



THE OHIO STATE UNIVERSITY WEXNER MEDICAL CENTER

DEPARTMENT OF SURGERY

YEAR IN REVIEW | FY2021



THE OHIO STATE
UNIVERSITY
WEXNER MEDICAL CENTER

The value of **connections** became more apparent than ever this past year.

Because of the pandemic, teams across The Ohio State University Wexner Medical Center were forced to change how we interacted and invent new ways to partner. While certainly a challenge, the virtual separation gave us an even greater appreciation for the in-person collaboration we had previously enjoyed and are now returning to more regularly. It also made us keenly aware of the unique advantages we enjoy as part of one of the largest academic health centers in the country at one of the largest university systems in the United States.



As a department, we emphasize the interdependence of education, research and clinical care. Our surgeons are supported by a team of engaged researchers, and our integration of students, faculty and clinicians across projects provides rich opportunities for learning from so many different perspectives and experience levels. These partnerships can extend to all departments within the medical center and the university at large.

Within just the medical center, there are over 23,000 dedicated team members in nearly every medical discipline. We have been nationally ranked as a “Best Hospital” by *U.S. News & World Report* for 29 consecutive years and 10 of our specialties were named to the 2021-2022 list, with 13 common procedures and conditions selected as high performing.

Beyond the medical center, The Ohio State University has more than 200 academic centers and institutes within 18 colleges and schools. The university is the #1 producer of Fulbright Scholars in the nation, #3 in industry-sponsored research and a Top 12 public research university. We are also ranked by *U.S. News* among the Top 10 public universities for innovation, a ranking that identifies our leading approach to curriculum, campus life, technology and facilities.

As you review the advancements our department made this past year, you’ll see the wide variety of interdisciplinary and interprofessional teams that helped us advance patient care and discover diagnostic and treatment breakthroughs. Such a wide array of connections is only possible at a place like Ohio State.

Our surgical team is also fortunate to have access to more than 100 Ohio State Wexner Medical Center buildings that house the most technologically advanced research, teaching and patient care programs in the region. This includes seven hospitals, the single largest research facility on The Ohio State University campus, a Central Sterile Supply building that improves efficiency and patient safety, and the Clinical Skills Education and Assessment Center, which is a state-of-the-art training center for medical students and other health professionals.

In addition, significant new construction projects already underway are an exciting indicator of the medical center’s continued commitment to innovation.

- A new 26-story, 1.9 million-square-foot inpatient hospital scheduled to open in 2026 will serve as a model for 21st-century health care, and three new outpatient care facilities are soon to open across central Ohio to provide more convenient access to outpatient surgery, endoscopy, specialty surgical clinics and more.
- The Interdisciplinary Health Sciences Center will provide upgraded and flexible facilities to create a collaborative campus for interprofessional education throughout the Health Sciences.
- In our new Innovation District, the Interdisciplinary Research Facility will house approximately 305,000 new square feet in a five-story laboratory building to serve multiple research disciplines in a single collaborative space.

It’s an exciting time for the Ohio State Department of Surgery with new team members, new possibilities and a supportive environment that emphasizes individual goals and the unique perspectives and experiences that strengthen each of us. We’re incredibly proud of our collective emphasis on Diversity, Equity and Inclusion, as well as the forward-thinking emphasis on sustainability and community health care initiatives. Ohio State was among the first in the nation to declare racism a social determinant of health, and we continue to emphasize the importance of proactive health care for minority communities and opportunities for those underrepresented in medicine.

I hope you will take the time to explore our individual division accomplishments from Fiscal Year ’21, which we believe best demonstrate the power of teamwork, cooperation and professional alliances. In addition, please know that we always welcome any inquiries or opportunities for research or referrals with teams from other medical centers, universities and other community, corporate or government organizations as well.

The best solutions always come from **connections**.

Timothy Pawlik, MD, MPH, MTS, PhD, FACS, FRACS (Hon.)
Chair, Department of Surgery
The Urban F. Meyer III and Shelley M. Meyer Chair for Cancer Research
Surgeon in Chief

To learn more about Ohio State and the Department of Surgery, visit medicine.osu.edu/surgery.



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Content of this year in review was taken prior to the coronavirus outbreak. Please follow guidelines put forward by the Centers for Disease Control and local health officials to remain safe and healthy during this time.

Aspirations for our **future**

As a team, the faculty and staff of the Department of Surgery at The Ohio State University Wexner Medical Center are dedicated to thoughtful planning for our future. Our mission, vision and values have been carefully considered and deliberately chosen to serve as a guide for our department's decisions.

Our strategic plan reflects our collective ambition for continual improvement, and we believe each of the five goal areas — talent and culture; research; education; health and well-being; and resource stewardship — are crucial to our success.

Department of Surgery Mission

We provide exceptional, patient-centered care; lead innovative surgical research; and train the next generation of surgeon leaders and scientists.

Department of Surgery Vision

We will improve the care of patients by building innovative clinical surgical programs and advancing translational scientific knowledge.

Department of Surgery Values

Excellence, Integrity, Innovation, Education, Quality and Diversity

Our Department

The Ohio State Department of Surgery is composed of:

Nine surgical specialty divisions:

- Cardiac Surgery
- Colon and Rectal Surgery
- General and Gastrointestinal Surgery
- Pediatric Surgery
- Surgical Oncology
- Thoracic Surgery
- Transplantation Surgery
- Trauma, Critical Care and Burn
- Vascular Diseases and Surgery

Ten multidisciplinary centers:

- Burn Center
- Center for Bariatric Surgery
- Center for Minimally Invasive Surgery
- Center for Research, Education and Advancement of Transdisciplinary Exploration (CREATE)
- Center for Surgical Health, Assessment, Research and Policy (SHARP)
- Comprehensive Esophageal Health Center
- Comprehensive Hernia Center
- Comprehensive Wound Center
- COPPER Laboratory
- Trauma Center

OUR **BUCKEYE SPIRIT** MOVES US FORWARD

THE OHIO STATE UNIVERSITY WEXNER MEDICAL CENTER'S STRATEGIC PRIORITIES

TALENT AND CULTURE



RESEARCH



EDUCATION



HEALTH AND WELL-BEING



RESOURCE STEWARDSHIP



INCLUSIVENESS • DETERMINATION • EMPATHY • SINCERITY • OWNERSHIP • INNOVATION

THE DEPARTMENT OF SURGERY **goals**

TALENT AND CULTURE

Through recruitment and training, create a high-performing culture that values accountability, inclusion and collaboration. Continue to improve the faculty experience for all, with additional focus on cultivating women leaders in surgery.

RESEARCH

Become a top 5 National Institutes of Health (NIH)-funded surgery department and national leader in health sciences research by supporting collaboration and developing the resources needed to pursue grants, publication opportunities and national awareness.

EDUCATION

Foster a culture that emphasizes daily learning within a supportive, professionally challenging environment that attracts the nation's best and brightest faculty, residents and fellows.

HEALTH AND WELL-BEING

Serve as a surgical resource with an expanded scope of influence by reducing disparities of care for disadvantaged populations and working to become a surgical destination of choice locally, regionally, nationally and globally.

RESOURCE STEWARDSHIP

Focus on both cost savings and exterior funding, using metrics to track progress, establish accountability and identify areas for improvement.

A talented team dedicated to results

Every year, The Ohio State University Department of Surgery benefits from an influx of new talent that further strengthens the quality of our collaboration and sparks new partnerships, new learning and new medical breakthroughs.



Nicole Bernal, MD, FACS

Director of the Burn Center; professor, Trauma, Critical Care and Burn

An experienced and nationally recognized surgeon focused on academic burn surgery. Her clinical expertise includes infrared laser spectroscopy

for diagnosis of burns, international medicine and pediatric trauma, while her research focuses on improving burn wound healing. She's co-authored 33 peer-reviewed journal articles and made more than 75 invited lectures and presentations.



Matthew Henn, MD

Assistant professor, Cardiac Surgery

A graduate of The Ohio State University College of Medicine who is returning to Columbus following his general surgery residency and cardiothoracic surgery

training. His clinical focus will encompass the full spectrum of cardiac surgery. In addition, he is interested in clinical outcomes research and both medical student and surgical trainee education.



Robert Beaulieu, MD, MSE

Assistant professor, Vascular Diseases and Surgery

Focuses on an array of diseases, including aneurysms, carotid artery disease and peripheral artery disease through both open and endovascular approaches.

In addition to a general surgery residency and vascular surgery fellowship, he completed a master's degree in biomedical engineering.



Alex Kim, MD, PhD

Assistant professor, Surgical Oncology

An expert in advanced cancer therapies, including cytoreductive surgery, hyperthermic intraperitoneal chemoperfusion and regional chemotherapies, as well as

minimally invasive surgery. He treats patients with complex, advanced gastrointestinal and peritoneal malignancies, and the goal of his research is the identification of both upstream and downstream therapeutic targets of epithelial-mesenchymal transition (EMT) to provide innovative treatments for patients with advanced malignancy.

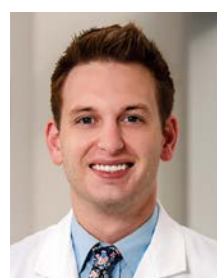


Ashley Limkemann, MD, MPH

Assistant professor, Transplantation Surgery

An abdominal transplant surgeon with clinical interest in living donor liver and pediatric liver transplantation. She completed an abdominal organ transplantation and

hepato-pancreato-biliary surgery fellowship with research in transplant and trauma surgery focused on ischemic-reperfusion injury. She was awarded multiple resident awards for clinical performance.



Brett Tracy, MD

Assistant professor, Trauma, Critical Care and Burn

A general surgeon and graduate of an American Association for the Surgery of Trauma acute care surgery and surgical critical care fellowship program. He will care for

trauma, surgical critical care and emergency general surgery patients with particular focus on clinical outcomes research, health care disparities, geospatial analysis and metabolism. He has more than 30 presentations and 20 articles in peer-reviewed journals to his credit.

Become part of the surgical team at the Ohio State Wexner Medical Center, one of the largest and most diverse academic health centers in the country. We are continually looking for the best and brightest. See available opportunities at wexnermedical.osu.edu/recruitment.



Andrew Young, MD, FACS

Assistant professor, Trauma, Critical Care and Burn

Specializes in cervical spine fracture, antimicrobial stewardship in the SICU and trauma quality improvement. His research interests include

user interface design and creation of machine learning models to improve outcomes, cut health care costs and improve electronic health record functionality. He has received numerous teaching awards and also served in the U.S. Navy as a general surgeon for four years.



Alfredo Cordova, MD, FACS

Assistant professor, Trauma, Critical Care and Burn

Specializes in acute and chronic care of burn victims, trauma surgery, emergency general surgery, robotic surgery, hernia surgery and abdominal wall

reconstruction. He completed fellowships in burn and reconstructive surgery and surgical critical care, as well as a research fellowship in vascular surgery. He has also received multiple teaching and research awards and currently serves as a lieutenant colonel in the U.S. Army Medical Corps.



Alex Helkin, MD

Assistant professor, Trauma, Critical Care and Burn

A general surgeon who recently completed a fellowship in trauma and critical care. His clinical interests include treating life-threatening conditions such

as sepsis and respiratory failure, and he has been active in basic science research and worked two years for a biotech company.



Meihong Deng, MD

Associate professor, Trauma, Critical Care and Burn

A researcher with tremendous experience in the mechanisms that lead to immune dysregulation following sepsis and trauma with particular interest in the role of DNA-

sensing in innate immunity, the immunoregulatory roles of fibroblastic reticular cells and host defense. She has written more than 40 peer-reviewed published manuscripts and has a current NIH grant from the National Institute of Allergy and Infectious Diseases.



Mona El Refaey, PhD, MS

Assistant professor, Cardiac Surgery

A research scientist specializing in cardiovascular physiology and mechanisms underlying heart rhythm regulation who joins us

following several years with the Ohio State Department of Physiology and Cell Biology. She has completed more than 40 presentations and abstracts, been published more than 20 times and is a manuscript reviewer for multiple publications. She is also the principal investigator (PI) for a K99 career development award from the National Heart, Lung and Blood Institute.

Awards and Recognition

DIVISION OF CARDIAC SURGERY

John Bozinovski, MD

- Western Thoracic Surgical Association

Chuanxi Cai, PhD

- Co-chair of the American Heart Association

Asvin Ganapathi, MD

- Kirwan Institute Grant

Renzhi Han, PhD

- Editorial Board member, *Frontier in Genome Editing* and *Journal of Intensive Medicine*

Matthew Henn, MD

- ACGME Residency Review Committee for Thoracic Surgery

Haichang Li, PhD

- 2020 Butler-Williams Scholarship, National Institutes of Health (National Institute on Aging)

Jianjie Ma, PhD

- Reviewer for Best Grant Review

Nahush Mokadam, MD

- American Surgical Association
- Cardiac editor, *Seminars in Thoracic and Cardiovascular Surgery*

Prabhakara Nagareddy, PhD

- Fellow of the American Heart Association (Basic Cardiovascular Sciences)

Bryan Whitson, MD, PhD

- American Surgical Association

Hua Zhu, PhD

- Chairman, Education and Award Committee at The Academy of Cardiovascular Research Excellence

DIVISION OF COLON AND RECTAL SURGERY

Lisa Cunningham, MD

- Association of Surgical Education Research Fellowship 2021-22

Alessandra Gasior, DO

- International Sacral Agenesis/Caudal Regression Association Medical Advisory Board

Alan Harzman, MD

- Chair, Development Committee, Association for Surgical Education

Emily Huang, MD, MEd

- ASCRS annual scientific meeting 2021 program vice chair

Matthew Kalady, MD

- President, International Society of Inherited Gastrointestinal Tumors

Amber Traugott, MD

- Midwest Surgical Association executive council

DIVISION OF GENERAL AND GASTROINTESTINAL SURGERY

Courtney Collins, MD, MS

- 2020-22 ACS associate fellow scholar in Geriatric Surgery and Patient Reported Outcomes

Daniel Gallego-Perez, PhD

- Young Innovator Award, *Cellular and Molecular Bioengineering* journal

Sabrena Noria, MD, PhD

- Named first Department of Surgery vice chair of Diversity, Equity and Inclusion

Benjamin Poulouse, MD, MPH

- American Surgical Association

DIVISION OF PEDIATRIC SURGERY

Katherine Deans, MD, MHSC

- Executive leadership team, Academic Medicine Program for Women

Karen Diefenbach, MD

- American College of Surgeons Academy of Master Surgeon Educators
- Society of University Surgeons

Renata Fabia, MD, PhD

- President, North American Burn Society

Peter Minneci, MD, MHSC

- American Surgical Association

Benedict Nwomeh, MD, MPH

- Governor, American Pediatric Surgical Association
- President, Association of Pediatric Surgery Training Program Directors

Rajan Thakkar, MD

- Society of University Surgeons

Richard Wood, MD

- Society of University Surgeons

DIVISION OF SURGICAL ONCOLOGY

Joal Beane, MD

- Vice chair of the Society for the Alimentary Tract Virtual Education Committee

Carlo Contreras, MD

- Association for Academic Surgeons Education Committee

Priya Dedhia, MD, PhD

- Society of Asian Academic Surgeons Junior Faculty award winner

Mary Dillhoff, MD

- At-large member of the Surgery Board of Managers

Aslam Ejaz, MD, MPH

- Association for Academic Surgery Leadership Committee

Ko Un “Clara” Park, MD

- COVID-19 Women Faculty Warrior for Women in Medicine and Science, Ohio State

Timothy Pawlik, MD, MPH, PhD

- President, The Americas Hepato-Pancreato-Biliary Association

DIVISION OF THORACIC SURGERY

Desmond D’Souza, MD

- The Society of Thoracic Surgeons (STS) Workforce for New Technology

Peter Kneuert, MD

- STS Top Scoring Abstract – Richard E. Clark Memorial Paper

Robert Merritt, MD

- 2021 Leonard Tow Humanism in Medicine Award

DIVISION OF TRANSPLANTATION SURGERY

Sylvester Black, MD, PhD

- American Society of Transplant Surgeons (ASTS) 2021 Rising Star in Transplantation Surgery Award

Ginny Bumgardner, MD, PhD, FACS

- ASTS secretary of membership

Ashley Limkemann, MD, MPH

- ASTS Knowledge Assessment and Curriculum committees

Austin Schenk, MD, PhD

- Ohio Solid Organ Transplant Consortium Award

DIVISION OF TRAUMA, CRITICAL CARE AND BURN

Nicole Bernal, MD, FACS

- Named The American Electric Power Foundation Chair in Burn Care

Meihong Deng, MD

- *Frontiers in Cellular and Infection Microbiology* associate editor

Daniel Eiferman, MD

- 2021 America’s Most Honored Doctors Top 5%

Michael Sutherland, MD

- Central Ohio Trauma Advisory Board president

Brett Tracy, MD

- Vice chair, Resident and Associate Society of American College of Surgeons and *JACS* Journal Club

Wendy Wahl, MD

- Central Surgical Association secretary

DIVISION OF VASCULAR DISEASES AND SURGERY

Mounir Haurani, MD, FACS

- Co-chair, Registered Physician in Vascular Interpretation Exam Review Course for the Society for Vascular Surgery

Kristine Orion, MD

- American Heart Association Go Red for Women Campaign executive leadership team

Timur Sarac, MD

- *Gateways in Vascular Surgery* editor
- Executive Committee and Senior Advisor – VEITH Meeting

Patrick Vaccaro, MD, MBA, FACS

- President, Mazzaferri-Ellison Society of Master Clinicians

Residents: **50**

45% male; **52%** female; **3%** non-binary

34% underrepresented minorities in medicine

26 are members of the AOA National Medical Honor Society or graduated from a top 25 *U.S. News & World Report* Best Medical School

EDUCATION

FY2021 By the Numbers

**31% currently
hold advanced degrees**

100% went on to do a fellowship

**Top 10 General Surgery
Residency program in the
nation on Doximity's 2021
Residency Navigator**



Fellows: **26**

Number of ACGME-Accredited Surgical Residencies: **3**

Number of Specialty Fellowships: **6**

To learn more, visit medicine.osu.edu/surgeryed

Connecting training to individual aspirations and interests

Every resident and fellow of The Ohio State University Wexner Medical Center Department of Surgery brings distinct talents and abilities to our team and also has specific professional and personal goals that we strive to support through a customizable training path.

Our broad range of education options allow all trainees to craft a personal experience that supports the career they envision.

Developing confident, independent surgeons

- **Clinical Skills Education and Assessment Center**
 - State-of-the-art, high-fidelity simulation labs, including open, laparoscopic and task trainers
 - Video teleconferencing capabilities where surgeries happening anywhere in the world provide trainees a bird's-eye view of the surgery on one screen and from inside the patient on another, all while speaking with the physicians performing the procedure
 - Formal assessments and mentorship meetings
- **Live case experience**, with PGY2 residents averaging 400 cases
- **Novel alcohol-based soft tissue preservation** extends reuse of donated bodies and significantly improves the ability to mimic living tissue

OR Coaching program

- Residents receive feedback from senior surgeons, in addition to the attending for the case
- Includes procedure-specific suggestions, as well as constructive comments related to technique and OR management, including small procedural changes or potentially negative habits that can be corrected before becoming ingrained
- Observation and evaluation completed for 12 cases (three each for lap chole, inguinal hernia, ventral hernia and lap colectomy)
- Based on program success and resident interest, three new OR coaches were added to the team
- To learn more, visit medicine.osu.edu/orcoaching.



Upgraded robotic curriculum

- Leads to a da Vinci® Equivalency Certificate
- Begins with a series of dry labs, followed by case-specific pig labs, including high-volume procedures such as colectomy, gastrectomy and pancreatectomy
- Additional simulation training available during each individual surgical rotations
- To learn more, visit medicine.osu.edu/roboticsurgerycurr.



Lead, Engage, Accelerate, Drive in Surgery (LEAD)

- This leadership elective is available to PGY 2-5 general surgery and lab residents
- The one-year course teaches effective leadership skills, which we believe is crucial for a successful surgical career
- Small class size of 15 or fewer promotes discussion and input from varied perspectives
- To learn more, visit medicine.osu.edu/lead.

Exposure to varied surgical settings

- University Hospital
- The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute
- Richard M. Ross Heart Hospital
- Ohio State East Hospital
- Nationwide Children’s Hospital
- Outpatient surgery centers across central Ohio



Education Team

If you want to learn more about our education options and how they can be customized to each trainee’s interests, please contact our education team members:

- Brittany Williams – General Surgery Residency Program Manager
- Anna Patterson – Program Manager, Research Education
- Lori Bardon – Program Manager, Divisions of General and Gastrointestinal Surgery, Colon and Rectal Surgery, and Trauma, Critical Care and Burn
- Kaitlen Knight – Program Manager, Divisions of Cardiac Surgery and Vascular Diseases and Surgery
- Xiaodong (Phoenix) Chen, PhD, MSc, BEng – Senior Director of Education Science

Personal career development

All residents complete a minimum one-year research experience or a specialty fellowship during their residency, unless otherwise exempted.

Subspecialty surgical fellowships

- Advanced therapeutic endoscopy and gastrointestinal surgery
- Cardiothoracic surgery
- Colorectal surgery
- Surgical critical care
- Abdominal transplant surgery
- Pediatric surgery
- Pediatric surgical critical care
- Surgical oncology
- Vascular surgery
- Minimally invasive surgery
- Bariatrics surgery

Research Training Program

- This includes a mentored research project in any area of interest and completion of an advanced degree such as:
 - Master of Medical Science, with a track in translational, clinical, health services and medical education research
 - Master of Public Health
 - Master of Business Administration
 - An alternate Master of Science degree, such as a Master of Science in Anatomy
- To learn more, visit medicine.osu.edu/rtp.



Expanded Residency Wellness Program

Ohio State Department of Surgery expands residency wellness program

Wellness took on added importance during COVID-19, and the Ohio State Wexner Medical Center Department of Surgery was able to expand its existing residency wellness program thanks to the Robert Zollinger Surgical Society. This longstanding alumni group was reinvigorated to emphasize the physical, mental, social and professional wellness that is especially important during the often stressful years of residency. Themed events, developed with guidance from the residency wellness committee assistance, helped our trainees establish unity and maintain a supportive environment.

“The pandemic threw a lot of curves our way. This certainly intensified the daily stress on our residents, and we wanted to make sure we were ‘taking care of the caregivers.’”

— Kelly Haisley, MD, assistant program director of the Department of Surgery’s Wellness, Learning Environment and Duty Hours

Our two newest integrated residency programs

Cardiothoracic Surgery Integrated Residency

- Six-year integrated program to prepare for specialization in cardiothoracic surgery in both academic and community settings
- Rotation on both general and cardiothoracic services at the Ohio State Wexner Medical Center, and complete rotations on the congenital heart service at Nationwide Children’s Hospital
- To learn more, visit medicine.osu.edu/ctsurgery.

Vascular Surgery Residency

- One of the few integrated vascular surgery residency programs in the nation
- Five-year program develops competency in the surgical treatment of patients with complicated vascular conditions and prepares trainees to serve in both academic and clinical care settings
- To learn more, visit medicine.osu.edu/vascular.

RESEARCH

FY2021 By the Numbers

Total funding: **\$23.3 million**

Active grants: **103**

Total NIH funding: **\$20.9 million**

Principal investigators: **50**

NIH awards R01, R03, R21,
K08, UM1, T32 and P30 grants: **30**

Clinical trials: **289**

Publications: **575**

Blue Ridge ranking based on federal fiscal year 2020 (Oct. 1, 2019-Sept. 30, 2020)



Investing in research to accelerate discovery

The Ohio State University Wexner Medical Center Department of Surgery has committed significant time, talent and facilities to the research process. Our ultimate aim is to give our researchers everything they need to explore, innovate and transform their most daring ideas into reality.

An atmosphere of determination

More studies mean more discoveries.

In 2015, we were ranked 25th in National Institutes of Health (NIH) research funding. With resolve and focus we've made steady progress since:

2015 – #25

2018 – #18

2019 – #6

2020 – #5

2021 – #4

Others share our passion for research as well.

The Ohio State University is #3 in industry-sponsored research and a Top 12 public research university.

Support for big ideas

- **Department of Surgery initiatives:**
 - **The Center for Research Education and Advancement of Transdisciplinary Exploration (CREATE)** – supports interprofessional project teams to streamline product and technology development and save costs.
 - **The Center for Surgical Health Assessment, Research and Policy (SHARP)** – provides mentorship, brainstorming sessions, research-in-progress meetings, physical research space, secure database server and staff support for project coordination, statistical analysis and development of grant funding opportunities.
 - **Master of Medical Science degree** – surgery trainees interested in a research career can pursue a Master of Medical Science degree with a curriculum track in either Basic/Translational Science or Clinical Science.
- **University research offices** – For every aspect of research, our scientists can find support from specific university offices. This includes the Office of Research, as well as dedicated offices for sponsored programs, clinical trials, research compliance, responsible research practices, technology and commercialization, and research information technology.

Active NIH studies for FY2021:

Sylvester Black, MD, PhD; R01 for “Preservation of DCD Allograft Integrity for Liver Transplantation”

Ginny Bumgardner, MD, PhD, FACS

- R01 for “Investigating a Novel Cellular Therapy to Prevent and Treat Acute Antibody Mediated Kidney Transplant Rejection”
- TL for “NRSA Training Core”
- T32 for “Advanced Research Training in Immunology for Surgery Trainees (ARTIST)”

William Carson, MD

- UM1 for “The Ohio State University as a Lead Academic Organization (LAO) for the Experimental Therapeutics Clinical Trials Network”
- T32 for “Tumor Immunology”

Meihong Deng, MD; R01 for “Role of Toll-like Receptor 9 in Fibroblastic Reticular Cell-based Therapy for Intra-abdominal Sepsis”

Rehzi Han, PhD; R01 for “ANO5 in Muscle Health and Disease”

Hai Huang, MD; R01 for “Preoperative Exercise Therapy for Surgery Triggered Inflammation”

Haichang Li, DVM, PhD; R01 for “Hydrogel Encapsulation of a Tissue Repair Protein to Treat Chronic Wounds”

Pei-Hui Lin, PhD; R01s for:

- “Muscle-Kidney Crosstalk in Age-Related Kidney Disease”
- “MG53-Mediated Membrane Repair In Muscle Physiology And Disease”
- “Ca Signaling Cross-Talk from SR To Mitochondria In Heart Muscle”

Jianjie Ma, PhD; R01 for “Myokine Function of MG53 in Muscle Injury-Repair and Regeneration”



State-of-the-Art Spaces

- **Innovation District** — A new campus district being built that will include:
 - **The Interdisciplinary Research Facility**, a 270,000-square-foot facility where students, academic researchers, city leaders, Fortune 500 businesses and new start-ups — just steps away from each other — have the potential to share promising new ideas and accelerate discovery.
 - **An interdisciplinary health sciences complex** that provides 225,000 square feet of collaborative space and state-of-the-art technology for learning across the colleges of Medicine, Nursing, Pharmacy, Dentistry, Optometry, Public Health and Veterinary Medicine.
- **Biomedical Research Tower** — Currently the largest research facility on The Ohio State University campus; includes the Imaging Core Facility, which provides researchers high-resolution imaging using a variety of different instruments.



Tools of Discovery

- **The Comprehensive Transplant Center (CTC) Biorepository** — affords our scientists reliable access to high-quality, clinically annotated normal and diseased human biospecimens
- **Novel alcohol-based soft-tissue preservation technique** — extends reuse up to six months and significantly improves the ability to mimic living tissue
- **The Ohio State Human Tissue Resource Network (HTRN)**
- **University Laboratory Animal Resources (ULAR)**
- **Campus Miscopy and Imaging Facility (CMIF)** — a full-service facility supporting sample preparation, image processing and wide range of instrumentation
- **The Campus Chemical Instrument Center (CCIC)** — state-of-the-art research facilities for Nuclear Magnetic Resonance, Mass Spectrometry and Proteomics

Pioneering methods to improve transplant outcomes and donor organ utilization

The **COPPER laboratory**, led by co-directors Sylvester Black, MD, PhD and Bryan Whitson, MD, PhD, is a model of collaboration, with investigators in thoracic and abdominal transplantation, biochemical engineering, biomedical engineering, mechanical engineering, molecular biology and physiology working together to expand the science of endothelial cell repair in ischemia reperfusion and exploit ex vivo perfusion to assess, repair and modify donor allografts. With their guidance, the Ohio State Comprehensive Transplant Center was the first in Ohio to offer extended ex vivo perfusion, a process that uses a mechanical system to respire, warm, nourish and repair donor lungs outside the body, thus improving the odds that they can be used for transplant. Learn more at medicine.osu.edu/copperlab.



Directly linking the Department of Surgery with other scientists

With an organizing principle that “no one of us is as bright as all of us,” the **Center for Research Education and Advancement of Transdisciplinary Exploration (CREATE)**, led by director Sylvester Black, MD, PhD, establishes project teams that include health care providers, academic and health care faculty, students, partners from private industry, engineers and inventors. Its aim is to support research partnerships that can streamline product and technology development, facilitate consultation and save costs. Innovative solutions currently being explored include alternative energy-sourced mechanical ventilation for austere environments, the use of virtual reality in critical care settings and the benefits of Vamos mobility in critical care. Learn more about CREATE at medicine.osu.edu/create.



Prabhakara Nagareddy, PhD; R01 for “Thrombocytopoiesis in Diabetes: Role of Damage Associated Molecular Patterns”

Raphael Pollock, MD, PhD; P30s for:

- “Impact of COVID-19 on Behaviors across the Cancer Control Continuum in Ohio”
- “Admin. Supp. for NCI P30 Cancer Center Grants to Facilitate the Development of Standardized Electronic Treatment Plan Builds for NCI-Supported Clinical Trials Applicable Across Clinical Research Sites”
- Four Cancer Center support grants

Brian Tillman, MD, PhD; R01 for “An Organ Perfusion Stent as an Alternative to Surgery in Donor Organ Recovery”

Allan Tsung, MD; R01 for “Surgery Triggered Immune Response and Liver Metastases”

Bryan Whitson, MD, PhD; R01 for “Preservation and Rescue of the Lung Donor Allograft for Transplantation”

Jonathan Wisler, MD; K08 for “Analyzing the Mechanism of Exosome Mediated DNA Methyltransferase Activity During Sepsis”

Hua Zhu, PhD; R01s for:

- “Preservation of Limbal Stem Cell Function in Corneal Injury”
- “Regulation of Mitsugumin 29 Expression in Muscle Physiology and Diseases”
- “Inhibiting Cell Death for Protecting Cardiac Injury”

The Ohio State Department of Surgery is dedicated to mentoring and supporting our surgical scientists toward obtaining their K and R awards. In addition, both our residency and fellowship tracks allow for extensive research to support and cultivate our trainees' areas of interest.

Clinical faculty: **90+**

Advanced practice providers: **80+**

CLINICAL CARE

FY2021
By the Numbers

Admissions: **8,949***

wRVUs: **682,823**

OR Cases: **18,266**

Connected decision making leads to care that can change lives

Every case considered by The Ohio State University Wexner Medical Center's Department of Surgery is evaluated by a collaborative team that understands each patient comes to us with unique concerns and often other conditions or lifestyle challenges that can complicate treatment. Because every aspect of an individual's health and wellness must be considered, we are always conscious of the need to work together across specialties to deliver the most personalized care possible.

Surgery Divisions FY2021 By the Numbers

Cardiac Surgery

OR cases: 1,045
wRVUs: 81,479

Pediatric

OR cases: 3,909
wRVUs: 89,258

Transplantation

OR cases: 800
wRVUs: 72,783

Colon and Rectal

OR cases: 1,600
wRVUs: 40,609

Surgical Oncology

OR cases: 2,575
wRVUs: 111,017

Trauma, Critical Care and Burn

OR cases: 2,616
wRVUs: 114,385

General and GI

OR cases: 2,653
wRVUs: 73,172

Thoracic

OR cases: 1,274
wRVUs: 30,432

Vascular

OR cases: 1,794
wRVUs: 69,688

New Pancreatic Cancer Multidisciplinary Clinic: expert care simplified

The process of diagnosis and treatment has been simplified for patients at the new Pancreatic Cancer Multidisciplinary Clinic (PMDC) at The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute (OSUCCC – James). Our goal at the PMDC is to schedule any required assessments, testing, patient education, support resources and treatment into single-day visits. Not only is this more convenient for patients and their families, it also improves coordination of care between the entire multidisciplinary pancreatic cancer team throughout the patient's course of individualized treatment. Each patient's active input and involvement is encouraged and valued by each member of the team, which includes experts from surgical oncology, medical oncology, radiation oncology, gastroenterology, radiology, pathology, social work and more. For additional information, visit cancer.osu.edu/PMDC.

Robust lung transplantation program includes transplants for COVID-19 survivors

Although pulmonologists and other providers at The Ohio State University Wexner Medical Center were stretched thin by the demands of caring for COVID-19 patients, they continued to provide lifesaving lung transplants throughout the pandemic — including procedures for patients who survived COVID-19. During 2020, the lung transplant team — which includes colleagues in cardiac surgery — finished in the top 10 in the United States for volume for the first time, ranking #9 with 69 lung transplants and ranking first in the state of Ohio for lung transplantation outcomes. This milestone includes the first COVID-19 patient transplantation, a rare double-lung procedure performed in December 2020. Lung transplant recipients with previous COVID-19 infections have significant inflammation and are also weaker going into surgery, which can make the procedure more challenging than usual. Yet since that first successful procedure, the transplant team at the Ohio State Wexner Medical Center has performed eight additional lung transplantations on COVID-19 survivors, with additional referral continuing. Learn more about the Ohio State Comprehensive Transplant Center, at wexnermedical.osu.edu/transplant.



Multiple departments work together to tackle rare neuroendocrine tumors, leading to Center of Excellence designation

Pheo Para Alliance, a patient advocacy organization that supports patients with pheochromocytoma (pheo) and paraganglioma (para), which are rare neuroendocrine tumors that can be benign or malignant, has designated The Ohio State University Wexner Medical Center as a Center of Excellence for treating and studying these and related genetic illnesses. The Center of Excellence Program recognizes institutions worldwide for providing quality multidisciplinary care for patients with these diseases and for participating in research on the underlying molecular causes.



A team of physicians from several specialties are involved in neuroendocrine patient care, including those from the Department of Surgery, Department of Otolaryngology – Head and Neck Surgery and the Divisions of Endocrinology, Medical Oncology and Genetics in the Department of Internal Medicine, as well as the Comprehensive Adrenal Program (CAP), a new formally organized multidisciplinary team that serves patients from around the world. Because patients with such a rare disease often travel to Columbus from a far distance, the Ohio State Wexner Medical Center's Destination Medicine Global Health Care program works with families to coordinate travel and in-town accommodations and provide any necessary translation to eliminate any distance or language barriers to treatment. To learn more about CAP, visit medicine.osu.edu/adrenalprogram.

Ohio State completes the 1,000th robotic-assisted lobectomy

In February 2021, Robert Merritt, MD, professor and director of the Division of Thoracic Surgery, performed the 1,000th robotic-assisted lobectomy done at The Ohio State University Wexner Medical Center. Robotic surgery provides a minimally invasive surgical option for patients with early-stage lung cancer. Robotic-assisted lobectomy allows patients to recover faster and return to their normal activities much sooner than the conventional open thoracotomy procedure. Patients can expect faster recoveries with smaller incisions, less blood loss, reduced pain and shorter hospital stays, as well as the long-term benefits of improved outcomes. Explore the details of the Ohio State Wexner Medical Center's Center for Advanced Robotic Surgery at wexnermedical.osu.edu/roboticsurgery.



More than 100
thoracic transplantations
in FY2021

Established an
ECMO retrieval
program

Division of Cardiac Surgery

New integrated six-year
residency program



The Ohio State Heart and Vascular Center brings together a team of highly skilled surgeons, the most advanced technology and world-class facilities to deliver exceptional surgical heart care. We have earned a procedure rating of “high performing” for heart bypass surgery from *U.S. News & World Report*.

We specialize in treating the most complex cardiac surgery patients and can provide less invasive therapies, coronary artery bypass surgery, complex reoperations, heart valve surgery, aortic surgery, endovascular and transcatheter procedures, heart and lung transplantation, mechanical circulatory support and extracorporeal membrane oxygenation (ECMO).

Primary Programs:

- **Thoracic Transplant and Mechanical Circulatory Support Program** — This cutting-edge program provides advanced procedures such as ex vivo lung perfusion, total artificial heart replacement, minimally invasive left ventricular assist devices (LVAD) and extracorporeal life support, including ECMO.

- **Minimally Invasive and Robotic Surgery** — Our surgeons offer valve replacement through keyhole operations to deliver leading transcatheter valve replacement therapy (TAVR). We also perform minimally invasive procedures, including coronary artery bypass surgery using a robot to mobilize the left internal mammary artery and small left-anterior thoracotomy incisions for an off-pump coronary artery bypass.
- **Total Arterial Off-Pump Revascularization** — We preferentially perform all arterial coronary artery bypass without the use of the heart-lung machine, as well as off-pump coronary artery bypass (OPCAB) without touching the aorta (anaortic) to minimize the risk of stroke.
- **Adult Congenital Heart Surgery Program** — Our cardiac surgeons at the Ohio State Ross Heart Hospital work in tandem with colleagues from Nationwide Children’s Hospital to bridge the gap in care for those adults transitioning from pediatric care for congenital heart disease.

Referral Information

The Division of Cardiac Surgery specializes in the treatment of the most complex cardiac surgery patients offering a full range of procedures including heart and lung transplantation. This includes patients who require complex reoperations or who have:

- Structural heart disease
- Valvular heart disease
- Advanced heart failure
- Adult congenital heart disease
- Aortic disease

To refer, please call the Division of Cardiac Surgery at **614-293-5502**.

You may also fill out the one-page medical center referral form at wexnermedical.osu.edu/referralform and fax your referral to 614-293-1456.

Faculty



Nahush Mokadam, MD*
Director, Division of Cardiac Surgery
Program Director, Cardiothoracic Surgery
Resident Education Programs

Clinical Faculty

Adult Cardiac Surgery

John Bozinovski, MD
Asvin Ganapathi, MD
Matthew Henn, MD
Michael Vallely, MBBS, PhD
Bryan Whitson, MD, PhD

Pediatric and Congenital Cardiac Surgery

Sergio Carrillo, MD
Mark Galantowicz, MD*,
Chief of Congenital Cardiac Surgery
Patrick McConnell, MD

Research Faculty

Chuanxi Cai, PhD
Renzhi Han, PhD
Jae-Kyun Ko, PhD
Haichang Li, DVM, PhD
Pei-Hui Lin, PhD
Jianjie Ma, PhD
Prabhakara Nagareddy, PhD
Mona El Refaey, PhD, MS
Hua Zhu, PhD

* Castle Connolly 2021 Top Doctor

World-class
hereditary colorectal
cancer program

World-class multidisciplinary
IBD treatment center

Division of Colon and Rectal Surgery

8 faculty (50% women)



The Division of Colon and Rectal Surgery at The Ohio State University Wexner Medical Center is recognized for our patient care related to diseases and cancer of the colon and rectum. We have earned a procedure rating of “high performing” for colon cancer surgery from *U.S. News & World Report*.

Every surgeon within the division is board certified and dedicated to practicing only within his or her specific area of expertise. This intense dedication has yielded a high volume of cases and increased our experience levels with even the most unusual and complex surgical cases within our specialties.

Primary Programs:

- **Colorectal Cancer** — Internationally recognized specialists in the prevention, diagnosis, genetic sequencing, hereditary syndromes and treatment of colorectal cancers work together across several medical disciplines to develop individualized treatment plans that target each patient’s biologically unique malignancy.

- **Inflammatory Bowel Disease** — World-class multidisciplinary inflammatory bowel disease (IBD) treatment center, with one of the highest volumes in the region. Our surgeons are part of the multidisciplinary team for IBD, creating individualized surgical treatment plans for each patient to ensure the best outcomes possible.
- **Pelvic Floor Disorders** — This multidisciplinary clinic opens at our New Albany location in fall 2021 and provides comprehensive testing and evaluation, and a range of treatment options for men and women diagnosed with a variety of pelvic floor disorders.
- **Minimally Invasive Surgery** — Our program offers robotic surgery for treatment of diseases of the colon and rectum, including colectomy and lower anterior resection (LAR). We also offer minimally invasive transanal techniques to allow access to the proximal and mid-rectum for resection of benign and early-stage malignant rectal lesions offering patients the advantages of a shorter hospital stay, less blood loss, reduced pain and quicker recovery.
- **Colonoscopy** — Our surgeons are committed to delivering the best care possible for our patients by performing colonoscopies for pre- and post-operative patients ourselves in one of the Ohio State Wexner Medical Center’s endoscopy suites, allowing for continuity of care.
- **Anal Cancer Screening Program** — As the first formal program in Ohio and one of few in the country, our goal is to improve the diagnosis and treatment of anal cancer, which has increased at an alarming rate, particularly among the often underserved population of HIV-positive gay men.
- **Colorectal Transitional Care** — This collaborative effort between the Ohio State Wexner Medical Center and Nationwide Children’s Hospital helps pediatric patients take ownership of their care at a young age and eventually transition to the adult care setting.

Referral Information

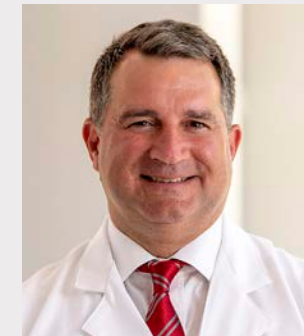
The Division of Colon and Rectal Surgery offers comprehensive surgical programs for the treatment of a wide range of colon and rectal conditions, such as:

- Colon and rectal cancer, including primary, recurrent and metastatic cancers
- Inflammatory bowel disease
- Pelvic floor disorders
- Anorectal disease
- Benign colonic disease

To refer, please call the Division of Colon and Rectal Surgery at **614-293-3230**.

You may also fill out the one-page medical center referral form at **wexnermedical.osu.edu/referralform** and fax your referral to 614-293-1456.

Faculty



Matthew Kalady, MD*
Director, Division of Colorectal Surgery

Clinical Faculty

Mark Arnold, MD*
Lisa Cunningham, MD
Alessandra Gasior, DO
Alan Harzman, MD*
Emily Huang, MD, MEd
Syed Husain, MBBS
Amber Traugott, MD

* *Castle Connolly 2021 Top Doctor*

Bariatric Surgery program contributing to fastest-growing robotic surgery space in the country

Ohio State's Gastroenterology and GI Surgery specialty enters *U.S. News & World Report* top 50 ranking

Division of General and Gastrointestinal Surgery

First in country to offer multidisciplinary Abdominal Core Health elective for senior residents



The Ohio State University Wexner Medical Center has been recognized as “high performing” in gastroenterology and GI surgery by *U.S. News & World Report*. Our Division of General and Gastrointestinal Surgery is a pioneer in minimally invasive surgery with a high volume of foregut surgery, bariatric surgery, advanced therapeutic endoscopy, gallbladder surgery, hernia repair and complex abdominal wall reconstruction.

Primary Programs:

- **Comprehensive Weight Management and Metabolic Bariatric Surgery Program** — The Ohio State Wexner Medical Center is a Bariatric Surgery Center of Excellence, performing more than 400 primary and revisional operations annually, which now includes robotic bariatric surgery. Telehealth appointments are available.
- **Center for Abdominal Core Health** — Advancing patient care through programs such as complex abdominal wall reconstruction, monthly complex hernia conferences, a robotic hernia program and a comprehensive abdominal core surgery rehabilitation protocol. Telehealth and next-day appointments available.
- **Comprehensive Esophageal Health Center** — This multidisciplinary foregut clinic launched in New Albany in 2021. Telehealth and next-day appointments available.

Referral Information

The surgeons in the Division of General and Gastrointestinal Surgery accept referrals for all patients with general surgical needs, including:

- Bariatric surgery
- Esophageal/foregut disease
- Gallbladder surgery
- Hernia repair
- Gastrointestinal surgery
- Endoscopy, including endoscopic retrograde cholangiopancreatography (ERCP)

To refer, please call the Division of General and Gastrointestinal Surgery at **614-293-3230** or Bariatric Surgery at **614-366-6675**.

You may also fill out the one-page medical center referral form at wexnermedical.osu.edu/referralform and fax your referral to 614-293-1456.

Faculty



Benjamin Poulou, MD, MPH*
Director, Division of General and Gastrointestinal Surgery

Clinical Faculty

Stacy Brethauer, MD, MBA
Courtney Collins, MD, MS
Kelly Haisley, MD
Michael Meara, MD, MBA
Vimal Narula, MD
Bradley Needleman, MD*
Sabrena Noria, MD, PhD
Kyle Perry, MD, MBA
David Renton, MD

Research Faculty

Daniel Gallego-Perez, PhD

* *Castle Connolly 2021 Top Doctor*

Busiest pediatric
robotic surgery program
in the U.S.

More than
150 publications last year

Division of Pediatric Surgery

42 national trainee
research awards since 2012

The Division of Pediatric Surgery is one of the largest and most diverse divisions of its kind, maintaining active clinical programs in general pediatric surgery, minimally invasive surgery, robotic surgery, surgical oncology, surgical endocrinology, trauma, burns, chest wall deformities, bariatric surgery, inflammatory bowel disease, hepatobiliary surgery, neuromodulation and pediatric colorectal surgery.

Each member of the division brings individual strengths and talents and is recognized for expertise in clinical care, research and education. One of the most important aspects of our program is the opportunity to train the next generation of pediatric surgeons through our highly desired training programs in pediatric surgery and additional specialty training programs.

Primary Programs:

- **Pediatric Minimally Invasive and Robotic Surgery** — Our surgeons offer a wide variety of pediatric surgical procedures performed through tiny incisions to treat both common and complex pediatric conditions in children of all ages including newborns. In addition, we have the busiest robotic surgery program of any children's hospital in the United States, and now offer complex operations on even smaller children using the newest da Vinci Xi robot. We are the only center offering robotic bariatric weight loss procedures to adolescents.

- **Pediatric Oncology and Endocrinology Programs** — Our surgeons work side by side with our pediatric oncologists and endocrinologists to offer the most comprehensive oncology and endocrinology procedures available.
- **Pediatric Trauma and Burn Program** — We are one of the few children's hospitals in the country verified as both a Level I Trauma Program by the American College of Surgeons and Burn Program by the American Burn Association.
- **Pediatric Conference and Simulation Center** — The new Conference and Simulation Center at Nationwide Children's Hospital is now open and provides numerous simulation and training opportunities for faculty, staff and visitors.

Referral Information

The surgeons in the Division of Pediatric Surgery accept referrals for patients with an extensive range of conditions, some of which include:

- Bariatric surgery
- Burns
- Chest wall deformity correction
- Congenital anomalies of the trachea, esophagus, diaphragm, intestines
- Gallbladder disease
- Gastroesophageal reflux disease
- Hernias (inguinal, umbilical, hiatal)
- Intestinal diseases (inflammatory bowel disease, Hirschprung disease, anorectal malformations)
- Pediatric cancers
- Pediatric thyroid and parathyroid conditions
- Trauma
- Wounds

To refer, call the Division of Pediatric Surgery at **614-722-3900**.

Faculty



Gail Besner, MD* **
Director, Division of Pediatric Surgery

Clinical Faculty

Jennifer Aldrink, MD
Katherine Deans, MD, MHSC
Karen Diefenbach, MD
Renata Fabia, MD, PhD* **
Jonathan Groner, MD*
Ihab Halaweish, MD
Brian Kenney, MD, MPH*
Marc Michalsky, MD, MBA*
Peter Minneci, MD, MHSC
Benedict Nwomeh, MD, MPH*
Oluyinka Olutoye, MD, PhD*
Rajan Thakkar, MD*
Richard Wood, MD

Research Faculty

Christopher Breuer, MD
David Brigstock, PhD

* Castle Connolly 2021 Top Doctor

** Castle Connolly 2021 Exceptional Women in Medicine

Among the top three busiest robotic HPB and adrenal programs in the Midwest

One of three original Society of Surgical Oncology fellowships started in 1977

Division of Surgical Oncology

More than \$15 million in research funding



Our team of surgeons works in conjunction with world-renowned multidisciplinary teams of cancer experts as part of The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute (OSUCCC – James) — a National Cancer Institute (NCI)-designated comprehensive cancer center that has been ranked as a top cancer hospital for 23 years by *U.S. News & World Report* — we tailor each patient’s unique treatment plan by utilizing the most advanced diagnostic testing, innovative technology and internationally recognized research. In 2020, the OSUCCC – James received the NCI’s highest rating, “exceptional,” for the third consecutive five-year review period and earned an estimated \$33 million National Cancer Institute support grant.

Primary Programs:

- **Breast** — At the Stefanie Spielman Comprehensive Breast Center, patients can access a full continuum of care — from prevention and screening through treatment and survivorship — in one location with state-of-the-art technology. Our surgeons provide cutting-edge, multidisciplinary breast cancer treatment and evaluate patients who are at high risk for cancer. The breast cancer team is also nationally recognized for its innovative research in many fields, including health equity, clinical trials and novel approaches to care.

- **Endocrine** — Our endocrine specialists focus on surgical diseases of the thyroid gland, parathyroid and adrenal glands, and neuroendocrine tumors, and are able to perform complex, minimally invasive and robot-assisted procedures. The Ohio State University Wexner Medical Center’s thyroid cancer group has been a top-National Institutes of Health-funded group for over 15 years, and our new Comprehensive Adrenal Program offers multidisciplinary treatment and clinical trials for a wide range of adrenal disorders.
- **Gastrointestinal (GI)** — Our surgical team of internationally recognized experts in esophageal, hepatobiliary, pancreas, stomach and colorectal malignancies has extensive experience in complex minimally invasive abdominal operations. In concert with the full multidisciplinary cancer team at the OSUCCC – James, our surgeons develop individualized treatment plans that target each patient’s unique cancer, including innovative regional therapies for metastatic cancer. This team is also focused on innovations that can improve patient outcomes, including telehealth for cross-institutional collaboration and a presurgical exercise program.
- **Melanoma/Sarcoma** — Patients with these cancers benefit from multidisciplinary surgical expertise spanning the full spectrum of cutaneous and soft tissue malignancies. The Skin and Melanoma Center at the OSUCCC – James offers patients with melanoma, Merkel cell carcinoma, squamous cell carcinoma, basal cell carcinoma and other rare skin tumors individualized treatment options — including intralesional therapies, robotic resection and access to clinical trials. At our Soft Tissue Sarcoma Center, internationally recognized surgeon-scientists continue to advance the standard of care for patients with a variety of primary and recurrent tumors through clinical advancements and laboratory discoveries.

Referral Information

To refer a patient or schedule an appointment with one of our OSUCCC – James cancer experts, complete the referral form at go.osu.edu/patientreferral or call:

Phone: 614-293-7171

614-293-4040 (Breast)

Fax: 614-293-3277

Faculty



Allan Tsung, MD*
Director, Division of Surgical Oncology

Clinical Faculty

Breast

Doreen Agnese, MD* **
William Carson, MD*
William Farrar, MD*
Valerie Grignol, MD* **
Samilia Obeng-Gyasi, MD, MPH
Bridget Oppong, MD
Ko Un “Clara” Park, MD
Stephen Povoski, MD*
Bushra Siddiqi, MD

Endocrine

Priya Dedhia, MD, PhD
Barbra Miller, MD**
John Phay, MD

Gastrointestinal

Jordan Cloyd, MD
Mary Dillhoff, MD
Aslam Ejaz, MD, MPH
Alex Kim, MD, PhD
Andrei Manilchuk, MD
Timothy Pawlik, MD, MPH, PhD*

Melanoma/Sarcoma

Joal Beane, MD
Carlo Contreras, MD
Valerie Grignol, MD* **
Raphael Pollock, MD, PhD*

Research Faculty

Zhiwei Hu, MD, PhD
Hai Huang, MD

* Castle Connolly 2021 Top Doctor

** Castle Connolly 2021 Exceptional Women in Medicine

Top 25
U.S. News & World Report
lung program

**1,000th robotic anatomic lung
resection was performed in 2021**

Division of Thoracic Surgery

**Among the highest in
robotic lung volume nationally;
#1 in Ohio**



Dedicated to providing multidisciplinary care for malignant and benign diseases of the chest, The Ohio State Wexner Medical Center's Division of Thoracic Surgery earned a distinguished three-star rating from the Society of Thoracic Surgeons (STS) for both lobectomy and esophagectomy, which denotes the highest category of quality. This places our division among the elite for general thoracic surgery in the United States and Canada. The Ohio State Wexner Medical Center has earned a procedure rating of "high performing" for lung cancer surgery from *U.S. News & World Report*.

Primary Programs:

- **Robotic Surgery** — Ranked first in Ohio with over 200 robotic lobectomy procedures in FY2021, including the 1,000th robotic lobectomy performed in February 2021.
- **Minimally Invasive Thymectomy for Myasthenia Gravis** — A multidisciplinary program formed with Neurology.

- **Minimally Invasive Esophagectomy** — A combined program of minimally invasive surgery, GI medicine and oncology with over 260 procedures completed from 2014-2021.
- **Lung Volume Reduction Surgery Program** — With 19 cases performed in FY2021, the Ohio State Wexner Medical Center has performed more lung volume reduction surgeries than any medical center in the country and is the only hospital in central Ohio offering the procedure.
- **Thoracic Surgery** — Our surgeons collaborate with the lung and gastrointestinal disease sites at The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute and share many clinical trials with medical oncology, as well as radiation oncology through Cancer and Leukemia Group B (CALGB), Radiation Therapy Oncology Group (RTOG) and American College of Surgeons Oncology Group (ACOSOG).

Referral Information

Surgeons in the Division of Thoracic Surgery accept referrals and offer advanced diagnostic testing and treatment procedures for patients with an extensive range of conditions, including:

- Achalasia
- Barrett's esophagus
- Carcinoid tumor
- Esophageal cancer
- Gastroesophageal reflux disease (heartburn)
- Hiatal hernia
- Lung cancer
- Myasthenia gravis
- Thymoma

To refer, please call the Division of Thoracic Surgery at **614-293-9059**.

You may also fill out the one-page medical center referral form at **wexnermedical.osu.edu/referralform** and fax your referral to 614-293-1456.

Faculty



Robert Merritt, MD*
Director, Division of Thoracic Surgery
Associate Program Director,
Cardiothoracic Surgery

Clinical Faculty

Desmond D'Souza, MD
Peter Kneuert, MD

* Castle Connolly 2021 Top Doctor

Top 10 transplant center
by volume in the United States in 2020
(#8 for abdominal transplants)

Division of Transplantation Surgery

Living donor
liver and kidney programs

More than 11,000 transplants
performed since first kidney
transplant in 1967

The Ohio State University Wexner Medical Center has performed more than 11,000 solid organ transplants since its first transplant, a kidney, 54 years ago. Fewer than 10% of adult transplant centers in the United States have achieved this milestone.

As central Ohio's only adult comprehensive transplant center, the Ohio State Wexner Medical Center performs nearly 600 transplants each year, and ranks eighth by volume in the U.S. with excellent patient outcomes.

Primary Programs:

- **Kidney Transplant Program** — As one of the largest programs in the country, the Ohio State Wexner Medical Center utilizes living donor exchange and chains to aggressively transplant many patients who might otherwise be ineligible due to incompatibility with their donor.
- **Living Donor Liver Program** — The Ohio State Wexner Medical Center has expanded liver transplant donor and recipient criteria and is one of only two locations in Ohio able to perform adult living liver donor transplants.
- **Liver Cancer** — One of only 55 comprehensive cancer centers in the nation as designated by the National Cancer Institute, the Ohio State Wexner Medical Center offers treatment for hepatocellular carcinoma and prepares these patients for liver transplantation.
- **Pancreas Auto Islet Program** — This specialized treatment for patients suffering from chronic pancreatitis and some other pancreas diseases utilizes a patient's own islet cells for reintroduction after a total pancreatectomy.
- **Outreach Clinics** — With three Ohio locations, our clinics in Lima and Cincinnati, part of the Healthy State Alliance with Mercy Health, and our clinic in Dayton extend patient access to transplant care outside of central Ohio.

Referral Information

The Division of Transplantation Surgery coordinates patient care with a team of transplant experts including organ specialists, infectious disease physicians, transplant coordinators, advanced practice providers, social workers, psychiatrists, dietitians and transplant pharmacists. As an academic medical center, we are able to access the latest treatments and clinical trials of new immunosuppressive drugs and antirejection therapies.

For more information or to refer a patient for a transplant consultation, visit wexnermedical.osu.edu/transplant.

Faculty



Kenneth Washburn, MD
Director, Division of
Transplantation Surgery
Executive Director,
Comprehensive Transplant Center

Clinical Faculty

Musab Alebrahim, MD

Sylvester Black, MD, PhD*

Ginny Bumgardner, MD, PhD, FACS

Ashley Limkemann, MD, MPH

Amer Rajab, MD, PhD

Austin Schenk, MD, PhD

Research Faculty

Brenda Reader, PhD

* Castle Connolly 2021 Top Doctor

Level I trauma center and
ABA-verified burn program at
University Hospital

21 active clinical trials including
2 Eastern Association for
the Surgery of Trauma (EAST)
clinical trials and more than
\$1 million in research funding

Division of Trauma, Critical Care and Burn

Level III trauma center
at East Hospital



Formed in 2006, the Division of Trauma, Critical Care and Burn provides surgical care for multiple trauma, burns, urgent and emergent general surgery conditions and surgical critical care. Clinical, translational and basic science research efforts of our clinical scientists and dedicated basic science researchers investigate sepsis, trauma and surgical emergencies.

Primary Programs:

- **Level I Trauma Center at University Hospital** — An American College of Surgeons designation that recognizes our role as a regional resource to care for the most critically ill and injured patients.
- **Level III Trauma Center at Ohio State East Hospital** — The same experienced clinical team that serves the University Hospital Level I Trauma Center provides critical access, stabilization of patients and definitive trauma care to patients with serious traumatic injuries.
- **Acute Care Surgery** — Urgent and emergent general surgical care is available at both University Hospital and East Hospital in a wide variety of surgical disease states, including necrotizing soft tissue infections, gastrointestinal bleeding, bowel perforation, appendicitis, acute pancreatitis and complications after cardiovascular or cancer surgery. This program currently supports two fellowships for advanced training.

- **Adult Burn Center** — The only adult burn center in central Ohio verified by the American College of Surgeons and the American Burn Association, with an inpatient burn rehabilitation ranked among the best in the country by *U.S. News & World Report*.
- **Surgical Critical Care** — Our team employs advanced life-saving technologies to treat over 5,000 critically ill and injured patients each year across four ICU locations. The service supports six American Council for Graduate Medical Education (ACGME)-accredited Critical Care Fellows in partnership with Anesthesiology: ICU.

Referral Information

We offer both inpatient and outpatient services, including:

- Advanced dressing options to minimize pain, scarring and other complications
- Wound care and complex wound management
- Treatment for all burns, from small to large, with special emphasis on:
 - Third-degree burns
 - Burns to face, hands, feet, genitalia, perineum and joints
 - Electrical burns and lightning strikes
 - Chemical burns
 - Burns in patients with comorbid conditions

For referral to Ohio State's Comprehensive Burn Center, please call **614-293-BURN (2876)**.

Other Critical Care Referrals

Our surgeons address the full scope of surgical critical care, trauma, burns, emergency general surgery and acute care surgery. To have a patient transferred to our care, call the Transfer Center at **614-293-4444** or **800-824-8236**.

Faculty



Carrie Sims, MD, PhD, FACS
Director, Division of Trauma,
Critical Care and Burn

Clinical Faculty

Nicole Bernal, MD, FACS

Alfredo Cordova, MD, FACS

Daniel Eiferman, MD*

Alex Helkin, MD

David Lindsey, MD

Michael Sutherland, MD

Brett Tracy, MD

Wendy Wahl, MD

Brian Weiss, MD

Jonathan Wisler, MD

Andrew Young, MD, FACS

Research Faculty

Meihong Deng, MD

* Castle Connolly 2021 Top Doctor

Only practice in Ohio
doing four-vessel branch chimney
thoracoabdominal aortic
aneurysm repair

New Integrated
Residency Program

Division of Vascular Diseases and Surgery

11 active clinical trials,
including TAMBE trial



The Division of Vascular Diseases and Surgery specializes in the comprehensive care of diseases of the arteries, veins and lymphatic system. Each year, our division has more than 8,800 outpatient visits and performs more than 1,800 endovascular cases and major open vascular surgeries. We specialize in complete care for any vascular condition, from a patient's initial visit to diagnostic testing, interventional or minimally invasive endovascular treatments (such as stenting and angioplasty), open surgical treatments (such as bypass surgery) and, most importantly, ongoing, lifelong post-treatment care. We have earned a procedure rating of "high performing" for aortic valve surgery from *U.S. News & World Report*.

Primary Programs:

- **Aortic Center** — Combines the expertise of highly skilled physicians, such as vascular surgeons, cardiac surgeons and cardiologists, to provide a tailored approach to each patient's care. This includes conventional surgery and new, minimally invasive procedures. In addition to scheduled aortic procedures, the Aortic Center also provides treatment for emergent and life-threatening aneurysms.

- **Limb Preservation Program** — Part of the Comprehensive Wound Center, offering a multidisciplinary approach and advanced techniques to treat patients with limb-threatening conditions.
- **Ohio State Total Vein Care** — Outpatient treatment from board certified vascular surgeons with more than 30 years' experience in the treatment of venous disease.
- **Vascular Ultrasound** — Expanded inpatient and outpatient services with new same-day reporting with VascuPro™ vascular lab reporting software.

Referral Information

The physicians in the Ohio State Division of Vascular Diseases and Surgery accept referrals and offer an extensive range of advanced procedures for patients with a variety of issues, including:

- Emergent and life-threatening abdominal and thoracic aneurysms
- Arterial diseases
- Lymphatic system diseases
- Venous diseases
- Carotid artery blockage
- Risk of amputation due to vascular diseases, such as peripheral arterial disease and diabetes
- Needed creation or repair of AV fistula for dialysis
- Required kidney or intestinal artery bypasses or stents

To refer, please call the Division of Vascular Diseases and Surgery at **614-293-8536**.

You may also fill out the one-page medical center referral form available at wexnermedical.osu.edu/referralform and fax your referral to 614-293-1456.

Faculty

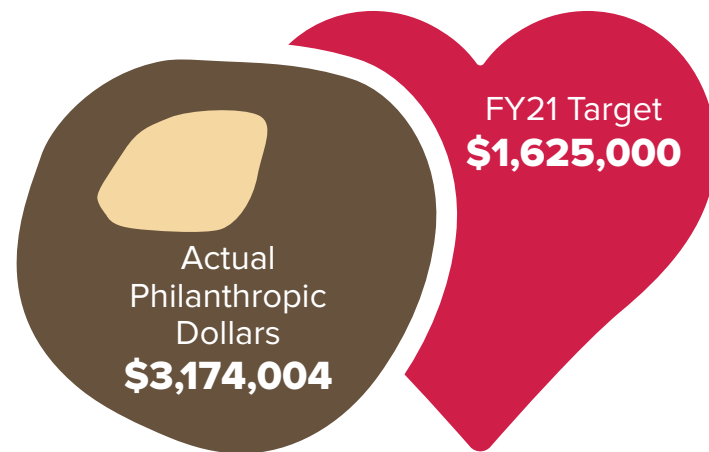


Timur Sarac, MD
Director, Division of
Vascular Diseases and Surgery
Director, Aortic Center
Program Director, Vascular Surgery
Resident Education Programs

Clinical Faculty

- Robert Beaulieu, MD, MSE
- Michael Go, MD, FACS*
- Mounir Haurani, MD, FACS
- Kristine Orion, MD
- Jean Starr, MD, FACS*
- Bryan Tillman, MD, PhD*
- Patrick Vaccaro, MD, MBA, FACS*

* Castle Connolly 2021 Top Doctor



PHILANTHROPY

The pandemic forced a shift to virtual meetings and engagements for our philanthropy efforts, but we discovered the power of strong relationships during uncertain times.

Focusing on smaller, more targeted audiences, including both corporations and individuals, we creatively employed videos and virtual events to inform and engage potential donors from a distance.

The results were heartening.

We started Fiscal Year '21 with a goal of raising \$1.625 million in donations for the Department of Surgery. We ended up raising \$3.174 million, or 95% more than our target!

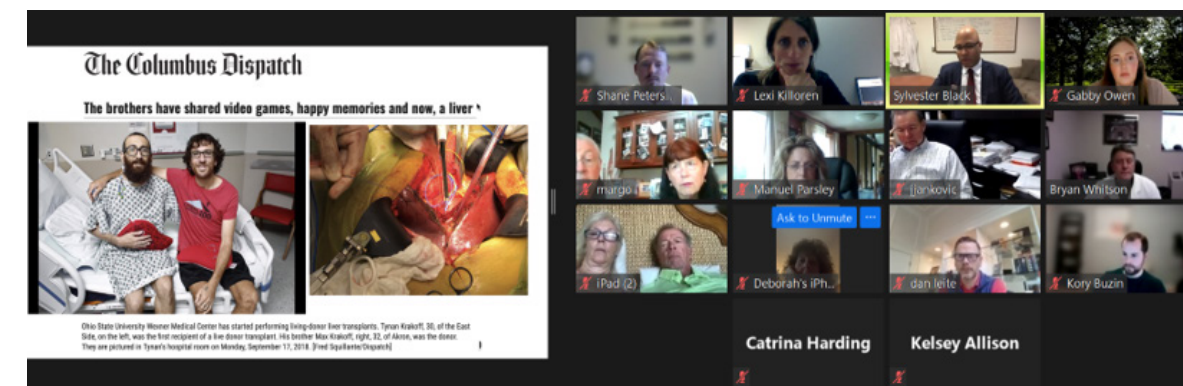
The virtual events revealed how engaging and inspiring our faculty can be when their innovation, foresight and knowledge is highlighted. We hope to expand the visibility of our department so potential donors can envision the difference their philanthropy can make. As we look forward, we are energized to continue the push for additional donations in support of our research, Global Surgery Residency Program — which is gearing up for new travel possibilities — and endowed positions to retain and attract the best and brightest surgeons and researchers.

If you'd like to explore more about our available programs or make a donation to advance surgical programs or research, please visit medicine.osu.edu/surgerygiving.

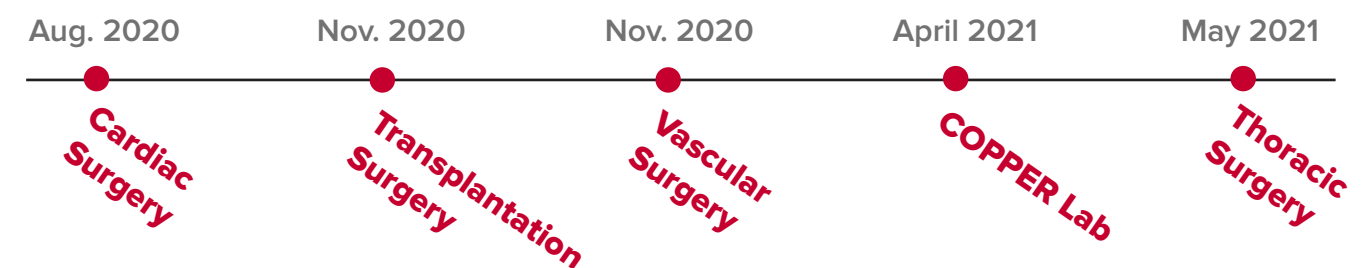
Stevens Family makes generous gift to Comprehensive Transplant Center

George Stevens describes his son John's path to a heart transplant in a way that only a parent can. He talks about the struggles and the challenges, but also the joy and relief when it was his turn to get a new heart. During this entire time the staff at The Ohio State University Wexner Medical Center was always very caring and helpful as John's medical condition worsened. For most anyone undergoing a major transplant, this is a once in a lifetime experience and neither the patient nor the family know exactly what to expect. This experience was made much less stressful by the kind, courteous attention of every member of the hospital staff.

It's that appreciation that led the Stevens family to make a very generous gift in support of the Comprehensive Transplant Center. It is their hope that their philanthropy "will enable others to have the same positive experience with their medical issues." Their support will help fund groundbreaking research, education for the transplant surgeons of the future, and outstanding patient care. "It means the world to know that he has a new lease on life."



VIRTUAL EVENTS HOSTED BY THE OHIO STATE DEPARTMENT OF SURGERY AND OTHER UNIVERSITY DEPARTMENT EXPERTS



Ohio

“Columbus in April reminded me of the D.C. area, where I grew up. I loved all the greenery. I cannot wait to make it home for the next seven years!”
— incoming resident



A capital city filled with surprises

Columbus is a great place to start out, to stay, to raise a family and to explore.

- **We're Big** – Ohio's capital is the 14th largest city in the U.S. and the second largest in the Midwest behind Chicago.
- **We're Diverse** – Our diversity makes us a top test market and there are over 109 languages represented here.
- **We're Accessible** – The average commute is just over 20 minutes, and John Glenn Columbus International Airport is just 10 minutes from downtown.
- **We're Affordable** – The cost of living in Columbus is 10% below the national average.
- **We've Earned Many High Marks and Accolades:**
 - #1 among the 10 largest Midwest metros in population and private sector job growth since 2010** – U.S. Department of Labor
 - #5 in the world for quality of life** – numbeo.com, 2021
 - Top 10 Best U.S. Cities for Young, Growing Families** – CNBC, Sept 2019
 - #2 City for New College Grads** – Smart Asset 2021 edition
 - Top 10 nationally among large metros** – for population ages 25-34
 - Home to 11 Fortune 1000 headquarters**
 - Columbus scored 100/100** – on The Municipal Equality Index by the Human Rights Campaign, which includes measures of employment, housing and public attitudes toward the LGBTQ community
 - One of the nation's best metro areas for the arts** – *Places Rated Almanac*
 - Top five U.S. city for women-owned businesses** – Fit Small Business, 2019
 - Ranks globally on *The New York Times* list of **"52 Places to go in 2019"**

For more information about Columbus, please visit wexnermedical.osu.edu/cols.

APPRECIATING THE PAST LOOKING TO THE FUTURE



Sabrena Noria, MD, PhD

The Ohio State University Department of Surgery has a rich history. Our roots date back to the 1800s with surgeons working at the first teaching hospital in the United States. Since then, Ohio State has remained a medical pioneer, with milestones such as the first heart pump, the nation's first ambulance (dubbed the Heartmobile), an innovative helicopter transport program for trauma patients and the first robotic-assisted heart procedure in North America.

We're proud of that past and excited for the future — a future we believe will be strengthened by emphasizing diversity, equity and inclusion in order to bring even more visionaries and heroes into the field of medicine and to the Department of Surgery at The Ohio State University Wexner Medical Center.

Advancing surgery by promoting diversity, equity and inclusion

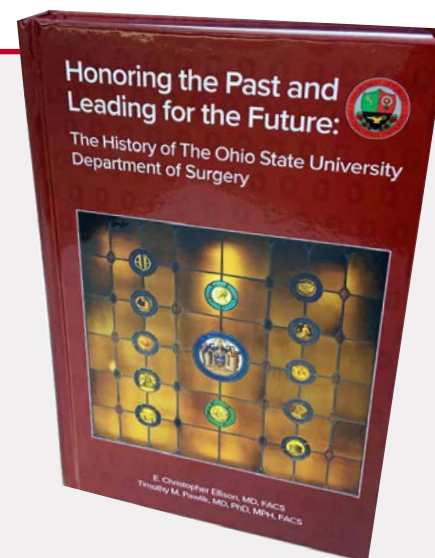
In order to cultivate inclusion and diversity, as well as ensure the department is free from racial disparities and individual exclusion, the Ohio State Wexner Medical Center Department of Surgery has established a formal Diversity, Equity and Inclusion (DEI) program. Sabrena Noria, MD, PhD, from our Division of General and Gastrointestinal Surgery, leads our efforts as the department's inaugural vice chair of Diversity, Equity and Inclusion.

A few of our DEI efforts this past year included:

- In February 2021, our grand rounds featured **Carla Pugh, MD, PhD**, professor of Surgery and director of the Technology Enabled Clinical Improvement Center at Stanford Medicine.
- Also in February 2021, we hosted a **Black Excellence webinar and panel discussion.**
- In May 2021, we hosted a webinar, **"Dispelling the Model Minority: The Myth of APIDA Representation."**

"Honoring the Past and Leading for the Future: The History of The Ohio State University Department of Surgery" captures the accomplishments and notable surgical breakthroughs achieved by Ohio State during the leadership period of each department chair from 1975 to the present day.

Order your copy today!
go.osu.edu/doshistorybook



Referring a patient? *It's never been easier.*



Our referral team will provide you with the personalized help you and your patients require — just call the numbers below and fax our one-page referral form. If you have any questions during any part of the referral process or about the status of your referral, please call our referral specialists at 614-293-5123.

- Abdominal Transplantation Surgery (Kidney, Liver, Pancreas): 800-293-8965
- Bariatric Surgery: 614-366-6675
- Cardiac Surgery: 614-293-5502

- Colon and Rectal Surgery: 614-293-3230
- General and Gastrointestinal Surgery: 614-293-3230
- Heart Transplantation: 800-538-1886
- Lung Transplantation: 866-204-3411
- Pediatric Surgery: 614-722-3900
- Surgical Oncology: The James Line, 800-293-5066
- Thoracic Surgery: 614-293-9059
- Vascular Diseases and Surgery: 614-293-8536

For all of our divisions except Pediatric Surgical Oncology and Transplantation Surgery, complete our one-page Ohio State Wexner Medical Center referral form available at wexnermedical.osu.edu/referralform and fax your referral to 614-293-1456.

To download organ transplant referral forms, visit wexnermedical.osu.edu/transplant.

After we've received your fax, we'll manage the scheduling and notification process.

- We'll contact your patient directly to schedule a convenient time and location for their appointment.
- As referring physician, you'll receive confirmation of the appointment for your records via mail, fax or Ohio State CareLink.



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