



THE OHIO STATE UNIVERSITY COLLEGE OF MEDICINE

# TRAINING FOR TOMORROW

GRADUATE SURGICAL EDUCATION



THE OHIO STATE  
UNIVERSITY

COLLEGE OF MEDICINE



# Welcome to the Department of Surgery



Since 1870, The Ohio State University’s campus in Columbus has been the stage for academic achievement and a laboratory for innovation. The university’s main campus is one of America’s largest and most comprehensive. As one of Ohio’s best and one of the nation’s top-20 public universities, Ohio State is recognized for its top-rated academic medical center and premier cancer hospital and research center.

As home to The Ohio State University, Columbus is a vibrant, diverse city that has the 14th largest population in the United States. Within 550 miles of nearly half the nation’s population, Columbus is a central location for businesses, art and culture, as well as host of sporting and entertainment options.

As part of The Ohio State University College of Medicine, the Department of Surgery specializes in treating some of the most complicated illnesses and conditions, and serves as a surgical referral center for patients and physicians from throughout the United States and worldwide. Our faculty, staff and residents are committed to service and excellence as we provide the best care possible, create new knowledge, and educate surgeons and teachers of tomorrow. Specifically, our multidisciplinary approach combines the expertise of physicians from many specialties with the newest procedures and state-of-the-art facilities and technologies, with an emphasis on quality and patient safety. The educational programs provide a superior education and training experience in a comprehensive array of subspecialty areas. In addition, each of our surgical divisions pursues innovative advances in basic, clinical and translational research, with the ultimate goal of improving patient care.

This brochure offers information about our clinical programs, research interests, as well as training and educational opportunities in the department. I hope you explore our department and learn about our world-renowned surgeons, clinical programs, cutting-edge research, and our incredible educational programs.

The Department of Surgery seeks to empower trainees, as well as research and clinical faculty with the knowledge and skill to deliver today’s state-of-the-art care, while discovering the treatments of tomorrow.

Again, welcome to the Department of Surgery.

GO BUCKS!

Sincerely,

A handwritten signature in black ink that reads "Tim Pawlik". The signature is fluid and cursive, with a long horizontal stroke at the end.

Timothy Pawlik, MD, MPH, PhD  
Chair, Department of Surgery  
The Urban F. Meyer III and Shelley M. Meyer Chair for Cancer Research



# Why Ohio State Surgery?

17,796

Number of OR Cases

563,869

wRVUs

46

Number of Residents

59% male/41% female

32% underrepresented minorities in medicine

97% provided positive review of Ohio State surgical residency in 2017 Accreditation Council for Graduate Medical Education (ACGME) survey

4,606

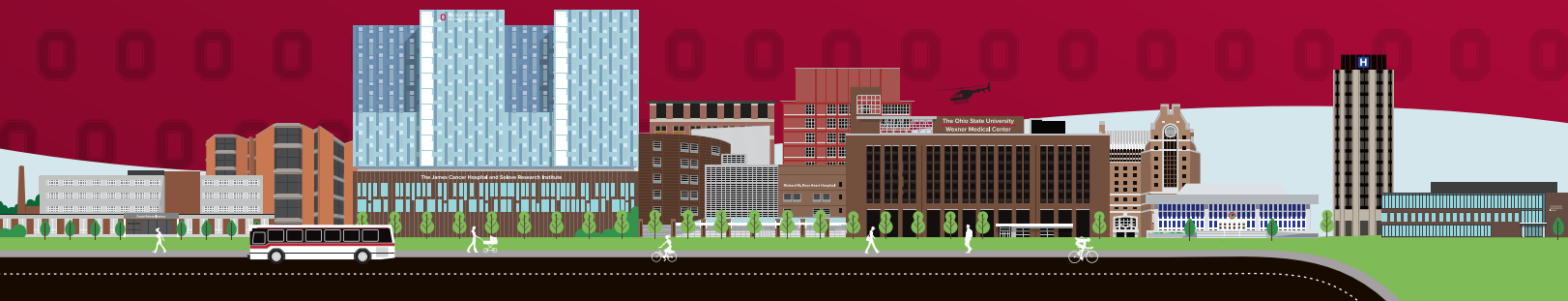
Research Papers

26

Number of Fellows

7,906\*

Admissions



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# Patient Care

General surgery resident Justin Huntington, MD, MS, explains how residents and fellows in the Department of Surgery receive outstanding training and experience in caring for patients.

“At The Ohio State University Wexner Medical Center, the Department of Surgery encompasses a huge breadth of operations and has the privilege of taking care of numerous patients from diverse backgrounds and with a wide variety of medical issues. The Department of Surgery boasts a number of experts in their respective fields and is home to a number of centers of excellence,” says Dr. Huntington. “As residents, we engage in valuable clinical experiences in numerous services that are unsurpassed. Early operative and procedural training continues to be a strong asset of our program. With access to a state-of-the-art resources and simulation center, we are able to continually enhance our technical skills. Here at Ohio State, we are able to experience appropriate autonomy and manage services with the assistance of attendings. Chief graduates complete all ACGME requirements with ease and are well prepared for fellowship training or private practice. Clinic experience gives residents continuity of care, the opportunity to see a variety of pathologic processes and the ability to learn how to evaluate and manage complex surgical issues. Working at a large, academic center allows us to engage in collaborative dialogue with experts in other fields as well as numerous ancillary services. This support provides an excellent educational environment and helps to maintain our clinical mission. Additionally, we are given the opportunity to work with medical students, providing them with exposure to surgery and mentorship.”



We have a total of sixty-seven residents and fellows participating in our department’s 15 programs. House staff treat patients in the outpatient clinics and on the surgical service. Early clinical training broadens the knowledge of general surgical concepts, patient management issues and state-of-the-art surgical procedures. Residents assume progressive responsibilities based upon individual skill level, experience and knowledge. Attending physicians provide supervision and conduct teaching rounds regularly. While a full-time attending surgeon is on call each night, resident teams and medical students staff the major services. Each resident will have participated in 1,000 to 1,200 operative cases upon completion of the program.

## ACGME-Accredited Residencies

- Cardiothoracic Surgery
  - Colorectal Surgery
  - General Surgery
  - Pediatric Surgery
  - Pediatric Surgical Critical Care
  - Surgical Critical Care
  - Surgical Oncology
  - Vascular Surgery
- ## Specialty Fellowships
- Acute Care Surgery
  - Advanced Therapeutic Endoscopy and Gastrointestinal Surgery
  - Mechanical and Circulatory Support – Cardiac
  - Minimally Invasive Surgery – Cardiac
  - Minimally Invasive and Bariatric Surgery
  - Transplantation Surgery – Solid Organ
  - Transplantation Surgery – Thoracic

*“Early operative and procedural training continues to be a strong asset of our program.”*

*Dr. Justin Huntington*

# Teaching

General surgery resident David Strosberg, MD, MS, has nothing but good things to say about learning and teaching in the Department of Surgery.

“Education is one of the most highly valued missions at the Department of Surgery at The Ohio State University. The Department of Surgery is committed to the education of its residents, fellows and medical students. All residents are encouraged to teach, even at the most junior level, to develop the skills necessary to become educators and leaders, and to improve their own education. Our attending surgeons are enthusiastic to train the next generation of academic surgeons, and this is encouraged by our division directors and chair of Surgery,” explains Dr. Strosberg. “At the start of the 2016 academic year, the didactic curriculum was completely overhauled by a resident-led team. Our morbidity and mortality conference, grand rounds, professor conference, ABSITE review and surgical skills training are protected times for our residents every Thursday morning. During the professor conference, experts in their field will review mock oral board questions and real-world scenarios. ABSITE is resident-run and encourages resident camaraderie and scientific communication. Our surgical skills training is unique at Ohio State. We have frequent hands-on pig labs, with our most recent sessions including laparoscopic Nissen fundoplication, vagotomy and antrectomy with gastric reconstruction and laparoscopic inguinal and ventral hernia repairs. We have a built-in simulation curriculum to prepare for Fundamentals of Laparoscopic Surgery and Fundamentals of Endoscopic Surgery. We utilize the Simbionix GI-Bronch Mentor virtual reality trainers, which we use to prepare for difficult laparoscopic or endoscopic cases. The residency program director ensures that all rotations are educational to maximize the experience of the surgical residents. The medical center has incorporated physician assistants and nurse practitioners to assist in outpatient clinics and provide care to in-house floor patients.”

Residents in the Department of Surgery are dedicated to learning and teaching advanced surgical techniques and procedures and assume a major responsibility for the clinical education of medical students.

The integrated and affiliated institutions of the program provide clinical resources for graduate and undergraduate surgical education. The full-time attending faculty of the Department of Surgery are based at Ohio State Wexner Medical Center, the Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, the Richard M. Ross Heart Hospital, University Hospital East, Nationwide Children’s Hospital and Grant Medical Center.

Ohio State Wexner Medical Center and the Department of Surgery host a variety of forums and seminars where highly skilled clinicians and researchers share their expertise and advance the profession.

The extensive collection of the Health Sciences Library includes the papers and memorabilia of Dr. Robert M. Zollinger, the internationally respected surgeon and former department chair, and divisional libraries supplement the collection of the Health Sciences Library. A comprehensive range of support services, including a call room suite, reimbursement for mobile devices and dry cleaning facilities, is provided to residents.



*“The residency program director ensures that all rotations are educational to maximize the experience of the surgical residents.”*

*Dr. David Strosberg*

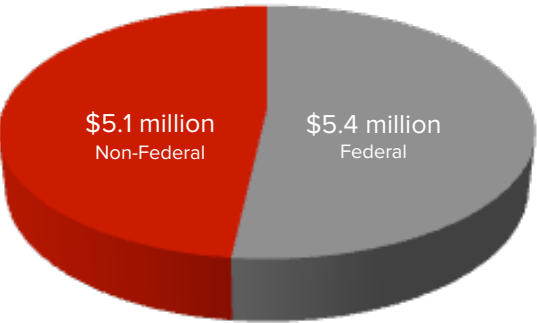


# Research

General surgery resident Sara Mansfield, MD, MS, describes how the research experience in the Department of Surgery provides residents with a valuable opportunity to broaden their skills and deepen their understanding.

“The Department of Surgery has numerous research opportunities for both experienced researchers and novices alike. Residents are encouraged to take one to two years off of clinical duty for professional development. During this time, residents often pursue an advanced degree such as a MPH, MBA, etc. The department also offers a unique degree through the Master of Science in Medical Science Program, or MMSP. This program offers formalized didactics in research design, methodology, statistics, ethics and science writing. This complements the time spent doing basic, translational or clinical research. Most residents design a project, apply for funding, submit an IRB, write a manuscript and present their project effectively. Given the size of the academic campus and our partnership with Nationwide Children’s Hospital, there are several opportunities for research,” says Dr. Mansfield. “I entered the program with no basic science research. Through the dedication of faculty mentorship and the MMSP, I was able to navigate numerous projects from conception to design, analysis and publication. This experience also made me a better clinician. I look at pathology with a more inquisitive eye and turn to the literature with a better understanding of the methodologies behind the conclusions. I am now in a position to offer guidance to junior residents who are starting research projects and hit the ground running in my future academic career.”

## \$10.5 million Research Funding



All data FY2017 Ohio State Health System

### A Vital Component

Research is a vital component of the Department of Surgery’s mission. Chandan Sen, MD, is the vice-chair of research for the department. The department’s research efforts are focused on key areas of interest that promise to yield significant results in the understanding of disease and the improvement of clinical care.

The Department of Surgery’s Office of Surgical Education, under the leadership of Alan Harzman, MD, promotes excellence in clinical training and provides opportunities for pursuing mentored research projects, advanced degree training and scholarly activities.

### Funding

The department’s stature and the reputation of its researchers and clinicians enable it to garner significant funding from private industry and federal sources, such as the National Institutes of Health. The department offers seed grants for clinical and laboratory research to faculty and resident investigators.

### Major Areas of Research

- Advanced heart and lung procedures
- Critical care
- Minimally invasive surgery
- Regenerative medicine
- Wound healing and inflammation
- Radioimmunoguided surgery
- Transplantation biology
- Tumor biology
- Health services research

### Opportunities in Basic Science Research

- Cardiothoracic surgery
- General surgery
- Pediatric surgery
- Surgical oncology
- Transplantation surgery

### Research Facilities

- Center for Minimally Invasive Surgery
- Ohio State Comprehensive Cancer Center – James Cancer Hospital and Solove Research Institute
- The Ohio State University Dorothy M. Davis Heart and Lung Research Institute
- Biomedical Research Tower
- Wexner Institute for Pediatric Research, Nationwide Children’s Hospital
- Wiseman Hall
- Comprehensive Wound Center



# Integrated and Affiliated Hospitals

### The Ohio State University Wexner Medical Center

With more than 900 beds, University Hospital is the flagship patient-care facility of The Ohio State University Wexner Medical Center offering patients the latest in care, research and technology. A major referral center for patients from Ohio and throughout the Midwest, Ohio State’s University Hospital is consistently recognized as one of America’s Best Hospitals by *U.S. News & World Report*. It is a Level I trauma center and home to the most advanced intensive care units in the area, including a Level III neonatal intensive care unit and a comprehensive burn center.

### The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute

As the adult patient-care component of The Ohio State University Comprehensive Cancer Center (OSUCCC), The James is one of the nation’s premier hospitals for cancer care. The 21-story, 308-bed hospital, which opened in December 2014 to replace the original James that opened in 1990, is now the largest cancer hospital in the Midwest and the third largest in the nation.

### Ohio State Richard M. Ross Heart Hospital

Ohio State’s heart and vascular experts offer the best care in central Ohio. No other hospitals or heart centers in central Ohio are ranked among the nation’s best by *U.S. News & World Report*. Ohio State’s Richard M. Ross Heart Hospital is a 150-bed facility that combines the latest technology with patient-focused care to create the best possible healing environment. Each floor is dedicated to a specific service, such as cardiac surgery or vascular medicine, and we offer universal patient rooms. This means rooms are designed to be adaptable, allowing most patients to stay in the same private room throughout their hospitalization rather than having to move from room to room as their medical needs change.

### Ohio State University Hospital East

University Hospital East blends academic medicine with a community-based setting in a comprehensive outpatient facility and 190-bed hospital on Columbus’ East Side. The hospital provides a full range of medical and surgical services to patients throughout central Ohio, including orthopedics, general surgery, vascular surgery, plastic surgery, ENT, cardiovascular and pulmonary care,

family medicine, general internal medicine, and emergency medicine. Additionally, patients at University Hospital East have access to a comprehensive wound-healing center with limb preservation program. University Hospital East has earned a “2017 Distinguished Hospital Award for Clinical Excellence” from HealthGrades.

### Nationwide Children’s Hospital

Named to the Top 10 Honor Roll on *U.S. News & World Report*’s 2017-18 list of “America’s Best Children’s Hospitals,” Nationwide Children’s Hospital is one of America’s largest freestanding children’s hospitals, providing a broad spectrum of services from advanced neonatal intensive care and surgery to primary and secondary medical care. As home to the Department of Pediatrics of The Ohio State University College of Medicine, Nationwide Children’s physicians train the next generation of pediatricians and pediatric specialists. A Level I trauma center, Nationwide Children’s Hospital is located just east of downtown Columbus, five miles from Ohio State

# Advanced Therapeutic Endoscopy and Gastrointestinal Surgery

This one-year clinical instructorship in advanced therapeutic endoscopy and gastrointestinal surgery provides the highest level of training in advanced endoluminal techniques. The instructorship prepares the fellow to be credentialed and perform a wide variety of endoluminal techniques in clinical practice, teach and train others, as well as conduct ongoing clinical research in endoscopic therapies.

### Goals

- Train surgeons in advanced endoluminal techniques, specifically diagnostic and therapeutic ERCP, endoscopic stenting, endoluminal approaches to GERD and resection/ablation of superficial mucosal lesions.
- Prepare the trainee to repopulate the general surgery community with surgical endoscopists trained in advanced endoluminal techniques including ERCP, with trainees being capable of training others in approved fellowship or preceptorships.
- Research existing endoluminal treatments and develop new technologies/procedures utilizing the comprehensive research laboratory with access to live animals.

### Facilities

All clinical, educational, research and academic responsibilities will take place at the Ohio State Wexner Medical Center. Research and laboratory facilities are at Wiseman Hall on the medical center campus. This provides space for housing and operating rooms for large animals. This facility is certified by Ohio State's Institutional Animal Care and Use Committee. All studies are under the supervision of a veterinarian and technicians. Administrative space is available for the identified fellow with secretarial assistance within the Division of General and Gastrointestinal Surgery at The Ohio State University.

### Clinical Responsibilities

- Evaluate patients pre-procedure with teaching faculty
- Assist and perform procedures under the supervision of the teaching faculty
- Provide post-procedure care and management in conjunction with the resident staff under the supervision of teaching faculty
- Assist residents with basic endoscopic procedures in the operating room or endoscopy suite
- Practice and take calls independently as a credentialed attending

### Educational Responsibilities

- Prepare and attend monthly minimally invasive surgery conferences, which consist of morbidity and mortality statistics, cases participated in during the previous month and cases of educational interest
- Attend biweekly GI medicine/surgical conferences
- Instruct residents in basic endoscopic techniques
- Participate in the instruction of surgeons within the community who desire training and experience in advanced endoscopic techniques within the animal laboratory training facility
- Participate as an instructor or lecturer in advanced endoscopic training courses

### Research Responsibilities

- Maintain an endoscopic registry for advanced procedures specifically looking at outcomes and cost analysis
- Test and aid in the development of new endoluminal instrumentation for clinical application
- Attend and present research at national meetings (SAGES)

### Application Information

This fellowship participates in The Fellowship Council match process. Please visit their website at [fellowshipcouncil.org](http://fellowshipcouncil.org) for application and match dates.

#### For more information, contact:

Vimal Narula, MD  
Program Director  
The Ohio State University Wexner Medical Center  
Center for Minimally Invasive Surgery  
N711 Doan Hall  
410 W. 10th Ave.  
Columbus, OH 43210  
Phone: 614-366-9264  
Fax: 614-366-7230

# Cardiac Surgery and Thoracic Surgery

A two-year program accredited by the Accreditation Council for Graduate Medical Education is available to residents who have completed training and are board eligible in general surgery.

Two positions are available each year, beginning Aug. 1. Rotations, located at The Ohio State University Wexner Medical Center, the Ohio State Comprehensive Cancer Center – James Cancer Hospital and Solove Research Institute, the Ohio State Richard M. Ross Heart Hospital and Nationwide Children's Hospital, provide extensive exposure to all facets of adult and congenital cardiothoracic surgery.

### Cardiac Surgery

The cardiac surgery experience includes:

- Cardiac transplantation
- Coronary revascularization
- Lung transplantation
- Minimally invasive cardiac surgery, including the application of robotics to minimally invasive surgery
- Pediatric cardiothoracic surgery
- Valve surgery, including complex repair
- Ventricular assist devices
- Surgery for arrhythmia
- Transcatheter valve repair and replacement

### Thoracic Surgery

The thoracic surgery experience encompasses all components of:

- Diaphragm pacing
- Endoscopy
- Lung volume reduction
- Minimally invasive surgery
- Photodynamic therapy
- Robotic surgery
- Thoracic oncology

A third-year, non-accredited fellowship is offered in the areas of minimally invasive cardiac surgery, thoracic transplantation and mechanical circulatory support.

### Research

A fully equipped cardiothoracic research laboratory is available, as is access to a sterile operating room for chronic experiments. Current research interests include:

- Atherosclerosis and inflammation
- Autologous myoblasts and stem cells
- Clinical outcomes
- Clinical transformation education
- Heart failure in sheep
- Inflammation and immune function
- Mechanisms of acute lung injury
- Patient engagement through portal technology
- Patient safety
- Preservation of the heart and lungs
- Transplantation
- Tumor markers
- Ventricular assist devices

### Application Information

#### For standard application forms, contact:

National Resident Matching Program  
2121 K St. NW, Suite 1000  
Washington, DC 20037  
866-653-6767  
[nrmpp.org](http://nrmpp.org)

Juan Crestanello, MD, Cardiothoracic Surgery Fellowship Program Director and Director, Division of Cardiac Surgery  
Robert Merritt, MD, Director, Division of Thoracic Surgery  
Patrick McConnell, MD, Congenital Rotation Director  
Ahmet Kilic, MD, Education Director

#### For more information, contact:

Corey Ferguson  
Residency Coordinator  
The Ohio State University Wexner Medical Center  
Division of Cardiac Surgery  
N-846 Doan Hall  
410 W. 10th Ave.  
Columbus, OH 43210  
Phone: 614-293-0333  
Fax: 614-293-7221  
[corey.ferguson@osumc.edu](mailto:corey.ferguson@osumc.edu)



# Colorectal Surgery Residency Training Program

As of Jan. 15, 2016, the Colorectal Surgery (CRS) Residency Training Program received initial accreditation from ACGME, thus becoming the latest ACGME-accredited surgical residency on campus. The CRS Residency Training Program is a one-year curriculum in CRS, preparing the trainee for clinical practice whether in an academic setting (research/teaching) or the private sector. This residency follows the completion of an ACGME-accredited general surgery residency training program. The expectation is for the trainee to ultimately pass the qualifying and certifying examinations and become a diplomate of both the American Board of Surgery and the American Board of Colon and Rectal Surgery.

### Goals

The competency of patient care is the foundation of a physician's education, as patient care is the basis for our profession. Graduates of the CRS Residency Training Program will be able to provide patient care that is compassionate, appropriate and effective for the treatment of diseases and disorders of the colon and rectum.

### Objectives

- Following satisfactory completion of the CRS Residency Training Program, CRS residents should be able to:
- Gather accurate and essential information about their patients
  - Independently perform a thorough and competent patient assessment and demonstrate the ability to make appropriate decisions about treatment choices, including the need for surgery
  - Make informed decisions about diagnostic and therapeutic interventions based on current scientific evidence, patient information and preferences, and clinical judgment
  - Develop and carry through an outpatient management plan
  - Counsel and educate patients and their families using effective communication skills, including caring and respectful behavior
  - Articulate the rationale for approaches, decisions and judgments to patients and their families as well as other healthcare providers
  - Competently perform all medical management and invasive procedures considered essential in the field of CRS, including abdominopelvic and anorectal operations via open, laparoscopic and/or robotic means. Be exposed to other procedures such as diagnostic/therapeutic colonoscopy, anorectal ultrasound/physiology testing and interventions for the treatment of fecal incontinence (e.g., sacral nerve stimulation, use of injectables)

- Demonstrate competence in the application of clinical and basic science knowledge to make sound preoperative, intraoperative and postoperative decisions and to cope with unexpected findings or developments in the operating room independently
- Provide safe and competent perioperative care, including the timely recognition and management of surgical complications
- Work effectively with healthcare professionals from a broad spectrum of other disciplines to provide patient-focused care
- Provide healthcare services aimed at preventing health problems and maintaining health

### Research

The CRS resident will work the program director to identify a systems-based or clinical/bench research project with an appropriate faculty mentor at the beginning of his or her training. The faculty mentor provides the trainee oversight by setting up dedicated periodic meetings with the CRS resident to discuss technical challenges and solutions, project progress and deadlines, career development, setting next-step goals and objectives, timelines for abstract/grant submission, interpersonal and leadership skills, professionalism, etc. It is expected that the project will be submitted in abstract form for consideration for presentation at the yearly American Society of Colon and Rectal Surgeons (ASCRS) meeting and/or regional society meetings.

### Conferences

- The CRS resident is required to attend/complete the following:
- CRS grand rounds (resident, CRS faculty and invited faculty/visiting professors also present)
  - CRS skills lab (on own time)
  - Colorectal tumor board (weekly multidisciplinary conference, faculty and resident present)
  - Department of Surgery grand rounds (visiting professor, faculty and resident present)
  - Department of Surgery morbidity and mortality (resident presents to faculty and other house staff)
  - Weekly formal teaching rounds (faculty present with resident)
  - Monthly GI pathology conference (faculty, resident, and staff present)
  - Ethics (resident, on own time)

### Program Requirements

Prior to appointment to the CRS Residency Training Program, the applicant should have demonstrated a satisfactory level of clinical maturity technical skills and surgical judgment that will enable him or her to begin a CRS Residency Training Program for the purpose of board certification and specialization in the field. Also, the applicant must have successfully completed an ACGME- or a Royal College of Physicians and Surgeons of Canada (RCPSC)-accredited general surgery residency training program of no less than five years of progressive education and be certified by the American Board of Surgery (ABS) or have completed the educational requirements to be eligible to take the ABS qualifying (written) examination.

Applicants must be eligible for either a training certificate or a permanent medical license as granted by the Medical Board of the State of Ohio. Prior to appointment into the program, applicants must have either an acknowledgment letter of receipt of training certificate application, a newly issued or renewed training certificate, proof of receipt of application for permanent Ohio medical license, or permanent Ohio medical license.

Applicants who are non-U.S. citizens must hold permanent resident status with a work authorization, or be eligible to apply for or hold a J-1 visa through the Educational Commission for Foreign Medical Graduates (ECFMG) Exchange Visitor Sponsorship Program. H-1B-eligible applicants will be considered on a case-by-case basis.

The institution and training program agrees to assist the CRS resident as necessary with completion of immigration paperwork, but the ultimate responsibility for its completion remains with the resident. Applicants must apply for and receive limited staff privileges at The Ohio State University Wexner Medical Center and James Cancer Hospital as defined in the Ohio State University Hospitals Medical Staff Bylaws and Rules and Regulations. Prior to beginning the program, the individual must have been granted either limited staff privileges or temporary limited staff privileges.

### Application Information

We participate with the National Resident Matching Program (NRMP) as the sole means of establishing the CRS resident each year. We accept applications through the Electronic Residency Application Service (ERAS) of the NRMP. Selected applicants will be invited to Columbus for a personal interview.

#### For more information, please contact:

Kelly Krichbaum  
Program Coordinator, Colon and Rectal Residency Program  
William Cirocco, MD, FACS  
Professor of Surgery  
Division of Colon and Rectal Surgery  
N-711 Doan Hall  
410 W. 10th Ave.  
Columbus, OH 43210  
614-366-9264  
kelly.rood@osumc.edu





# General Surgery

The General Surgery Training Program has 12 interns:

- Nine in general surgery (six categorical and three undesignated preliminary)
- Three in urology (preliminary)

Categorical positions are six years in length, a period that includes five years of clinical training and one year of research or other advanced training, such as a surgical critical care fellowship. Six chief residents in general surgery graduate each year. The residency provides progressive responsibility in:

- Preoperative and postoperative care
- Non-operative management of surgical patients
- Development of operative skills and the ability to assume independent responsibility for clinical decision-making

### First-Year Goals

- Develop expertise in patient management
- Acquire basic operative skills
- Learn to set priorities in management
- Develop problem-solving, leadership and teaching skills

First-year residents participate actively in the operating rooms and clinics.

### Second-Year Goals

- Become familiar with important surgical specialties
- Develop expertise in surgical critical care and burns

Procedural exposure is excellent during the second year. Second-year residents participate in an advanced laparoscopic lab.

### Third-Year Goals

The goal of the third year is the development of surgical skills. The resident serves as an intermediate resident on the surgical services and participates in consultations, decision-making and a greater number of major procedures.

### Fourth- and Fifth-Year Goals

During the fourth and fifth years, the resident is the most senior on each service. In addition to the further development of surgical expertise, the goal of these years is to develop management and leadership skills. During the fourth year, residents are supervised by faculty and by advanced special residents (fellows) and receive a one-month elective rotation of their choice; during the fifth year, residents act as service chiefs.

The Department of Surgery pays for fourth- and fifth-year residents to attend one major meeting each year and provides them with \$2,000 for the purchase of books and loupes between their third and fifth years.

Operative experience is diverse and in-depth. Residents will have served as operative surgeons on more than 1,000 major cases by the time of their graduation from the program.

### Research

As an academic institution, we believe a research year is essential to a well-balanced surgical education. Therefore, all general surgery residents are required to spend at least one year doing basic science or clinical research after their second or third clinical year. Research can be conducted under the supervision of basic science mentors in labs at Ohio State. During the research year, residents also earn a Master of Medical Science, a Master of Business Administration or a Master of Public Health degree from The Ohio State University.

In lieu of research, some residents choose to do a one-year surgical critical care fellowship in the Department of Surgery following their third year. This fellowship prepares the graduating resident to sit for the American Board of Surgery special certificate in critical care medicine.

All second- and third-year residents must also do a clinical or basic science research project, which they present at the department's annual resident research conference in May. The department will pay for residents to attend professional meetings if they have an abstract accepted any time during their residency.

### Conferences

All residents attend a morbidity and mortality conference, surgery grand rounds, professor conference, skills labs and specialty-specific conferences each week.

### Evaluation

Faculty evaluate residents at the end of each rotation and semiannually. Residents are also evaluated by nurses, peers and medical students using a 360-degree evaluation. Evaluations are based on professionalism, medical knowledge, patient-care skills, technical skills, interpersonal and communication skills, practice-based learning and improvement and systems-based practice.

All residents take the American Board of Surgery In-Training Exam (ABSITE), which is held in January. Residents at the PGY3 through PGY5 levels participate in mock oral board exams.

### Foreign Medical Graduates

Foreign medical graduates applying to the program must hold or be eligible for a valid certificate from the Educational Commission for Foreign Medical Graduates (ECFMG) and a J-1 visa and must have at least one year of experience in an accredited clinical training program in the United States.



### General Surgery Rotations

James Cancer Hospital and Solove Research Institute (JCH)  
Nationwide Children's Hospital (NCH)  
Ross Heart Hospital (RHH)  
University Hospital East (UHE)  
Wexner Medical Center (WMC)

#### PGY1

Acute Care Surgery • WMC  
Colorectal Surgery • WMC  
Bariatric Surgery • WMC  
Float • WMC  
Hepato-Pancreato-Biliary • JCH  
Pediatric Surgery • NCH  
Surgical Intensive Care • WMC  
Surgical Oncology • JCH  
Thoracic Surgery • RHH  
Transplantation • WMC  
Vascular Surgery • WMC, RHH

#### PGY2

Acute Care Surgery • WMC  
Bariatric Surgery • WMC  
Breast • JCH  
Burn • WMC  
Float • WMC  
General Surgery • UHE, WMC  
Surgical Intensive Care • WMC  
Surgical Oncology • JCH

#### PGY3

Acute Care Surgery • WMC  
Colorectal Surgery • WMC  
Pediatric Surgery • NCH  
Thoracic Surgery • RHH  
Transplantation • WMC  
Vascular Surgery • WMC, RHH, UHE

#### PGY4

Acute Care Surgery • WMC  
General Surgery • WMC  
Surgical Oncology • JCH  
Vascular Surgery • WMC, RHH

#### PGY5

Acute Care Surgery • WMC  
Bariatric Surgery • WMC  
Colorectal Surgery • WMC  
General Surgery • WMC, UHE  
Hepato-Pancreato-Biliary • WMC, JCH

### Application Information

We accept applications through the Electronic Residency Application Service (ERAS) of the National Resident Matching Program. Selected applicants will be invited for a personal interview.

Alan E. Harzman, MD  
Director, General Surgery Residency Program

#### For more information, contact:

Brittany Campbell, MBA  
Residency Program Manager  
Department of Surgery  
395 W. 12th Ave., Suite 662  
Columbus, OH 43210  
Phone: 614-293-8704  
Fax: 614-293-4063



# General Surgery Professional Development and Research Training Program

After their second or third year of clinical training, general surgery residents will dedicate one to two full-time years without clinical training toward research education and training, including a mentored research project and the completion of an advanced degree. Based on the trainee's performance during their clinical training, their interest and their professional goals, degree options are the Master of Medical Science, MPH, MBA or an alternate MS degree (such as the MS in anatomy). Curriculum content and research plans are tailored to the individual's professional career interests and research focus. Trainees who are interested in completing the one-year surgical critical care fellowship for their professional development year should speak with the program director as soon as possible.

## Purpose of the Program

The Master of Medical Science (MMS) program provides advanced degree training for physicians interested in pursuing a career in academic medicine. The coursework is selected from courses offered in the College of Medicine Biomedical Sciences Graduate Program, College of Medicine departments, College of Public Health and/or other schools and colleges at The Ohio State University. The program includes a mentored research project. Coursework is typically completed within two years or six academic semesters. However, the curriculum can be tailored and completed in one year or three semesters. Fellows and general surgery residents are encouraged to enroll in this degree program.

## Admission Requirements

- Hold an MD or DO degree
- Be enrolled in an Ohio State or Nationwide Children's Hospital-sponsored residency training program
- Be in good academic standing within the residency/fellowship program
- Complete the Graduate School application
- Meet the ESL and spoken English requirements established by the graduate school, if applicable
- Provide transcripts as requested by the Graduate Admissions Office (GPA 3.0 in all prior undergraduate and graduate/professional coursework)
- Pay a non-refundable application fee
- Get GRE waived (MCAT scores are used)
- Provide three letters of recommendation

- Provide statement of intent
- Provide a current CV
- Submit and receive approval for curriculum and plan of study

## Core Curriculum Requirement

Student trainees must complete 30 credit hours of graduate courses, including a core curriculum in:

- Research design
- Research ethics
- Science communication/grant writing
- Statistics
- Electives relevant to career path and/or research project

## Program Requirements

All student trainees must:

- Maintain a 3.0 GPA
- Complete a minimum of 10 credit hours/semester
- Pursue a mentored research project
- Apply for extramural funding
- Submit abstracts to national scientific meetings
- Publish research results in a peer-reviewed journal
- Present culminating research to the Graduate Studies Committee in lieu of a written thesis prior to program completion

In addition, general surgery residents who are participating in the MMS or other degree program must:

- Apply for extramural funding 12-15 months in advance of the training period
- Participate in the Department of Surgery's James D. King Research Award presentations
- Submit an abstract for presentation at Ohio State Wexner Medical Center's Trainee Research Day and the Department of Surgery's Annual Surgery Research Conference
- Submit abstracts to national scientific meetings at least twice a year
- Publish two to three manuscripts per year
- Present research at Department of Surgery grand rounds

## Program Benefits

Trainees receive the following benefits while in their dedicated research training year(s):

- Travel allowance to present research
- Employee Fee Authorization
- Access to RDR i2b2 (Ohio State Research Data Repository)
- Access to microscopy core and small animal imaging
- Access to biostatistics resources
- Ohio State software for students

## Funding Your Research

Student trainees must apply for extramural funding. Potential funding sources include:

- Institutional T32 training grants including CCTS TL1, Advanced Research Training in Immunology for Surgical Trainees (ARTIST) T32, Tumor Immunology T32, Oncology T32, Ohio State Pelotonia Fellowship Program (cancer research)
- Individual postdoctoral F32 grants
- Mentor/PI-funded R01s

- Mentor/PI Diversity Supplement Award
- Society awards via the ACS, SUS, etc.
- University Fellowship Award

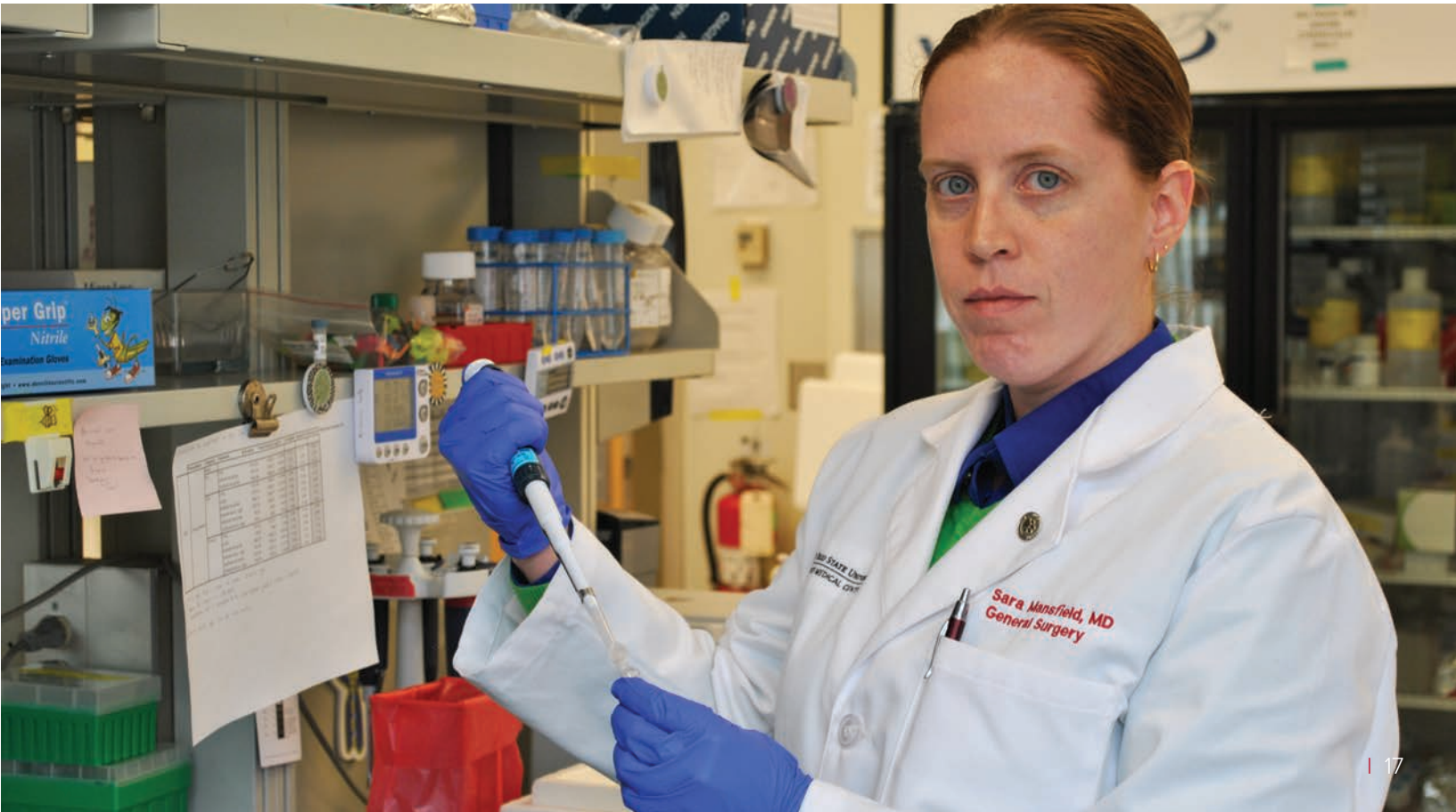
## Reducing Your Debt

Prepare 12 months in advance of the start of the research training period by applying for the NIH Loan Repayment Program (NIH LRP). The application deadline is September to mid-November of each year ([nih.lrp.gov](http://nih.lrp.gov)).

## Information

General surgery residents who are interested in learning more about the research requirement and MMS degree may contact:

Anna Patterson  
Program Manager, Research Education  
OSUWMC Department of Surgery  
395 W. 12th Ave., Room 662  
Columbus OH 43210  
Phone: 614-293-8703  
Fax: 614-293-4063  
[anna.patterson@osumc.edu](mailto:anna.patterson@osumc.edu)





# Minimally Invasive and Bariatric Surgery

The one-year clinical instructorship in minimally invasive and bariatric surgery provides the highest level of training in advanced minimally invasive surgical techniques, preparing the trainee for future clinical practice, research and teaching.

### Goals

- Apply new techniques in minimally invasive surgery
- Help to develop new applications of technology
- Train others in the application of new technology
- Provide guidance and resources for the development of independent investigations that evaluate treatment modalities in minimally invasive surgery

The program includes clinical, academic and research components. The laparoscopic experience includes training in advanced surgical techniques, including:

- Bariatric surgery
- Bowel resection
- Esophageal surgery
- Gastroesophageal surgery
- Hernia repair
- Solid organ removal

Trainees also gain experience in flexible endoscopy, including advanced upper and lower endoscopy of the GI tract.

Program participants receive training in instructional methods for basic and advanced laparoscopic techniques, both in the laboratory, using animate and inanimate models, and in the operating room. Trainees initiate and participate in investigational projects on the pathophysiology of laparoscopy, the development of experimental techniques and the impact of minimally invasive surgical techniques on the practice of surgery.

### Facilities

Clinical work is performed at The Ohio State University Wexner Medical Center, Ohio State University Hospital East, and The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute. Wiseman Hall provides housing and operating rooms for large animals. The facilities are certified by Ohio State’s Institutional Animal Care and Use Committee. Operating room facilities under the supervision of a veterinarian and a veterinary technician are available. Office space and secretarial support are available within the Division of General and Gastrointestinal Surgery.

### Clinical Responsibilities

- Assist faculty with teaching residents basic laparoscopic procedures in the operating room
- Assist with and perform surgery under the supervision of the teaching faculty
- Evaluate patients preoperatively with teaching faculty
- Provide postoperative care in conjunction with resident staff, under the supervision of teaching faculty
- Practice and take calls independently as a credentialed attending

### Educational Responsibilities

- Prepare and attend monthly minimally invasive surgery conferences consisting of morbidity and mortality statistics and educationally interesting case presentations that the fellow participated in during the previous month
- Attend biweekly GI medicine/surgical conferences at Ohio State Wexner Medical Center
- Attend morbidity and mortality conferences at the participating institutions, when cases involving laparoscopy are presented
- Attend weekly bariatric surgery director teaching rounds, which include rounding on bariatric service patients with medical students, residents and attending surgeons. Rounds are followed by discussions on bariatric surgery curriculum and relevant patient topics
- Participate in instruction of basic and laparoscopic techniques to PGY1, PGY2, PGY3, PGY4 and PGY5 residents in surgical skills labs held at Ohio State Wexner Medical Center
- Attend and present information at national meetings (i.e., SAGES, DDW, ASMBS)
- Participate as an instructor or lecturer in an advanced laparoscopic training course

### Application Information

This fellowship participates in The Fellowship Council match process. Please visit their website at [fellowshipcouncil.org](http://fellowshipcouncil.org) for application and match dates.

#### For more information, contact:

Bradley Needleman, MD  
Program Director, Center for Minimally Invasive Surgery  
N711 Doan Hall  
410 West 10th Ave.  
Columbus, OH 43210-1228  
Phone: 614-366-9264  
Fax: 614-366-7230  
[bradley.needleman@osumc.edu](mailto:bradley.needleman@osumc.edu)

# Pediatric Surgery

The Division of Pediatric Surgery is based at Nationwide Children’s Hospital (NCH), a 12-story, 750,000-square-foot facility that is one of America’s largest children’s hospitals, with 616 beds and more than 1.4 million patient visits each year, based on data reported by National Association of Children’s Hospitals and Related Institutions (NACHRI)-member pediatric hospitals. In 2017, NCH ranked seventh on the *U.S. News & World Report’s* Best Children’s Hospital Honor Roll. In addition, NCH ranks among the top 10 pediatric research institutes in the country as measured by National Institutes of Health funding and has three research buildings dedicated to pediatric research on its campus. The Division of Pediatric Surgery is one of the most well-funded divisions of its kind in the country in terms of external federal funding of its basic science and clinical research programs.

The pediatric surgery service is one of the busiest across the United States, with 8,797 clinic visits and 4,158 operative cases in 2016. NCH performs the highest number of inpatient surgical procedures among children’s hospitals in the United States, according to the most recent data from Children’s Hospital Association members.

The division sponsors a Level I Pediatric Trauma Program verified by the American College of Surgeons and a Pediatric Burn Program verified by the American Burn Association. The faculty members in the division include 16 pediatric surgeons, many of whom are certified in both pediatric surgery and surgical critical care. In addition to providing general pediatric surgical care, the division provides world-leading expertise in multiple focused areas of excellence, including pediatric burn care, trauma care, minimally invasive surgery, robotic surgery, inflammatory bowel diseases, adolescent bariatric surgery, gastrointestinal motility disorders, chest wall deformities, surgical oncology, surgical endocrinology and pediatric colorectal surgery. The Trauma Program has been verified by the American College of Surgeons as a Level 1 Trauma Center since 1991, the Burn Center has been verified by the American Burn Association since 2003, and the Bariatric Surgery program has been verified by the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) and the American College of Surgeons since 2015.

The division offers two training programs accredited by the Accreditation Council for Graduate Medical Education (ACGME): a two-year residency in pediatric surgery and a one-year fellowship in pediatric surgical critical care. In addition, there are one-year fellowship programs in pediatric minimally invasive surgery, pediatric bariatric surgery, colorectal surgery and surgical quality improvement. Multiple basic science and clinical research fellowships are also available to trainees.

Established in 1950 by H. William Clatworthy Jr., MD, a world-renowned clinical pediatric surgeon and clinical educator, the residency is among the most prestigious and comprehensive pediatric surgical training programs in the United States. Graduates of the residency have been recognized as academic and clinical leaders in pediatric surgery. They include such distinguished pediatric surgeons as Eric Fonkalsrud, MD, Jay Grosfeld, MD, James O’Neill, MD, Marc Rowe, MD, and Donna Caniano, MD. The division’s award-winning residency in pediatric surgery has been recognized for excellence in its educational programs.





# Pediatric Surgery

## Facilities

Nationwide Children’s Hospital has a state-of-the-art perioperative services unit with 21 technologically integrated operating rooms. Surgical neonates are cared for in a 114-bed Neonatal Intensive Care Unit, and critically ill patients are located in the 40-bed Pediatric Intensive Care Unit. Four beds are available for infants and children who require extracorporeal membrane oxygenation (ECMO). One floor of the hospital contains a 48-bed unit designated for pediatric surgical patients and includes a Burn Center. The hospital operates a Comprehensive Simulation Center to facilitate surgical education.

## Educational Schedule

- Weekly morbidity and mortality conference
- Quarterly combined pediatric surgery/gastroenterology conference
- Monthly clinical/translational/outcomes research meeting
- Weekly PedSCORE tutorial
- Monthly trauma grand rounds
- Weekly trauma professor rounds
- Weekly surgical clinic
- Multiple specialty clinics (burn clinic, bariatric clinic, chest wall deformity clinic, inflammatory bowel disease clinic, tumor clinic, endocrine surgery clinic and others)
- Weekly tumor board
- Weekly pediatric surgery review (PSR)
- Weekly multidisciplinary colorectal case conference

## Program Requirements

The resident in pediatric surgery is expected to perform 1,200 to 1,300 major operations covering the breadth and scope of neonatal and pediatric surgery. Electives are offered in neonatology, pediatric urology and other relevant pediatric specialty disciplines. At the completion of the program, the resident is eligible for the Pediatric Surgery Qualifying Examination administered by the American Board of Surgery.

## Application Information

The residency program participates in the Electronic Residency Application Service (ERAS) of the National Resident Matching Program. Candidates are invited for interviews based on their applications and the expected completion of an accredited residency in general surgery.

**For more information, contact:**  
Benedict Nwomeh, MD, MPH  
Program Director  
Department of Pediatric Surgery  
Nationwide Children’s Hospital, ED 379  
700 Children’s Drive  
Columbus, OH 43205  
Phone: 614-722-3911  
Fax: 614-722-3903  
nationwidechildrens.org

# Pediatric Surgical Critical Care

The Division of Pediatric Surgery offers a one-year ACGME-accredited fellowship in pediatric surgical critical care (SCC). Upon completion of the program, the fellow will be eligible for the Surgical Critical Care Certifying Examination through the American Board of Surgery. The program is based at Nationwide Children’s Hospital (NCH) and also provides electives in adult surgical critical care at The Ohio State University Wexner Medical Center.

## Facilities

The Pediatric Intensive Care Unit (PICU) includes 40 beds for critically ill children with medical or surgical problems, excluding cardiac patients who are cared for in a separate 20-bed Cardiothoracic ICU. The Neonatal Intensive Care Unit (NICU) is linked with several special care units in Columbus, making it one of the largest neonatal centers in the nation.

The SCC fellow is primarily involved with pediatric general surgery patients in both the PICU and the NICU. NCH is a Level I Pediatric Trauma Center and Level I Burn Center offering excellent exposure to these patients. The SCC fellow also helps to manage patients requiring extracorporeal membrane oxygenation (ECMO) in both units.

Faculty from the departments of Pediatric Critical Care Medicine, Neonatology and Pediatric Surgery staff the intensive care units, providing 24-hour in-hospital coverage and supervision.

## Curriculum

The educational program provides advanced training in all aspects of surgical critical care, with emphasis on:

- Unique aspects of pediatric respiratory failure
- Principles of metabolic and nutritional support in pediatric patients
- Application of new modalities for ventilatory support
- Clinical research techniques applicable in the critical care setting

## Responsibilities

- Participate in the educational conferences offered by the Department of Pediatric Surgery and the Division of Critical Care Medicine
- Organize selected educational conferences and provide teaching on topics in critical care to the residents in general surgery on the pediatric surgical service
- Participate in clinical research that leads to a presentation at a national surgical meeting and at least one peer-reviewed journal publication

## Application Information

One fellowship position is available each year. Qualified applicants include individuals who have completed at least three years of surgical residency or are board eligible or board certified general surgeons who wish to enhance their experience in caring for critically ill infants and children.

Applicants are invited for an interview prior to selection. NCH is an equal opportunity/affirmative action employer. Interested candidates should send their curriculum vitae to:  
Cathy Rings  
cathy.rings@nationwidechildrens.org  
614-722-3911

**For more information, contact:**  
Brian D. Kenney, MD, MPH  
Program Director  
Department of Pediatric Surgery  
Nationwide Children’s Hospital  
700 Children’s Drive, ED 379  
Columbus, OH 43205  
Phone: 614-722-3911  
Fax: 614-722-3903  
brian.kenney@nationwidechildrens.org  
nationwidechildrens.org





# Surgical Critical Care

The Department of Surgery offers a one-year ACGME-accredited fellowship in surgical critical care. The program is based at The Ohio State University Wexner Medical Center and The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, the primary teaching facilities of The Ohio State University College of Medicine.

## Facilities

Ohio State Wexner Medical Center is a tertiary-care, Level I trauma and burn center serving a wide geographic area with a metropolitan population of over 2 million. Each year, over 41,000 operations encompassing all disciplines of surgery are performed, more than 2,700 trauma and burn patients are admitted and more than 500 trauma patients are transported to the medical center by helicopter service. All fellows rotate on the two University Hospital SICU services, The James SICU service, the Ross cardiovascular surgery service, neurocritical care service and MICU service. There are two to three months of elective time built into the year. Some of the elective options include bedside ultrasound, acute care surgery, burn and pediatric surgical critical care.

The core rotations in surgical critical care at Ohio State occur in state-of-the-art facilities, including the 26-bed Surgical Intensive Care Unit, the 12-bed Cancer Surgical Intensive Care Unit and the Ross Heart Hospital Cardiovascular Surgery Intensive Care Unit. These units are directed and staffed by faculty from the departments of Surgery and Anesthesiology, all of whom are certified in critical care. More than 2,700 patients are admitted to the surgical critical care units each year.

## Curriculum

The curriculum provides advanced clinical training in all aspects of surgical critical care. Areas of particular emphasis include:

- Application of current principles of metabolic and nutritional support
- Management of complex hemodynamic problems
- Management of complex ventilator problems, including use of newer modes of ventilatory support

A second year devoted to acute care surgery and clinical or basic research is available.

Critical care fellows participate in the clinical and basic science research projects of the Division of Trauma, Critical Care and Burn. Four fellowship positions are available each year. Completion of at least three clinical years in an ACGME-accredited graduate educational program in the disciplines of general surgery, neurosurgery, urology or obstetrics and gynecology is a prerequisite for admission to the program. Individuals who have successfully completed an ACGME-accredited graduate educational program in anesthesiology will also be considered for admission to the program.

## Application Information

To request an application or more information on the Surgical Critical Care Training Program, please contact Program Director Steven M. Steinberg, MD, at the address below. Return the completed application and requested documents to the same address. Selected applicants will be invited for a personal interview.

### For more information, contact:

Steven Steinberg, MD  
Program Director  
Surgical Critical Care  
395 W. 12th Ave., Room 634  
Columbus, OH 43210  
Phone: 614-293-3185  
Fax: 614-293-9155  
steven.steinberg@osumc.edu

# Surgical Oncology

The Complex General Surgical Oncology Fellowship training program at The Ohio State University Wexner Medical Center dates to 1977. The program was one of the first to be sanctioned by the Society of Surgical Oncology in 1981, and in 2012 it was among the first to obtain accreditation by the Accreditation Council for Graduate Medical Education (ACGME).

## Facilities

The clinical and research facilities of the Division of Surgical Oncology are located in The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute (OSUCCC – James). Ohio State has been designated by the National Cancer Institute as a Comprehensive Cancer Center since 1976. The adult patient-care component of the OSUCCC is the 308-bed James Cancer Hospital and Solove Research Institute, a state-of-the-art facility dedicated to patient care, research and education. It is the only freestanding cancer hospital in Ohio and one of the largest in the United States. The OSUCCC – James is a charter member of the National Comprehensive Cancer Network. More than 330 cancer researchers with expertise in basic, clinical, translational, epidemiologic and prevention research, including a large portfolio of collaborative clinical trials, are affiliated with the OSUCCC – James.

Multidisciplinary care of patients by surgical oncologists involves specialized surgical techniques and often chemotherapy or radiation, or both. Specialized tumor boards exist for all major solid organ tumors (breast, colorectal, endocrine, esophageal/gastric, gynecologic, liver, lung, pancreas and sarcoma), and physicians work with teams of specialized advanced practice nurses, physician assistants and others, all of whom focus on cancer care. The OSUCCC – James is associated with the Alliance for Clinical Trials in Oncology, the National Surgical Adjuvant Breast and Bowel Project, and several other cooperative groups. The Division of Surgical Oncology plays an active role in the interdisciplinary oncology unit of the OSUCCC – James, which organizes and implements local research protocols.

## Curriculum

The fellowship is a two-year ACGME-accredited training program that includes 20 months of clinical rotations and four months of research. Fellows also spend dedicated time with multidisciplinary colleagues in Medical Oncology, Radiation Oncology and Pathology. An optional third year dedicated to research is available, and the program accepts three new fellows per year. The Division of Surgical Oncology is composed of 15 surgeons with a broad range of clinical and research foci. Fellows work primarily with one to

three faculty members per rotation for an “apprenticeship” model to facilitate more rapid and graduated independence. In addition, residents and medical students rotate through the surgical oncology services and play an active role in clinical activities.

## Research

There are multiple ongoing research projects related to surgical oncology, and fellows and residents with an interest in cancer research are encouraged to participate. Recent fellows have published multiple papers and have received awards for presentations at national meetings. Examples of research programs include:

- Health services research related to cancer care and surgical quality
- Tumor immunology and cancer immunotherapy
- Molecular biology of sarcomas
- Tumor biology of endocrine neoplasms
- MicroRNAs in solid tumors
- Outcomes in management of gastrointestinal malignancies
- Prevention and diagnosis of breast cancer
- Radioguided surgery

Program Director  
Carl Schmidt, MD  
Division of Surgical Oncology  
M-256 Starling Loving Hall  
320 W. 10th Ave.  
Columbus, OH 43210  
614-293-5644  
carl.schmidt@osumc.edu

Division Chief  
Raphael Pollock, MD, PhD  
N-924 Doan Hall, 410 W. 10th Ave.  
Columbus, OH 43210  
614-688-7915  
raphael.pollock@osumc.edu

## Application Information

For an application or more information on the Surgical Oncology Fellowship Program, please visit [surgery.osu.edu/oncology/education](http://surgery.osu.edu/oncology/education), or contact:

Jennifer Long, Program Coordinator  
N-924 Doan Hall, 410 W. 10th Ave.  
Columbus, OH 43210  
614-293-0758  
jennifer.long@osumc.edu



# Transplantation Surgery

The Ohio State University Division of Transplantation Surgery is recognized as one of the largest and most successful transplant centers in the United States and as a leader in state-of-the-art surgical techniques and facilities. A two-year fellowship in abdominal transplantation is offered, with certification by the American Society of Transplant Surgeons (ASTS) in kidney and pancreas transplantation. Trainees in the program will learn management of end-stage organ disease and the specific indications/contraindications for organ transplantation. The fellowship is primarily composed of clinical activities, with research opportunities involving clinical trials, retrospective research analysis and clinical research protocol development. Candidates for the fellowship program must have satisfactorily completed a residency that satisfies the educational requirements for certification by the American Board of Surgery or foreign equivalency.

The first year is focused primarily on renal transplantation. The Division of Transplantation Surgery performs over 200 renal transplants per year, of which about half are living donor renal transplant cases (laparoscopic living donor nephrectomy is used almost exclusively in the program). In addition, the fellow is trained in the management and recovery of the multi-organ deceased donor and donation after cardiac death and vascular access procedures. In the second year, training continues with the addition of pancreas, liver and kidney/pancreas transplantation. In addition, there is a focus on outpatient care in the second year of the fellowship.

The fellow is responsible for teaching and supervising surgical residents and medical students and assists in patient care activities on the inpatient transplant unit. The trainee is expected to follow all rules and regulations of the medical center in the provision of patient care and patient safety. Didactic components of the program include a weekly transplant seminar on transplant medicine or immunologic topics. Participation in morbidity and mortality conferences and attendance at grand rounds and weekly biopsy conferences are expected. The performance of the fellow will be assessed according to the current graduate medical education evaluation process in place at the institution. Faculty within the division will continually educate and coach the fellow's competence in patient care, medical and surgical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism and systems-based practice. In addition to satisfying the above requirements, the fellow is expected to keep a detailed surgical log that will be submitted to the ASTS upon completion of training.



At the conclusion of the training program, the fellow should be able to practice independently in the field of solid organ transplantation. A certificate of training will be provided by the institution; a separate certificate will be issued by the ASTS.

## Application Information

For an application or more information on the transplantation training program, contact the address below. Return the completed application to the same address. Selected applicants will be invited for a personal interview.

For more information, contact:  
Elmahdi Elkhammas, MD  
Program Director  
Division of Transplantation  
395 W. 12th Ave.  
Columbus, OH 43210  
Phone: 614-293-4627  
Fax: 614-293-4541  
elmahdi.elkhammas@osumc.edu

# Vascular Surgery

The Division of Vascular Diseases and Surgery at The Ohio State University Wexner Medical Center offers a comprehensive program in routine and complex vascular surgical reconstructions using both open and endovascular reconstruction.

## Two-Year Fellowship

An accredited two-year fellowship is available to candidates who have completed the requirements for certification in general surgery of the American Board of Surgery. The first year of fellowship emphasizes diagnostic angiography, endovascular therapeutic techniques and clinical research projects. During the second year, fellows acquire extensive experience with open procedures and advanced endovascular procedures. The fellowship also offers extensive experience in noninvasive laboratory techniques and encourages the fellow's participation in the noninvasive vascular lab, in both interpretation and performance of procedures.

The program provides an above-average number of operative cases. Conferences include vascular morbidity and mortality, endovascular morbidity and mortality, angiogram conferences, vascular research, clinical and basic science lectures, case presentations, vascular lab lectures, other specialty lectures, vascular journal club, preoperative case conferences, interesting case conferences, orientation to the vascular lab, practice management resident business class and 2:1 fellow/attending conferences. Our goal is to produce a fully trained individual who can operate independently and meet all competencies.

## Curriculum

Our curriculum provides advanced clinical training in all aspects of vascular surgery and enables the resident to acquire an advanced body of knowledge and level of skill in the management of vascular surgical patients in order to assume a leadership role in teaching and research in vascular surgery.





# Vascular Surgery

- Acquire in-depth diagnostic and therapeutic skills through extensive exposure to patients who present with a broad spectrum of common and complex vascular disorders
- Participate and direct the preoperative assessment, operative management and postoperative care
- Gain experience in the noninvasive laboratory and imaging studies
- Perform diagnostic arteriography
- Perform a variety of peripheral interventions
- Gain proficiency with intravascular ultrasound for diagnostic and therapeutic procedures
- Train and become proficient in all vascular surgery procedures
- Become proficient in the repair of abdominal and thoracic aneurysms using a variety of devices
- Master the ethical, economic and legal issues as they pertain to vascular surgery
- Pursue research with the goal of presentation at regional, national or international conferences
- Take the Vascular Surgery In-Training Exam, which is given annually

## Facilities

The vascular surgery unit is located at The Ohio State University Wexner Medical Center at the Richard M. Ross Heart Hospital, a 150-bed, state-of-the-art facility that houses the 30-bed vascular unit. Vascular patients are admitted to the fourth and fifth floor vascular units. Two brand-new, state-of-the-art hybrid endovascular operating rooms were recently opened. Outpatient clinic facilities are located in the Ross Heart Hospital and our Upper Arlington vascular clinic. The vascular resident is given the opportunity for clinical and/or surgical experience daily with individual faculty. Vascular laboratory facilities are available in the Ross Heart Hospital and our Upper Arlington office, and the vascular resident receives ample opportunities for hands-on experience in performing the testing and interpretation, as well as receiving instruction from the director of the vascular lab. We also have a vascular surgery service and limb salvage clinic at Ohio State University Hospital East.

## Research

The Division of Vascular Diseases and Surgery believes in the emphasis of an academic tradition at Ohio State, along with research learning opportunities. We have studies on clinical outcomes, basic and translational stroke mechanisms, etiology and progression of aortic aneurysms, retrospective reviews and several multicenter endovascular research trials, such as carotid, peripheral interventional, and thoracic and abdominal aortic aneurysm stents. A full-time research coordinator and heart and vascular research organization support these efforts.

## Application Information

For an application or more information on the Vascular Surgery Fellowship Program, contact the address below. The division participates in the Electronic Residency Application Service (ERAS) of the National Resident Matching Program. Selected applicants will be invited for a personal interview.

Applicants will be required to possess the Registered Physician in Vascular Interpretation (RPVI) credential. This credential is obtained by successfully completing the Physicians' Vascular Interpretation examination, which evaluates knowledge and skills commonly used in a vascular laboratory setting.

### For more information, contact:

Jean Starr, MD  
Program Director  
Division of Vascular Diseases and Surgery  
jean.starr@osumc.edu

Dawn Sagle, Program Coordinator  
701 Prior Hall  
376 W. 10th Ave.  
Columbus, OH 43210  
Phone: 614-293-8536 or 614-293-5136  
Fax: 614-293-8902  
dawn.sagle@osumc.edu

# Directory

**Cardiac Surgery**  
614-293-5502

**Colon and Rectal Surgery**  
614-366-9264

**General Surgery**  
614-293-8704

**Minimally Invasive Surgery**  
614-366-9264

**Pediatric Surgery**  
614-722-3900

**Pediatric Surgical Critical Care**  
614-722-3911

**Surgical Critical Care**  
614-293-3185

**Surgical Oncology**  
614-293-4583

**Thoracic Surgery**  
614-293-0333

**Transplantation Surgery**  
614-366-1925

**Vascular Surgery**  
614-293-8536 or 614-293-5136

[wexnermedical.osu.edu/departments/surgery](http://wexnermedical.osu.edu/departments/surgery)





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