

Dr. Lovvorn, Dr. Blakely

Message from the Program Director

The Vanderbilt Pediatric Surgery Residency seeks exceptional candidates from a diverse background who are eager to pursue a career in academic Pediatric Surgery and to make unique and life-long contributions to our specialty. The Department of Pediatric Surgery promotes excellence in the comprehensive surgical care of children. Our highly-accomplished group of pediatric surgeons is committed to the practice and teaching of excellence in clinical care and to the discovery of innovative therapies through clinical outcomes and basic laboratory research. The education of Pediatric Surgery residents and categorical Surgery residents is fundamental to our mission. We also cherish teaching undergraduates, medical students, and nursing students on the wonders of Pediatric Surgery. Our nationally renowned Department of Pediatric Surgery and comprehensive hospital offer a stimulating environment and opportunity for the clinical and investigative training of academic Pediatric Surgeons. Our Pediatric Surgery residents develop a unique expertise in the clinical approach to the surgical problems of childhood, as well as a critical and analytical approach to the evidence-based practice of Pediatric Surgery.

The resident finishing the Pediatric Surgery Residency at Vanderbilt will be competent in the full spectrum of this broad specialty. Our faculty perform the full scope of Pediatric Surgical procedures, from routine to the most complex, and among all ages through early adulthood.

The Vanderbilt Department of Pediatric Surgery is historically one of the most well-rounded academic groups nationwide and produces a high volume of impactful manuscripts and scientific presentations annually. Our Department also has a strong history of securing extramural NIH funding. The Pediatric Surgery resident is encouraged to participate in any research endeavor s/he wishes during fellowship. Support for Pediatric Surgery resident-initiated research and travel to meetings is available

through several resources (see research opportunities on back). The Pediatric Surgery resident at Vanderbilt should consider themselves an ambassador for our service and an advocate for the sick child, and in this role, to recruit top medical students into Surgery and Surgery residents into Pediatric Surgery. For the Pediatric Surgery resident interested in International Humanitarian work, the opportunity to rotate through Bethany Kids Hospital in Kijabe, Kenya during this two-year fellowship is available.

Altogether, our Department of Pediatric Surgery is comprised of diverse faculty who study unique aspects of our precious specialty, which makes training at the Monroe Carell Jr. Children's Hospital at Vanderbilt special. The finishing resident is truly prepared for any career trajectory in Pediatric Surgery!



Harold N. Lovvorn, III, MD Program Director Professor of Pediatric Surgery



Eunice Y. Huang, MD Associate Program Director Professor of Pediatric Surgery



Message from the Chair of the **Department of Pediatric Surgery**

The Department of Pediatric Surgery at Vanderbilt operates within one of the largest, most respected, and fastest growing medical centers in the country. Our department serves one of the largest free-standing children's hospitals in the country, the Monroe Carell Jr. Children's Hospital at Vanderbilt. Our hospital faculty surgeons, nurses, and staff provide care designed specifically for the needs of children and their families. Patients originate from the entire state of Tennessee, Kentucky, Alabama, and Virginia.

The Department of Pediatric Surgery is committed to providing and promoting excellence in surgical care. Our surgeons and nurses are specially trained to treat fetal patients, newborns, infants, toddlers, children and young adults.

We perform the full scope of Pediatric Surgery procedures at two campuses, with the inpatient volume exclusively at Monroe Carell while the outpatient procedures are shared with a new, state-of-theart ambulatory surgery center in nearby Murfreesboro, TN.



Meet the **Faculty**

Jeffrey Upperman, MD Professor and Chair, Department of Pediatric Surgeon-in-Chief, Monroe Carell Jr. Children's Hospital at Vanderbilt Profile link

Vanderbilt Department of Pediatric Surgery - Our Mission -

Our mission is to provide and promote excellence in the surgical care of children. This comprehensive care extends from fetal patients to young adults. Our unified group commitment to excellence includes clinical care, both clinical and laboratory research, and the education of students, nurses, residents and fellows.

Meet your Pediatric Surgery Residency, **Associate Program** Manager



Melissa Danko, MD Associate Professor of Pediatric Surgery

Profile link



Joseph Fusco, MD Assistant Professor of Pediatric Surgery Profile link



Maggie Gallagher, MD Assistant Professor of Pediatric Surgery and Pediatrics

Profile link



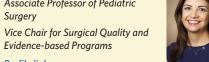
Eunice Huang, MD, MS Associate Program Director Profile link



Gretchen Jackson, MD, PhD Associate Professor of Pediatric Surgery and Biomedical Informatics Profile link



Monica Lopez, MD Associate Professor of Pediatric



Harold Lovvorn, III, MD Professor Pediatric Surgery **Program Director** Profile link

Profile link



Walter Morgan, III, MD Associate Professor of Pediatric Surgery and Pediatrics Profile link



Jamie Robinson, MD Assistant Professor of Pediatric Surgery Profile link



Irving Zamora, MD, MPH Assistant Professor of Pediatric Surgery Profile link



Monroe Carell Jr. Children's Hospital at Vanderbilt by the Numbers



ISNews

Vanderbilt Lifeflight air and ground medical transportation services complete an annual **7,402** adult and pediatric transports





Vanderbilt Children's Hospital by the Numbers

- Total Inpatient Beds: 343
- Emergency Department Rooms: 42 (including 2 trauma bays and 7 fast track bays)
- Operating Rooms: 18 (onsite)
- Inpatient Discharges: 16,232
- Clinic Visits: 360,314
- ER Visits: 47,446
- The only Level 1-designated Trauma Unit and dedicated Burn Unit in the region
- The only Level 4-designated Neonatal Intensive Care Unit
- More than 400 physicians trained in 30 pediatric and surgical specialties
- 10th Floor Expansion opened in June 2019 (Pediatric Heart Institute - 38 beds)
- 11th Floor Expansion opened in March 2020 (NICU, Cardiology and Transplant - 38 beds)

Other expansions

- 2020 opened Postpartum/NICU unit opening
- 2021 New Cath Lab coming
- The total footprint will be approximately 1 million square feet with 12 floors after the expansion of the four new floors

Research Opportunities

Pediatric Surgery clinical research programs offer a vast and diverse exposure to pediatric surgical research. The topics are broad and open to the resident and include:

- ongoing prospective clinical studies evaluating surgical treatments for common conditions such as Hernia Repair
- and Necrotizing Enterocolitis in infants • biomedical informatics to enhance online patient care portal for optimal communication
- Wilms tumor, or nephroblastoma, a common renal malignancy of the embryonic kidney and how racial disparities affect the treatment and outcomes.
- assessment of Body Composition in Children with Cancer or while on ECMO
- truly any topic in Pediatric Surgery

- Surgical Outcomes Center for Kids (SOCKs) https://www.vumc.org/socks/home
- Vanderbilt Institute for Clinical and Translational Research (VICTR) https://victr.vumc.org

Residents and Program Directors of the Department of Pediatric Surgery



Resident graduate gallery from L to R 2007 to 2021

Former Pediatric Surgery Residents:

2007-09, Barry R. Berch - University of Mississippi Medical Center

2008-10, Joshua B. Glenn - Navicent Health Children's Hospital and Mercer University School of Medicine

2009-11, Thomas P. Rauth - Tristar Centennial Medical Center

2010-12, Colin A. Martin - University of Alabama School of Medicine, Children's Hospital of Alabama

2011-13, Nathan M. Novotny - Beaumont Children's, Oakland University

2012-14, Melissa E. Danko - Monroe Carell Jr. Children's Hospital at Vanderbilt University Medical Center

2013-15, Brian T. Bucher - *University of Utah School of Medicine, Children's Hospital*

2014-16, Syamal Dave Bhattacharya - *Children'* s Hospital at *Erlanger, University of Tennessee*

2015-17, Adam S. Brinkman - University of Wisconsin School of Medicine, Children's Hospital

2016-18, Kyle Van Arendonk - *Children's Hospital of Wisconsin, Medical College of Wisconsin*

2017-19, Margaret Gallagher - Monroe Carrell Jr., Children's Hospital and Fort Campbell Medical Center

2018-20, Lauren A. Gillory - UT Southwestern Medical Center

2019-21, Laura Y. Martin - NYU Langone Health

2020-22, Jacob K. Olson - Riley Children's Hospital, Indiana ersity

Current Pediatric Surgery Residents:

2021-23, Laura Stafman - Chief Pediatric Surgery Resident

2022-24, Maren Shipe - Junior Pediatric Surgery Resident

2023-25, Roshan D'Cruz-Incoming Pediatric Surgery Resident

Program Directors

2007-11, Wallace "Skip" W. Neblett, Jr. 2011-18, Dai H. Chung 2018 - present Harold "Bo" N. Lovvorn, III

Pediatric Surgery Educational Curriculum and Conference Schedule

The Pediatric Surgery educational curriculum at Vanderbilt includes multidisciplinary conferences held from 07:00-09:00 each Wednesday, as well as a case-based Didactic Seminar held on the third Thursday of each month. The multidisciplinary conferences are conducted on specified days of the month with Pediatric Radiology, Pediatric Pathology, Pediatric Gastroenterology, Pediatric Emergency Medicine, and Pediatric Trauma. Other conferences include a Department Morbidity and



Dr. Lovvorn fist-bumps with Surgery resident Lexie Vaughn

Mortality review and then a quarterly presentation at the Section of Surgical Sciences M&M. Pediatric Surgery Grand Rounds and Journal Club are also held in this 2-hour block on recurring Wednesdays. We also participate in a monthly teleconference solid tumor board with St. Jude Children's Research Hospital, Memphis, TN and Prince's Maxima, Utrecht, Netherlands to share and discuss complex and challenging cancer cases.



Dr. Upperman operating with Senior Pediatric Surgery resident Lauren Gillory

Department of Pediatric Surgery Residents Cases by Volume

	Number of Index	Gallagher	Gallagher	Gallagher
Required Cases During Two Year Fellowship	Cases Required	Year 1	Year 2	Total
Bronchoscopy/Esophagoscopy	15	26	37	63
Esophageal Atresia/TE Fistula	5	7	4	11
GE Reflux (Fundoplication)	15	35	18	53
Lung Resection	5	6	10	16
Congenital Diaphragmatic Hernia Repair	6	8	13	21
Pyloric Stenosis	10	20	17	37
Malrotation/Intussusception	5	9	10	19
Intestinal atresia/duodenal atresia	5	9	9	18
Appendectomy	20	79	71	150
Hirschsprung (Pull Through)	5	3	4	7
Anorectal Malformation	5	3	6	9
Biliary Atresia/Choledochal Cyst	3	4	5	9
Abdominal Wall Defect Closure	5	11	6	17
Inguinal hemia < 6 months	15	37	18	55
Cryptorchid Testis (Orchiopexy)	5	6	2	8
Adnexal operations	5	12	8	20
Kidney/Neuroblastoma Resection	6	5	7	12
Head/Neck	10	20	12	32
Neonatal cases	75	87	79	166
Tumors	25	25	18	43
Non-operative trauma	90	97	38	135
Fellowship Y	ear 2018-2020			
Required Cases During Two Year Fellowship	Number of Index Cases Required		Lauren Gillory Year 2	Gillory Total
All I i I/Ol	100	4.40	0.4	0.45

Fellowship Year 2018-2020							
Required Cases During Two Year Fellowship	Number of Index Cases Required	Lauren Gillory Year 1	Lauren Gillory Year 2	Gillory Total			
Abdominal/GI	120	148	94	245			
Thoracic	50	36	37	73			
Endoscopy	30	29	18	47			
Operative trauma/critical care	20	31	19	50			
Non-operative trauma/critical care	90	97	42	139			
NICU	20	0	21	21			
PICU	10	2	9	11			
Oncology	25	21	16	37			
Head & Neck/Endocrine, GU, and ARM	50	36	30	66			



Legends of Pediatric Surgery – Holcomb Lecture with Dr. Hayes

Resident, Faculty Scrapbook



Didactic Conference Academic Year 2022-2023



TOPICS

- Necrotizing Enterocolitis (NEC) Spontaneous Intestinal Perforate
- Intestinal Atresia, Intestinal Duplication, Intussusception, and Meconiun Ileus
- Pectus
- Ovarian Cysts/Masses/Torsion
- Umbilical Abnormalities
- Liver Tumors
- Neck Lesions
- Vaginal Atresia/Hydrometrocolpos
- Anorectal Malformations
- Renal Tumors
- Sacrococcygeal Teratoma
- Parapneumonic Effusion/ Empyema/Spontaneous
 Pneumothorax
- Intestinal Atresias
- Gastroschisis/Omphalocele
- Hirschsprungs/Neonatal Obstruction
- Inflammatory Bowel Disease (IBD)
- Necrotizing Enterocolitis (NEC)/Spontaneous Intestinal Perforation (SIP)

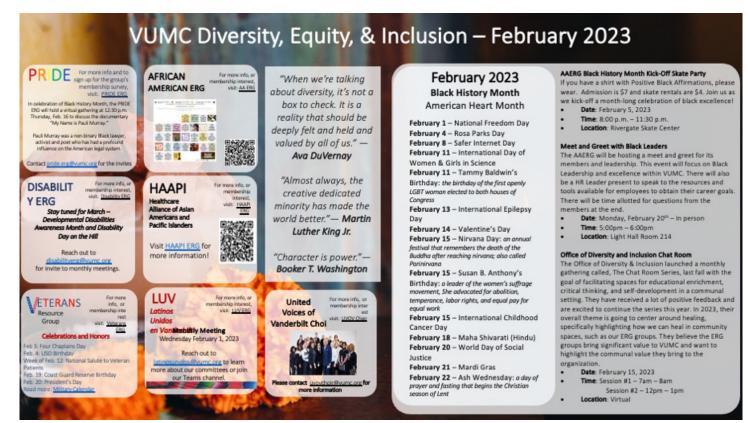


Welcoming Dr. Lopez

Diversity, Equity, and Inclusion

Vanderbilt Pediatric Surgery fully endorses and is committed to growing diversity within our precious specialty. We pledge to increase diversity, emphasize equity, and promote an inclusive culture within the pipeline of learners pursuing or considering Pediatric Surgery. Partnering with the Office of Diversity Affairs, our Department has participated in numerous exercises to mitigate bias when considering applicants to Pediatric Surgery.

We deeply value applicants who derive from unique backgrounds and aspire to exceptional careers. Our Department seeks to train Pediatric Surgeons from all races, ethnicities, genders and self-identity, sexual orientation, disabilities, geographic origins, and socioeconomic status.



For additional information, please visit:

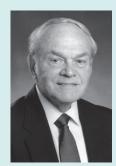
Vanderbilt School Medicine Diversity Website, and Section of Surgical Sciences Diversity and Inclusion Website.

Annual Endowed Holcomb Lecture

The George W. Holcomb, Jr. Lecture in Pediatric Surgery is presented by the Department of Pediatric Surgery in honor of George W. Holcomb, Jr., Clinical Professor of Surgery, Emeritus (June 19th, 1922 – June 29th, 2019).

Dr. Holcomb served as resident in Surgery at Vanderbilt from 1946 to 1949 and subsequently completed his training in Pediatric Surgery at Boston Children's Hospital in 1952

This named lecture attracts sought after



nationally renowned surgeons and surgeon scientists who consistently present inno-vative, cutting-edge procedures, methods and theory to surgical faculty and trainees.

Past Holcomb Guest Lecturers

1990 - Judson G. Randolph, MD

1991 - James A. O'Neill, Jr., MD

1992 - Lester W. Martin, MD

1993 - J. Alex Haller, Jr., MD

1994 - Thomas M. Holder, MD

1995 - Edwin Ide Smith, MD

1996 - Alfred A. de Lorimier, MD

1997 - R. Peter Altman, MD

1998 - Eric W. Fonkalsrud, MD

1999 - Robert J. Touloukian, MD

2000 - Moritz M. Ziegler, MD

2001 - H. Beimann Othersen, MD

2005 - George W. Holcomb, III, MD

2006 - Jay L. Grosfeld, MD

2007 - Bradley M. Rodgers, MD

2008 - Thomas M. Krummel, MD

2009 - Edward M. Barksdale, MD

2010 - Brad W. Warner, MD

2011 - George K. Gittes, MD

2012 - Thomas F. Tracy, Jr., MD

2013 - Kevin P. Lally, MD

2014 - Alan W. Flake, MD

2015 - Marshall Z. Schwartz, MD

2016 - Frederick J. Rescorla, MD

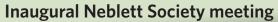
2017 - Anthony D. Sandler, MD

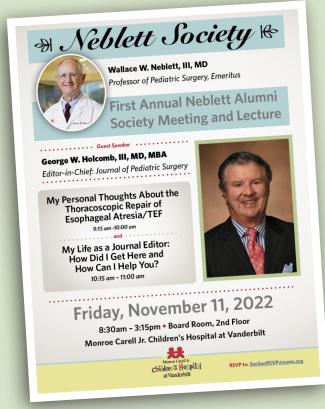
2018 - Daniel von Allmen, MD

2019 - Diana L. Farmer, MD

2022 - Andrea Hayes, MD

2023 - Jessica J. Kandel, MD





Wallace W. Neblett, III, MD

Professor of Pediatric Surgery, Emeritus

Dr. Neblett joined the Vanderbilt Faculty in 1980 as a Clinical Instructor in Surgery. Just four years later he accepted the appointment as Chair of the Department of Pediatric Surgery, a position held for the next 27 years. In 2011 he stepped down from his duties as Chair of the Department and Program Director of Fellowship Training but continued to practice pediatric surgery. He has dedicated 42 years to caring for sick children at Vanderbilt, supporting families, and teaching surgical residents.

FOUNDING MEMBERS

Barry R. Berch - 2007-2009 Joshua B. Glenn - 2008-2010

Thomas P. Rauth - 2009-2011 **Colin A. Martin** - 2010-2012

Nathan M. Novotny - 2011-2013

Melissa E. Danko - 2012-2014

Brian T. Bucher - 2013-2015

Syamal Dave Bhattacharya -2014-2016

Adam S. Brinkman - 2015-2017

Kyle Van Arendonk - 2016-2018 Margaret E. Gallagher - 2017-

19

Lauren A Gillory - 2018-2020

Laura Y. Martin - 2019-2021

Jacob Olson - 2020-2022 Laura Stafman - 2021-2023

Maren Shipe - 2022-2024

CORE RESEARCH REPORT - Department of Pediatric Surgery

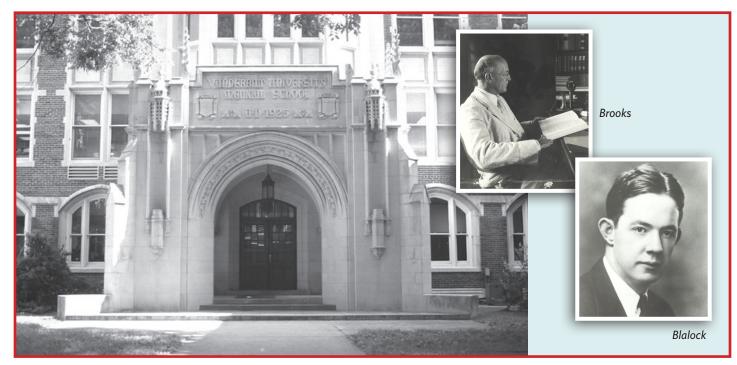
July - December 2022

Dr. Jacob Olson and Dr. Laura Stafman publications

- 1. Light-Olson H, Niec JA, Zwaschka TA, Wong G, Ragheb D, Oros J, Correa H, Lopez ME, Stafman LL, Lovvorn HN: Minimally Invasive Adnexa-Sparing Surgery for Benign Ovarian and Paratubal Masses in Children. *Journal of Pediatric Surgery*. Published Online 22 Dec 2022.
- 2. Hanna DN, Haddadlin Z, Stafman L, Godfrey CM, Huang EY, Aiello B, Greeno AL, Unni P, Lovvorn HN: Sledding While Towed Behind Motorized Vehicles Associates With More Severe and Lethal Injuries. Published *Journal of Pediatric Surgery*. 5 Nov 2022.
- 3. Marayati R, Julson J, Bownes LV, Quinn CH, Stafman LL, Beierle AM, Markert HR, Hutchins SC, Stewart JE, Crossman DK, Hjelmeland AB, Mroczek- Musulman E, Beierle EA: PIM3 Kinase Prommotes Tumor Metastasis in Hepatoblastoma by Upregulating Cell Surface Expression of Chemokine Receptor CXCR4. Office *Journal of the Mestastasis Research Society*. Published Online 31 Oct 2022.
- 4. Julson JR, Marayati R, Beierle EA, Stafman LL: The Role of PIM Kinases bin Pediatric Solid Tumors. *Pediatric Onocology*. Published 22 Jul 2022.

- 5. Patel AD, D'Cruz R, Olson JK, Lucas M, Baron CM, Novotny NM, Zamora IJ, Lovvorn HN: Endoluminal Silicone-Covered Stenting in Children: Novel Applications and Lessons Learned. *The American Surgeon*. Published Online 20 Apr 2022.
- 6. Haddadin Z, Halasa N, McHenry R, Varjabedian R, Lynch TL, Chen H, Abdul Ghani, MO, Schmitz JE, Sucre J, Isenberg K, Zamora I, Danko M, Blakely M, Olson JK, Jackson GP, Lovvorn HN: SARS-CoV-2 Testing of Aerosols Emitted During Pediatric Minimally Invasive Surgery: A Prospective, Case-Controlled Study. *The American Surgeon*. Published Online 11 Feb 2022.
- 7. Marayati R, Stafman LL, Williams AP, Bownes LV, Quinn CH, Markert HR, Easlick JL, Stewart JE, Crossman DK, Mroczek- Msulman E, Beierle EA: CRISPR/Cas9-mediated knockout of PIM3 suppresses tumorigenesis and cancer cell stemness in human hepatoblastoma cells. *Cancer Gene Therapy*. Published 16 Apr 2021.

VIEW THE FULL CORE RESEARCH REPORT



Vanderbilt has a rich history in Pediatric Surgical training since 1925. Today, we are a children's hospital ranked in all 10 discliplines evaluated by *U.S. News & World Report* and attracts top-flight pediatric surgical resident candidates.

Residency training in pediatric surgical diseases at Vanderbilt has its origins dating back to 1925. The first patient evaluated in the newly opened Vanderbilt University Hospital emergency department (1925) was a child presenting with advanced appendicitis. Operative logs show that Barney Brooks, the first Chair of Surgery at Vanderbilt, and Alfred Blalock, his first Chief Resident, managed that child and the bulk of pediatric surgical conditions in that era.

Other giants in American Surgery while faculty at Vanderbilt also made original and significant contributions to Pediatric Surgery before board approval as its own specialty. Specifically, Rollin A. Daniel, Jr. reported in Annals of Surgery (1944) his first successful primary repair of esophageal atresia and tracheoesophageal fistula (EATEF) in a newborn. However, Cameron Haight of Ann Arbor, MI had reported a month earlier in Annals his successful repair of EATEF, preferring a left thoracotomy. Although these cases occurred independently and almost simultaneously in date, Haight was credited historically with this coincidental accomplishment, yet Daniel would popularize the right chest, retropleural approach. Similarly, James A. Kirtley, Jr. published the first successful portoenterostomy for the "uncorrectable" form of biliary atresia in the American Surgeon (1954) 5 years ahead of

Morio Kasai's description. Remarkably, Kirtley's patient lived 39 years with her native liver, bearing 3 children, before dving during an attempt at liver transplantation.

H. William Scott, Jr., Chair of Surgery from 1952-1982, performed the first successful, complete repair of tetralogy of fallot in 1955. Scott had received three years of pediatric surgical training under Drs. Ladd and Gross at Boston Children's Hospital, which set the stage for sustained emphasis in the surgical care of children at Vanderbilt and nationally across his illustrious career.

Dr. Scott influenced many Surgery residents at Vanderbilt to pursue Pediatric Surgery, including such titans as James A. O'Neill, Jr. and Wallace W. Neblett, Jr., who with George Holcomb, Jr. (also a trainee of Drs. Ladd and Gross) grew the Department of Pediatric Surgery. With this esteemed foundation and history, Lovvorn, O'Neill, and Neblett established in 2007 a comprehensive residency training program in Pediatric Surgery.







Neblett

Resident, Faculty Scrapbook



Attendings holding hooks for the chief fellow – bedside CDH



VATS EATEF



Fellows excising a choledochal cyst together



Dr. Morgan – master teacher



Old dogs (left) teaching new dogs (right) about choledochal cysts



VATS CDH

