Chair, VUMC Sedation Committee



Amanda Shakal, DO Co-Director, Point-of-Care Ultrasound (POCUS)



Edward Sherwood, MD, PhD Vice Chair, Research; Cornelius Vanderbilt Chair in Anesthesiology



**Kara Siegrist, MD** Medical Director, Catheter and EP Labs



**Bantayehu Sileshi, MD** Fellowship Director, Cardiothoracic Anesthesiology



**Chris Sobey, MD**Fellowship Director, Pain
Medicine



**Jenna Sobey, MD**Fellowship Director, Pediatric
Anesthesiology



**Laura Sorabella, MD** Director, Clinical Operations, Obstetric Anesthesiology



**Paul St. Jacques, MD** Patient Safety Officer



**Ann Walia, MBBS** Chief, Veterans Affairs Anesthesiology Service



Jonathan Wanderer, MD, MPhil Associate Director, Vanderbilt Anesthesiology & Perioperative Informatics Research (VAPIR)



**Sheena Weaver, MD** *Medical Director, Vanderbilt Preoperative Evaluation Center* 

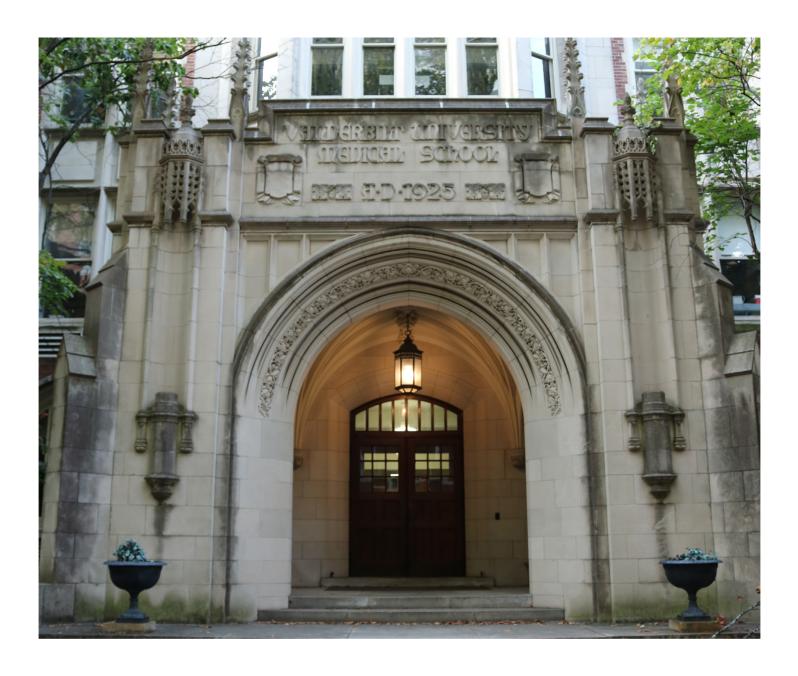


Liza Weavind, MBBCh, FCCM, MMHC
Associate Chief, Anesthesiology
Critical Care Medicine;
Director, Critical Care Burn Unit;
Program Director, Vanderbilt eICU;
Associate Chief of Staff, VUH

Operations Control Center



Edward Yaghmour, MD Assistant Vice Chair, Perioperative Medicine; Director, Adult Regional Anesthesiology & Acute Pain Service



### DEPARTMENT OF ANESTHESIOLOGY



### Compassionate | Creative | Committed | Collaborative

Department of Anesthesiology at Vanderbilt University Medical Center Office of the Chair 1211 21st Avenue South, 722 MAB Nashville, TN 37212 615-936-1595 www.vumc.org/anesthesiology