Founded in 1870 as the Ohio Agricultural and Mechanical College, our university was renamed in 1878 by the state legislature, which decreed that it “shall be known and designated hereafter as ‘The Ohio State University’”. The legislature’s purpose in renaming our institution was to recognize that the vision was that it would become much more than an agricultural school. Legend has it that “The” was used to indicate that this institution of higher learning was to be the leader in the state – in size, scope and financial support from the legislature. Sometime after, the letters of that simple grammatical article of speech “The” became an acronym for “Tradition, Honor, Excellence”, a fitting description for all things Ohio State. Now entering into our second century, The Department of Surgery is guided by the ideals of Tradition, Honor and Excellence.

We have a tradition of innovation through surgical research and keen observation. We recently commemorated the sixtieth anniversary of the description of the Zollinger-Ellison Syndrome by then chairman Robert Zollinger, Sr., MD and colleague, Edwin Ellison, MD, father of our ex-chair and current interim dean of the College of Medicine, E. Christopher Ellison, MD. The report of this syndrome ushered in a new era of gastrointestinal physiology. This legacy of discovery and innovation continues in our many recent successes and in the development of “bedside to bench and back to bedside” treatments.

We honor our academic mission by training tomorrow’s surgeons and recognizing successes of our current and past surgeons. Our residency and fellowship programs attract the best and brightest trainees both nationally and internationally. Our mission is to educate excellent surgeons who will practice and lead in our communities as well in academic medicine. We continue to seek to attract more women and underrepresented populations to surgical careers. In recognition of a highly successful surgeon who trained within our department and became an important leader here and nationally, we are proud to announce the annual “Donna A. Caniano, MD Lectureship” highlighting our ongoing Women in Surgery Lecture Series. Additionally, as a goal for this academic year, we will work to complete the funding of the Edwin H. and E. Christopher Ellison Endowment, honoring the memory of Dr. Edwin Ellison’s contributions and the ongoing contributions by Dr. E. Christopher Ellison to The Ohio State University and our Department of Surgery.

We have a guiding principle of excellence in patient care, education and research. As “THE” state medical center for Ohio, we offer high quality, comprehensive patient care, state of the art medical education programs, and innovative and cutting edge research programs, all designed to promote the health of the citizens of Ohio and beyond. In order to support that level of excellence in our faculty, we have developed and implemented a new Faculty Development Program this year.

TRADITION. HONOR. EXCELLENCE.
THE DEPARTMENT OF SURGERY
Steven M. Steinberg, MD, Interim Chairman
The missions of the Department of Surgery are the delivery of high-quality and safe patient care, the contribution to innovations in medicine through basic and translational research and clinical outcomes studies, and the education of medical students and postgraduate trainees. This report summarizes the changes and accomplishments in the department from July 1, 2014 through June 30, 2015.

Organization
The Department of Surgery has a long and respected tradition of excellence in clinical care, research and education. The Department is composed of nine surgical specialty divisions:
- Cardiac Surgery
- Colon & Rectal Surgery
- General and Gastrointestinal Surgery
- Pediatric Surgery
- Surgical Oncology
- Thoracic Surgery
- Transplant Surgery
- Trauma, Critical Care and Burn
- Vascular Diseases and Surgery

In addition to these divisions, the Department also includes several multidisciplinary centers:
- Aortic Center of Excellence
- Center for Minimally Invasive Surgery
- Burn Center
- Center for Bariatric Surgery
- Center for Wound Healing and the Comprehensive Wound Center
- Comprehensive Hernia Center
- COPPER Laboratory
- Center for Regenerative Medicine and Cell-Based Therapies

The Department of Surgery provides all aspects of major surgical care. This year, the department performed 63,516 surgical procedures and received 82,315 outpatient visits. Outpatient services are available at numerous sites, including:
- The Arthur G. James Cancer Hospital and Richard J. Solove Research Institute
- General and Vascular Surgery at Knightsbridge Surgical Center
- Stefanie Spielman Comprehensive Breast Cancer Center
- The Martha Morehouse Medical Plaza
- Nationwide Children’s Hospital
- The Ohio State University Medical Center
- The Richard M. Ross Heart Hospital
- University Hospital East

In addition we have outreach programs in vascular surgery in Ashland, Bellefontaine, Marysville, Upper Sandusky, and Washington Court House, Ohio.

Overview Clinical Statistics, FY 2014-2015

<table>
<thead>
<tr>
<th>Department</th>
<th>OR Procedures</th>
<th>Admissions</th>
<th>Outpatient Visits</th>
<th>Patient Days</th>
<th>Average Length of Stay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiac Surgery</td>
<td>4,094</td>
<td>953</td>
<td>2,616</td>
<td>13,661</td>
<td>11.69 days</td>
</tr>
<tr>
<td>General and Gastrointestinal Surgery</td>
<td>12,778</td>
<td>1,135</td>
<td>19,768</td>
<td>5,720</td>
<td>4.94 days</td>
</tr>
<tr>
<td>Surgical Oncology</td>
<td>5,928</td>
<td>1,293</td>
<td>27,168</td>
<td>8,787</td>
<td>6.51 days</td>
</tr>
<tr>
<td>Transplant Surgery</td>
<td>2,911</td>
<td>834</td>
<td>3,583</td>
<td>5,427</td>
<td>6.38 days</td>
</tr>
<tr>
<td>Vascular Diseases and Surgery</td>
<td>20,113</td>
<td>652</td>
<td>7,622</td>
<td>2,619</td>
<td>4.11 days</td>
</tr>
</tbody>
</table>

- Cardiac Surgery
- Admissions
- Outpatient Visits
- Patient Days
- Average Length of Stay

- General and Gastrointestinal Surgery
- Admissions
- Outpatient Visits
- Patient Days
- Average Length of Stay

- Surgical Oncology
- Admissions
- Outpatient Visits
- Patient Days
- Average Length of Stay

- Transplant Surgery
- Admissions
- Outpatient Visits
- Patient Days
- Average Length of Stay

- Vascular Diseases and Surgery
- Admissions
- Outpatient Visits
- Patient Days
- Average Length of Stay

- Colon and Rectal Surgery
- OR Procedures
- Admissions
- Outpatient Visits
- Patient Days
- Average Length of Stay

- Pediatric Surgery
- OR Procedures
- Admissions
- Outpatient Visits
- Patient Days
- Average Length of Stay

- Thoracic Surgery
- OR Procedures
- Admissions
- Outpatient Visits
- Patient Days
- Average Length of Stay

- Trauma, Critical Care and Burn
- OR Procedures
- Admissions
- Outpatient Visits
- Patient Days
- Average Length of Stay

- Vascular Diseases and Surgery
- OR Procedures
- Admissions
- Outpatient Visits
- Patient Days
- Average Length of Stay
Research is a vital component of the Department of Surgery’s mission and an integral element of its training programs. Research efforts are focused on key areas of interest that promise to yield significant results in the understanding of disease and in the improvement of clinical care. The Department of Surgery’s Office of Surgical Research promotes interdisciplinary research activity and the integration of clinical and basic science research. The Department’s stature and the reputation of its researchers and clinicians enable it to garner significant funding from private industry and from federal sources, such as the National Institutes of Health.

Research efforts continue to focus on three major areas: wound healing, vascular biology and transplantation, and tumor biology. This past year fifty-three faculty members were principal investigators, cumulatively publishing 249 books, book chapters and peer-reviewed journal articles.

The Department of Surgery has the goal to become a Top 20 NIH funded U.S. academic surgery program. We moved closer to this goal in FY 2013-2014 ranking 28th by the Blue Ridge Institute for Medical Research, up from 38th in FY 2012-2013. Strategic plans include investing in a targeted number of highly productive and successful investigators to accelerate discovery and increase NIH funding, increasing the number of annual NIH proposals and submissions, and developing a research and innovation pathway infrastructure.

Our investigators have been awarded several new NIH RO1 grants, and in 2014 new faculty member Renzhi Han, PhD brought an additional two RO1 grants to the department.

Future plans include the establishment of a Center for Surgical Research, Outcomes and Innovation has the goal to coordinate and streamline clinical, translational and outcomes research efforts within the Department and to maximize synergies between divisions to facilitate clinical research.

New Research Funding
During fiscal year 2014–2015, research funding awarded through The Ohio State University Office of Sponsored Programs and Nationwide Children’s Research Institute to principal investigators in the Department of Surgery totaled more than $10.5 million. Federal funding was more than $7.66 million, or 72 percent of total funding. Funding from industry was more than $1.86 million, or 18 percent of the total. Non-federal funding was more than $1 million, or 10 percent of the total.
Teaching tomorrow’s surgeon-scientists

Twenty-seven residents and fellows completed training programs in 2014-2015. Eight went on to community practice, thirteen to further training, five to academic appointments and one to a military appointment. Over two hundred medical students from the College of Medicine perform clinical rotations on our surgical services. We re-engineered our honors program in surgery, making it practical and up-to-date for our students entering careers in surgery. Sixteen students completed the surgical honors program. Twenty-six students entered surgical training in this academic year.

Graduate Programs in Surgery

The surgical residency programs at The Ohio State University College of Medicine share a common goal: to provide an environment conducive to learning in which physicians prepare to function as well-qualified, independent specialists in surgery.

This year, 69 residents and fellows participated in the Department’s 13 residency programs, which consist of six residencies accredited by the Accreditation Council for Graduate Medical Education (ACGME) and seven approved specialty fellowships. These programs provide training in acute care surgery, cardiothoracic surgery, general surgery, minimally invasive surgery, advanced endoscopic surgery, pediatric surgery, surgical critical care, surgical oncology, transplantation, and vascular surgery.

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 tutelage of basic science mentors in labs at Ohio State. During the research year, residents may also earn either a master of medical science, a master of business administration, or a master of public health degree from The Ohio State University.

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

Residents and Fellows

69
ACGME-Accredited Surgical Residencies
7
Approved Specialty Fellowships

ACGME-Accredited Residencies
• Cardiothoracic Surgery
• General Surgery
• Pediatric Surgery
• Pediatric Surgical Critical Care
• Surgical Critical Care
• Surgical Oncology
• Vascular Surgery

Specialty Fellowships
• Acute Care Surgery
• Advanced Therapeutic Endoscopy & Gastrointestinal Surgery
• Mechanical & Circulatory Support - Cardiac
• Minimally Invasive Surgery - Cardiac
• Minimally Invasive and Bariatric Surgery
• Transplantation - Solid Organ
• Transplantation - Thoracic

Major Areas of Research
• Advanced heart and lung procedures
• Critical care
• Minimally invasive surgery
• Molecular medicine and wound healing
• Radioimmunoguided surgery
• Transplantation biology
• Tumor biology

Opportunities in Basic Science Research
• Cardiothoracic surgery
• General surgery
• Pediatric surgery
• Surgical oncology
• Transplantation

Research Facilities
• Biomedical Research Tower
• Center for Minimally Invasive Surgery
• Comprehensive Cancer Center
• Davis Heart and Lung Research Institute
• Tzagournis Medical Research Facility
• Wexner Institute for Pediatric Research, Nationwide Children’s Hospital
• Wisseman Hall Research Facility
• Wound Center, University Hospital East
This has been an exciting year for the Division of Cardiac Surgery. Juan Crestanello, MD was appointed as the division director in August 2014, and on July 1, 2015 he assumed the position as program director of the Thoracic Fellowship program. Dr. Crestanello has also been named the Gerald S. Kakos, MD and Thomas Williams, MD Endowed Professor in Cardiac Surgery, through the generosity of Dr. Kakos and Dr. Williams. “I’m excited and humbled for this honor that carries the name of two of the most prestigious cardiothoracic surgeons that have ever practiced at our institution,” said Crestanello.

Division initiatives include the development and promotion of young faculty to leadership positions. Ahmet Kilic, MD has been appointed as the vice chief for Clinical and Academic Affairs for the Division of Cardiac Surgery and the director of Heart Transplantation and co-director of the Advanced Heart Failure Strategic Program in the Heart & Vascular Institute.

This year saw growth of the cardiac surgery program with increases in both case volume and complexity. We performed 947 cases – our largest number of yet. The complexity and the acuteness of the patients are reflected by the highest case mix index in the Ross Heart Hospital. Particularly impressive has been the growth of the lung transplant program led by Bryan Whitson, MD, PhD and of the LVAD and heart transplant program led by Dr. Kilic. Dr. Whitson performed 31 lung transplants in this academic year. As medical director of the End-Stage Cardiopulmonary Failure Program, Dr. Whitson also continued to grow the extracorporeal membrane oxygenation (ECMO) program for respiratory failure and the pulmonary endarterectomy program. Under Dr. Kilic’s leadership, the Advanced Heart Failure Program grew to 21 heart transplants, 61 ventricular assist devices, and 52 ECMO procedures. Dr. Crestanello leads the multidisciplinary transcatheter valve program which has continued to expand with more than 80 procedures performed this year.

Peter Lee, MD, PhD is an essential member of the Division, supporting the mechanical circulatory support, heart and lung transplant programs. Greg Rushing, MD is the newest member of our Division. He completed his cardiothoracic fellowship at Johns Hopkins Medical followed by a Thoracic Aortic Surgery Fellowship at the Cleveland Clinic. His clinical and research interests are aortic surgery and connective tissue disorders.

In research Renzhi Han, PhD joined the faculty as associate professor of surgery. An accomplished investigator of muscular dystrophy and of molecular and cellular functions of the heart, Dr. Han is funded by two NIH RO1 awards. Hua Zhu, PhD, assistant professor of surgery, was awarded a College of Medicine Bridge Fund and has received an RO1 award. Jianjie Ma, PhD continued his research on MG53 and cell membrane repair with funding through the NIH. Drs. Kilic and Whitson co-investigate organ perfusion and engineering in the COPPER Laboratory. Toshiharu Shinoka, MD, PhD, co-directs the Tissue Engineering Program at Nationwide Children’s Hospital. His clinical and research interests center on bioengineered tissue for use in surgery.

In education, Dr. Crestanello directs the Cardiothoracic Fellowship Program which saw Drs. George Christensen, Stephen Noble, and Emily Smeltzer graduate. Led by Dr. Thomas Williams the division’s summer scholar program is a tremendous success with two of the scholars receiving awards, including a first ever American Association for Thoracic Surgery Summer Internship award.
Division of Colon and Rectal Surgery

The Division of Colon and Rectal Surgery continues to grow and expand its presence in the clinical care of patients with benign and malignant diseases of the colon and rectum. Patient volumes have continued to grow, with a marked increase in the treatment of inflammatory bowel disease and treatment for malignant disease of the colon and rectum. Providing specialized care to our patients, as well as teaching the next generation of surgeons the care and treatment of colorectal diseases, are top priorities of our division.

Leadership is provided by Mark W. Arnold, MD, professor of surgery and chief of the Division of Colon and Rectal Surgery. Faculty members include William C. Cirocco, MD, Alan E. Harzman, MD, and Syed G. Husain, MBBS. The Division recently grew with the recruitment of an additional full-time faculty member, Amber L. Traugott, MD. All faculty members in the division are board certified by both the American Board of Surgery and the American Board of Colon and Rectal Surgery, and each has completed a fellowship in Colon and Rectal Surgery.

Educational opportunities for medical students, residents and fellows are increasing, bolstered by the leadership roles of Dr. Arnold, who continues service as the Vice Chair for Education in the Department of Surgery, and Dr. Harzman as the Program Director of the General Surgery Residency program.

In research, faculty members published 14 scholarly articles and were active in presenting at national meetings, with Drs. Cirocco, Harzman and Husain serving on numerous national committees.
The Division of General and Gastrointestinal Surgery is committed to excellence in education, research and clinical care in gastrointestinal surgery, foregut, hernia repair, endoscopic procedures and bariatric surgery. We strive to offer the most advanced, state-of-the-art treatments. Our surgeons are leaders in their respective fields and we continue to recruit the best and the brightest talent to expand our division’s ability to offer the best care to our patients.

Jeffrey W. Hazey, MD, associate professor of surgery, is chief of the division. Bradley Needleman, MD, associate professor of surgery is director for the Center for Minimally Invasive Surgery (CMIS), whose focus is to foster innovation in clinical surgical care, education, and research pertaining to minimally invasive surgery, leading to new techniques and technology in this ever-expanding field.

As a division, we continue to focus our efforts in clinical care on multidisciplinary team approaches to patient care. This is demonstrated by our formulation and continued integration of the hepatobiliary service. This service is a highly skilled integrated care service for patients with hepatobiliary disease staffed by care teams from our division as well as Surgical Oncology. Faculty from our division continue to develop the Comprehensive Hernia Center which provides multidisciplinary care for patients with routine and complex hernias. This effort is in conjunction with the Division of Trauma, Critical Care and Burn and the Department of Plastic Surgery.

Through our investigations, we continue to make significant contributions to surgery in the fields of gastroesophageal reflux disease, endoluminal and minimally invasive surgery, bariatric surgery, surgical endoscopy, regenerative medicine, wound care and the treatment of malignant disease of the gastrointestinal tract, including pancreatic, esophageal and gastric cancers. In the last year, our clinical faculty have published twenty three peer-reviewed articles and given eleven presentations at national and international meetings.

Minimally Invasive/Endoscopy fellow Edward Jones, MD, with the aid of faculty mentors Jeffrey Hazey, MD and Dean Mikami, MD, was awarded a Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) grant to investigate the characterization of unintentional energy transfer during endoscopy. This is the second awarded SAGES grant in as many years for the OSU CMIS program. Sabrena Noria, MD, PhD was awarded an American Society for Metabolic and Bariatric Surgeons (ASMBS) grant to investigate the role of gut hormones on age-associated diabetes remission following weight-loss surgery. Dr. Noria’s efforts continue with the collaboration of David Bradley, MD from the Division of Endocrinology, Diabetes, and Metabolism.

Our fully accredited general surgery residency program attracts the best and the brightest candidates, both nationally and internationally. We also offer three fellowship positions: two in advanced minimally invasive and bariatric surgery and one in minimally invasive/surgical endoscopy. These positions are accredited through the Fellowship Council. Over the last year, our fellows had one of the most academically productive years since the fellowship began in 1999 and we continue to look forward to matching future leaders in the field. The CMIS hosted 57 educational events which included Continuing Medical Education (CME) and non-CME courses and education and training labs during July 2014 through June 2015 with over 623 participants including practicing surgeons, allied health professionals, surgical fellows and residents, and students. Course topics included bariatric surgery, complex minimally invasive hernia repair, abdominal wall reconstruction, endoscopy, flexible endoscopy, robotic urologic, gynecologic surgery, and advances in surgery and healthcare economics. The Center has also partnered with the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) to offer international visiting scholar opportunities to surgeons from China who are interested in learning advanced minimally invasive surgery techniques to train to their colleagues.
The Division of Pediatric Surgery conducts its clinical, educational, research, and academic programs at Nationwide Children’s Hospital (NCH), one of the largest children’s hospitals in the country with an impressive total of 470 beds in the main campus. The hospital had over one million patient visits last year. It is consistently ranked in all 10 specialties of the U.S. News & World Report listing of the best Children’s Hospitals in the United States, and once again made the U.S. News & World Report’s Best Children’s Hospital Honor Roll in 2015, nationally ranked at ninth. This “best of the best” distinction was awarded to only 12 children’s hospitals across the country. This is the fifth consecutive year that Nationwide Children’s has ranked in all specialties evaluated by U.S. News.

The pediatric surgery service is one of the busiest services of its kind across the United States. Our Division includes 15 board-certified pediatric surgeons, six of whom are also certified in surgical critical care, one hospitalist, who is board-certified in general surgery and specializes in burn and trauma care, and a full-time Ph.D. scientist. Nationwide Children’s Hospital is one of the only hospitals in the United States that is an American College of Surgeons designated Level I pediatric trauma center, an American Burn Association verified pediatric burn center, and a Commission on Accreditation of Rehabilitation Facilities (CARF) approved pediatric rehabilitation center.

Two new surgeons were recruited to join the NCH faculty in 2015. Rajan Thakkar, MD was recruited as the Associate Trauma Director and the Associate Burn Director, and Richard Wood, MD was recruited to join the Center for Colorectal and Pelvic Reconstruction where he works alongside world-renowned surgeon Marc Levitt, MD as a pediatric colorectal surgeon.

Our Pediatric Minimally Invasive Surgery Program, directed by Dr. Karen Diefenbach, attained “Center of Excellence” designation by Karl Storz Endoscopy of America, accompanied by an educational grant. Our Bariatric Surgery Program, under the direction of the Division of Pediatric Surgery, is the only combined pediatric surgical oncology clinic in Ohio. She also has a special interest in pediatric thyroid cancer and melanoma.

Nationwide Children’s Hospital 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. Division faculty have been awarded four new NIH grants this year. Two were awarded to division director Gail Besner, MD - one for her investigations of heparin-binding EGF-like growth factor (HB-EGF) and the ability of stem cells and their secreted exosomes to protect the intestines from necrotizing enterocolitis, and the other for the production of tissue engineered intestine. The other two RO1 grants were awarded to Christopher Breuer, MD, who serves as the Director of the Tissue Engineering Program and as Director of Surgical Research, and is the principal investigator on the first FDA-approved study evaluating the use of tissue engineered vascular grafts in congenital heart surgery.

The Center for Surgical Outcomes Research (CSOR), directed by Dr. Thakkar, MD was established in 2015. The Center for Surgical Outcomes Research (CSOR), directed by Katherine Deans, MD and Peter Minneci, MD, is a comprehensive surgical outcomes research program which employs a wide range of methodologies in order to determine optimal interventions for the management of surgical diseases and the minimization of post-operative complications. The CSOR is funded by a Patient-Centered Outcomes Research Institute (PCORI) federally-funded grant. Dr. Thakkar is establishing a translational research laboratory focusing on sepsis research.
Our surgeons treat patients at the new Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, a transformational facility that fosters the collaboration and integration of cancer research and clinical cancer care. The James is the largest cancer hospital in the Midwest and the third largest in the nation. The James is consistently ranked by U.S. News & World Report as one of the top hospitals in the nation for cancer care.

The Division of Surgical Oncology performed over 5,000 procedures last year, for which we received quarterly Patient Satisfaction Achievement Awards for the second, third and fourth quarters. Division director, Raphael Pollock, MD, PhD was appointed as Chief of Surgical Services for the OSU Wexner Medical Center.

Many of our faculty, staff, colleagues and friends ride or volunteer in the annual Pelotonia fundraising bicycle tour. In 2015 Team Buckeye – OSU Surgical Oncology and Friends peloton raised over $87,000. The team, led by Doreen Agnese, MD, had a total of 82 members (55 actual riders, 21 virtual riders and 6 volunteers) including 16 actual riders, 3 virtual riders and 2 volunteers that are Surgical Oncology faculty, staff and nurse practitioners. 100% of all money raised goes directly to support cancer research at The James.

In education, Jill Onesti, MD and Neil Saunders, MD successfully completed their surgical oncology fellowships and have joined clinical and academic practices, respectively. William Carson, III, MD, professor of surgery received the OSU Department of Surgery Faculty Teaching Award. Carl Schmidt, MD, associate professor of surgery completed the “Surgeons as Leaders” course of the American College of Surgeon and also graduated from the OSU College of Medicine’s Faculty Leadership Institute. Fellowship graduates Lawrence Shirley, MD, Scott Albert, MD and Michelle Fillion, MD all successfully passed the new Surgical Oncology Boards.

The division receives over $6 million in research grant support. Our faculty participate in three national cooperative groups: The Cancer and Leukemia Group B (CALGB), The National Surgical Adjuvant Breast and Bowel Project (NSABP), and the SARC Sarcoma SPORE. Most of the research performed in the division is translational, in which ideas and hypotheses from the laboratory are incorporated into clinical evaluation through the clinical trial mechanism.

Our Division continues to grow with the addition of three new faculty members last year. Joining Surgical Oncology are Mary Dillhoff, MD who focuses on gastrointestinal and hepatopancreatico-biliary malignancies, Lawrence Shirley, MD who specializes in endocrine cancers, and Anne Strohecker, PhD who investigates molecular biology and cancer genetics as they relate to tumor growth.
The Thoracic Surgery Division has the mission of providing innovative, compassionate, and multi-disciplinary care for patients with thoracic diseases. We are committed to patient care, research, and education.

The Division has undergone major transition during the last year. Robert Merritt, MD, associate professor of surgery, has been appointed as interim chief. There is currently an active division chief search and a thoracic surgery faculty search. The recruitment process should identify outstanding individuals who will help rebuild the division.

The foundation of our clinical care is a multi-disciplinary approach to evaluation and management of thoracic diseases. Dr. Merritt is among the 183 Wexner Medical Center attending physicians who are in the top 10 percent of physicians nationally for patient satisfaction. We continue our collaborations with Thoracic Oncology and Gastrointestinal Oncology. These collaborations led to the creation of the multidisciplinary esophageal surgery program. The majority of pulmonary resections are now performed with minimally invasive techniques including robotic surgery and thoracoscopic lobectomy.

Clinical therapies include:
- Adult thoracic surgery
- Diaphragmatic pacing
- Endobronchial ultrasound
- Foregut surgery
- Lung volume reduction surgery
- Minimally invasive esophagectomy
- Navigational bronchoscopy
- Photodynamic therapy
- Robotic thoracic surgery
- Thoracic oncology multidisciplinary clinic
- Thoracoscopic lobectomy
- Tracheal reconstruction

The foundation for our research is collaboration with multiple specialties and basic scientists. We anticipate further progress this year as we expand the spectrum of basic research and outcomes research projects in pulmonary and esophageal diseases. Susan Moffatt-Bruce, MD, PhD, chief quality and patient safety officer for the Wexner Medical Center, is a senior author of a study that showed that the use of barcode-assisted medication administration (BCMA) technology significantly reduced errors in an emergency care setting. Our photodynamic therapy registry has expanded to eight centers and our clinical investigators have begun a phase 2 study of MPDL3280A as induction therapy in stage I-II-I-IIIA resectable and untreated non-small cell lung cancer.

We remain committed to graduate surgical education. We have developed a thoracic surgery simulation program for robotics and thoracic lobectomy, as well as training in photodynamic therapy. Our two-year cardiothoracic surgery fellowship is accredited by the Accreditation Council for Graduate Medical Education. We offer an eight week Summer Scholars program for first year medical students to give them exposure to the field of cardiothoracic surgery, and comprehensive rotations in thoracic surgery for the first and third year general surgery residents.
The Division of Transplant Surgery is dedicated to delivering high-quality, comprehensive and cost-effective transplant care, which is based on a solid foundation of basic, translational, and clinical research. The Division is led by Mitchell L. Henry, MD, professor of surgery and deputy director of Surgical Services in the Comprehensive Transplant Center. In July 2014 the division welcomed its newest faculty member, Ashraf El-Hinnawi, MD, assistant professor of clinical surgery.

The number of transplants performed by the Division continues to increase, and outcomes remain successful. The Ohio State transplant program continues to reflect volumes that place it among the leaders within international and national transplant centers. This year, a dedicated effort by the pre-transplant coordinators, the transplant surgeons, and the nephrologists resulted in 89 living donor kidney transplants. In addition, 88 deceased donor kidney transplants were performed. Twenty-three combined kidney/pancreas transplants were performed this year.

During the year, 29 liver transplants were performed, as well as two liver-kidney transplants. Ohio State is one of a very few centers offering total pancreatectomy with auto-islet transplantation as a treatment modality to those patients suffering from chronic pancreatitis. This past year six of these complex procedures were performed, all resulting in good outcomes for the patient.

Our research is focused on numerous programs including transplant rejection, allograft acceptance and transplant tolerance, novel immunologic strategies for islet transplantation, hepatocyte transplantation, ex vivo organ resuscitation, and new immunosuppressive compounds. In August 2014 Ginny Bumgardner, MD, PhD, professor of surgery and director of the Master of Medical Science Program was awarded the NIH “Advanced Research Training in Immunology for Surgical Trainees” (ARTIST) T32 grant. The goal of this program is to train and inspire a unique cadre of surgeon-scientists to translate astute observations at the bedside, in the operating room, and in the clinic, into novel hypotheses that can be interrogated through immunology-focused translational research. Dr. Bumgardner also serves as the associate dean for Research Education in the College of Medicine.

The division offers a two-year fellowship in solid organ transplantation which is accredited by the American Society of Transplant Surgeons. This year Ahmad Zaaroura, MD completed a two-year fellowship in abdominal organ transplantation, and then was matched in the training program at Duke University for further training in transplant surgery/hepatobiliary surgery. The Division of Transplantation serves as a clinical rotation site for general surgery residents during their intern and PGY-3 years and offers rotation for surgery residents from the Mount Carmel Health System, Riverside Methodist Hospital, and Doctors Hospital, as well as for physician assistant students as part of their elective rotations.

We offer a one month Observership Program during which an international visiting scholar comes to the Wexner Medical Center to observe in transplant surgery with the goal of introducing them to the fields of transplant surgery, patient care, research and teaching. The Division also has a mentorship program which offers undergraduate and graduate students an opportunity to job shadow with the multidisciplinary team. They are introduced to a variety of healthcare professionals and have an opportunity to explore multiple career options.
The Department of Surgery
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FALL 2015
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THE OHIO STATE UNIVERSITY WEXNER MEDICAL CENTER
DOS
SIER
DIVISION OF TRAUMA, CRITICAL CARE AND BURN

Steven Steinberg, MD
J. Kevin Bailey, MD
Daniel Eiferman, MD
David Evans, MD
Christian Jones, MD
Larry Jones, MD
David Lindsey, MD
Amy Rushing, MD
Daniel Vazquez, MD

The Division of Trauma, Critical Care and Burn was formed in March 2006 with the mission of enhancing the Department of Surgery’s programs in surgical critical care, trauma, burn and emergency general surgery, and developing an acute care surgery program. This year we have seen continued growth in number of faculty and also in clinical volume and scholarly activity. We are active in community outreach programs, providing training to local and rural communities and offering burn and injury prevention programs, as well as support for survivors.

Steven M. Steinberg, MD, professor of surgery and Vice Chairman for Quality and Patient Safety, is the director of the Division of Trauma, Critical Care and Burn and is a member of the board of the clinical trauma committee of Central Ohio Trauma Systems. In July 2015 he was appointed as interim chairman of the Department of Surgery. Dr. Steinberg is listed as one of the Best Doctors in America by the U.S. News and World Report.

This year the division recruited two new faculty members: Amy Rushing, MD, assistant professor of surgery, and Daniel Vazquez, MD, assistant professor of surgery.

Faculty members in the division published 49 scholarly articles, abstracts and book chapters and gave 20 podium presentations at national meetings. The division broadened the scope of its research activities to include representatives from Anesthesiology, Dietary, Pain and Palliative Medicine, Nursing, and Pharmacy. A number of collaborative initiatives were launched during the year, including the establishment of a dedicated research curriculum titled “How to Do Research” and joint clinical studies with the Department of Anesthesia.

The Burn Program, directed by Larry M. Jones, MD, was the recipient of the “Best of the Best” award, recognizing excellence in nutritional care of critically injured patients. The award was presented by Critical Care Nutrition and the Clinical Evaluation Research Unit based in Canada. The Ohio State University Wexner Medical Center is the first ever hospital in the United States to rank in the top 10 and the first ever U.S. hospital to win this award.

We have implemented a multi-disciplinary abdominal wall reconstruction service/clinic with Plastic Surgery that is attracting new patients into the OSUMC system. Daniel Eiferman, MD partnered with Plastic Surgery to perform vascularized mesenteric lymph node transfers as a surgical treatment for chronic lymphedema, a novel technique not performed elsewhere.

David Evans, MD has developed one of the first protocols for pre-hospital administration of tranexamic acid (TXA) in hemorrhagic shock which resulted in the first known TXA administration to a trauma patient in the field in the United States.

Other novel therapies, led by Kevin Bailey, MD, include an outpatient laser program to minimize burn scars, and the use of tissue plasminogen activator (tPA) to treat limb-threatening frostbite injuries.

Our faculty have developed and led the first Team Based Learning (TBL) module for the LSI Part 2 UPRSN (Understanding Patients with Reproductive and Surgical Needs) ring. This is an interactive session with third year medical students to train them in trauma assessment incorporating student-led didactics and high-fidelity simulation in the OSU Clinical Skills Education and Assessment Center. Dr. David Lindsey is in his third year as the associate academic program director of the “Lead, Serve, and Inspire” medical school curriculum, and also as an ATLS Trauma Course Director. The graduating Class of 2015 honored Dr. Lindsey as 2015 “Outstanding Clinical Teacher.”

Four fellows completed the surgical critical care fellowship. Ankur Bhakta, DO returned to Doctor’s Hospital in Columbus to complete his general surgery residency. He will also be a rotator at The Ohio State University, Department of Surgery; Brent Goslin, MD accepted a position in General Surgery and Surgical Critical Care at Ohio Health, Riverside Surgical Associates in Columbus; Theresa Jones, MD accepted a position as Assistant Professor of Surgery in General Surgery at Denver VA Medical Center, University of Colorado, Aurora, Colorado; and Thanh Nguyen, DO accepted a position as a trauma surgeon at Grant Medical Center, Columbus.
The Division of Vascular Diseases and Surgery delivers the highest quality of care to patients throughout Central Ohio suffering with peripheral vascular disease. We contribute to innovations in medicine through translational research and clinical outcomes studies, and educate medical students and postgraduate trainees. Strategic planning has been a priority for us as we have focused on identifying how we can best fulfill our mission and truly create the future of medicine to improve people’s lives. A key element of that focus is our commitment to leadership in personalized health care as well as to help become a high-performance organization and workplace of choice. The Division is led by Patrick Vaccaro, MD, MBA.

Our clinical programs include a comprehensive general vascular diseases and surgery service, endovascular surgery, an arterial surgery clinic, a varicose vein clinic, and a wound care clinic located at OSU Hospitals East. Our Aortic Center of Excellence provides an interdisciplinary team of vascular surgeons, cardiac surgeons, anesthesiologist and cardiologist to care for patients with diseases of the aorta. We serve out-lying Ohio communities via clinics located in Ashland, Bellefontaine, Washington Court house, Marysville and Upper Sandusky.

Our physicians and care teams consistently received quarterly Patient Satisfaction Achievement Awards during fiscal year 2015, scoring above the 90th percentile nationwide for overall patient satisfaction.

In research, faculty members published 126 scholarly articles, books, abstracts, posters and presentations. We have numerous clinical trials opened for enrollment for conditions such as aortic aneurysms, critical limb ischemia, wound care, and carotid stenosis. Research faculty Cameron Rink, PhD received a new grant award as a Co-PI from the American Association of Neurological Surgeons. He continues to be the PI for three other active grants.

Our education program offers an accredited two-year fellowship in vascular diseases and surgery. The General Vascular Surgery Fellowship Program has trained 28 vascular surgeons that are currently practicing in the United States and international communities. The fellowship program is directed by Jean Starr, MD with new faculty member Hosam El Sayed, MD, PhD serving as associate program director. We offer a comprehensive rotation in vascular diseases and surgery for junior and senior general surgery residents, and a sub-internship for medical students in vascular diseases and surgery. Our bi-weekly and monthly conferences include Vascular Grand Rounds, Divisional Morbidity and Mortality Conference, Pre-Operative Case Conference, and Journal Club, among others. Bhagwan Satiani, MD, MBA directs the College of Medicine’s Faculty Leadership Institute for faculty development, as well as the Seminar in Practice Management which presents monthly business classes to the residents and fellows in the Department of Surgery.

In November 2015 the Division hosts the continuing medical education conference “Controversies in Vascular Disease and Eighth Annual Vascular Noninvasive Testing Symposium.”