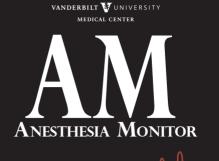
Department of Anesthesiology



SUMMER 2021

IN THIS ISSUE

Page 2: Message from the Chair

Page 4: Lopez lands ASCI Young Physician-Scientist Award

Page 4: AEE inducts four department members

Page 5: Departmental Promotions

Page 5: Dexmedetomidine and delirium

Page 6: Celebrating departmental accomplishments

Page 7: New Hires

Page 13: New Residents

Page 14: Recent Publications

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

Sandberg named Chief of Staff for Vanderbilt University Adult Hospital

By John Howser

Originally published in the VUMC Reporter on July 7, 2021

Warren Sandberg, MD, PhD, professor and chair of the Department of Anesthesiology, and Vanderbilt University Adult Hospital's (VUAH) chief of staff for Perioperative and Critical Care Service, has been named as the hospital's new Chief of Staff effective immediately. Through this promotion, Sandberg, who is also professor of Surgery and Biomedical Informatics, is expanding the scope of his responsibilities to include oversight for all adult inpatient admissions and discharges and inpatient surgical and intensive care throughput goals.

Since 2018, Sandberg has served as VUAH's co-chief of staff during a period of sustained growth in inpatient volumes driven in part by a massive influx of critically ill COVID-19 patients throughout much of 2020.

CONTINUED ON PAGE 3

Pandharipande named to hold VUMC endowed directorship

From article **by Nancy** *Humphrey* originally published in the VUMC Reporter on March 25, 2021

Pratik Pandharipande, MD, MSCI, is one of the eight leaders from across Vanderbilt University Medical Center to have been named as holders of endowed directorships. He is the holder of the James Tayloe Gwathmey Directorship in Anesthesiology.

"Endowed directorships honor and support leaders of

CONTINUED ON PAGE 2



Pratik Pandharipande, MD, MSCI

MESSAGE FROM THE CHAIR

The summer of 2021 has been busy for our department. Our accomplishments in the areas of clinical care, education, and research are significant.

For clinical care, the appointment of Srijaya Reddy, MD, MBA, as the Division Chief of Pediatric Anesthesiolgy is quite the accomplishment. The division flourished during her interim tenure.



Warren Sandberg, MD, PhD Chair, Department of Anesthesiology

The division has seen thriving mentorship, numerous leadership opportunities, and strong recruitment. This has put the division on an upward trajectory expected to continue under her leadership.

Summer also means we get to welcome a new resident class. We look forward to seeing what this class does in the future.

Education continues to a be high point for the department, with the induction of four more department members to the Academy for Excellence in Education. The AEE believes in fostering educational excellence, innovation, leadership, and scholarship. The addition of more educators from our department is a testament to our educational priorities.

If you want a glimpse of how busy the department is in terms of research, look no further than our multiple pages of recent publications. Assistant Professor Marcos Lopez, MD, is one of the five VUMC faculty members to receive ASCI's Young Physician-Scientist Award. This award recognizes those early in their careers who have made notable achievements in research.

I expect the department will continue to excel long after the hot summer days are over. I look forward to seeing what we can accomplish. ◆

Pandharipande continued from page 1

exceptional commitment who provide compassionate, world-class care, advance knowledge through groundbreaking research and train the next generation of leaders," said Jeff Balser, MD, PhD, President and Chief Executive Officer for VUMC and Dean of Vanderbilt University School of Medicine.

"Generous individuals and families who are committed to VUMC's future were crucial philanthropic partners, making gifts to fund several of these directorships. I am grateful for their support."

The most recent directorships are spread throughout many different departments — highlighting individuals who impact patient care in myriad ways.

"We are delighted to honor these highly accomplished colleagues who make critical and important contributions to VUMC's missions," said David Raiford, MD, chief of clinical staff for VUMC and senior associate dean for Faculty Affairs. "Their nomination for this distinction is reviewed and endorsed by peers, affording special meaning for such recognition."

Pandharipande, vice chair for Anesthesiology Faculty Affairs, professor of Anesthesiology and Surgery, and former chief of Anesthesiology Critical Care Medicine, is an internationally recognized investigator in the area of delirium, sedation and neuropsychological impairments among the critically ill. Co-director of the Critical Illness, Brain Dysfunction, and Survivorship (CIBS) Center, his research focuses on the epidemiology of ICU-associated brain injury, its risk factors and improving survivorship. Pandharipande's studies have significantly impacted the care of critically ill patients around the world.

Sandberg continued from page 1

"Dr. Sandberg demonstrates outstanding leadership capabilities, along with considerable knowledge of the inner workings of our adult inpatient services. He has helped other members of the hospital's leadership team address the ever-increasing demand for the tertiary and quaternary services that only VUMC offers. The experience he has gained over the past three years has prepared him well to help meet the hospital's ongoing growth. I want to express my appreciation to Warren for this service in this new role," said C. Wright Pinson, MBA, MD, Deputy CEO and Chief Health System Officer for VUMC.

Sandberg is internationally recognized for his expertise in the use of information systems data in the perioperative setting to continuously improve quality, safety and efficiency of care. His research focuses on clinical and medical informatics and examines factors affecting physicianpatient communication, patient care technology, perioperative systems design and OR workflow management.

"Over the past three years Dr. Sandberg's leadership and operational expertise have been invaluable to the success of our inpatient services, never more so than during the COVID pandemic. Broadening his responsibilities acknowledges this and positions him well to influence all aspects of VUMC's adult inpatient operations," said David Raiford, MD, Chief of Clinical Staff for VUMC.

As chair of the Department of Anesthesiology and as VUAH Co-Chief of Staff Sandberg has championed numerous initiatives using clinical process and outcome data to drive care improvements.

Teams working in his area have helped patients recover more quickly from major surgery, leave the hospital earlier and have fewer side effects from their pain management, all without increased rates of unexpected readmission. In step with reductions in patients' length of stay, the cost of care has decreased due to improved efficiency.

"It has been a true pleasure to watch Dr. Sandberg lead in partnership with our multidisciplinary team to ensure exemplary care for our patients. His consistency in ensuring that we as leaders go to the front lines to gather facts, gain insights and empower those close to the work has made a demonstrable impact. I look forward to watching him succeed and make an even bigger difference for our patients and families as he takes on this larger scope," said Shon Dwyer, MBA, RN, President of VUAH.

Sandberg was recruited to VUMC in 2010 to serve as department chair for Anesthesiology. As chair, he has responsibility for the Department of Anesthesiology's entire administrative, research, educational and clinical enterprise.

The department is currently home to more than 180 anesthesiologists, 180 nurse anesthetists and 100 trainees. The department is currently ranked No. 11 in National Institutes of Health research funding. Its faculty routinely participates in or leads institutional initiatives designed to improve access to and the reliability of care delivery, and patient throughput and quality.

"I've always enjoyed building things and taking whatever I found around me and making it better," said Sandberg. "During my time at VUMC, I've appreciated the central importance of building relationships, personal and professional, as the key to success in all other endeavors we undertake on behalf of our patients. VUMC is the preferred place where patients place their trust, and we, in turn, must give them the best experience we can. Through our relationships as friends and clinicians, we build the shared trust and experiences to fulfill our patients' expectations. I'm truly looking forward to continuing to grow in this role, and appreciate the trust placed in me by VUMC leadership on behalf of our patients."

Sandberg also serves on numerous national, VUMC and School of Medicine committees, boards and workgroups and participates in teaching and training across the entire educational continuum, from premedical students to advanced clinicians. In 2018, he was elected into the American Association for the Advancement of Science (AAAS) as a fellow. ◆

Lopez lands ASCI Young Physician-Scientist Award

From article **by Bill Snyder** originally published in the VUMC Reporter on April 14, 2021

Marcos Lopez, MD, is one of the five Vanderbilt University Medical Center faculty members to receive the Young Physician-Scientist Award from the American Society of Clinical Investigation (ASCI), an elite honor society of physician-scientists.

The awards, presented during the joint annual meeting of the ASCI, Association of American Physicians (AAP) and the American Physician Scientist Association held virtually in Chicago, recognize physicianscientists early in their first faculty appointments who have made notable achievements in research.

Lopez, assistant professor of Anesthesiology in the Division of Anesthesiology Critical Care Medicine, is investigating the role of impaired endothelial function and vascular reactivity in postoperative brain and kidney dysfunction, with the goal of developing novel approaches to treat it. \blacklozenge



Marcos Lopez, MD

AEE inducts four department members

The Academy for Excellence in Education (AEE) provides a forum to foster higher levels of participation and promote excellence and scholarship in the delivery of education to health professionals. The mission of the AEE is to enhance the educational environment in the Vanderbilt University School of Medicine and VUMC by advocating for the development, support and recognition of dedicated educators, by sustaining a community of educators, and by fostering educational excellence, innovation, leadership and scholarship. The AEE elected 28 new members in 2021, four of whom are members of our department: Nathan Ashby, MD, Clifford Bowens, MD, Douglas Hester, MD, and Jenna Sobey, MD.



Nathan Asbhy, MD



Douglas Hester, MD



Clifford Bowens, MD



Jenna Sobey, MD

Departmental Promotions

Brian Allen, MD, was promoted to Associate Professor.

Bret Alvis, MD, was promoted to Associate Professor.

Arna Banerjee, MBBS, was promoted to Professor.

Jacob Clifton was promoted to Statistical Analyst.

Jerod Denton, PhD, was promoted to Tenured Professor.

Ashley Hall was promoted to Lead Administrative Assistant.

Dillon Heath, CRNA, was promoted to Service Specialist.

Antonio Hernandez, MD, MSCI, was promoted to Professor.

Elisabeth Hudson was promoted to Manager for Office of Educational Affairs.

Harrison Johnson was promoted to Assistant Director of Finance.

Judy Lashbrook was promoted to Senior Business Process Manager. **Dawn Martin** was promoted to Program Manager.

Carrie Menser, MD, was promoted to Associate Professor of Clinical Anesthesiology.

Jillian Powell was promoted to Administrative Manager.

Mias Pretorius, MBChB, MSCI, was promoted to Professor.

Dexmedetomidine and delirium

By Paul Govern

Originally published in the VUMC Reporter on June 21, 2021

Dexmedetomidine was approved in 1999 and today is used mainly in the intensive care setting for light to moderate sedation. Postmarket studies of the drug have produced inconsistent safety results.

In new findings that are exclusively with regard to cardiac surgery patients, intraoperative dexmedetomidine — that is, the drug as administered during heart surgery — is associated with 85 percent greater risk of postoperative delirium and 29 percent greater risk of postoperative intubation and reintubation.

Meanwhile, dexmedetomidine administered to cardiac surgery patients postoperatively in the ICU is associated with 25 percent greater risk of 30-day mortality. These findings, reported in *The Annals of Thoracic Surgery* by **Miklos Kertai, MD, PhD**, and colleagues, are based on records of 54,682 cardiac surgery patients from the Society of Thoracic Surgeons Adult Cardiac Surgery Database. The patients underwent cardiac surgery between July 2014 and December 2018.

Dexmedetomidine was also associated with minor, somewhat inconsistent differences in pain scores (at postop day three and hospital discharge).

On the study also from Vanderbilt University Medical Center were Ashish Shah, MD, Xiaoke Feng, MS, and Matthew Shotwell, PhD. They were joined by researchers from Virginina Commonwealth University, Johns Hopkins School of Medicine, the Cleveland Clinic Foundation and Missoula Anesthesiology. •



Miklos Kertai, MD, PhD

Celebrating departmental accomplishments



After a comprehensive national search led by an interdisciplinary committee of departmental and VCH leaders, we are thrilled to announce the appointment of **Srijaya Reddy**, **MD**, **MBA**, as the Division Chief of Pediatric Anesthesiology. Dr. Reddy has done an incredible job of providing leadership as the Interim Division Chief since October of 2020. I don't need to point out how challenging the past year and a half has been for all of us. Against that backdrop, Dr. Reddy has led the division with steady grace throughout these trying times. During her interim tenure, mentorship has flourished, numerous leadership opportunities have opened, and recruitment has been strong.

Dr. Reddy is an associate professor at VUMC and has substantial experience as a clinician-scholar in systems distinct from our own as well as the past three years at VUMC. Her professional interests are very much tied to clinical anesthesia and the development of quality care for complex surgery. She is also an avid collaborator and maintains connections to many prominent experts in her field around the country, while at the same time bringing along her colleagues at VUMC. Importantly, she is highly regarded by our surgeons and hospital leadership as an engaged, calm and capable clinician-expert.

The Pediatric Division is on an amazing upward trajectory, energized by 24 highly capable, committed faculty, working with an equally impressive complement of CRNAs, residents and fellows. Sri will continue working with departmental and hospital leadership teams enthusiastically dedicated to building on recent successes.

-Warren Sandberg, MD, PhD

Congratulations to **Nicole Cavanaugh,** who recently achieved PACE certification. PACE (Professional Administrative Certification of Excellence) is a nationally-recognized certification and is administered through the American Society of Administrative Professionals.

Sterling Haring, DO, MPH, won first place for his abstract titled "EMS Administration of Naloxone Peaked During COVID-19" at the Tennessee Pain Society Annual Meeting & Scientific Sessions.

Melissa McKittrick, MD,

placed third for her abstract titled "Buprenorphine Management in the Acute Pain Setting" at the Tennessee Pain Society Annual Meeting & Scientific Sessions.

Congratulations to **Jerod Denton**, **PhD**, for receiving NIH funding for his R01 submission on new insights into VRAC molecular structure and structure-function relationships.

Charina Pelayo, CRNA, is the winner of the DAISY Award. The DAISY Award honors nurses who provide above-and-beyond compassionate care to patients and families.

2021 Research Symposium Awards

Pittinger Prize in Basic Science Research: *Eric Delpire, PhD* Pittinger Prize in Clinical/Translational Research: *Marcos Lopez, MD* Pittinger Prize in Health Services/ Informatics: *Matthew Weinger, MD* Roger England Research Award: *Tracie Baker* Best Poster Presentations: *Melissa Kimlinger* and *Katherine Burelbach* Best Oral Presentation: *Kevin Manz, PhD*

New Hires

Bailey Barton Certified Registered Nurse Anesthetist

Education and Training:

DNP, Nurse Anesthesia, Rush University College of Nursing, Chicago, IL (2018) *BSN*, Indiana University - Purdue University Indianapolis, Indianapolis, IN (2013) **Fun Fact:** I like golf and enjoy being outdoors.

Kendall Basham Communications Coordinator Office of the Chair

Education and Training:

BS, Journalism and Electronic Media, University of Knoxville, Knoxville, TN (2017) **Fun Fact:** I thoroughly enjoy dystopian novels, politics, and making it to the end of a hike!

Margaret Bessey Certified Registered Nurse Anesthetist

Education and Training:

MS, Nurse Anesthesia, Middle Tennessee School of Anesthesia, Madison, TN (2008) *MS*, Nursing, Vanderbilt University, Nashville, TN (2002) **Fun Fact:** I once auditioned for America's Got Talent.

Moncia Bhutiani, MD, MEd Instructor Multispecialty Adult Anesthesiology

Education and Training:

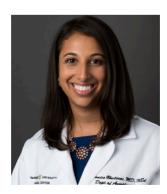
Residency, Anesthesiology, Vanderbilt University Medical Center, Nashville, TN (2021)

MD, Vanderbilt University School of Medicine, Nashville, TN (2017) *MEd*, Vanderbilt University School of Medicine, Nashville, TN (2017) **Fun Fact:** I danced classical ballet and rhythmic tap throughout college and delved into Latin dancing during medical school.

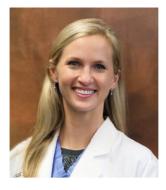








Mandi Breymeyer Certified Registered Nurse Anesthetist



Education and Training: *MS*, Nurse Anesthesia, University of South Carolina School of Medicine, Columbia, SC (2019) *BSN*, University of South Carolina, Spartanburg, SC (2016) **Fun Fact:** I enjoy serving on mission trips in other countries.



Sue Buxton Certified Registered Nurse Anesthetist

Education and Training:

MS, Nurse Anesthesia, Case Western Reserve University, Cleveland, OH (2020) *BSN*, University of Buffalo, Buffalo, NY (2014) **Fun Fact:** I make the most amazing chicken Parmesan.



Lexi Davis Lead Administrative Assistant Certified Registered Nurse Anesthetists

Fun Fact: I love to snorkel and hope to obtain my scuba certification one day soon. My favorite place is off the island of Anguilla.



Sarah Fandre, MD Assistant Professor of Clinical Anesthesiology Multispecialty Adult Anesthesiology

Education and Training: *Residency,* Anesthesiology, Vanderbilt University Medical Center, Nashville, TN (2009) *MD,* Texas A&M College of Medicine, College Station, TX (2005) **Fun Fact:** I have run three 200-mile relay races and plan to run more.



Michele Gravois Certified Registered Nurse Anesthetist

Education and Training:

DNAP, Anesthesia, Middle Tennessee School of Anesthesia, Madison, TN (2015) *MS*, Nurse Anesthesia, University of Alabama, Birmingham, AL (2005) *BSN*, University of Alabama, Tuscaloosa, AL (1998) **Fun Fact:** I'm joyful and play well with others.

snorkel and hope to obtain my scuba

8

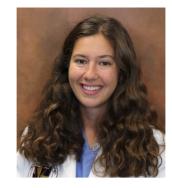
Emily Gilfert Certified Registered Nurse Anesthetist

Education and Training:

DNAP, Anesthesia, University at Buffalo, Buffalo, NY (2021) *BSN*, Alfred State College, Alfred, NY (2015) **Fun Fact:** I am an average piano player.

Sadler Goodwin Research Assistant I Center for Research and Innovation in Systems Safety

Education and Training: *BS*, Psychology, Troy University, Troy, AL (2020) **Fun Fact:** I played Division-1 baseball throughout my time at college.





Helen Gould Certified Registered Nurse Anesthetist

Education and Training:

DNAP, Nurse Anesthesia, Middle Tennessee School of Anesthesia, Madison, TN (2020)
BSN, Massachusetts College of Pharmacy & Health Sciences, Boston, MA (2012)
Fun Fact: I played lacrosse in college and I have a cavapoo puppy.

Chris Husin Senior Administrative Assistant Center for Research and Innovation in Systems Safety

Education and Training:

BA, Global Studies and Geography, University of Tennessee, Knoxville, TN (2021)

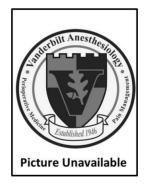
Fun Fact: I was once stranded in a small town in France during holiday on my semester abroad.

Gabrielle Illakowicz Administrative Assistant Office of Educational Affairs

Education and Training:

BS, Psychology, University of Houston, Houston, TX (2017) **Fun Fact:** I am a Polish American. I can speak Polish fluently.









Chris Lensing, MD Fellow Cardiothoracic Anesthesiology

Education and Training:

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

MD, Creighton University School of Medicine, Omaha, NE (2017) **Fun Fact:** I was a water ski instructor throughout my college summers.



Tyler Leverich Certified Registered Nurse Anesthetist

Education and Training:

MSN, Nurse Anesthesia, California State University, Fullerton, CA (2014) *BSN,* Mount Mary College, Milwaukee, WI (2006)



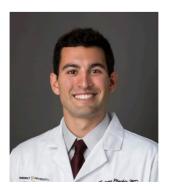
Cara Lyle Senior Administrative Assistant Pediatric Cardiac Anesthesiology

Fun Fact: I love listening to music.



Jessica Oldham Certified Registered Nurse Anesthetist

Education and Training: *MSN*, Anesthesia, University of New England, Portland, ME (2009) *BSN*, University of Tennessee, Knoxville, TN (2005) **Fun Fact:** I studied abroad in Spain and speak Spanish.



Andreas Plackis, MD Fellow Cardiothoracic Anesthesiology

Education and Training: *Residency,* Anesthesiology, Vanderbilt University Medical Center, Nashville, TN (2021) *MD,* University of Missouri-Columbia School of Medicine, Columbia, MO (2017)

Fun Fact: I love all racquet sports.

Chad Pritts, MD Assistant Professor of Clinical Anesthesiology Multispecialty Adult Anesthesiology

Education and Training:

Fellowship, Critical Care Medicine, Stanford University, Stanford, CA (2009) *Residency,* Anesthesiology, Stanford University, Stanford, CA (2008) *Residency,* Emergency Medicine, Ohio State University, Columbus, OH MD, University of Florida College of Medicine, Gainesville, FL (2000) **Fun Fact:** My wife Brenda worked in finance and is a trained occupational therapist. Now she is a teacher, administrator, CEO, COO, CTO, CFO, and everything for our household. My daughters went to camp at Vanderbilt and loved every minute of it.

Jesse Ream, MD Fellow Cardiothoracic Anesthesiology

Education and Training:

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

MD, University of Oklahoma College of Medicine, Oklahoma City, OK (2017) **Fun Fact:** I married my high school sweetheart.

Chris Reid Certified Registered Nurse Anesthetist

Education and Training:

MS, Nurse Anesthesia, Middle Tennessee School of Anesthesia, Madison, TN (2006)

BS, Psychology, Tennessee Technological University, Cookeville, TN (1998) **Fun Fact:** I have visited five of the seven continents (North America, South America, Europe, Australia and Antarctica) and have been blessed to experience approximately 20 domestic and international destinations in the last 10 years mostly during my eight year hiatus from practicing anesthesia.

Makenzie Ruberto Certified Registered Nurse Anesthetist

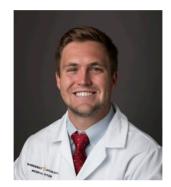
Education and Training:

DNAP, Nurse Anesthesia, Middle Tennessee School of Anesthesia, Madison, TN (2021)

BSN, Middle Tennessee State University, Murfreesboro, TN (2015)

Fun Fact: I have a huge family of nurses! Many cousins, and my mom is one of 10 girls and one boy. Nine of them are nurses.









Sharon Seats Senior Administrative Assistant Multispecialty Adult Anesthesiology

Fun Fact: I love flowers, reading and watching TV.



Brett Speer Associate Program Manager **Office of Educational Affairs**

Education and Training:

BA, Political Science, University of Tennessee, Knoxville, TN (2004) Fun Fact: I have been playing hockey since I was 5 years old, and I still play in Nashville's Adults Ice Hockey league.



Stephen Thiele Certified Registered Nurse Anesthetist

Education and Training: DNAP, Anesthesia, Virginia Commonwealth University, Richmond, VA (2019)*BA*, Economics, University of Virginia, Charlottesville, VA (2007)

Fun Fact: I make unbelievably clear ice cubes.



Jacob Turner **Certified Registered Nurse Anesthetist**

Education and Training: DNP, Nurse Anesthesia, Southern Illinois University, Edwardsville, IL (2019)BSN, Methodist College, Peoria, IL (2013) **Fun Fact:** I love to cook, learn new things, ride motocross and play guitar.



Ethan Young, MD Instructor of Clinical Anesthesiology Multispecialty Adult Anesthesiology

Education and Training:

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

MD, University of South Dakota Sanford School of Medicine, Vermillion, SD (2017) Fun Fact: I'm a first generation physician, avid golfer, and snow skiing enthusiast.

Matt Zapf, MD Instructor Multispecialty Adult Anesthesiology

Education and Training:

Residency, Anesthesiology, Vanderbilt University Medical Center, Nashville, TN (2021) *MD*, Loyola University Chicago Stritch School of Medicine, Maywood, IL (2017)

Fun Fact: We have a rescue dog named Cody.



PGY-1 Class of 2021-2022



Alex Brown, MD



Alice Chae, MD



Colette Ciresi, MD



Joshua Coleman, MD



Alexandra Feldner, MD



Sarah Gallegos, DO



Chris Jenks, MD



John Johnson, MD



Kelsei Keene, MD



Kyle Kinslow, MD



Mary Kay Kujak, MD



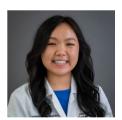
Victoria Stabile, MD



Sarah Lopez, MD



David Newton, MD



Lindsey Nguyen, MD



Chandra Rathnam, MD



Eric Samuelson, MD





Alex Tobias, MD

Recent Publications

Adams CD, Reddy SK, Phillips JD, **Emerson BR.** Hypoglossal nerve stimulator placement in a child with severe refractory OSA: a novel procedure in the paediatric population. BMJ Case Rep. 2021 May 4;14(5):e242592. doi: 10.1136/bcr-2021-242592. PMID: 33947679; PMCID: PMC8098956.

Akushevich I, Yashkin AP, Kravchenko J, **Kertai MD.** Chemotherapy and the Risk of Alzheimer's Disease in Colorectal Cancer Survivors: Evidence From the Medicare System. JCO Oncol Pract. 2021 Feb 25:OP2000729. doi: 10.1200/OP.20.00729. Epub ahead of print. PMID: 33630665.

Bauer ME, Arendt K, Beilin Y, Gernsheimer T, Perez Botero J, James AH, **Yaghmour E,** Toledano RD, Turrentine M, Houle T, MacEachern M, Madden H, Rajasekhar A, Segal S, Wu C, Cooper JP, Landau R, Leffert L. The Society for Obstetric Anesthesia and Perinatology Interdisciplinary Consensus Statement on Neuraxial Procedures in Obstetric Patients With Thrombocytopenia. Anesth Analg. 2021 Feb 4. doi: 10.1213/ANE.0000000005355. Epub ahead of print. PMID: 33861047.

Ben-Ari Y, **Delpire E.** Phenobarbital, midazolam, bumetanide, and neonatal seizures: The devil is in the details. Epilepsia. 2021 Feb 3. doi: 10.1111/epi.16830. Epub ahead of print. PMID: 33534145.

Betters KA, Le TM, Gong W, Lindsell CJ, **Smith HA**, Smith AH. Utilization of ICU Rehabilitation Services in Pediatric Patients With a Prolonged ICU Stay. Crit Care Med. 2021 Apr 16. doi: 10.1097/CCM.00000000005036. Epub ahead of print. PMID: 33870920.

Billings FT 4th, Lopez MG, Shaw AD. The incidence, risk, presentation, pathophysiology, treatment, and effects of perioperative acute kidney injury. Can J Anaesth. 2021 Jan 6. English. doi: 10.1007/s12630-020-01894-z. Epub ahead of print. PMID: 33403555.

Bohannon JK, Sherwood ER. What's New in Shock, April 2021? Shock. 2021 Apr 1;55(4):419-422. doi: 10.1097/SHK.000000000001760. PMID: 33730006.

Boncyk CS, Farrin E, Stollings JL, Rumbaugh K, Wilson JE, Marshall M, Feng X, Shotwell MS, **Pandharipande PP, Hughes CG.** Pharmacologic Management of Intensive Care Unit Delirium: Clinical Prescribing Practices and Outcomes in More Than 8500 Patient Encounters. Anesth Analg. 2021 Jan 11. doi: 10.1213/ANE.00000000005365. Epub ahead of print. PMID: 33433117.

Borst AJ, Bonfield CM, Deenadayalan PS, Le CH, Xu M, **Sobey JH, Reddy SK.** ε-Aminocaproic acid versus tranexamic acid in children undergoing complex cranial vault reconstruction for repair of craniosynostosis. Pediatr Blood Cancer. 2021 May 18:e29093. doi: 10.1002/pbc.29093. Epub ahead of print. PMID: 34003588.

Bruehl S, Burns JW, Koltyn K, **Gupta R**, Buvanendran A, **Edwards D**, **Chont M**, Wu YH, **Stone A.** Does aerobic exercise training alter responses to opioid analgesics in individuals with chronic low back pain?: a randomized controlled trial. Pain. 2020 Dec 15;Publish Ahead of Print. doi: 10.1097/j.pain.0000000002165. Epub ahead of print. PMID: 33394881.

Caillet AR, Russell AC, Wild MG, Acra S, Bradshaw LA, **Bruehl S**, Walker LS, **Stone AL.** Sex Moderates the Relationship Between Nausea Severity and Heart Rate Variability in Adolescents and Young Adults. Dig Dis Sci. 2021 Feb 19. doi: 10.1007/s10620-021-06892-9. Epub ahead of print. PMID: 33608817.

Canter MO, Tanguturi YC, Ellen Wilson J, Williams SR, Exum SA, Umrania HM, Betters KA, Raman R, Ely EW, **Pandharipande PP**, Fuchs DC, **Smith HAB.** Prospective Validation of the Preschool Confusion Assessment Method for the ICU to Screen for Delirium in Infants Less Than 6 Months Old. Crit Care Med. 2021 Jun 24. doi: 10.1097/CCM.000000000005099. Epub ahead of print. PMID: 34166285.

Chen B, Alrifai W, Gao C, Jones B, Novak L, Lorenzi N, **France D**, Malin B, Chen Y. Mining tasks and task characteristics from electronic health record audit logs with unsupervised machine learning. J Am Med Inform Assoc. 2021 Feb 12:0caa338. doi: 10.1093/jamia/ ocaa338. Epub ahead of print. PMID: 33576432.

Clark MG, Schaffer AJ, **Freundlich RE.** Intraoperative Anaphylaxis: Definition Determines Detection. Anesth Analg. 2021 May 1;132(5):e77-e78. doi: 10.1213/ANE.00000000005449. PMID: 33857995.

COVIDSurg Collaborative, GlobalSurg Collaborative **(Kynes JM, Walters C).** SARS-CoV-2 vaccination modelling for safe surgery to save lives: data from an international prospective cohort study, British Journal of Surgery, 2021 Mar 24. znab101, https://doi.org/10.1093/bjs/znab101

COVIDSurg Collaborative, GlobalSurg Collaborative **(Kynes JM, Walters C).** Timing of surgery following SARS-CoV-2 infection: an international prospective cohort study. Anaesthesia 2021 Mar 9. https://doi.org/10.1111/anae.15458

Crawford L, Mueller D, Mathews L. Anesthetic Considerations for Functional Neurosurgery. Anesthesiol Clin. 2021 Mar;39(1):227-243. doi: 10.1016/j.anclin.2020.11.013. PMID: 33563384.

de la Coba P, **Bruehl S**, Del Paso GAR. Slowly repeated evoked pain (SREP) as a central sensitization marker in episodic migraine patients. Sci Rep. 2021 Feb 25;11(1):4582. doi: 10.1038/s41598-021-84157-1. PMID: 33633294; PMCID: PMC7907059.

Devlin JW, **Pandharipande PP.** Do Our Sedation Practices Contribute to Increased Mortality in Coronavirus Disease 2019-Related Acute Respiratory Distress Syndrome? Crit Care Med. 2021 May 25. doi: 10.1097/CCM.00000000000005094. Epub ahead of print. PMID: 34034302.

Donahue BS. Commentary: Coagulation Testing in Pediatric Cardiac Surgery: The Small Picture and the Big Picture. Semin Thorac Cardiovasc Surg. 2021 Mar 1:S1043-0679(21)00097-6. doi: 10.1053/j.semtcvs.2021.02.017. Epub ahead of print. PMID: 33662556.

Dukleska K, Vinocur CD, **Brenn BR**, Lim DJ, Keith SW, Dirnberger DR, Berman L. Preoperative Blood Transfusions and Morbidity in Neonates Undergoing Surgery. Pediatrics. 2020 Nov;146(5):e20193718. doi: 10.1542/peds.2019-3718. PMID: 33087550. Dwan RL, **Raymond BL, Richardson MG.** Unanticipated Consequences of Switching to Sugammadex: Anesthesia Provider Survey on the Hormone Contraceptive Drug Interaction. Anesth Analg. 2021 Mar 8. doi: 10.1213/ANE.00000000005465. Epub ahead of print. PMID: 33684087.

Ende HB, Dwan RL, **Freundlich RE, Dumas S, Sorabella LL, Raymond BL,** Lozada MJ, Shotwell MS, **Wanderer JP, Bauchat JR.** Quantifying the incidence of clinically significant respiratory depression in women with and without obesity class III receiving neuraxial morphine for post-cesarean analgesia: a retrospective cohort study. Int J Obstet Anesth. 2021 May 7:103187. doi: 10.1016/j.ijoa.2021.103187. Epub ahead of print. PMID: 34053816.

Ende HB, Lozada MJ, **Chestnut DH**, Osmundson SS, Walden RL, Shotwell MS, **Bauchat JR**. Risk Factors for Atonic Postpartum Hemorrhage: A Systematic Review and Meta-analysis. Obstet Gynecol. 2021 Feb 1;137(2):305-323. doi: 10.1097/AOG.00000000004228. PMID: 33417319.

Ende HB, Lozada MJ, Micevych PS, Pennycuff J, Vadhera RB, Peralta FM, **Bauchat JR**. A survey of USA anesthesiology residents regarding their perceptions of, and barriers to, fellowship training in obstetric anesthesia. Int J Obstet Anesth. 2021 Mar 29:103159. doi: 10.1016/j.ijoa.2021.103159. Epub ahead of print. PMID: 33893007.

Ende HB, Richardson MG, Lopez BM, **Wanderer JP.** Improving ACGME Compliance for Obstetric Anesthesiology Fellows Using an Automated Email Notification System. Appl Clin Inform. 2021 May;12(3):479-483. doi: 10.1055/s-0041-1730323. Epub 2021 May 26. PMID: 34041735; PMCID: PMC8154353.

Ende HB, Tran B, Thampy M, **Bauchat JR**, McCarthy RJ. Standardization of epidural top-ups for breakthrough labor pain results in a higher proportion of catheter replacements within 30 min of the first bolus dose. Int J Obstet Anesth. 2021 Apr 8:103161. doi: 10.1016/j. ijoa.2021.103161. Epub ahead of print. PMID: 33931311.

Eskaf J, Cleveland WJ, **Riess ML.** No Direct Postconditioning Effect of Poloxamer 188 on Mitochondrial Function after Ischemia Reperfusion Injury in Rat Isolated Hearts. Int J Mol Sci. 2021 May 5;22(9):4879. doi: 10.3390/ijms22094879. PMID: 34063028; PMCID: PMC8124240.

Figueroa EE, **Denton JS.** Zinc pyrithione activates the volume-regulated anion channel through an antioxidant-sensitive mechanism. Am J Physiol Cell Physiol. 2021 Apr 7. doi: 10.1152/ajpcell.00070.2021. Epub ahead of print. PMID: 33826406.

Fitzsimons MG, **Rice MJ**, Baker K. Drug Testing in Anesthesia: "Prevention and Protection" or "Major Risk for Minimal Gain". Anesth Analg. 2021 Jan 7. doi: 10.1213/ ANE.00000000005350. Epub ahead of print. PMID: 33438964.

Flores B, **Delpire E.** Temporal manipulation of KCC3 expression in juvenile or adult mice suggests irreversible developmental deficit in HSMN/ACC. Am J Physiol Cell Physiol. 2021 Feb 17. doi: 10.1152/ajpcell.00594.2020. Epub ahead of print. PMID: 33596149.

Franklin AD, Serdiuk AA, Tsai MH, Urman RD, Engwall S. Designing reliable healthcare teams - Proceedings of the Association of Anesthesia Clinical Directors (AACD) 2021 annual perioperative leadership summit. J Clin Anesth. 2021 Jun 24;74:110411. doi: 10.1016/j. jclinane.2021.110411. Epub ahead of print. PMID: 34174641.

Gagnon KB, **Delpire E.** Sodium Transporters in Human Health and Disease. Front Physiol. 2021 Feb 25;11:588664. doi: 10.3389/fphys.2020.588664. PMID: 33716756; PMCID: PMC7947867.

Goebel A, Birklein F, Brunner F, Clark D, Gierthmuehlen J, Harden N, Huygen F, Knudsen L, McCabe C, Lewis J, Maihoefner C, Magerl W, Moseley L, Terkelsen A, Thomassen I, **Bruehl S.** The Valencia consensus-based adaptation of the IASP CRPS diagnostic criteria. Pain. 2021 Mar 15. doi: 10.1097/j.pain.0000000002245. Epub ahead of print. PMID: 33729210.

Gupta RK, Schwenk ES. Postoperative opioid consumption after spine surgery: 24 hours or midnight to midnight? An infographic. Reg Anesth Pain Med. 2021 Apr 14:rapm-2021-102761. doi: 10.1136/rapm-2021-102761. Epub ahead of print. PMID: 33853881.

Hansen JD, Perri RE, **Riess ML.** Liver and Biliary Disease of Pregnancy and Anesthetic Implications: A Review. Anesth Analg. 2021 Feb 24. doi: 10.1213/ANE.00000000005433. Epub ahead of print. PMID: 33687174.

Hayhurst CJ, Hughes CG, Pandharipande PP. The Conundrum of Pain, Opiate Use and Delirium: Analgosedation or Analgesia-first Approach? Am J Respir Crit Care Med. 2021 May 6. doi: 10.1164/rccm.202104-0968ED. Epub ahead of print. PMID: 33956575.

Hernandez A, Patil NK, Bohannon JK. A Murine Model of Full-Thickness Scald Burn Injury with Subsequent Wound and Systemic Bacterial Infection. Methods Mol Biol. 2021;2321:111-120. doi: 10.1007/978-1-0716-1488-4_10. PMID: 34048011.

Hopkins MB, Hawkins AT, **Tiwari V**, Soda M, Martin BJ, Muldoon RL, Ford MM, Beck D, Geiger TM. Is newer always better?: comparing cost and short-term outcomes between laparoscopic and robotic right hemicolectomy. Surg Endosc. 2021 Jun 15. doi: 10.1007/s00464-021-08579-8. Epub ahead of print. PMID: 34129087.

Hughes CG, Hayhurst CJ, Pandharipande PP, Shotwell MS, Feng X, Wilson JE, Brummel NE, Girard TD, Jackson JC, Ely EW, Patel MB. Association of Delirium during Critical Illness With Mortality: Multicenter Prospective Cohort Study. Anesth Analg. 2021 Apr 30. doi: 10.1213/ANE.00000000005544. Epub ahead of print. PMID: 33929361.

Hughes CG, Mailloux PT, Devlin JW, Swan JT, Sanders RD, Anzueto A, Jackson JC, Hoskins AS, Pun BT, Orun OM, Raman R, Stollings JL, Kiehl AL, Duprey MS, Bui LN, O'Neal HR Jr, Snyder A, Gropper MA, Guntupalli KK, Stashenko GJ, Patel MB, Brummel NE, Girard TD, Dittus RS, Bernard GR, Ely EW, **Pandharipande PP;** MENDS2 Study Investigators. Dexmedetomidine or Propofol for Sedation in Mechanically Ventilated Adults with Sepsis. N Engl J Med. 2021 Feb 2. doi: 10.1056/NEJM0a2024922. Epub ahead of print. PMID: 33528922.

Huth HB, Skeens R, **Anders S**, Herzberg S, Simpson C, Novak L, Jackson GP. Health Management in the Home: A Qualitative Study of Pregnant Women and Their Caregivers. J Patient Exp. 2020 Dec;7(6):1227-1233. doi: 10.1177/2374373520948442. Epub 2020 Aug 14. PMID: 33457569; PMCID: PMC7786694.

Hyman SA, Card EB, De Leon-Casasola O, Shotwell MS, Shi Y, **Weinger MB**. Prevalence of burnout and its relationship to health status and social support in more than 1000 subspecialty anesthesiologists. Reg Anesth Pain Med. 2021 Feb 11:rapm-2020-101520. doi: 10.1136/rapm-2020-101520. Epub ahead of print. PMID: 33574158.

Jones B, Balasubramaniam M, Lebowitz JJ, Taylor A, Villalta F, Khoshbouei H, **Grueter C**, **Grueter B**, Dash C, Pandhare J. Activation of proline biosynthesis is critical to maintain glutamate homeostasis during acute methamphetamine exposure. Sci Rep. 2021 Jan 14;11(1):1422. doi: 10.1038/s41598-020-80917-7. PMID: 33446840; PMCID: PMC7809342.

Kertai MD, Mosley JD, He J, Ramakrishnan A, Abdelmalak M, Hong Y, Shoemaker MB, Roden DM, Bastarache L. Predictive Accuracy of a Polygenic Risk Score for Postoperative Atrial Fibrillation After Cardiac Surgery. Circ Genom Precis Med. 2021 Mar 1. doi: 10.1161/CIRCGEN.120.003269. Epub ahead of print. PMID: 33647223.

Kynes JM, Kauffmann R, **Walters CB**, Sizemore C, **Banerjee A.** The Preparing Residents for International Medical Experiences (PRIME) Simulation Workshop: Equipping Surgery and Anesthesia Trainees for International Rotations. MedEdPORTAL. 2021 Feb 11;17:11088. doi: 10.15766/mep_2374-8265.11088. PMID: 33598534; PMCID: PMC7880254.

Lam L, **Richardson MG**, Zhao Z, Thampy M, Ha L, Osmundson SS. Enhanced discharge counseling to reduce outpatient opioid use after cesarean delivery: a randomized clinical trial. Am J Obstet Gynecol MFM. 2021 Jan;3(1):100286. doi: 10.1016/j.ajogmf.2020.100286. Epub 2020 Dec 3. PMID: 33451618.

Lee WT, Hill RW, Baidya J, Choudhry DK, **Brenn BR.** Comparative Evaluation of Tube First Versus Video Laryngoscope First Techniques in a Normal and Simulated Difficult Airway Model: A Randomized Controlled Trial. AANA J. 2020 Dec;88(6):479-483. PMID: 33218384.

Lefevre RJ, Crossley GH, **Sorabella LL, Siegrist KK, Eagle SS.** Unintended ICD discharge in a patient undergoing bladder tumor resection utilizing monopolar cautery and full-body return electrode. J Cardiovasc Electrophysiol. 2020 Oct;31(10):2762-2764. doi: 10.1111/jce.14699. Epub 2020 Aug 5. PMID: 33462878.

Li G, Freundlich RE, Gupta RK, Hayhurst CJ, Le CH, Martin BJ, Shotwell MS, **Wanderer JP.** Postoperative Pulmonary Complications' Association with Sugammadex versus Neostigmine. Anesthesiology. 2021 Mar 17. doi: 10.1097/ALN.00000000003735. Epub ahead of print. PMID: 33730169.

Lombard FW, Popescu WM, Oprea AD, **Kertai MD.** Perioperative thrombocytopenia. Curr Opin Anaesthesiol. 2021 Jun 1;34(3):335-344. doi: 10.1097/ACO.00000000000999. PMID: 33935182. **Lopez MG,** Shotwell MS, Morse J, Liang Y, **Wanderer JP**, Absi TS, Balsara KR, Levack MM, Shah AS, **Hernandez A, Billings FT 4th.** Intraoperative venous congestion and acute kidney injury in cardiac surgery: an observational cohort study. Br J Anaesth. 2021 Mar;126(3):599-607. doi: 10.1016/j.bja.2020.12.028. Epub 2021 Feb 4. PMID: 33549321.

Manz KM, Coleman BC, **Grueter CA**, Shields BC, Tadross MR, **Grueter BA**. Noradrenergic signaling disengages feedforward transmission in the nucleus accumbens shell. J Neurosci. 2021 Mar 16:JN-RM-2420-20. doi: 10.1523/JNEUROSCI.2420-20.2021. Epub ahead of print. PMID: 33737458.

Manz KM, Siemann JK, McMahon DG, **Grueter BA.** Patch-clamp and multi-electrode array electrophysiological analysis in acute mouse brain slices. STAR Protoc. 2021 Apr 5;2(2):100442. doi: 10.1016/j.xpro.2021.100442. PMID: 33899023; PMCID: PMC8056272.

Mart MF, Girard TD, Thompson JL, Whitten-Vile H, Raman R, **Pandharipande PP**, Heyland DK, Ely EW, Brummel NE. Nutritional Risk at intensive care unit admission and outcomes in survivors of critical illness. Clin Nutr. 2021 Jun;40(6):3868-3874. doi: 10.1016/j. clnu.2021.05.005. Epub 2021 May 11. PMID: 34130034; PMCID: PMC8243837.

Mart MF, Pun BT, **Pandharipande P**, Jackson JC, Ely EW. ICU Survivorship-The Relationship of Delirium, Sedation, Dementia, and Acquired Weakness. Crit Care Med. 2021 Jun 9. doi: 10.1097/CCM.00000000005125. Epub ahead of print. PMID: 34115639.

McBride MA, **Patil TK, Bohannon JK, Hernandez A, Sherwood ER, Patil NK.** Immune Checkpoints: Novel Therapeutic Targets to Attenuate Sepsis-Induced Immunosuppression. Front Immunol. 2021 Feb 3;11:624272. doi: 10.3389/ fimmu.2020.624272. PMID: 33613563; PMCID: PMC7886986.

McEvoy MD, Dear ML, Buie R, **Fowler LC**, Miller B, Fleming GM, Moore D, Rice TW, Bernard GR, Lindsell CJ; Vanderbilt Learning Healthcare System Investigators. Embedding Learning in a Learning Health Care System to Improve Clinical Practice. Acad Med. 2021 Feb 9. doi: 10.1097/ACM.0000000003969. Epub ahead of print. PMID: 33570841.

McIlroy DR, Roman B, **Billings FT 4th**, Bollen BA, Fox A, Geube M, Liu H, Shore-Lesserson L, Zarbock A, Shaw AD. Potential Renoprotective Strategies in Adult Cardiac Surgery: A Survey of Society of Cardiovascular Anesthesiologists Members to Explore the Rationale and Beliefs Driving Current Clinical Decision- Making. J Cardiothorac Vasc Anesth. 2021 Feb 6:S1053-0770(21)00099-9. doi: 10.1053/j.jvca.2021.02.004. Epub ahead of print. PMID: 33674203.

Meyer LJ, **Riess ML.** Evaluation of In Vitro Neuronal Protection by Postconditioning with Poloxamer 188 Following Simulated Traumatic Brain Injury. Life (Basel). 2021 Apr 6;11(4):316. doi: 10.3390/life11040316. PMID: 33917288; PMCID: PMC8067401.

Miles M, Burdick KJ, Shi Y, Shotwell MS, Lane-Fall M, **Schlesinger JJ.** The authors reply. Crit Care Med. 2021 May 1;49(5):e551-e553. doi: 10.1097/CCM.000000000004954. PMID: 33854022. **Mishra P, Edwards D,** Huntoon M, **Sobey C,** Polkowski G, **Corey J, Mishra KL**, Shinar A, Engstrom S, Palmer C, **Bruehl S.** Is preoperative genicular radiofrequency ablation effective for reducing pain following total knee arthroplasty? A pilot randomized clinical trial. Reg Anesth Pain Med. 2021 Jul 2:rapm-2021-102501. doi: 10.1136/rapm-2021-102501. Epub ahead of print. PMID: 34215667.

Morandi A, Grossi E, Lucchi E, Zambon A, Faraci B, Severgnini J, MacLullich A, **Smith H, Pandharipande P**, Rizzini A, Galeazzi M, Massariello F, Corradi S, Raccichini A, Scrimieri A, Morighi V, Gentile S, Lucchini F, Pecorella L, Mossello E, Cherubini A, Bellelli G. The 4-DSD: A New Tool to Assess Delirium Superimposed on Moderate to Severe Dementia. J Am Med Dir Assoc. 2021 Apr 3:S1525-8610(21)00249-8. doi: 10.1016/j.jamda.2021.02.029. Epub ahead of print. PMID: 33823162.

Morris MC, **Bruehl S, Stone AL,** Garber J, Smith C, Palermo TM, Walker LS. Does Quantitative Sensory Testing Improve Prediction of Chronic Pain Trajectories? A Longitudinal Study of Youth with Functional Abdominal Pain Participating in a Randomized Controlled Trial of Cognitive Behavioral Treatment. Clin J Pain. 2021 Jun 30. doi: 10.1097/AJP.000000000000056. Epub ahead of print. PMID: 34192714.

Nordness MF, **Hayhurst CJ, Pandharipande P.** Current Perspectives on the Assessment and Management of Pain in the Intensive Care Unit. J Pain Res. 2021 Jun 14;14:1733-1744. doi: 10.2147/JPR.S256406. PMID: 34163231; PMCID: PMC8214553.

Novak LL, **Wanderer J**, Owens DA, Fabbri D, Genkins JZ, Lasko TA. A Perioperative Care Display for Understanding High Acuity Patients. Appl Clin Inform. 2021 Jan;12(1):164-169. doi: 10.1055/s-0041-1723023. Epub 2021 Mar 3. PMID: 33657635; PMCID: PMC7929715.

Nthumba PM, **Newton MW**, Gathuya Z. Global surgery in the 21st century: The voice from Africa - We need a new model. Paediatr Anaesth. 2021 May;31(5):510-512. doi: 10.1111/ pan.14162. PMID: 33844377.

Odinkemelu DS, Sonah AK, Nsereko ET, Dahn BT, Martin MH, Moon TD, **Niconchuk JA, Walters CB, Kynes JM.** An Assessment of Anesthesia Capacity in Liberia: Opportunities for Rebuilding Post-Ebola. Anesth Analg. 2021 Apr 12. doi: 10.1213/ANE.00000000005456. Epub ahead of print. PMID: 33844659.

Omer S, Jin SC, **Koumangoye R**, Robert SM, Duran D, Nelson-Williams C, Huttner A, DiLuna M, Kahle KT, **Delpire E.** Protein kinase D1 variant associated with human epilepsy and peripheral nerve hypermyelination. Clin Genet. 2021 Apr 27. doi: 10.1111/cge.13973. Epub ahead of print. PMID: 33904160.

Owen AM, Fults JB, **Patil NK**, **Hernandez A**, **Bohannon JK**. TLR Agonists as Mediators of Trained Immunity: Mechanistic Insight and Immunotherapeutic Potential to Combat Infection. Front Immunol. 2021 Feb 18;11:622614. doi: 10.3389/fimmu.2020.622614. PMID: 33679711; PMCID: PMC7930332.

Pal N, Abernathy JH 3rd, Taylor MA, Bollen BA, Shah AS, Feng X, Shotwell MS, **Kertai MD.** Dexmedetomidine, Delirium, and Adverse Outcomes: Analysis of the STS Adult Cardiac Surgery Database. Ann Thorac Surg. 2021 Apr 23:S0003-4975(21)00725-6. doi: 10.1016/j. athoracsur.2021.03.098. Epub ahead of print. PMID: 33901455. Pal N, Weitzel N, **Kertai MD.** The Year 2020 in Review: Coronavirus Disease 2019 Cloud and Its Impact Excelling the Clinical Practice. Semin Cardiothorac Vasc Anesth. 2021 May 18:10892532211016152. doi: 10.1177/10892532211016152. Epub ahead of print. PMID: 34000905.

Pal N, Weitzel NS, **Kertai MD.** A Change of Tide or the Beginning of the End: COVID-19. Semin Cardiothorac Vasc Anesth. 2021 Mar;25(1):5-10. doi: 10.1177/1089253221989132. PMID: 33554769.

Palermo TM, Walco GA, Paladhi UR, Birnie KA, Crombez G, Vega R, Eccleston C, Kashikar-Zuck S, **Stone AL.** Core outcome set for pediatric chronic pain clinical trials: results from a Delphi poll and consensus meeting. Pain. 2021 Feb 22. doi: 10.1097/j. pain.0000000002241. Epub ahead of print. PMID: 33625074.

Panebianco NL, Mayo PH, Arntfield RT, Brown SM, Diaz-Gomez J, **Hernandez A**, Koenig SJ, Noble V, Sekiguchi H, Subhiyah RG, Mulvagh S, Saric M, Troianos CA, Labovitz AJ. Assessing Competence in Critical Care Echocardiography: Development and Initial Results of an Examination and Certification Processes. Crit Care Med. 2021 Mar 17. doi: 10.1097/ CCM.00000000004940. Epub ahead of print. PMID: 33730745.

Pille JA, **Riess ML.** Potential Effects of Poloxamer 188 on Rat Isolated Brain Mitochondria after Oxidative Stress In Vivo and In Vitro. Brain Sci. 2021 Jan 18;11(1):122. doi: 10.3390/brainsci11010122. PMID: 33477541; PMCID: PMC7831103.

Pokidysheva EN, Seeger H, Pedchenko V, Chetyrkin S, Bergmann C, Abrahamson D, Cui ZW, **Delpire E,** Fervenza F, Fidler AL, Fogo AB, Gaspert A, Grohmann M, Gross O, Haddad G, Harris RC, Kashtan C, Kitching AR, Lorenzen JM, McAdoo S, Pusey CD, Segelmark M, Simmons A, Voziyan PA, Wagner T, Wüthrich RP, Zhao MH, Boudko SP, Kistler AD, Hudson BG. Collagen IV^{α345} dysfunction in glomerular basement membrane diseases. I. Discovery of a COL4A3 variant in familial Goodpasture's and Alport diseases. J Biol Chem. 2021 Mar 24:100590. doi: 10.1016/j.jbc.2021.100590. Epub ahead of print. PMID: 33774048.

Pregnall AM, Churchwell AL, **Ehrenfeld JM.** A Call for LGBTQ Content in Graduate Medical Education Program Requirements. Acad Med. 2021 Jun 1;96(6):828-835. doi: 10.1097/ACM.0000000003581. PMID: 34031304.

Prowle JR, Forni LG, Bell M, Chew MS, Edwards M, Grams ME, Grocott MPW, Liu KD, **McIlroy D**, Murray PT, Ostermann M, Zarbock A, Bagshaw SM, Bartz R, Bell S, Bihorac A, Gan TJ, Hobson CE, Joannidis M, Koyner JL, Levett DZH, Mehta RL, Miller TE, Mythen MG, Nadim MK, Pearse RM, Rimmele T, Ronco C, Shaw AD, Kellum JA. Postoperative acute kidney injury in adult non-cardiac surgery: joint consensus report of the Acute Disease Quality Initiative and PeriOperative Quality Initiative. Nat Rev Nephrol. 2021 May 11. doi: 10.1038/s41581-021-00418-2. Epub ahead of print. PMID: 33976395.

Pun BT, Badenes R, Heras La Calle G, Orun OM, Chen W, Raman R, Simpson BK, Wilson-Linville S, Hinojal Olmedillo B, Vallejo de la Cueva A, van der Jagt M, Navarro Casado R, Leal Sanz P, Orhun G, Ferrer Gómez C, Núñez Vázquez K, Piñeiro Otero P, Taccone FS, Gallego Curto E, Caricato A, Woien H, Lacave G, O'Neal HR Jr, Peterson SJ, Brummel NE, Girard TD, Ely EW, **Pandharipande PP**; COVID-19 Intensive Care International Study Group. Prevalence and risk factors for delirium in critically ill patients with COVID-19 (COVID-D): a multicentre cohort study. Lancet Respir Med. 2021 Jan 8:S2213-2600(20)30552-X. doi: 10.1016/S2213-2600(20)30552-X. Epub ahead of print. Erratum in: Lancet Respir Med. 2021 Jan 27; PMID: 33428871; PMCID: PMC7832119.

Raman R, Chen W, Harhay MO, Thompson JL, Ely EW, **Pandharipande PP**, Patel MB. Dealing with missing delirium assessments in prospective clinical studies of the critically ill: a simulation study and reanalysis of two delirium studies. BMC Med Res Methodol. 2021 May 6;21(1):97. doi: 10.1186/s12874-021-01274-1. PMID: 33952189; PMCID: PMC8101230.

Rengel KF, Hayhurst CJ, Jackson JC, **Boncyk CS,** Patel MB, Brummel NE, Shi Y, Shotwell MS, Ely EW, **Pandharipande PP, Hughes CG.** Motoric Subtypes of Delirium and Long-Term Functional and Mental Health Outcomes in Adults After Critical Illness. Crit Care Med. 2021 Feb 23. doi: 10.1097/CCM.000000000004920. Epub ahead of print. PMID: 33729717.

Robertson AC, Fowler LC, Kimball TS, **Niconchuk JA,** Kreger MT, Brovman EY, Rickerson E, Sadovnikoff N, Hepner DL, **McEvoy MD,** Bader AM, Urman RD. Efficacy of an Online Curriculum for Perioperative Goals of Care and Code Status Discussions: A Randomized Controlled Trial. Anesth Analg. 2021 Apr 22. doi: 10.1213/ANE.0000000005548. Epub ahead of print. PMID: 33886519.

Rodney JP, Shinn JR, Amin SN, Portney DS, Mitchell MB, Chopra Z, Rees AB, Kupfer RA, Hogikyan ND, Casper KA, Tate A, Vinson KN, Fletcher KC, Gelbard A, **St Jacques PJ, Higgins MS,** Morrison RJ, Garrett CG. Multi-Institutional Analysis of Outcomes in Supraglottic Jet Ventilation with a Team-Based Approach. Laryngoscope. 2021 Feb 20. doi: 10.1002/lary.29431. Epub ahead of print. PMID: 33609043.

Sangari A, **Emhardt EA**, Salas B, Avery A, **Freundlich RE**, Fabbri D, Shotwell MS, **Schlesinger JJ**. Delirium Variability is Influenced by the Sound Environment (DEVISE Study): How Changes in the Intensive Care Unit soundscape affect delirium incidence. J Med Syst. 2021 Jun 25;45(8):76. doi: 10.1007/s10916-021-01752-5. PMID: 34173052.

Schirle LM, Dietrich MS, Lam L Ms, **Stone AL, Bruehl S,** Osmundson SS. Accuracy of Patient-Reported Versus Real-Time Electronic Postoperative Opioid Use Outcomes: Condensation: Patient-reported postoperative opioid use corresponded highly with electronically-derived data, and is a reasonably accurate method to assess opioid use over a 2-week time period. Am J Obstet Gynecol MFM. 2021 Mar 11:100347. doi: 10.1016/j. ajogmf.2021.100347. Epub ahead of print. PMID: 33716134.

Schwenk ES, **Gupta RK.** Femoral triangle block plus iPACK block versus local infiltration analgesia for anterior cruciate ligament reconstruction: an infographic. Reg Anesth Pain Med. 2021 Jun 18:rapm-2021-102942. doi: 10.1136/rapm-2021-102942. Epub ahead of print. PMID: 34145055.

Siegrist KK, Fernandez Robles C, **Kertai MD**, Oprea AD. The Electrophysiology Laboratory: Anesthetic Considerations and Staffing Models. J Cardiothorac Vasc Anesth. 2021 Feb 26:S1053-0770(21)00185-3. doi: 10.1053/j.jvca.2021.02.050. Epub ahead of print. PMID: 33773891.

Sinz E, **Banerjee A**, Steadman R, Shotwell MS, **Slagle J**, McIvor WR, Torsher L, Burden A, Cooper JB, DeMaria S Jr, Levine AI, Park C, Gaba DM, **Weinger MB**, Boulet JR. Reliability of simulationbased assessment for practicing physicians: performance is context-specific. BMC Med Educ. 2021 Apr 12;21(1):207. doi: 10.1186/s12909-021-02617-8. PMID: 33845837; PMCID: PMC8042680.

Smith DK, **Freundlich RE**, Shinn JR, Wood CB, Rohde SL, **McEvoy MD**. An improved predictive model for postoperative pulmonary complications after free flap reconstructions in the head and neck. Head Neck. 2021 Mar 30. doi: 10.1002/hed.26689. Epub ahead of print. PMID: 33783905.

Smith LE, Smith DK, Yancey PG, Kon V, Remaley AT, **Billings FT 4th**, Linton MF. Perioperative high-density lipoproteins, oxidative stress, and kidney injury after cardiac surgery. J Lipid Res. 2021 Jan 13:100024. doi: 10.1016/j.jlr.2021.100024. Epub ahead of print. PMID: 33453220.

Smith NK, **Grueter BA.** Hunger-driven adaptive prioritization of behavior. FEBS J. 2021 Feb 25. doi: 10.1111/febs.15791. Epub ahead of print. PMID: 33630426.

Sreetharan S, **Schlesinger JJ**, Schutz M. Decaying amplitude envelopes reduce alarm annoyance: Exploring new approaches to improving auditory interfaces. Appl Ergon. 2021 Oct;96:103432. doi: 10.1016/j.apergo.2021.103432. Epub 2021 Jun 14. PMID: 34120000.

Stone AL, Qu'd D, Luckett T, Nelson SD, Quinn EE, Potts AL, Patrick SW, **Bruehl S, Franklin AD.** Leftover Opioid Analgesics and Disposal Following Ambulatory Pediatric Surgeries in the Context of a Restrictive Opioid- Prescribing Policy. Anesth Analg. 2021 Mar 31. doi: 10.1213/ANE.00000000005503. Epub ahead of print. PMID: 33788776.

Toporek AH, Semler MW, Self WH, Bernard GR, Wang L, Siew ED, Stollings JL, **Wanderer JP**, Rice TW, Casey JD; SMART Investigators and the Pragmatic Critical Care Research Group. Balanced Crystalloids versus Saline in Critically Ill Adults with Hyperkalemia or Acute Kidney Injury: Secondary Analysis of a Clinical Trial. Am J Respir Crit Care Med. 2021 Jan 27. doi: 10.1164/rccm.202011-4122LE. Epub ahead of print. PMID: 33503391.

Triana AJ, Vyas R, Shah AS, **Tiwari V.** Predicting Length of Stay of Coronary Artery Bypass Grafting Patients Using Machine Learning. J Surg Res. 2021 Mar 27;264:68-75. doi: 10.1016/j. jss.2021.02.003. Epub ahead of print. PMID: 33784585.

Turner BD, Smith NK, Manz KM, Chang BT, **Delpire E, Grueter CA, Grueter BA.** Cannabinoid type 1 receptors in A2a neurons contribute to cocaine-environment association. Psychopharmacology (Berl). 2021 Jan 16. doi: 10.1007/s00213-021-05759-1. Epub ahead of print. PMID: 33454843.

Umutesi G, **McEvoy MD**, Bonnet K, Druffner S, Schlundt DG, Atieli HE, China JN, Onyango K, **Newton MW.** Factors influencing mothers' decisions regarding obstetrical care in Western Kenya: a mixed-methods study. BMC Womens Health. 2021 May 19;21(1):210. doi: 10.1186/s12905-021-01355-9. PMID: 34011323; PMCID: PMC8136230.

Walters C, Kilkelly J, Sobey J, McQueen KA. Anesthesiology Leadership: a review. Physician Leadership Journal. 2021;8(2):34-40.

Walters C. Pediatric Anesthesiology Special Issue. Children (Basel). 2021 Mar 7;8(3):201. doi: 10.3390/children8030201. PMID: 33800089; PMCID: PMC7999179.

Ward DS, Absalom AR, Aitken LM, Balas MC, Brown DL, Burry L, Colantuoni E, Coursin D, Devlin JW, Dexter F, Dworkin RH, Egan TD, Elliott D, Egerod I, Flood P, Fraser GL, Girard TD, Gozal D, Hopkins RO, Kress J, Maze M, Needham DM, **Pandharipande P**, Riker R, Sessler DI, Shafer SL, Shehabi Y, Spies C, Sun LS, Tung A, Urman RD. Design of Clinical Trials Evaluating Sedation in Critically Ill Adults Undergoing Mechanical Ventilation: Recommendations From Sedation Consortium on Endpoints and Procedures for Treatment, Education, and Research (SCEPTER) Recommendation III. Crit Care Med. 2021 Apr 28. doi: 10.1097/CCM.00000000005049. Epub ahead of print. PMID: 33938718.

Ward MJ, Chavis B, Banerjee R, Katz S, **Anders S.** User-Centered Design in Pediatric Acute Care Settings Antimicrobial Stewardship. Appl Clin Inform. 2021 Jan;12(1):34-40. doi: 10.1055/s-0040-1718757. Epub 2021 Jan 20. PMID: 33472258; PMCID: PMC7817334.

Watkins SC, de Oliveira Filho GR, Furse CM, Muffly MK, Ramamurthi RJ, Redding AT, Maass B, **McEvoy MD.** Tools for Assessing the Performance of Pediatric Perioperative Teams During Simulated Crises: A Psychometric Analysis of Clinician Raters' Scores. Simul Healthc. 2021 Feb 1;16(1):20-28. doi: 10.1097/SIH.00000000000467. PMID: 33956763.

Weaver CD, **Denton JS.** Next-generation inward rectifier potassium channel modulators: Discovery and molecular pharmacology. Am J Physiol Cell Physiol. 2021 Apr 7. doi: 10.1152/ ajpcell.00548.2020. Epub ahead of print. PMID: 33826405.

Weinger MB. Time out! Rethinking surgical safety: more than just a checklist. BMJ Qual Saf. 2021 Mar 23:bmjqs-2020-012600. doi: 10.1136/bmjqs-2020-012600. Epub ahead of print. PMID: 33758034.

Wise ES, Hocking KM, Polcz ME, Beilman GJ, Brophy CM, **Sobey JH, Leisy PJ,** Kiberenge RK, **Alvis BD.** Hemodynamic Parameters in the Assessment of Fluid Status in a Porcine Hemorrhage and Resuscitation Model. Anesthesiology. 2021 Apr 1;134(4):607-616. doi: 10.1097/ALN.00000000003724. PMID: 33635950; PMCID: PMC7946734.

Yamanashi T, Saito T, Yu T, Alario A, Comp K, Crutchley KJ, Sullivan EJ, Anderson ZM, Marra PS, Chang G, Wahba NE, Jellison SS, Meyer AA, Mathur S, **Pandharipande P**, Yoshino A, Kaneko K, Lee S, Toda H, Iwata M, Shinozaki G. DNA methylation in the TNF-alpha gene decreases along with aging among delirium inpatients. Neurobiol Aging. 2021 May 21;105:310-317. doi: 10.1016/j.neurobiolaging.2021.05.005. Epub ahead of print. PMID: 34192631.

Yan C, Zhang X, Gao C, Wilfon E, Casey J, **France D,** Gong Y, Patel M, Malin B, Chen Y. The Collaboration Structure in COVID-19 Critical Care: A Network Analysis. JMIR Hum Factors. 2021 Feb 22. doi: 10.2196/25724. Epub ahead of print. PMID: 33621187.

Yang B, Sanches-Padilla J, Kondapalli J, Morison SL, **Delpire E,** Awatramani R, Surmeier DJ. Locus coeruleus anchors a trisynaptic circuit controlling fear- induced suppression of feeding. Neuron. 2021 Jan 20:S0896-6273(20)31027-8. doi: 10.1016/j.neuron.2020.12.023. Epub ahead of print. PMID: 33476548.

Department Leadership



Warren Sandberg, MD, PhD Chair, Department of Anesthesiology Vanderbilt University Medical Center



Jeanette Bauchat, MD, MS Chief, Obstetric Anesthesiology



Christopher Canlas, MD Chief, Ambulatory Anesthesiology



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



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



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



Brian Gelfand, MD Associate Vice Chair, Educational Affairs; Director, Residency Program



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



Bevan Londergan, MD Chief, Pediatric Cardiac Anesthesiology



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



Matthew McEcoy, MD Vice Chair, Educational Affairs; Medical Director, Perioperative Consult Service



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



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



Mias Pretorius, MBChB, MSCI Chief, Cardiothoracic Anesthesiology



Srijaya Reddy, MD, MBA Chief, Pediatric Anesthesiology



Mark Rice, MD Executive Vice Chair, Department of Anesthesiology



Amy Robertson, MD *Vice Chair, Clinical Affairs*



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



Ann Walia, MBBS Chief, Veterans Affairs Anesthesiology Service



Stephen Doherty, MMHC Department Administrator



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



Clavne Benson, MD Medical Director II, Liver Transplant Team



Josh Billings, MD Resident Research Coordinator Co-Director. BH Robbins Scholar Program



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



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



Stephen Bruehl, PhD Research Compliance Officer



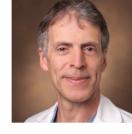
Brian Donahue, MD, PhD Pediatric Research Leadership



Susan Dumas, MD



Jeffery Clemmons, MD Medical Director. Vanderbilt Surgery Center



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



MS, MSCI



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



Medical Director, OB/GYN

Peter Chin, MBBS

VUMC Sedation

Committee Chair



Holly Ende, MD Fellowship Director, Obstetric Anesthesiology



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





Michael Higgins, MD, MPH Chair, Peer Review Committee



Christina Hayhurst, MD

Anesthesiology Critical

Fellowship Director,

Care Medicine

Elizabeth Hughes, MD Clinical Director, Pediatric Anesthesiology; Associate Director, Residency Program



Patrick Henson, DO Medical Director II, PACU



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

Koffi Kla, MD

Medical Director, VUAH &

MCE Operating Rooms



Douglas Hester, MD Director & Coordinator, Resident Simulation Program



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



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

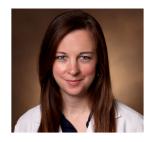




Miklos Kertai, MD, PhD Precision Perioperative Medicine Leadership



Carrie Menser, MD Medical Director, VCH PACU



Merrick Miles, MD Medical Director, Cool Springs Surgery Center



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



Chris Sobey, MD Fellowship Director, Pain Medicine



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



Gregory Panomitros, MD Medical Director, VUH Satellite Anesthesiology Services



Jenna Sobey, MD Fellowship Director, Pediatric Anesthesiology



Puneet Mishra, MD Associate Fellowship Director, Pain Medicine



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



Paul St. Jacques, MD Patient Safety Officer



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



Kara Siegrist, MD Medical Director, Catheter and EP Labs



Jonathan Wanderer, MD, MPhil Associate Director, VAPIR



Roy Neeley, MD

Chair, Supplies and

Equipment Committee

Bantayehu Sileshi, MD Fellowship Director, Cardiothoracic Anesthesiology



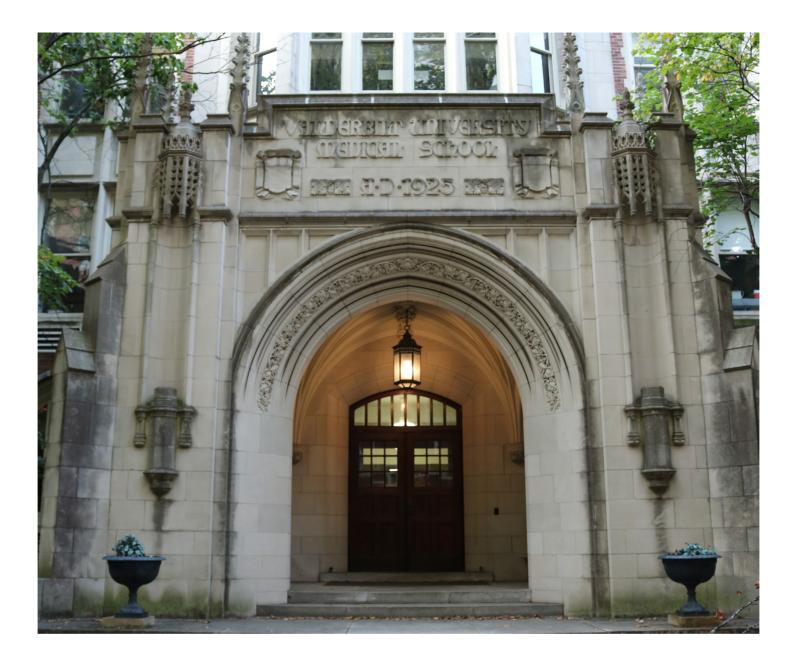
Sheena Weaver, MD Medical Director, Vanderbilt Preoperative Evaluation Center



Liza Weavind, MBBCh, FCCM, MMHC Associate Chief, Anesthesiology Critical Care Medicine; Associate Medical Director, SICU; Director, Critical Care Burn Unit; Program Director, Vanderbilt eICU



Edward Yaghmour, MD Director, Adult Regional Anesthesiology & Acute Pain Service



Department of Anesthesiology

VANDERBILT 💱 UNIVERSITY

MEDICAL CENTER

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