

A close-up photograph of a surgeon wearing blue scrubs, a blue bouffant cap, and red-framed glasses with two small lights attached. The surgeon is holding a surgical instrument, and the background is a blurred operating room environment. The text is overlaid in the upper left corner.

Department of Surgery Fiscal Year 2024 **Annual Report**

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Message From the Chair

Dear colleagues and friends,

As chair of the Northwestern Medicine Department of Surgery, I use the structure of the fiscal year as an opportunity to frame the successes of the department. Fiscal year 2024 (September 2023 to August 2024) contained an array of accomplishments by our faculty, trainees, students and staff, cementing our reputation as one of the top programs in the country.

I want to highlight our high number of surgical procedures and our top-ranked clinical and training programs. We had an increase in National Institutes of Health (NIH) funding (remaining in the top 10), with our total funding nearly doubling coming out of the pandemic. With a greater number of grant proposals, department faculty achieved multiple firsts in the grant types they were awarded. This results in an exciting and friendly research environment leading to the scholarly pursuit of surgical knowledge of the highest quality.

As we enter our 166th year as a department, we keep our vision trained on shaping its future. We continue our vigorous, strategic expansion phase with recruitment of top talent across all divisions. Two new vice chairs stepped into the Equity and Faculty Development arenas. And we continue to elevate our programs and put an emphasis on our strategic priorities in the following domains: Education, Research and Innovation, Faculty Development, Equity, Clinical Operations and Regional Integration.

It is because of the talents and efforts of our team that we can pursue innovations in person-centered care, research and education. We remain committed to attracting and nurturing their talents; they are the critical reason for the department's success.

I'd also like to thank our administrative staff including our division administrators, administrative assistants, program coordinators and research coordinators who have continually supported the success of our department in FY24.

I am incredibly proud of what we have achieved so far, and I look forward to working together to reach even greater heights. This report is a summary of our accomplishments over the last fiscal year. Thank you for taking the time to review it.



Hasan B. Alam, MD

Loyal and Edith Davis Professor of Surgery
Professor of Cell and Developmental Biology
Chair, Department of Surgery, Northwestern
University Feinberg School of Medicine
Surgeon-in-Chief, Northwestern Memorial Hospital



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Department **mission and vision** statements

The Northwestern Medicine Department of Surgery is committed to delivering world-class, comprehensive and equitable surgical care; attracting and nurturing the talents of students, residents and fellows; and conducting groundbreaking basic and translational research. Our mission and vision statements guide us on our path to continued excellence.

Mission

Within a dynamic, innovative environment, we will:

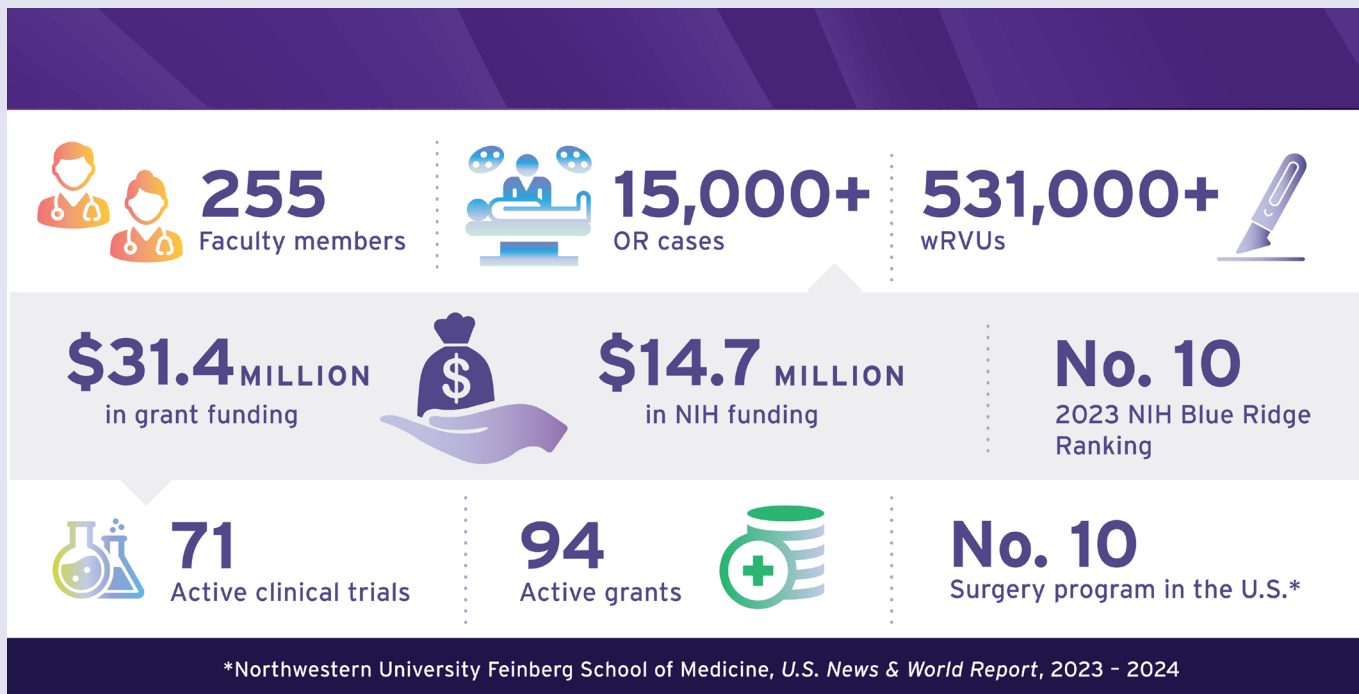
- Provide the highest quality, evidence-based, comprehensive, and compassionate patient care across a broad range of surgical specialties.
- Develop leaders in academic surgery through state-of-the-art training programs which are conducive to outstanding education for all learners across the career continuum.
- Expand the frontiers of knowledge by advancing research, innovation, creativity, and collaboration and the translation of surgical sciences to patient care.

Vision

To be a distinguished surgical department that delivers comprehensive and innovative care within an integrated academic health system, pursues research that defines the future of surgery, trains the next generation of surgical leaders, and serve as a national and global destination for patients.

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Department of Surgery by the numbers



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Department of Surgery organization

Department leadership



Hasan B. Alam, MD
Chair



Satish Nadig, MD, PhD
Vice Chair, Faculty Development
As of April 2024



Julie Johnson, MSPH, PhD
Scientific Director, NQUIRES



Jason Hyunsuk Ko, MD
Vice Chair, Clinical Operations



Cord Sturgeon, MD
Vice Chair, Regional Integration
Through February 2025



Andrew Hoel, MD
Director, Mid-Career Development



Amy L. Halverson, MD
Vice Chair, Education



Alyssa M. Vela, PhD
Vice Chair, Equity
As of April 2024



Daniela P. Ladner, MD
Vice Chair, Research and Innovation

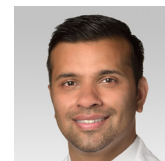


Karen J. Ho, MD
Director, Resident Research



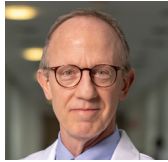
Dineen C. Simpson, MD
Vice Chair, Faculty Development
Through March 2024

Incoming leadership



Akhil Chawla, MD
Vice Chair of Regional Integration
As of March 1, 2025

Division leadership



Michael Shapiro, MD
Division Chief, Acute
Care Surgery



**Thomas Inge, MD,
PhD**
Division Chief,
Pediatric Surgery



**Mark K. Eskandari,
MD**
Division Chief,
Vascular Surgery



Nora Hansen, MD
Division Chief, Breast
Surgery



**Gregory Dumanian,
MD**
Division Chief,
Plastic Surgery



Satish Nadig, MD, PhD
PhD, Division
Chief, Organ
Transplantation



**Douglas R. Johnston,
MD**
Division Chief,
Cardiac Surgery



Jeffrey Wayne, MD
Division Chief,
Surgical Oncology



Scott Strong, MD
Division Chief,
Gastrointestinal
Surgery



Ankit Bharat, MD
Division Chief,
Thoracic Surgery

Education leadership



Samuel S. Kim, MD
Associate Program
Director, General
Surgery Residency



**Joseph A. Herrold,
MD, MPH**
Director, Surgery
Clerkship



Tadaki Tomita, MD
Associate Director,
Surgery Clerkship



Leah Tatebe, MD
Program Director,
General Surgery
Residency

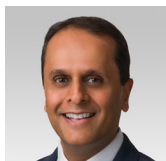


**Yue-Yung Hu, MD,
MPH**
Associate Program
Director, General
Surgery Residency

Incoming division leadership



Michael Rosen, MD
Division Chief,
Gastrointestinal
Surgery
*As of February 1,
2025*



Shishir Maithel, MD
Division Chief,
Surgical Oncology
As of January 1, 2025



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Department of Surgery **domains**

Department of Surgery vice chairs highlight fiscal year 2024 accomplishments and describe goals for the coming year.

Regional integration

The Department of Surgery vice chair for Regional Integration partners with Department of Surgery leadership, health system leadership and surgeons to lead efforts to integrate clinical service lines across Northwestern Medicine. This role emphasizes relationship development, collaboration and alignment for Department of Surgery specialties across the health system. The goal is to establish cross-regional programming that interconnects and integrates surgical service lines.

In the past fiscal year, great progress was made in several systemwide projects. In December 2023, the Qventus software platform was implemented to optimize operating room (OR) scheduling at Northwestern Memorial Hospital. In April, Qventus was launched systemwide. As a result, we have seen a 176% increase in block hours released two weeks in advance in the health network hospitals as well as a 6% increase in year-over-year case volume growth. In April 2024, the Perioperative Care Collaborative was launched, and the group established systemwide goals of aligning perioperative antibiotics, providing venous thromboembolism (VTE) prophylaxis and implementing the colorectal surgical site infection reduction bundle.

In FY24, work was also started on standardizing pre-operative care for elective scheduled cases across the network. Modeled after the successful pre-operative clinic at Northwestern Memorial Hospital, an interdisciplinary team was assembled, and pre-operative testing and medication instruction guidelines were developed. Work will continue on these integration projects throughout FY25.

Update by Vice Chair
Cord Sturgeon, MD





Education

Congratulations to our 2024 residency graduates.

Andrew Hu, MD

Pediatric Surgery, Cincinnati Children's Hospital Medical Center

Rachel Joung, MD

Surgical Oncology, MD Anderson Cancer Center

Andy Lee, MD

Cardiothoracic Surgery, University of Virginia

Sam Linton, MD

Pediatric Critical Care Fellowship, Ann & Robert H. Lurie Children's Hospital of Chicago

Kate Ott, MD

Pediatric Surgery, Ann & Robert H. Lurie Children's Hospital of Chicago

Sirivan Seng, MD

Acute Care Surgery, Penn State University

Update by Vice Chair
Amy L. Halverson, MD



Faculty spotlight

Rebecca L. Williams, MD, PhD, joined the Department of Surgery and our residency education leadership team in 2023. She is an assistant professor in the Division of Surgical Oncology as well as an associate program director for the General Surgery Residency at Northwestern University.

In addition to building a robust practice in endocrine and general surgery, Dr. Williams was awarded an Education Research Grant from the Association of Program Directors in Surgery and the Augusta Webster Faculty Fellowship in Educational Research and Innovation from the Feinberg School of Medicine. Both grants will support Dr. Williams' work on the implementation of entrustable professional activities (EPA), a system for assessing resident performance in core clinical skills. Dr. Williams will lead a multi-institutional study on EPA implementation.



In the summer of 2024, education leaders from several programs in Chicago formed the Chicago Surgical Education Consortium. On the national level, Dr. Williams was elected chair of the American College of Surgeons Committee on Resident Education.

Recent publications by Dr. Williams include the following:

Williams-Karnesky RL, White E, Holmstrom A, Garcia N, Johnson J, Cook M, Nickel B, Sarosi G, Buyske J, Mellinger J, Greenberg JA. Faculty and resident perspectives on the implementation of entrustable professional activities in general surgery residency. *J Surg Educ.* 2024;81(6):841-849. doi:10.1016/j.jsurg.2024.03.006.

Williams-Karnesky RL. Advancing equity in assessment in the surgical learning environment. *J Surg Educ.* 2024;81(11):1650-1654. doi:10.1016/j.jsurg.2024.07.008.

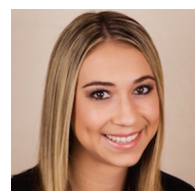
Leadership in residency

In addition to outstanding clinical performance, our residents strive to hone their leadership skills. Jessie Ho, MD, and Audra Reiter, MD, are administrative chief residents. Dr. Ho received a grant from the Association for Surgical Education to conduct a needs assessment for leadership education in surgery residency. Her findings from this qualitative study were recently published:

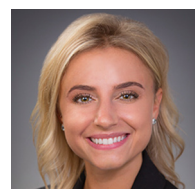


Ho JW, Cerier EJ, Diaz CM, Hu YY, **Tatebe LC**, Alam HB, Johnson JK, Halverson AL. Residents need a dynamic approach to leadership education: a qualitative study. *J Surg Educ.* 2024;81(6):794-803. doi:10.1016/j.jsurg.2024.03.003.

Another accomplishment in surgical education is the acceptance of Brooke Golisch, MD, into the competitive Surgical Education Research Fellowship (SERF) program at the Association for Surgical Education. Dr. Golisch presented her work, “Coping with work-related trauma: an assessment of resources at surgical residencies in the United States,” at the Chicago Committee on Trauma Meeting and won first prize in the abstract competition.



Another institutional resident leader is Samantha Warwar, MD, who is serving as vice president of the McGaw House Staff Association. In this role, Dr. Warwar is working to improve the trainee experience at Northwestern Medicine. She interacts with residents and fellows across various programs, fostering connections and building a supportive network that goes beyond departmental boundaries.



Research and innovation

We continue to build and strengthen our research community within the department. We hired seven faculty members with exclusive (PhDs) or significant (MDs) research portfolios ranging from basic, translational and outcomes research to clinical trials. We started an R01 bootcamp, led by Carl Atkinson, PhD, with an inaugural class of seven junior Department of Surgery faculty. Over the course of nine months, these researchers will learn to complete a 2025 R01 submission.

Akhil Chawla, MD, is the new physician core leader for the clinical research core, which has expanded. The grants administrative core grew to meet the increasing need for grant support; Darlene Ratliff joined as the senior lead. The Surgeons Promoting Academic Surgeons and Scientists (SURPASS) series continues with Bowen Wang, PhD, newly leading the charge, and Anne Stey, MD, and Salva Balbale, PhD, continue to lead the Northwestern Quality Improvement, Research, & Education in Surgery (NQUIRES) lecture series and meetings for department postdoctorate scholars and faculty. We continue weekly biostats office hours for faculty with Cristian Andrei, PhD, and provided nine awards for data warehouse requests and biostatistical support and two seed grants for scored NIH grant resubmissions.

Department of Surgery faculty members had multiple firsts in grant awards (P01, R50, T32, K99R00) and two postdoctorate researchers received F awards. We also nominated with intention; many faculty received awards and were accepted into prestigious academic societies (such as the Alpha Omega Alpha Honor Medical Society). These initiatives contributed to our department's growth and success in FY24 and serve as a testament to the amazing faculty and staff and our dedication to advancing research excellence.

As our department grows, we are rolling out new faculty research awards for preliminary data toward extramural funding. We continue to focus on research recruitments and train and expand our cores to support the diversified needs of our departmental research.

Update by Vice Chair
Daniela P. Ladner, MD, MPH



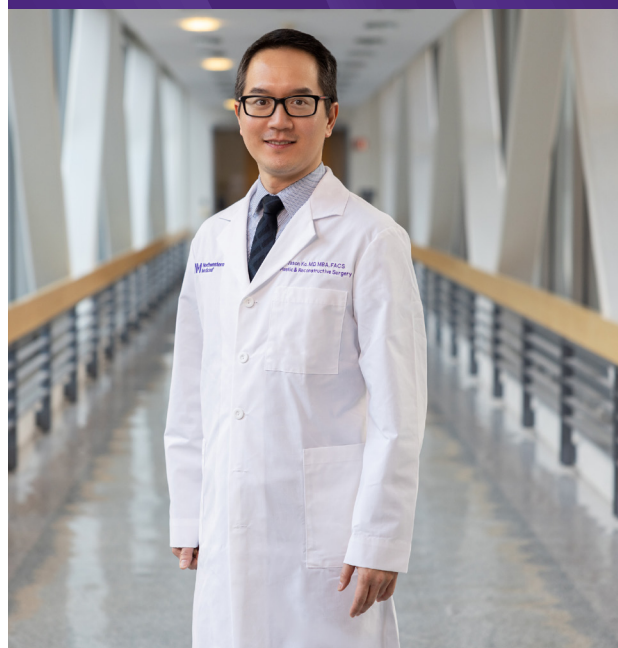
Clinical operations

Fiscal year 2024 exemplified the continued strength of clinical operations within the Department of Surgery. Overall revenues for the department at the Academic Medical Center (AMC) were \$60 million, an increase over FY23. The total of 531,064 work relative value units (wRVUs) generated by Department of Surgery clinicians was 12% greater than budgeted for FY24. We have made coordinated efforts to optimize efficiency along each step of the patient care pathway: outpatient access, OR utilization and inpatient length of stay (LOS).

In FY24, the average new patient lag days across the department remained stable at 43.5 days, and clinician likelihood to recommend scores remained high at 92 (of a possible 100). At the AMC, the Department of Surgery controls a greater proportion of OR blocks than any other department, and our monthly in-block utilization was 84%, along with a monthly total utilization of 86%, both of which represented continued strong performance of the Department of Surgery relative to other departments in the AMC. In terms of enhancing patient throughput on the inpatient side, among 5,656 inpatient admissions, the average LOS was 9.1 days. The observed-to-expected (O/E) ratio for the Department of Surgery decreased to 0.93 in FY24 compared with 1.01 in FY23, which marked a substantial improvement.

During this past year, our Clinical Operations Strategic Workgroup implemented various tactics to improve operational efficiency within the department at the AMC. One pilot we rolled out involved placing a nurse navigator within the service center to triage patients with breast cancer, improving access to our clinics and in turn our ORs. The nurse navigator in the service center has worked closely with a nurse navigator in the breast center to optimize efficiencies for our patients with breast cancer. For FY24, we also planned to establish a triage room on the inpatient floor for transplant surgery patients so that they can bypass the Emergency Department (ED), be assessed appropriately by the team, and

Update by Vice Chair
Jason Hyunsuk Ko, MD



then potentially be admitted directly or discharged to home with planned outpatient follow-up. Seeing the value in this strategy, the AMC has taken the lead on the transplant triage project, which could reduce unnecessary admissions from the ED and decrease overall LOS for transplant surgery.

Another effort to improve inpatient LOS involved working closely with the social work team to initiate a pilot that placed a social worker in the Cardiac Surgery clinic. The social worker meets patients in the pre-operative clinic if they are likely to require continued care at an acute inpatient rehabilitation (AIR) or subacute rehabilitation (SAR) facility post-discharge, with a goal of streamlining that placement process. One month after the pilot started, these early interactions with social workers have already resulted in a 54% reduction in LOS for the patients who required AIR/SAR placement after discharge. If we can expand these types of collaborations with social workers, we can substantially decrease LOS within all divisions in the Department of Surgery.

We are excited to continue these efforts in FY25 to optimize operational efficiency, which should improve the patient experience while enhancing the already high-quality care that we provide. Our many successes within Clinical Operations are a testament to the combined effort of the faculty, advanced practice providers (APPs), clinical and administrative staff, and residents, and I am confident that the department will only see more success in FY25 as it continues to expand and improve.

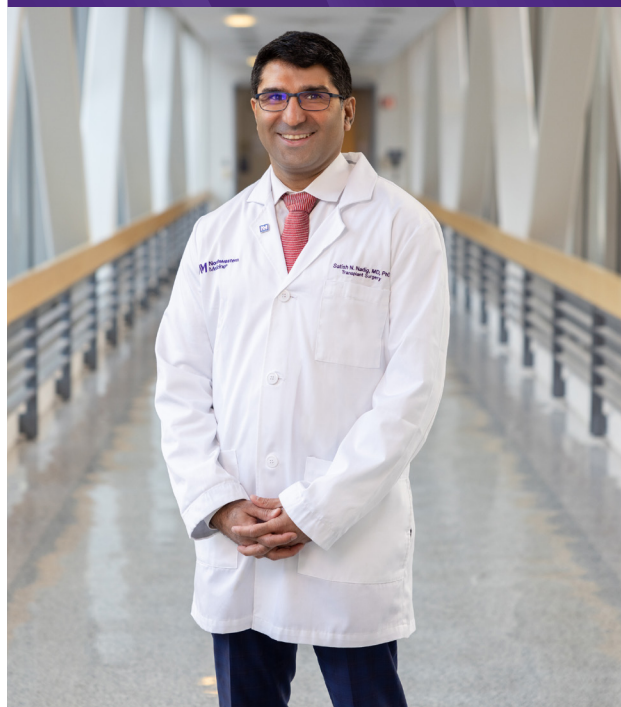


Faculty development

The Office of the Vice Chair for Faculty Development at the Department of Surgery has made significant strides in fostering professional growth and innovation. Notable achievements include the initiation of the Summer Development Series, which has featured visits from distinguished leaders, including accomplished authors, to inspire and educate faculty.

The office has also championed the Faculty Advancement and Success Track (FAST) program, providing tailored mentorship and development opportunities. In addition, the office has introduced a groundbreaking robotics course for experienced surgeons to enhance their technical expertise, established a junior faculty exchange program to promote cross-institutional collaboration and learning, and launched a mid-career skills sabbatical to help faculty refine their expertise and pursue new research or clinical initiatives. These programs collectively underscore the office's commitment to empowering faculty at all career stages.

Update by Vice Chair
Satish Nadig, MD, PhD



Equity

Fiscal year 2024 began with excellent leadership from Dinee C. Simpson, MD, and emphasized moving forward the strategic goals and priorities developed by the Diversity and Faculty Development Taskforce in early 2024. With a change in leadership in spring 2024, the department's equity work continued to build on past years by implementing the ongoing Cultural Competence Mortality and Morbidity Conference with four sessions per academic year.

Topics during FY24 included cultural considerations for pregnancy and nursing, equitable evaluation, mental health, and weight bias and sizeism. Attendance and engagement in Cultural M&M continue to be great. Additionally, search committee review by a group of departmental faculty continues, and we welcomed involvement from a few new faculty members. The goal of these reviews is to ensure that attention to diversity and equity continues with the thoughtful development and work of search committees. In alignment with our strategic goals, faculty recruitment will be a key focus for FY25.

Update by Vice Chair
Alyssa Vela, PhD





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Division updates

The divisions within the Department of Surgery at Northwestern University Feinberg School of Medicine provide specialized education and training programs, conduct valuable basic and translational research, and provide outstanding surgical care through our affiliated hospitals.



Acute Care Surgery

The Division of Acute Care Surgery offers world-class surgical care and provides leadership and education in the fields of trauma, critical care and acute care surgery.

Key achievements



Clinical

- › The trauma census was 33% higher in FY24 than the previous 10-year average.
- › Compared with FY23, our wRVUs were 2.6% higher and charges were 5.6% higher. This fiscal year, we generated 48,692 wRVUs.
- › We had a total of 1,528 clinic visits.



Education

Nicole Meredyth, MD was named program director for the Surgical Critical Care Fellowship.

Joseph A. Herrold, MD, MPH was appointed director of third-year Medical Student Surgery.

Key division publications

Bold names denote Northwestern Medicine Department of Surgery faculty, trainees and staff at the time of publication.

Chen Z, Ford K, Islam M, Wan H, Ramakrishnan A, Wang Y, Lamsawat S, Teregulova V, Davis B, Gate D, Weiss C, Schwulst S. [Anti-CD49d antibody treatment improves survival and attenuates neurocognitive deficits after traumatic brain injury in aged mice](#). *Shock*. 2024;61(1):112-119. doi:10.1097/SHK.0000000000002256.

Hatchimonji JS, Meredyth NA, Gummadi S, Kaufman EJ, Yelon JA, Cannon JW, Martin ND, Seamon MJ. [The role of emergency department thoracotomy in patients with cranial gunshot wounds](#). *J Trauma Acute Care Surg*. 2024;97(2):220-224. doi:10.1097/TA.0000000000004282.

Hackenberger P, Mittal M, Fronza J, **Shapiro M**. [Duramesh registry study: short-term outcomes using mesh suture for abdominal wall closure](#). *Front Surg*. 2024;10:1321146. doi:10.3389/fsurg.2023.1321146.

Rosen JE, Monsell SE, DePaoli SC, Fannon EC, Kohler JE, Reinke CE, Kao LS, Fransman RB, Stulberg JJ, **Shapiro MB**, Nehra D, Park PK, Sanchez SE, Fischkoff KN, Davidson GH, Flum DR; TRIAD Collaborative. [The use and impact of a decision support tool for appendicitis treatment](#). *Ann Surg*. 2024;280(4):616-622. doi:10.1097/SLA.0000000000006412.

Faculty highlights

Steven J. Schwulst, MD, received a promotion with tenure. Dr. Schwulst also acted as a study section reviewer for the NIH.

Nicole A. Meredyth, MD, was named to the Ethics Committee for the Association of Academic Surgery.

Michael Shapiro, MD, received the Jonathan Fryer, MD, Award for Excellence in Surgical Education.

Key faculty honors and awards

Hasan B. Alam, MD, received a grant from the Department of Defense on May 1, 2024.

Title: Multi-institutional phase 2/3 trial of valproic acid in patients with moderate to severe traumatic brain injury

Current year award: \$685,802

Dr. Schwulst received an RF1 grant from the NIH (National Institute of Neurological Disorders and Stroke) on September 18, 2023.

Title: The young gut microbiome: a fountain of youth for brain injury in the aged?

Award: \$2,221,6356

Leah Tatebe, MD, received a grant from the Eastern Association for the Surgery of Trauma grant on January 25, 2024.

Title: The language of violence: do words matter more than we think?

Award: \$10,000

Acute Care Surgery Faculty



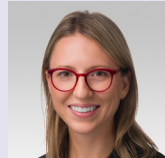
Hasan B. Alam, MD



Joseph A. Herrold,
MD, MPH



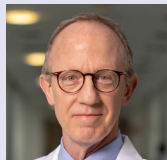
Nabil M. Issa, MD



Nicole A. Meredyth,
MD



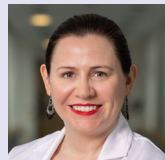
Steven J. Schwulst,
MD



Michael Shapiro,
MD

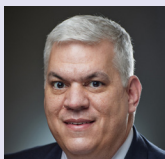


Anne Stey, MD



Leah Tatebe, MD

Health System Clinician



Michael J.
Sutherland, MD



Breast Surgery

In partnership with Robert H. Lurie Comprehensive Cancer Center of Northwestern University, the Division of Breast Surgery embraces a multidisciplinary approach to breast disease and breast care in an academic and community setting that is warm, inviting and comfortable for patients.

Key achievements



Research

- › Swati Kulkarni, MD, reached her accrual goals for her R01, The Promise Study, and the R44, the VIVID Trial.
- › Seema Khan, MD, received a renewal for her Breast Cancer Research Foundation grant, “Pre-clinical & clinical studies of breast cancer prevention with transdermal anti-progesterone agents.”
- › Dr. Khan continues to lead the Northwestern Cancer Prevention Consortium through her NCI UG1 grant.



Education

- › The Breast Center completed its 4th annual Society of Surgical Oncology Fellowship 5-year recertification site visit.
- › Nora Hansen, MD, received a \$100,000 gift to fund the Fellowship Program.

Key division publications

Bold names denote Northwestern Medicine Department of Surgery faculty, trainees and staff at the time of publication.

Bevers TB, Niell BL, Aminololama-Shakeri S, Baker JL, Bennett DL, Bonaccio E, Camp MS, Chikarmane S, Conant EF, Eghtedari M, Flanagan MR, Hawley J, Helvie M, Hodgkiss L, Hoyt TL, Huo D, Ivanovich JL, Jochelson MS, **Kulkarni S**, Lancaster RB, Mauer C, Maxwell J, Patel BK, Pearlman M, Philpotts L, Plecha D, Plichta JK, Smith ML, Streibert CL, Strigel RM, Thompson CN, Tumyan L, Winkler NS, Wolverton DE, Bergman MA, Stehman K. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Breast Cancer Screening and Diagnosis V.2.2024. April, 2024.

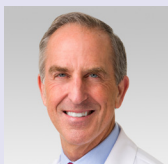
Oturkar CC, Rosario SR, Hutson AD, Groman A, Edge SB, Morrison CD, Swetzig WM, Wang J, Park JH, Kaiparettu BA, Singh PK, Kumar S, Cappucino HH, Ranjan M, Adjei A, Ghasemi M, Goey AKL, **Kulkarni S**, Das GM. ESR1 and p53 interactome defines mechanisms of therapeutic response to tamoxifen therapy in luminal breast cancer patients. *iScience*. 2024 May 15;27(6):109995.

Khan SA. Sentinel node biopsy for early breast cancer-A SOUND for de-escalation. *JAMA Oncol*. 2023 Nov 1;9(11):1501-1503.

Khan SA. Breast cancer risk reduction: current status and emerging trends to increase efficacy and reduce toxicity of preventive medication. *Surg Oncol Clin N Am*. 2023 Oct;32:631–646.

Khan SA, Mi X, Xu Y, Blanco LZ, Akasha AM, Pilewskie M, Degnim AC, AlHilli Z, Amin AL, Hwang ES, Guenther JM, Kocherginsky M, Benante K, Zhang S, Helland T, Hustad SS, Gursel DB, Mellgren G, Dimond E, Perloff M, Heckman-Stoddard BM, Lee O. Presurgical oral tamoxifen vs transdermal 4-hydroxytamoxifen in women with ductal carcinoma in situ: A randomized clinical trial. *JAMA Surg*. 2023 Oct; PMID: 37870954.

Breast Surgery Faculty



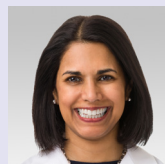
Kevin Bethke, MD



Nora Hansen, MD

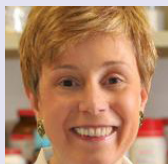


Seema A. Khan, MD



Swati Kulkarni, MD

Research Faculty



Susan Clare, MD



Oukseub Lee, PhD

Health System Clinicians



Denise Monahan,
MD



Miraj Shah-Khan,
MD



Faaiza T. Vaince,
MD



Cardiac Surgery

The Division of Cardiac Surgery is widely respected throughout the nation as an innovator and leader. The division's success is built on three main areas: education, research and clinical care through our affiliated hospitals.

Innovation and highlights

- › Northwestern Memorial Hospital has the No. 7 cardiology, heart and vascular surgery program in the United States according to *U.S. News & World Report*, 2024 – 2025, which also named it the highest-ranked program in Illinois for 17 straight years.
- › The robotics program saw 50 cases in FY24 with an average post-procedure length of stay of 4.4 days. A team of existing Northwestern Memorial Hospital nurses and APPs supplement the skilled robotic OR team.
- › As part of a collaborative effort with the Division of Cardiac Surgery, Amazon and NVIDIA provided an in-kind contribution valued at \$650,000 toward the development of an advanced multimodal cardiac imaging suite. This university research agreement is aimed at pioneering innovations in cardiac diagnostics with the Kline Engineering Lab of Northwestern University.
- › Bluhm Cardiovascular Institute is advancing care via artificial intelligence (AI) by participating in a Tempus/Notable study. Clinicians are using AI-enabled electrocardiography (ECG) results in addition to routine clinical ECG monitoring to identify patients at increased risk of developing atrial fibrillation or structural heart disease.



- › We welcomed as new faculty Benjamin S. Bryner, MD; Mustafa Kurkluoglu, MD; Erhan Guler, MD; Kevin Hodges, MD; Melissa Medina, MD; Stephen Chiu, MD, and Franjo Siric, MD.
- › New research faculty welcomed over the last year include Adrienne S. Kline MD, PhD, BSc, and Bowen Wang, PhD (joint with the Vascular Surgery division).

Key achievements



Clinical

- › Our case volume saw a 19% increase over the previous fiscal year.
- › In FY24, we performed our first robotic coronary artery bypass graft and maze procedures.



Research

- › Bluhm Cardiovascular Institute (BCVI) is involved with more than 10,000 active research participation of more than 100 clinical trials.
- › More than 75% of BCVI faculty are involved in clinical research.
- › Nationally, 14 clinical trials have principal investigators from BCVI.
- › BCVI currently participates in eight early feasibility studies (EFS) for the U.S. Food and Drug Administration (FDA).
- › BCVI is participating in 17 active transcatheter valve investigational device exemption (IDE) trials. Northwestern Medicine participated in the EFS and pivotal trials that resulted in FDA approval of the EVOQUE tricuspid valve replacement system on February 1, 2024. It is the first transcatheter tricuspid device to be approved in the United States.



Education

The total number of residency and advanced fellowship training was expanded to 16 positions.

Key division publications

Bold names denote Northwestern Medicine Department of Surgery faculty, trainees and staff at the time of publication.

The division has participated in more than 70 publications, including one cover illustration designation and another named as a Cardiac Breakthrough Essential Article, respectively, as follows:

- › **McCarthy PM, Cox JL, Kruse J, Elenbaas C, Andrei AC.** [One hundred percent utilization of a modified CryoMaze III procedure for atrial fibrillation with mitral surgery.](#) *J Thorac Cardiovasc Surg.* 2024;167(4):1278-1289. doi:10.1016/j.jtcvs.2022.08.028.
- › **Churyla A, McCarthy PM, Kruse J, Andrei AC, Kaplan R, Passman RS, Cox JL.** [Concomitant ablation of atrial fibrillation: new pacemakers and early rhythm recovery.](#) *J Thorac Cardiovasc Surg.* 2024;168(6):1677-1685.e1. doi:10.1016/j.jtcvs.2023.10.030.

The following article was awarded the Richard E. Clark Memorial Paper in Adult Cardiac Surgery:

- › **Mehta CK, Liu TX, Bonnell L, Habib RH, Kaneko T, Flaherty JD, Davidson CJ, Thomas JD, Rigolin VH, Bonow RO, Pham DT, Johnston DR, McCarthy PM, Malaisrie SC.** [Age-stratified surgical aortic valve replacement for aortic stenosis.](#) *Ann Thorac Surg.* 2024;118(2):430-438. doi:10.1016/j.athoracsur.2024.01.013.

Two articles were published in the *Journal of Heart and Lung Transplantation*, which has an impact factor of 6.4. (in 2023) and 7.7 (for five years through 2023):

- › **Grady KL, Kallen M, Beiser D, Lindenfeld J, Teuteberg J, Allen L, McIlvennan C, Rich J, Yancy C, Lee C, Denfeld Q, Kiernan M, Walsh M, Adler E, Ruo B, Stehlik J, Kirklin J, Bedjeti K, Cella D, Hahn E.** [Novel measures to assess ventricular assist device patient-reported outcomes: findings from the MCS A-QOL study.](#) *J Heart Lung Transplant.* 2024;43(1):36-50. doi:10.1016/j.healun.2023.08.007.
- › **Grady KL, Kallen M, Cella D, Allen LA, Lindenfeld J, McIlvennan C, Beiser D, Walsh MN, Denfeld Q, Lee C, Ruo B, Murks C, Stehlik J, Kirklin JK, Teuteberg J, Adler E, Kiernan M, Rich J, Bedjeti K, Hahn E.** [Efficient measurement of multiple ventricular assist device patient-reported outcomes: creation of a 20-item profile from the MCS A-QOL study.](#) *J Heart Lung Transplant.* 2024;43(8):1308-1317. doi:10.1016/j.healun.2024.04.060.

Cardiac Surgery Faculty



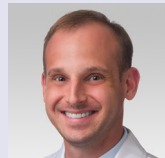
Benjamin S. Bryner,
MD



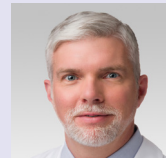
Stephen F. Chiu, MD



James L. Cox, MD



Kevin E. Hodges,
MD



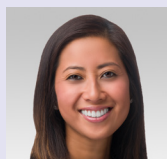
Douglas R.
Johnston, MD



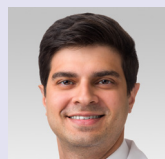
S. Chris Malaisrie,
MD



Patrick M.
McCarthy, MD



Melissa G. Medina,
MD

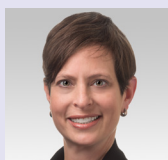


Christopher K.
Mehta, MD

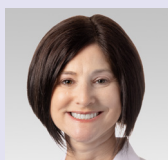


Duc Thinh Pham,
MD

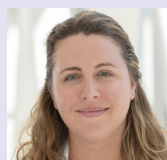
Cardiac Behavioral Medicine Faculty



Kim L. Feingold,
PhD



Gail M. Osterman,
PhD

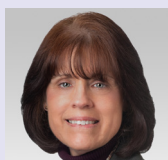


Alyssa M. Vela, PhD

Research Faculty



Abigail Baldrige,
DrPH, MS



Kathleen L. Grady,
PhD



Adrienne S. Kline,
MD, PhD, BSc



Bowen Wang, PhD

Cardiac Surgery Faculty

Health System Clinicians



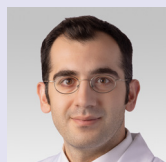
Andrei Churyla, MD



Gyu Gang, MD



Ricardo Boix
Garibo, MD



Erhan Guler, MD



Mustafa
Kurkluoglu, MD



Aqeel A. Sandhu,
MD



Franjo Siric, MD



Gastrointestinal Surgery

The division includes the sections of bariatric and minimally invasive surgery, colorectal surgery and general surgery. Each of our surgeons has specialty training in their area of expertise. In keeping with the mission and vision of the Department of Surgery, the division is dedicated to being an academic leader in education and research.

Innovation and highlights

- › Northwestern Memorial Hospital was ranked No. 10 (tie) nationally in Gastroenterology and GI Surgery by *U.S. News & World Report*, 2024 – 2025.

Key achievements



Education

Mohammed Abbass, MD, MPH, served as guest editor for *Clinics in Colon and Rectal Surgery* for an article titled “Colorectal cancer genetics: an evolutionary tale of us.”

Amy L. Halverson, MD; Alexander Nagle, MD; Vitaliy Poylin, MD; and Scott Strong, MD, were named Castle Connolly/Chicago Magazine Top Doctors.

Rachel E. Hendee, PA-C, and Dr. Halverson introduced a high-resolution anoscopy program for patients with anal dysplasia or neoplasia.

Ms. Hendee and Dr. Poylin received a \$50,000 grant from the Digestive Health Foundation for their proposal titled “Impact of spousal support and resiliency training in new stoma patients” and a \$25,000 award from Northwestern University Feinberg School of Medicine’s Institute for Global Health for an initiative titled “Improving HPV vaccinations in Ukraine.”

Eric Hungness, MD, led an initiative to significantly improve bariatric surgery quality metrics (e.g., length of stay, post-operative bleeding and readmission).

Dr. Hungness participated in a philanthropic trip to the Instituto de Medicina Integral Professor Fernando Figueira hospital in Recife, Brazil, to establish a laparoscopic simulation program and potential education partnership.

Kyle Mueller, MD, performed his 1500th robot-assisted operation and continues to serve as a proctor for health system surgeons.

Dr. Nagle led efforts that earned Northwestern Memorial Hospital re-accreditation by the American College of Surgeons Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program.

Dr. Poylin led a group of clinicians from Chicago (including Zachary Dietch, MD, Ms. Hendee and Elizabeth A. Rauh, APRN) and Boston on a trip to Ukraine, where they participated in nationwide educational conferences, hands-on stoma teaching and intra-operative teaching. Dr. Poylin also led an ongoing program that brought 20 Ukrainian cancer physicians to Northwestern Medicine to help them learn modern techniques.

Dr. Poylin was elected vice president of the Chicago Society of Colon and Rectal Surgeons and was appointed to the Executive Board of the International Society of University Colon and Rectal Surgeons.

Dr. Strong continued to serve as Vice President of the Society of Pelvic Surgeons.

Ezra Teitelbaum, MD, MEd, received a \$25,000 grant from the Digestive Health Foundation for their proposal titled “Mesh suture in laparoscopic paraesophageal hernia repair.”

Gastrointestinal Surgery Faculty



Mohammad
Abbass, MD, MPH



Amy L. Halverson,
MD



Eric Hungness, MD



Kyle Mueller, MD



Alexander Nagle,
MD



Vitaliy Poylin, MD



Scott Strong, MD



Ezra Teitelbaum,
MD, MEd

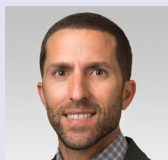
Health System Clinicians



John Andrews, MD



Daniel Davila, MD



James Frydman,
MD



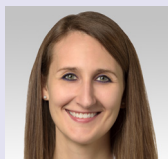
Stephen Ganshirt,
MD



Dean Shoener, MD



Jack Wagoner, MD



Jacklyn Wierzbicki,
MD



Organ Transplantation

The Division of Organ Transplantation seeks to make discoveries through science and research, improve organ transplant surgical techniques and outcomes, educate future surgeons and scientists, and enhance the lives of patients. Founded in 1964, Northwestern Medicine's transplantation program is the longest-standing program in the Chicago area.

Innovation and highlights

- › Daniela P. Ladner, MD, and Dineen C. Simpson, MD, were named counselors for the American Society of Transplant Surgeons (ASTS).
- › Satish Nadig, MD, PhD, became chair of the Surgeon-Scientist Committee and co-chair of the American Transplant Congress, and Vinayak Rohan, MD, was named the ASTS chair of Communications.
- › The Division of Transplant Surgery welcomed a new faculty member, Jesse T. Davidson IV, MD, who brings extensive research experience to the Comprehensive Transplant Center.
- › Anat Roitberg-Tambur, PhD, won the 2024 Paul I. Terasaki Clinical Science Award.

Key achievements



Clinical

- › Abdominal transplant surgeons at Northwestern Medicine performed the [first awake kidney transplant](#), using spinal anesthesia instead of general anesthesia, on a 28-year-old patient who was discharged less than 24 hours after surgery. This breakthrough procedure may increase access to transplantation for high-risk patients and shorten hospital stays, revolutionizing the field of transplantation.
- › The Organ Transplantation Center achieved a significant milestone by becoming the [first in Illinois to reach 10,000 transplants](#) in April 2024, marking a leap forward in transplant technology and innovation. Over this time, the center has also established programs to address transplant care disparities among Hispanic and African American communities and continues to advance transplantation through research and clinical trials.
- › Northwestern Medicine has been leading the way in the use of organ perfusion technology, temporarily storing organs outside the body and maintaining their vitality. As a result, we have seen a 30% increase in liver transplants since 2020, and we can consider organs from older or sicker donors, expanding access and enhancing quality in liver transplantation.
- › The Organ Transplantation Center became the first in Illinois to perform the innovative procedure normothermic regional perfusion. This technique will have a crucial role in the field of transplantation as it will improve organ viability and function, ultimately increasing the chances of successful transplant outcomes.
- › The division set new highs in volume across all organ types in the fiscal year, including:
 - 337 kidney transplants
 - 124 liver transplants
 - 24 pancreas transplants



Research

- › The Division of Organ Transplantation was awarded \$12,084,537 in funds for the fiscal year, a new high in the Comprehensive Transplant Center.
- › Joseph Leventhal, MD, PhD, received IDE approval from the FDA for the clinical trial titled “A phase I, single center trial of donor extracorporeal photopheresis (ECP) treated cell infusion (ECP-DL) plus post-transplant ECP for the prevention of rejection in living donor kidney transplant recipients.”



› The division has several other clinical trials underway, including:

- A randomized phase 2 trial of adoptive therapy with Treg adoptive cell transfer (TRACT) to prevent rejection in living donor kidney transplant recipients (RETIRE Trial)
- Phase I study of total lymphoid irradiation, total body irradiation, anti-thymocyte globulin and purified donor CD34+, T-cell and recipient T regulatory cell transfusion in human leukocyte antigen mismatched living donor kidney transplantation
- Improving access to renal transplantation for underserved Black communities (NIH funded)
- Improving deceased donor kidney transplant outcomes via a single intragraft injection of C1 esterase inhibitor: (IMPROVISE Trial, NIH funded)
- A dose escalation and proof-of-concept study of REGN5459 OR REGN5458 (BCMA x CD3 bispecific antibodies) for desensitization of chronic kidney disease patients in need of kidney transplantation who are highly sensitized to human leukocyte antigen
- Expanding liver transplant immunosuppression minimization via everolimus (ELIMINATE)
- Cytomegalovirus (CMV) vaccine in orthotopic liver transplant candidates (COLT)
- Everolimus and epoetin for sustained liver transplant tolerance (EVERST)
- Phase 1 interventional study to evaluate the safety and functional effects of microELAP (bioengineered liver) in adult subjects with acute liver failure
- Prospective, multi-center, continued access protocol of whole liver preservation via hypothermic machine perfusion (HMP) using the LLT system with Vasosol®



Education

- › The division had a successful year in education with expanded programming on several training grants and growth in the Transplant Surgery Fellowship.
- › With a generous gift from Harvey N. Medvin, the division launched the Harvey N. Medvin Fellowship, which offers one transplant fellow in their final year of training the opportunity to participate in educational travel. Fellows will be able to take a sponsored educational trip to learn new techniques and practices to bring back to the center.

Key division publications

Bold names denote Northwestern Medicine Department of Surgery faculty, trainees and staff at the time of publication.

Simpson DC, Obayemi JE, Kershaw KN, Franklin JE, **Ladner DP**. [The African American Transplant Access Program: mitigating disparities in solid organ transplantation](#). *NEJM Catal Innov Care Deliv*. 2024;5(9):10.1056/CAT.24.0140. doi:10.1056/CAT.24.0140.

Ladner DP, Goldstein AM, Billiar TR, Cameron AM, Carpizo DR, Chu DI, Coopersmith CM, DeMatteo RP, Feng S, Gallagher KA, Gillanders WE, Lal BK, Lipshutz GS, Liu A, Maier RV, Mittendorf EA, Morris AM, Sicklick JK, Velazquez OC, Whitson BA, Wilke LG, Yoon SS, Zeiger MA, Farmer DL, Hwang ES; ASA Task Force for Research Sustainability. [Transforming the future of surgeon-scientists](#). *Ann Surg*. 2024 1;279(2):231-239. doi:10.1097/SLA.0000000000006148.

Leventhal JR, Galvin J, Ison MG, Feng CY, Ding R, Lee JR, Li C, Mathew JM, Gallon L, Gibson M, Belshe D, Tollerud DJ, Gornstein E, Suthanthiran M, Ildstad ST. [Evaluation of immunocompetence and biomarkers of tolerance in chimeric and immunosuppression-free kidney allograft recipients](#). *Transplantation*. 2023;107(10):e257-e268. doi:10.1097/TP.0000000000004666.

Gordon EJ, Lee J, Kang R, Uriarte J, **Caicedo JC**. [Disparities persist among Hispanic patients: completing evaluation, waitlisting, and receiving a kidney transplant](#). *Transplant Direct*. 2024;10(3):e1595. doi:10.1097/TXD.0000000000001595.

Jacobs RC, Friedewald JJ, Agrawal AH, Angarone MP, **Nadig SN**, **Rohan VS**. [Surgical treatment of medically refractory encapsulating peritoneal sclerosis in a patient after kidney transplant](#). *Exp Clin Transplant*. 2024;22(3):239-241. doi:10.6002/ect.2023.0265.

Wisel SA, **Borja-Cacho D**, Megna D, Adjei M, Kim IK, Steggerda JA. [Organ utilization rates from non-ideal donors for solid organ transplant in the United States](#). *J Clin Med*. 2024;13(11):3271. doi:10.3390/jcm13113271.

Organ Transplantation Faculty



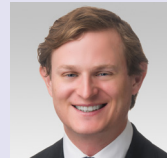
Daniel Borja-Cacho,
MD



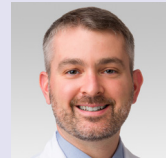
Juan Caicedo-
Ramirez, MD



Derrick
Christopher, MD



Jesse T. Davidson
IV, MD



Zachary Dietch, MD



Daniela P. Ladner,
MD



Joseph Leventhal,
MD, PhD



Satish Nadig, MD,
PhD

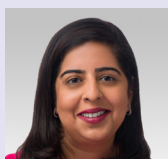


Vinayak Rohan, MD



Dineen C. Simpson,
MD

Research Faculty



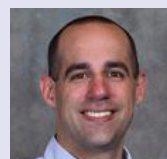
Amna Daud, MBBS,
MPH



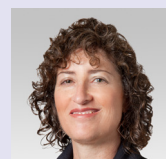
Dinesh Jaishankar,
PhD



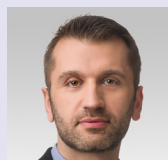
James Mathew,
PhD



David F. Pinelli, PhD



Anat Roitberg-
Tambur, PhD



Aleksandar Senev,
MD, PhD



Hong Xu, MD



Xiaomin Zhang, MD



Zheng Zhang, MD



Pediatric Surgery

The Division of Pediatric Surgery endeavors to advance academic, clinical and research activities in keeping with the missions of Ann & Robert H. Lurie Children's Hospital of Chicago and Northwestern University Feinberg School of Medicine.

Innovation and highlights

- › Lurie Children's was awarded its third renewal as an American College of Surgeons Level 1 Verified Center. It is the only Level 1 center in Illinois.
- › In the 2024 – 2025 *U.S. News & World Report* rankings of the Best Children's Hospitals, Lurie Children's continues to be the top hospital in Illinois, ranking in 11 specialties.
- › Lurie Children's Living Donor Transplant Program is the largest in the region thanks to a partnership with Northwestern Medicine. The [Lurie Children's Precision podcast](#) discussed the success of the collaboration and how we lead the way in living donor transplantation.
- › In July, Lurie Children's Cardiology and Cardiac Surgery ranked [No. 1 in the Newsweek list of America's Best Children's Hospitals 2024](#).

Key achievements



Clinical

- › In FY24, Lurie Children's performed a hospital-record 140 solid organ and stem cell transplants.
- › Lurie Children's currently leads the country in number of heart transplants (24) in children from January 2024 to date.
- › [Lurie Children's Pediatric Heart Failure and Heart Transplantation Program](#) has been in the top 10 hospitals in the country by volume for pediatric heart transplants since 2016. Long-term survival rate for Lurie Children's heart transplant patients is above the national average.
- › Allison B. Davila, MD, joined the faculty as assistant professor of Surgery (Pediatric Cardiovascular–Thoracic Surgery).
- › David S. Winlaw, MD, was featured on the podcast [Surgical Innovations in Pediatric Cardiology](#).



Research

The Pediatric Devices, Innovations, and Advances in Surgery (PEDIA-SURG) research group investigators Timothy B. Lautz, MD, and Seth D. Goldstein, MD, completed a successful Investigational New Drug application with the FDA and began a first-in-pediatrics clinical trial of a novel fluorescent agent used to detect sarcoma metastases during surgery. This drug, Cytalux (pafocianine), is approved for use in adults undergoing surgery for lung and ovarian cancer and has shown great promise for improving surgical detection of these nodules.

The Pediatric Obesity Research Group, led by Thomas Inge, MD, PhD, and Justin R. Ryder, PhD, continues to be active in NIH-funded research, clinical trials and publications with high impact factors. The team has three active R01 grants focused on treatment of adolescents type 2 diabetes (R01DK119450, Inge MPI), understanding mechanisms of weight regain (R01DK127991, Ryder PI), and novel treatment for MASLD in adolescents with obesity (R01DK136207, Ryder PI). The group is also actively partnering with industry to bring clinical trials to Northwestern Medicine and Lurie Children's with three studies: the phase 2 clinical trial PASIPHY, the phase 3 clinical trial SURMOUNT-ADOLESCENTS-2 and the phase 3 clinical trial ATTAIN-ADOLESCENTS.

Mehul V. Raval, MD, is a principal investigator (PI) for the Children's Surgery Methodology and Research Training (C-SMART) project, with the first T32 grant ever awarded to the Department of Surgery at Lurie Children's.

Joanna K. Ledwon, PhD (PI), and Arun K. Gosain, MD (co-PI), received a grant for \$75,000 from the Plastic Surgery Foundation to study whether acellular dermal

matrix or deferoxamine can have a protective role when radiation is administered to tissues undergoing tissue expansion.

Dr. Lautz obtained industry funding from Astellas Pharmaceuticals for a phase 3 study on a novel fluorescent agent for intra-operative ureter visualization and from OnTarget Laboratories for a phase 1 study of a novel fluorescent agent for nodule visualization during pulmonary metastasectomy.

The Division of Pediatric Surgery had more than 90 peer-reviewed publications.



Education

The division supports a Pediatric Research Scholar, which is a GME fellowship endorsed by McGaw Medical Center at Northwestern University Feinberg School of Medicine. Ariel Figueroa, PGY2 in general surgery from New York Medical College, completed her two years, and Emily George, PGY2 in general surgery from University of Wisconsin–Madison, began her two years as a Pediatric Research Scholar.

Akira Yamada, MD, PhD, presented a CME course, “Advances and techniques in microtia and ear reconstruction,” held in April 2024.

Key division publications

Dr. Raval was a co-author of the [first AAP guideline on opioid prescribing in primary care](#). If opioids are prescribed, according to the guideline, families need to be counseled on the warning signs of overdose and have on hand naloxone, the medication that rapidly reverses an opioid overdose. The guideline also urges providers to advise families on safe disposal of unused opioid medication after their child’s pain resolves, instead of keeping it at home for future use.

Bold names denote Northwestern Medicine Department of Surgery faculty, trainees and staff at the time of publication.

Ryder JR, Jenkins TM, Xie C, Courcoulas AP, Harmon CM, Helmrath MA, Sisley S, Michalsky MP, Brandt M, **Inge TH**. [Ten-year outcomes after bariatric surgery in adolescents](#). *N Engl J Med*. 2024;31;391(17):1656-1658. doi: 10.1056/NEJMc2404054.

Aronson S, Applebaum SA, Kelsey LJ, **Gosain AK**. [Evidence-based practices in facial reanimation surgery](#). *Plast Reconstr Surg*. 2023;152(3):520e-533e. doi:10.1097/PRS.00000000000010539.

Janes LE, Kelsey LJ, Sasson DC, Applebaum S, **Ledwon JK, Gosain AK**. [Drop-off in axonal regeneration along the length of a cross-face nerve graft: an experimental study in rats](#). *Microsurgery*. 2023;43(7):694-701. doi:10.1002/micr.31053.

Applebaum SA, Aronson S, Termanini KM, **Gosain AK**. Evidence-based practices in cleft palate surgery. *Plast Reconstr Surg*. 2024;153(2):448e-461e. doi:10.1097/PRS.00000000000011035.

Song G, **Gosain AK**, Buganza Tepole A, Rhee K, Lee T. [Exploring uncertainty in hyper-viscoelastic properties of scalp skin through patient-specific finite element models for reconstructive surgery](#). *Comput Methods Biomech Biomed Engin*. 2024;1-15. doi:10.1080/10255842.2024.2313067.

Ledwon JK, Applebaum SA, Progre B, Han T, Vignesh O, Gutowski KS, Chang AB, Reddy NK, Tepole AB, Gosain AK. [Acellular dermal matrix cover improves skin growth during tissue expansion by affecting distribution of mechanical forces](#). *Plast Reconstr Surg*. 2024;153(4):663e-672e. doi:10.1097/PRS.00000000000010709.

Hallman TG, Qureshi U, Gutowski KS, Arcelona C, Donaldson R, **Gosain AK**. [The price of productivity: evaluating the cost of a research year](#). *J Surg Educ*. 2024;81(4):495-502. doi:10.1016/j.jsurg.2024.01.005.

Yamada A, Chwa ES, Bector MJ. [Update on total auricular construction](#). *Plast Reconstr Surg*. 2024;153(5):1011e-1021e. doi:10.1097/PRS.00000000000011219.

Key faculty honors and awards

Senior resident Mallory Perez, MD, was awarded the Judah Folkman Award for best overall clinical presentation for her work, “Heeding the black box: leveraging National Surgical Quality Improvement Project–Pediatric for hospital-level assessment of opioid prescribing.”

Erin Rowell, MD, was promoted to professor of Surgery, and Dr. Goldstein was promoted to associate professor of Surgery.

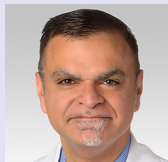
Dr. Raval, Dr. Jordan, Dr. Nadig, Dr. Rohan and Dr. Stey were inducted into the Society of University Surgeons.

Dr. Raval was inducted into the Alpha Omega Alpha Honor Medical Society.

Dr. Lautz was appointed vice chair of Clinical Operations for the Department of Surgery at Lurie Children’s Hospital.

Pediatric Surgery Faculty

Clinical Educator and Research Faculty



Fizan Abdullah, MD,
PhD



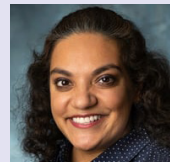
Amir M. Alhajjat,
MD



Anthony C. Chin,
MD



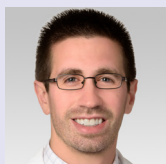
Osama M. Eltayeb,
MBBS



Noopur
Gangopadhyay, MD



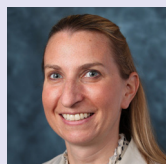
Hassan M. I.
Ghomrawi, PhD,
MPH



Seth D. Goldstein,
MD



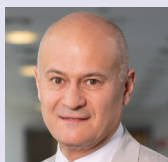
Arun K. Gosain, MD



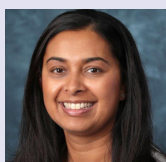
Julie D. Grabowski,
MD



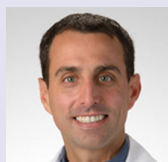
Yue-Yung Hu, MD,
MPH



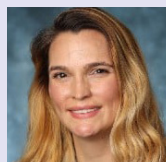
Thomas Inge, MD,
PhD (tenured)



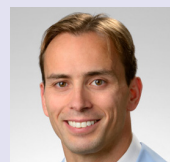
Rashmi Kabre, MD



Timothy B. Lautz,
MD



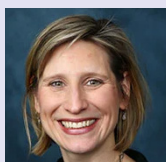
Jennifer L.
McGrath, MD



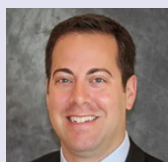
Michael C. Monge,
MD



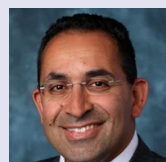
Mehul V. Raval, MD
(tenured)



Erin Rowell, MD



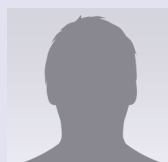
Justin R. Ryder, PhD



Aimen F. Shaaban,
MD



Riccardo A.
Superina, MD



David S. Winlaw,
MD



Akira Yamada, MD,
PhD

Pediatric Surgery Faculty

Research Faculty



Joanna K.
Ledwon, PhD

Health System Clinicians



Monica Langer, MD



Guillermo J. Ares,
MD



Alex Dzakovic, MD



Plastic Surgery

The Division of Plastic Surgery offers a spectrum of surgical and nonsurgical procedures designed for both cosmetic enhancements and reconstructive purposes.

Innovation and highlights

Over the past year, the Division of Plastic Surgery has made significant strides in expanding its team and enhancing patient care. The division welcomed two former residents, Megan E. Fracol, MD, and Lindsay E. Janes, MD, as new faculty members after they completed fellowships outside the institution. Dr. Fracol brings her expertise to the field of reconstructive microsurgery, adding new types of flaps performed at Northwestern Medicine for breast reconstruction, including the posterior inner thigh PAP flap for women who would otherwise not be able to use their abdomen for autogenous breast reconstruction. Dr. Janes is focusing on advancing the division's capabilities in hand surgery and is developing new treatments at Northwestern Medicine for spastic and partially paralyzed limbs using novel tendon transfers and nerve denervation techniques. Additionally, the division introduced a Gender Surgery Fellowship, with Andrea Battistini, MD, joining as the inaugural fellow. Dr. Battistini's contributions have been instrumental in improving access and care for gender surgery patients, marking an important step forward in patient inclusivity and specialized care.



In terms of innovation, the division has helped introduce a new surgical suture called a mesh suture for possible improved outcomes in reconstructive abdominal and orthopedic surgery. More than 1,100 cases were performed using the suture in the first 18 months after its introduction at Northwestern Medicine. The suture is now used widely nationally and internationally. Surgical outcomes after using the suture are the subject of a data registry that is being mined for publications.

The division also experienced substantial growth in clinical activity, with a 12.8% increase in surgical cases and a 17.6% increase in wRVUs over the previous year, reflecting the team's dedication to meeting the growing demand for services and providing reconstructive procedures when needed for the enlarging scope of the Department of Surgery. In collaboration with the Regional Medical Group, the division has worked with our partner surgeons to expand faculty and programs. Particularly notable is the breast microsurgery service at Lake Forest Hospital led by Michael Howard, MD, and recruitment at both Palos Hospital (completed) and Central DuPage Hospital (ongoing). This partnership has enhanced the integration of services and positioned the division as a leader in delivering leading-edge surgical care to the region. These achievements underscore the division's commitment to excellence, innovation and patient-centered care.

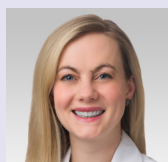
Plastic Surgery Faculty



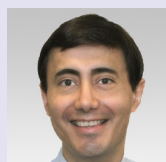
Gregory Dumanian,
MD



Marco Ellis, MD



Megan E. Fracol,
MD



Robert D. Galiano,
MD



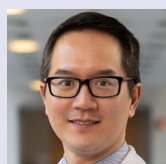
Lindsay E. Janes,
MD



Sumanas Jordan,
MD, PhD



John Kim, MD



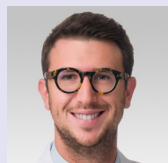
Jason Hyunsuk Ko,
MD

Research Faculty



Seok Jong Hong, PhD

Health System Clinicians



Andrea Battistini,
MD



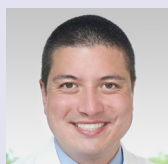
Julius Few, MD



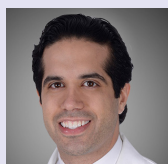
Michael Howard,
MD



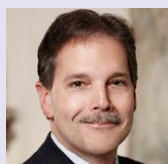
Thomas Mustoe,
MD



Clark Schierle, MD,
PhD



Sammy Sinno, MD



Anthony Terrasse,
MD



Chad Teven, MD,
MBA



Surgical Oncology

In partnership with Robert H. Lurie Comprehensive Cancer Center of Northwestern University, the Division of Surgical Oncology offers evidence-based, multidisciplinary cancer treatment from a team of fellowship-trained surgeons and dedicated care professionals.

Faculty highlights

For the Division of Surgical Oncology, the past year has been marked by growth as we have added two new advanced practice providers and three new faculty to our team. Joining our Section of Endocrine Surgery, Rebecca Williams, MD, PhD, most recently was at the University of Wisconsin–Madison, where she completed a fellowship in endocrine surgery. Dr. Williams will have a broad endocrine practice, treating benign and malignant surgical conditions of the thyroid, parathyroid and adrenal glands. In addition, she will bring the capability to do robotic adrenalectomies to our department. Dr. Williams has already established herself nationally as a researcher in surgical education and was appointed an associate program director for the general surgery residency. She has been working closely with the American Board of Surgery to implement a system of entrustable professional activities (EPAs) to transition surgical education to a competency-based model.

Also joining our division this year is Juliet Lumati, MD, MPH. Dr. Lumati just completed a complex general surgical oncology fellowship at Johns Hopkins, and specialized in the multidisciplinary management of complex gastrointestinal malignancies. Dr. Lumati will lead our regional therapies program offering hyperthermic peritoneal perfusion (HIPEC), and hepatic artery infusion (HAI) pumps to patients with otherwise untreatable metastatic cancers. Dr. Lumati is also working toward developing a robotic pancreatic cancer program. Dr. Lumati's research centers around international health and quality in oncologic care.

Surgical Oncology Faculty



David Bentrem, MD



Dina Elaraj, MD



Juliet S. Lumati,
MD, MPH



Cord Sturgeon, MD



Jeffrey D. Wayne,
MD



Rebecca L.
Williams, MD, PhD

Research Faculty



Julie Johnson,
MSPH, PhD



Willemijn Schäfer,
PhD



Yao Tian, PhD

Health System Clinicians



John Abad, MD



Chad A. Barnes, MD



Akhil Chawla, MD



Ashley N. Hardy, MD



Samer R. Rajjoub,
MD



James R. Wade, MD



Thoracic Surgery

The Division of Thoracic Surgery is among the top programs in the country for clinical care, research and education. We offer advanced surgical treatments across the entire spectrum of thoracic diseases based on leading-edge medical research. We constantly strive for excellence within all aspects of academic thoracic surgery and work to develop innovative solutions for all of our patients, regardless of the complexity of their conditions.

Innovation and highlights

- › The Lung Transplant program became the busiest in the nation by volume, completing more than 140 lung transplants.
- › The DREAM program (Double Lung Transplant Registry Aimed for Lung-Limited Malignancies) continued to grow and provides options for patients with stage 4 lung cancer to receive a lung transplant.
- › Ankit Bharat, MD, received the first-ever Program Project Grant awarded by the NIH to the Department of Surgery for “Integrated mechanisms of primary and chronic graft dysfunction following lung transplantation.”
- › Calvin C. H. Lung, MD, was appointed surgical director for Extracorporeal Membrane Oxygenation.
- › Chitaru Kurihara, MD, was appointed associate surgical director for Lung Transplant.
- › Samuel S. Kim, MD, is leading the local site of the randomized clinical trial “Perioperative physical activity intervention in older adults with lung cancer and their family caregivers.”

Thoracic Surgery Faculty



Diego Avella Patino,
MD



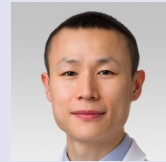
Ankit Bharat, MD



Samuel S. Kim, MD



Chitaru Kurihara,
MD

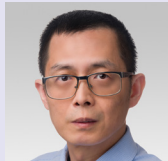


Kalvin C. H. Lung,
MD

Research Faculty



Emilia Lecuona,
PhD



Xianpeng Liu, PhD



Masahiko
Shigemura, PhD



Qiang Wu, PhD



Yuanqing Yan, PhD



Wenbin Yang, PhD

Health System Clinicians



Andrew T. Arndt,
MD



Michael S. Vercillo,
MD



James R. Wade, MD



Vascular Surgery

The mission of the Division of Vascular Surgery is to reduce the mortality and disability from vascular disease through patient care, research and education. Our strategy is to bring together highly qualified individuals who have basic and clinical research interest and expertise in vascular disease to create novel treatments and prevention programs for arterial and venous vascular disease.

Innovation and highlights

- › We opened new hybrid operating rooms with radiation-free 3D imaging capabilities (LumiGuide), one of 10 sites in the country and the only one in the region.
- › We welcomed Mary Jo Gould, MSN, APRN, AGACNP-BC (northern suburbs), and Rachel Breault, PA-C (south suburbs).

Key achievements



Clinical

- › Members of the division participated in the following research trials:
Commercially available branched aortic stent graft devices (W. L. Gore & Associates) for treatment of aortic arch diseases and thoracoabdominal aneurysms/dissections: Andrew Hoel, MD; Neel A. Mansukhani, MD, MS; Heron E. Rodriguez, MD; and Ashley K. Vavra, MD

Implantation of Barostim device for advanced heart failure patients: Mark K. Eskandari, MD; Tadaki Tomita, MD; Sherazuddin Qureshi, MD; and Gabriel A. Wallace, MD

“Lower limb salvage with commercially available LimFlow deep venous arterialization techniques: Dr. Eskandari and Dr. Tomita

- › Dr. Mansukhani and Dr. Vavra performed the first fenestrated aortic stent graft for abdominal aortic aneurysm at the Jesse Brown Department of Veterans Affairs Medical Center.
- › We performed our 400th complex endovascular repair of aortic aneurysm.
- › The Code Aorta rapid patient transfer program, in collaboration with the departments of Cardiac Surgery and Cardiology, has continued to find new patients with acute aortic syndromes, including type B aortic dissection and ruptured aortic aneurysm.



Research

- › Dr. Hoel actively participated in and recruited two patients for the Cook Medical aortic fenestrated device trial for thoracoabdominal aneurysms.
- › Dr. Eskandari participated in the IMPROVE-AD trial for treatment of uncomplicated acute thoracic aortic dissections and the “Small aortic aneurysm trial for nonlinear membrane analysis and aortic rupture risk.”
- › Bin Jiang, PhD, received the Bachrach Family Foundation Research Award.



Education

- › We hosted the Annual Northwestern Vascular Symposium in December 2023 at the Intercontinental Hotel.
- › Northwestern Medicine was a collaborating hospital for the American Irish Medical Summit in Dublin, Ireland, in August 2024.
- › The division sent speakers to the Latin America Aortic Event, sponsored by W. L. Gore & Associates, in October 2024.
- › Our Vascular Surgery Interest Group hosted an introduction to vascular surgery, scrubbing, and knot tying in September in the Simulation Center, with about 70 first-year medical students in attendance.

Key division publications

Bold names denote Northwestern Medicine Department of Surgery faculty, trainees and staff at the time of publication.

Hu CJ, Reilly M, Khan I, **Hoel AW**, Sturgeon C, **Ho KJ**. [An analysis of water used and wasted at operating room \(OR\) scrub sinks and call to action for reducing water waste](#). *Ann Surg*. Published online June 18, 2024. doi:10.1097/SLA.0000000000006406.

Gornik HL, Aronow HD, Goodney PP, Arya S, Brewster LP, Byrd L, Chandra V, Drachman DE, Eaves JM, Ehrman JK, Evans JN, Getchius TSD, Gutiérrez JA, Hawkins BM, Hess CN, **Ho KJ**, Jones WS, Kim ESH, Kinlay S, Kirksey L, Kohlman-Trigoboff D, Long CA, Pollak AW, Sabri SS, Sadwin LB, Secemsky EA, Serhal M, Shishehbor MH, Treat-Jacobson D, Wilkins LR. [2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease: a report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines](#). *Circulation*. 2024;149(24):e1313-e1410. doi:10.1161/CIR.0000000000001251.

Ho KJ, Muhammad LN, Khanh LN, Li XS, Carns M, Aren K, Kim SJ, Verma P, Hazen SL, Varga J. [Elevated circulating levels of gut microbe-derived trimethylamine N-oxide are associated with systemic sclerosis](#). *J Clin Med*. 2024;13(19):5984. doi:10.3390/jcm13195984.

Vavra AK, Furlough CL, Guerra A, Hekman KE, Yoo T, Duma N, Stewart CL, Yi JA. [Unconscious bias in speaker introductions at a national vascular surgery meeting: the impact of rank, race and gender](#). *Am J Surg*. 2024;232:54-58. doi:10.1016/j.amjsurg.2023.10.056.

Hoel A, Nayak T, Ponukumati AS, **Mansukhani NA**, Stone DH, Kuwayama DP, Nolan B, Suckow BD. [Disease-specific patient-reported quality of life after fenestrated/branched endovascular aortic aneurysm repair](#). *J Vasc Surg*. 2024;S0741-5214(24)01893-7. doi:10.1016/j.jvs.2024.09.012.

Paraskevas KI, Schermerhorn ML, Haulon S, Beck AW, Verhagen HJM, Lee JT, Verhoeven ELG, Blankensteijn JD, Kölbel T, Lyden SP, Clair DG, Faggioli G, Bisdas T, D'Oria M, Mani K, Sörelus K, Gallitto E, Fernandes E, Fernandes J, Katsargyris A, Lepidi S, Vacirca A, Myrcha P, Koelemay MJW, Mansilha A, Zeebregts CJ, Pini R, Dias NV, Karelis A, Bosiers MJ, Stone DH, Venermo M, Farber MA, Blecha M, Melissano G, Rimbaut V, Eagleton MJ, Gargiulo M, Scali ST, Torsello GB, **Eskandari MK**, Perler BA, Gloviczki P, Malas M, Dalman RL. [An international, expert-based, Delphi consensus document on controversial issues in the management of abdominal aortic aneurysms](#). *J Vasc Surg*. 2024;S0741-5214(24):01712-9. doi:10.1016/j.jvs.2024.08.012.

Rubin MJ, Wakinekona NA, **Reilly MA**, Canales B, Sparapani R, Dyer M, Kibbe MR, **Mansukhani NA**. [Reporting and analysis of sex in vascular surgery research](#). *J Vasc Surg*. 2024;80(6):1871-1882. doi:10.1016/j.jvs.2024.06.021.

Key faculty honors and awards

- › Dr. Tomita was promoted to associate professor of Surgery.
- › Gabriel A. Wallace, MD, was accepted into the Society for Vascular Surgery Leadership Program.
- › George E. Havelka, MD, entered the Society of University Surgeons Leadership Agility Program, part of a collaboration with the Northwestern University Kellogg School of Management.
- › Dr. Vavra was named to the Quality Improvement Committee for the Liaison Committee on Medical Education.
- › Dr. Eskandari; Karen J. Ho, MD; Dr. Hoel; and Dr. Tomita all received Department of Surgery Teaching Awards.



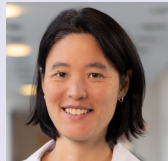
Vascular Surgery Faculty



Anand
Brahmandam, MD



Mark K. Eskandari,
MD



Karen J. Ho, MD



Andrew Hoel, MD



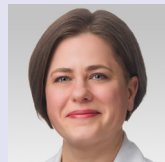
Neel A.
Mansukhani, MD,
MS



Heron E. Rodriguez,
MD



Tadaki Tomita, MD



Ashley K. Vavra, MD

Research Faculty



Bin Jiang, PhD

Health System Clinicians



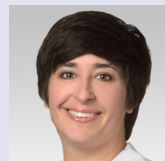
George E. Havelka,
MD



Sherazuddin
Qureshi, MD



Gabriel A. Wallace,
MD



Julia Wilkinson, MD



Northwestern Medicine Department of Surgery

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