Happy New Year Everyone!

As I write this, the end of 2015 and the rainiest month in Oregon history has just passed. Over 16 inches of water fell in the Portland area, bringing over 200 inches of snow to the mountains, and erasing the drought of 2015. In the dry heat of last autumn, no wise man would have put a wager on this much water! Even California is finally getting some relief from its drought, but I still wonder whether we could fund the future of Oregon by building a water pipeline to L.A. or the central valley of California. Perhaps with El Niño coming and driving a rainy winter, California will be drenched soon enough.

While I usually like to start these newsletters welcoming new faculty, the excitement of a good snow pack in the mountains prompts me to start by promoting Resident Ski Day on February 27th. In recognition of the great service that our general surgery residents provide to our patients, and in celebration of their completion of their in-service (ABSITE) exam, the Mackenzie Society has generously sponsored a bus, ski passes, a reception, and most importantly a day without a beeper for our residents to ski and board on Mt. Hood. The hospitals are covered that day by our attendings and fellows. We would encourage faculty wherever they practice to join us at Meadows for a fun day if you can get free.

Now on to the more serious stuff. Let’s start with research: Susan Rowell, M.D., M.C.R. has been awarded an R01 by the NIH to study the benefits of tranexamic acid at mitigation of acute brain injury in trauma patients titled, “Blood Based Biomarkers of Injury and Outcome in the Prehospital TXA for TBI Trial.” Adding to the research strength of our trauma division, James Ross, Ph.D. has brought several million dollars of grant money and the promise of a strong affiliation with the Air Force to our midst. His work on shock, ischemia, inflammation, hemorrhage control, and resuscitation dovetail very well with trauma surgeon Marty Schreiber, M.D.’s research in blood products and coagulopathy. Our residents and fellows in the lab continue to be very productive, writing great abstracts, delivering papers at many national meetings, and scoring podium presentations at the Pacific Coast Surgical Association (Drs. Sheena Harris, Kelly Haisley, Jennifer Burg, Justin Watson, Dale Wilson, and Christopher Connelly). Winning the William Fletcher Award for Cancer Research will allow Kelly Haisley, M.D. to present her work at the International Society for Diseases of the Esophagus meeting in Singapore in September.

Coupled to research, our Innovation Program continues to grow, with the number of disclosures of new ideas for products reaching last year’s total only halfway through the academic year. Several of these developments have earned peer-reviewed funding from OHISU’s Oregon Clinical and Translational Research Institute. Erin Gilbert, M.D., M.C.R.’s sponge detection project, Jim Dolan, M.D.’s jejunostomy tube project, and Greg Landry, M.D.’s
remote endarterectomy device project are amongst those funded. This represents three out of six awards given by the OHSU Biomedical Innovation Program in the past two years. The biggest success of our Innovation Program in the past few years is the creation of Qview Health. The company is developing a comprehensive peer review reporting software that originally stemmed from the surgical department's Morbidity and Mortality reporting process. Co-founded by Tim Liem, M.D. and Information Systems Manager Ed Wolf from OHSU with Michael Baker and Brenda Edin, Partners at Due North Innovation, Qview Health is currently implemented in four departments at OHSU with six additional departments expected to be up and running in the next few months.

Our education program has seen a transition this year, as Robin Alton, our Education Manager for two decades, has retired after long service to OHSU and the Department of Surgery. She has earned a much needed break after guiding nearly 400 surgical residents through their one to eight year experiences in our general surgery residency program. General Surgery Residency Program Director Karen Brasel, M.D., M.P.H., Vice-Chair for Education Karen Deveney, M.D. and the rest of the education team wrapped up our general surgery residency interviews shortly after the New Year, interviewing a total of 145 candidates, 68 of whom were AOA, and nearly all of whom were superb. This bodes well for the next generation of surgical residents at OHSU. If they are nearly as good as our current team, we are in a very good place.

Let's talk next about our clinical program, the engine that pulls the Department of Surgery. First, and to get the bad news out of the way at the beginning, we remain capacity constrained. Our clinics and especially our hospital is full to the gills, making it difficult to continue the growth trajectory that we have been on for the last two decades. A number of innovative solutions have been designed to address this problem, including internal renovation, partnerships with long-term care facilities, and partnerships with nearby hospitals with excess capacity. As the ink dries on the agreement pulling Salem Health and OHSU into a single management company (OHSU Partners) we are preparing to create a similar arrangement with Tuality Healthcare in Hillsboro. Other hospitals up and down the Columbia River valley and elsewhere remain strong partners of OHSU. To that end, we are helping find physicians for several different communities within a 90-minute drive of Portland, including Vancouver, Hillsboro, Salem, Astoria and The Dalles. To help standardize our approach and to bring additional value to the patient and the health system, Clinical Hepatology Director Atif Zaman, M.D., M.P.H., Vice President for Strategic Outreach Mark O'Hollaren, M.D. and I will be working with the School of Medicine Dean Mark Richardson, M.D., M.B.A., the Faculty Practice Plan, OHSU Healthcare, and OHSU Partners to integrate the physicians working at our partner facilities with physicians working at the OHSU campus on Marquam Hill. Working with the complexities and idiosyncrasies of each health system will not be underestimated but the guiding principles of care, professionalism, and compassion should take us to the right answer.

I would like to complete this message with a strong nod to our Quality Program. While we have always been fixated on improving the quality of what we do, we now have better and better ways of measuring it. Risk-adjusted outcomes programs such as the National Surgical Quality Improvement Program, the University Health System Consortium, and society-specific databases allow us to measure our performance against academic health centers similar to ours. Many of our programs reach top decile performance in these measurements. At the risk of missing a great program that hasn't been assessed recently, let me call out five programs that give me particular pride. Doernbecher Children's Hospital and the pediatric surgery program at DCH reside at the top of the UHC list as the highest quality children's program in the nation. Our trauma program is in the top decile nationally for quality outcomes in the ACS Trauma Quality Improvement Program analysis. Cardiac surgery continuously resides in the top quarter and frequently in the top decile of performance in the Society of Thoracic Surgery database. The liver and kidney transplantation programs continuously achieve national prominence in the United Network for Organ Sharing database for graft and patient survival. Lastly, and admittedly dear to my heart, our esophageal cancer program was the largest academic esophageal cancer program on the West Coast last year, a top decile performer in the National Surgical Quality Improvement Project and the third best performer for volume and quality in the nation in the UHC data.

Great outcomes are only achieved with high achieving teams. I am proud of our culture of collaboration and teamwork, a culture that attracts great talent and delivers great outcomes.

Well, I think I’ve gone longer than I should have so let’s wind it up here. Please join us for our great Grand Rounds program, and by all means if you enjoy skiing please come to the mountain for Resident Ski Day on February 27th. Have a great winter.

-John
OHSU is known for its multidisciplinary approach to health care and the fostering of collaborative rather than competitive efforts between departments, clinicians, research and industry. The Knight Cardiovascular Institute's Aortic Program, directed by the Department of Surgery's newest endovascular surgeon Cherrie Abraham, M.D., is doing just that. The Aortic Program spans the vascular and cardiothoracic surgery divisions, as well as incorporating the skills and expertise of OHSU cardiologists and interventional radiologists of OHSU's Dotter Interventional Institute. A collaboration such as this elevates patient care by utilizing the advanced skillsets of many to provide individualized and advanced treatment options for even the most complex cases of aortic aneurysms and disease. The Aortic Program at OHSU's Knight Cardiovascular Institute was conceived, in part, to be a clinical resource for patients and regional healthcare providers of Oregon and the surrounding areas. As such, it serves as a resource for treatment of complex conditions of the aorta including, but not limited to, complex aortic dissection and aortic aneurysms of the ascending aorta, aortic arch, thoracic, and abdominal aorta. In addition to providing cutting edge clinical expertise, the Aortic Program also has a mission of research and works in cooperation with engineers from Portland State University and basic science researchers here at OHSU and the Marquam Hill Shriner's Hospital to better understand mechanisms of aortic aneurysm growth and rupture and aortic dissection. The program's industry connections are also extensive and important to the development and testing of new devices for treatment of aortic pathology, making these advances available to patients in the Pacific Northwest earlier than they might otherwise be.

However, such research and industry programs always begin with clinical expertise and while OHSU has long served as a regional referral center for complex aortic problems, the recent recruitments of Dr. Abraham to the Division of Vascular Surgery and Victor Rodriguez, M.D., with appointments in both Vascular Surgery and Cardiothoracic Surgery, have elevated clinical expertise at OHSU in
Aortic diseases to a new level. Dr. Abraham, recruited from McGill University in Montreal, has advanced training and expertise in endovascular operations for complex aortic aneurysms and is one of the most experienced surgeons in the world at endovascular aneurysm repair. This experience spans minimally invasive endovascular and open surgery for aortic aneurysm and dissection, complex endovascular aortic aneurysm repair and general vascular surgery.

Dr. Victor Rodriguez is Board-certified in general, vascular and cardiothoracic surgery. Initially practicing as a vascular surgeon from 2003-2011, Dr. Rodriguez’s focus on complex aortic reconstructions led him back to residency in cardiothoracic surgery. Dr. Rodriguez is the definition of multidisciplinary healthcare and takes a particular interest in valvular heart disease, complex aortic reconstructions and endovascular aortic repairs. Both Drs. Abraham and Rodriguez bring particularly unique training and skillsets to the Knight Cardiovascular Institute Aortic Program.

Overall the Aortic Program is looking forward to and anticipating its responsibility to utilize the tremendous opportunity afforded by the generosity of Phil and Penny Knight and the Knight Cancer Challenge campaign to create a program of excellence that spans all of the OHSU missions of patient care, teaching and research for the betterment of aortic disease treatment for patients regionally, nationally and worldwide.
Extracorporeal Life Support

Adult ECLS Program Coming to OHSU in 2016

David Zonies, M.D., M.P.H.
Medical Director
OHSU Extracorporeal Support Program

After more than a year of planning, the new OHSU adult extracorporeal life support program will launch as a multi-disciplinary collaborative with faculty from trauma/critical care, cardiothoracic surgery, anesthesia critical care, medical critical care, pulmonary critical care, and heart failure cardiology. Inclusion and exclusion criteria for respiratory and cardiac failure have been developed to provide optimal therapy to our patients, which will be offered in the cardiovascular ICU, trauma/surgical ICU, and medical ICU.

Extracorporeal life support has evolved considerably over the past two decades. Once considered salvage or experimental therapy in adults, extracorporeal membrane oxygenation (ECMO) is evolving into a mainstream treatment for adult critical care. First pioneered for adults in the early 1970s, initial outcomes had mixed results. This promising technology led to an NIH-sponsored clinical trial that ultimately failed to demonstrate a survival benefit (<10 percent survival). Subsequent clinical trials in the 1980s and 1990s similarly failed to show a mortality advantage (40-50 percent survival). Poor outcomes in each trial were multifactorial. Notably, the technology was primitive by today’s standards and anticoagulation was fraught with unacceptable morbidity. However, in the late 2000s, significant device changes were developed to augment complex critical care. Advances included device miniaturization and the transition from traditional roller pump technology, a legacy of cardiopulmonary bypass, to magnetic centrifugal systems. Further refinements in oxygenator efficiency and the ability to bond heparin to circuit tubing significantly reduced device malfunction.

Concurrent with the release of modern ECMO technology, two important events occurred that stimulated a renewed interest in adult ECMO. First was the release of a United Kingdom-based multi-center trial that compared conventional ventilator therapy to treatment at an ECMO center. Although only 75 percent of those referred to the ECMO center actually received the intervention, the study demonstrated a 31 percent relative risk reduction.
of dying by treatment at an ECMO-based hospital. Although an imperfect trial, it was one of the first to show any appreciable benefit. At about the same time, the H1N1 influenza pandemic resulted in scores of patients in Australasia, Europe, and North America being placed on ECMO support. Several retrospective cohort studies were subsequently published demonstrating survival advantage among those who were placed on ECMO for severe ARDS, or acute respiratory distress syndrome. As a result of this marriage of technology and clinical experience, since 2010 there have been more than 150 new centers established with the international registry.

Extracorporeal membrane oxygenation may now be rapidly deployed in two broad patient categories: those with severe ARDS refractory to conventional lung protection (veno-venous support) and patients in cardiogenic shock refractory to maximal medical therapy (veno-arterial support). In either case, ECMO must either be viewed as a bridge to recovery (reversible respiratory failure or cardiogenic shock) or bridge to destination (e.g., implantable cardiac assist device, heart or lung transplantation). In many cases, cannulation may now be performed percutaneously and outside of the operating theater.

As of December 2015, close to 20,000 adults have been treated with ECMO in the past 25 years. No doubt, ECMO remains a high-risk, low-volume critical care endeavor. Although mortality continues to improve, patients, families, and physicians should be aware of the realistic odds of both survival and good functional outcome (see table).

<table>
<thead>
<tr>
<th>ELSO Adult Registry (1990-2015)</th>
<th>Patients</th>
<th>Survive ECLS (%)</th>
<th>Survive to Discharge (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory</td>
<td>9102</td>
<td>5989 (66%)</td>
<td>5254 (58%)</td>
</tr>
<tr>
<td>Cardiac</td>
<td>7850</td>
<td>4394 (56%)</td>
<td>3233 (41%)</td>
</tr>
<tr>
<td>E-CPR</td>
<td>2379</td>
<td>948 (40%)</td>
<td>707 (30%)</td>
</tr>
</tbody>
</table>

Looking ahead, innovative indications with active areas of clinical research include ECMO-supported cardiopulmonary resuscitation (E-CPR) for both in-hospital and out-of-hospital cardiac arrest, organ donor support in DCD, hypothermic arrest with ECMO-supported reanimation, and minimally invasive extracorporeal CO2 removal (ECCO2R) for severe hypercapnia. Continued technology refinement should be expected, to include mobile device options and improvements in percutaneous access. It is indeed an exciting time to be involved in the cutting edge of critical care.

ASA ECLS PROGRAM

Trauma Research

Selective Aortic Arch Perfusion

Bridging the Gap Between Hemorrhage Control and Organ Support

JAMES ROSS, Ph.D., from the Division of Trauma, Critical Care and Acute Care Surgery, has been awarded $1.8 million by the Defense Medical Research and Development Program for the study of Selective Aortic Arch Perfusion (SAAP) in the control of non-compressible torso hemorrhage (NCTH) and reversal of hemorrhage-induced traumatic cardiac arrest (HiTCA). NCTH is the leading cause of pre-hospital death in both military and civilian trauma. Despite significant advances in hemorrhage control during the last decade, there persists a lack of viable pre-hospital interventions available to providers to address this lethal injury complex. Survival from HiTCA in NCTH is extremely rare and in the presence of cardiac electrical asystole is reported to be universally fatal.

Dr. Ross’ Co-PI Dr. James Manning, Director of the Resuscitation Research Lab, Department of Emergency Medicine at the University of North Carolina at Chapel Hill is the inventor behind the SAAP catheter. Originally conceived for use in medical cardiac arrest in the early 90s, the SAAP catheter is an endovascular balloon catheter with a large central lumen. The catheter is placed in the descending aortic arch and inflated. Oxygenated fluids can be perfused through the lumen to support the heart and brain until spontaneous circulation is restored. Drugs can also be more effectively delivered to the heart in support of resuscitation.

Continued on Page 8
"We envision SAAP as part of an escalating series of interventions in trauma-induced hemorrhage. The SAAP catheter would be deployed in a decompensating patient with NCTH and inflated to provide afterload support and arterial inflow control of bleeding. Should the patient destabilize into HiTCA, the catheter would be connected to a portable ECMO machine to allow for perfusion of the heart and brain until return of spontaneous circulation. Failure to achieve ROSC or continued cardiovascular instability following ROSC would lead to initiation of partial extracorporeal life support via the SAAP catheter already in place until surgical hemostasis is achieved." - James Ross, Ph.D., PI

Drs. Ross and Manning recognized the applicability in military and civilian trauma for both control of non-compressible bleeding and hemorrhage-induced cardiac arrest and have published pilot data proving the concept of SAAP use to reverse HiTCA in hypovolemic arrest (Manning et al. 2015). This most recent grant is an extension of a number of projects where the efficacy of SAAP was examined in large-animal models of NCTH with HiTCA as compared to cardio-pulmonary resuscitation and passive occlusion techniques (REBOA). In addition, they have investigated resuscitation with SAAP in combination with whole blood, packed red blood cells and hemoglobin-based oxygen carriers. Most recently they have generated very promising data that support the concept of REBOA “rescue” where SAAP could be used in patients that arrest following endovascular control of hemorrhage.

This latest round of funding for SAAP will focus on the hand-off from SAAP to limited extracorporeal life support (ECLS) as a mechanism to support the heart after return of spontaneous circulation (ROSC) while mitigating the post ischemia-reperfusion injury and physiologic burden observed in previous experiments. Concurrent to these experiments, the investigatory team will be developing a SAAP training program as an extension of ACLS in preparation for clinical trials in both the United Kingdom and the United States.

WITH the recruitment of Nicholas Hamilton, M.D. in 2015, the Division of Pediatric Surgery is getting ready to launch its new gastrointestinal motility clinic. Dr. Hamilton was trained in general surgery at Washington University in St. Louis, Missouri. During that time, he completed a 2-year research experience in gastrointestinal tumor immunology and an additional year in pediatric trauma. Following completion of his general surgery program he became the 7th fellow in pediatric surgery at OHSU. When asked about Dr. Hamilton’s recruitment, Kenneth Azarow, M.D., Chief of Pediatric Surgery, remarked, “Just because Nick was our fellow, that did not stop me from looking around. It all boiled down to the fact that I viewed him as the top applicant in the nation when we were recruiting for this position.”

The launch of a clinic focused exclusively on pediatric GI motility reflects the latest research and advances in treatment of GI disease. For decades, pediatric surgeons have used anorectal manometry in the evaluation of toddlers and older children with a history or a possibility of Hirschsprung’s disease. Over the past 15-20 years, it has become clear that there is an entire host of illnesses beyond Hirschsprung’s that result from motility disorders in the colon. Advances in technology have now made it possible to measure the quantity and quality of smooth muscle peristalsis in the lower GI tract, just as has been done for years in the upper tract. With the support of our pediatric gastrointestinal colleagues, this GI motility clinic has the potential to become one of only a dozen Centers of Excellence nationwide.

In addition to offering lower GI tract evaluations, the clinic will assist the pediatric GI service in offering esophageal pH and manometry evaluations. We have a unique group of patients that we deal with in pediatric surgery; in addition to children who have failure to thrive and need gastrostomies which contribute to reflux, we see patients with primary neurologic problems that affect esophageal motility along with several congenital disorders such as esophageal atresia and congenital diaphragmatic hernia, making treating the associated GERD a very complicated endeavor. Offering a comprehensive evaluation of esophageal motility has not been the historical standard in children (as opposed to adults), due again to inadequate technology leading to unreliable data. We have now moved into a new era and will take the lead in providing the latest in GI healthcare to our young patients.
IMMray™ PanCan-d is a Game Changer

In collaboration with medical technology company Immunovia AB and OHSU’s Brenden-Colson Center for Pancreatic Care, the OHSU Knight Cancer Institute is positioned to support early diagnosis of pancreatic cancer. Pancreatic cancer is the second most common cause of cancer-related deaths in the United States, almost entirely due to inconclusive screening tests for early diagnosis. Currently, definitive pancreatic cancer symptoms remain uncertain until the cancer is in its later stages, at which point the survival rate is only 6 percent. Immunovia’s test platform, IMMray™ PanCan-d, goes beyond screening for single biological markers and instead creates a biological snapshot of an individual’s immune-response by analyzing serum proteins that change as a sign of disease.

In order for Immunovia to confirm, validate and commercialize a blood test for early diagnosis of pancreatic cancer, the test platform required access to a large cohort of blood samples collected from consenting patients with pancreatic ductal adenocarcinomas, or pancreatic cancer. The Brenden-Colson Center for Pancreatic Care, which is co-directed by OHSU’s Brett C. Sheppard, M.D., and Rosalie C. Sears, Ph.D., and the expertise of the OHSU KCI molecular diagnostics laboratories, headed by Christopher Corless, M.D., Ph.D., was the clear front-runner, offering both depth of data and commitment to early detection of cancer.

The collaboration between Immunovia, the OHSU KCI and the Brenden-Colson Center will use samples together with matched controls to run a retrospective study to verify, in a U.S. population, the findings of previous studies from Europe and China. The Brenden-Colson registry blood samples were collected at time of diagnosis, before, during and after treatment. The clinical validation study will cover about 600 samples with different stages of pancreatic cancer, matched controls as well as patients with chronic pancreatitis.

If validated, Immunovia’s pancreatic cancer specific test, IMMray™ PanCan-d, could be the first blood-based test available for early and specific diagnosis of pancreatic cancer. It could provide physicians with actionable information early enough for the cancer to be removed surgically.

In the words of Co-Director Brett Sheppard, M.D.:

“Our collaboration with Immunovia has great potential to substantially improve survivorship for pancreatic cancer patients everywhere. Sadly, most patients at diagnosis cannot be treated with curative intent due to advanced disease. If we are able to detect pancreatic cancer at its earliest stage (IA) then with state-of-the-art surgical care and chemotherapy we could almost triple the 5-year survivor rate with existing therapies done.”
Fast-Acting Bandage for Hemorrhage Prevention

On Jan. 1, trauma research Professor David H. Farrell, Ph.D., F.A.H.A. was awarded a 1-year $225,000 Small Business Innovation Research grant from the National Science Foundation for his company, Gamma Therapeutics, Inc., to develop a new type of bandage for traumatic injury that rapidly clots blood to prevent hemorrhage. Trauma Division Chief Martin Schreiber, M.D. is the collaborating investigator on this grant.

Trauma is the leading cause of death for all persons between the ages of 1 and 44 years, and the majority of deaths that occur within the first 24 hours following a traumatic injury are the result of hemorrhage. The current recommended hemostatic dressing, Combat Gauze™, contains a xenobiotic coagulation initiator that can cause downstream blood clots. Dr. Farrell’s patent-pending bandage design utilizes natural regulatory proteins and can cause complete and regulated blood clotting in 12-14 seconds. Its use is intended for both civilian and military hemorrhage control scenarios following traumatic injury. Research and development is underway with laboratory testing expected to conclude by the end of 2016.

Marquam Hill Lecture you won’t want to miss:

“Lessons from the Battlefield: How Military Trauma Care Transforms Civilian Care in the United States”
Presented by Martin Schreiber, M.D., Chief, Division of Trauma, Critical Care and Acute Care Surgery, OHSU
Thursday, Feb. 18 | 7 p.m. | OHSU Collaborative Life Sciences Building | RSVP at www.ohsu.edu/mhlectures

DEPARTMENT ANNOUNCEMENTS

Administrators Win Big at AASA

The Department of Surgery submitted three poster presentations to the Association of Academic Surgical Administrators 28th Annual Conference this past October in Chicago. Cardiothoracic Surgery Fellowship Coordinator Jill Rose and CT surgeon Paul Schipper, M.D. won 3rd place for Simulation and Accreditation. Bariatric Surgery Division Manager Elspeth Rogers and Digestive Health Center Director Meagan Schuette won 1st place for Bariatric Value Stream: Journey to Transformation. Each presented oral presentations which were well received. Congratulations!

Plastic Surgery Residents Present at Annual Meeting

The OHSU Division of Plastic Surgery was well represented at the annual Plastic Surgery meeting in Boston, the largest gathering of plastic surgeons in the country. Juliana Hansen, M.D. co-taught the first ever transgender surgery course at the meeting to a standing-room only crowd. Residents Matthew Lewis, M.D., Lindsay Stone, M.D., and Allison Nauta, M.D. all presented papers. Dr. Nauta in collaboration with Anna Kuang, M.D. was honored for best paper in the resident section for Maxillofacial/Pediatric Surgery, titled, Age at Time of Surgery and Maintenance of Head Size in Nonsyndromic Sagittal Craniosynostosis.

CONGRATULATIONS

Henry Neil Cunningham on July 26, 2015, to Aaron Cunningham, M.D. and Holland Cunningham

Isaac Schuitevoerder on July 29, 2015 to Darryl Schuitevoerder, M.D. and Yvonne Ontiveros

Sloane Murphy Feeney on October 10, 2015 to Ben Feeney, M.D. and Jen Feeney
2015-2016 Grand Rounds Schedule

Oregon Health & Science University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. OHSU School of Medicine, Division of CME, designates this educational activity for a maximum of 1.0 AMA PRA Category 1 Credits™ per session. Physicians should only claim credit commensurate with the extent of their participation in the activity. **Grand Rounds begins at 7:30 a.m.**, unless otherwise noted.

**JANUARY**

- **January 4** | Grand Rounds Canceled
- **January 11** | “Who Would Have Thought It? An Operation Proves the Most Effective Therapy for Diabetes,” Jon Purnell, M.D., Professor of Medicine, Knight Cardiovascular Institute, Division of Endocrinology, Diabetes and Clinical Nutrition, OHSU
- **January 18** | Canceled for Martin Luther King, Jr. Day
- **January 25** | “‘Reach for the Top’ - The KCVI Aortic Program and Endovascular Intervention for Complex Aortic Disease at OHSU,” Cherrie Abraham, M.D., Associate Professor of Surgery, Director, KCVI Aortic Program, Division of Vascular Surgery, Department of Surgery, OHSU

**FEBRUARY**

- **February 1** | “Current Concepts in the Treatment of Aortic Dissection,” Victor Rodriguez, M.D., Clinical Associate Professor, Division of Cardiothoracic Surgery, Department of Surgery, OHSU
- **February 8 | 7 - 8 A.M. | PERFORMANCE EXCELLENCE WEEK** | “Lean Transformation at Salem Health,” Norman Gruber, M.H.A., President, OHSU Partners and former CEO of Salem Health, Salem, Ore.
- **February 15** | Canceled for Presidents’ Day
- **February 22** | “High Stakes Surgical Decisions and Unwanted Care,” Gretchen Schwarze, M.D., M.P.P., F.A.C.S., Associate Professor of Surgery, Department of Surgery and Department of Medical History and Bioethics, University of Wisconsin, Madison, Wisc.
- **February 29** | “Two Important Roles for Surgeons in Public Policy and Government: Strengthening Emergency Care and Reducing the Impact of Smoking on Surgical Outcomes,” John Maa, M.D., F.A.C.S., Chair, Tobacco-Related Disease Research Program Scientific Advisory Committee, University of California, San Francisco

**MARCH**

- **March 7** | “Applying Complexity Science to a Hernia Program to Improve Outcomes,” Bruce Ramshaw, M.D., F.A.C.S., Chairman and Professor, Department of Surgery, University of Tennessee Graduate School of Medicine, Knoxville, Tenn.
- **March 14** | “Surgical Heroes and Heroines: Lessons Learned from Surgical Residents,” Karen Deveney, M.D., Professor of Surgery, Vice-Chair for Education, Division of Gastrointestinal and General Surgery, Department of Surgery, OHSU
- **March 21** | “Hepatic Arterial Infusion for Liver Hemastasis from Colorectal Cancer: Building a New Clinical and Research Program,” Skye Mayo, M.D., M.P.H., Assistant Professor of Surgery, Division of Surgical Oncology, Department of Surgery, OHSU
- **March 28 | 7 - 8 A.M.** | “Improving the Care of Older Surgical Patients Through Large Pragmatic Studies: Early Experiences from the REGAIN Trial,” Mark Neuman, M.D., M.Sc., Assistant Professor of Anesthesiology and Critical Care, Assistant Professor of Medicine (Geriatrics), Perelman School of Medicine at the University of Pennsylvania, Philadelphia, Penn.
known for his collaborative management style and commitment to community-based healthcare, Norman F. Gruber, M.H.A. became President and CEO of Salem Health in March 2003. His visionary leadership has set the direction for the hospital in all areas of service, patient-focused care, community integration and organizational leadership.

In collaboration with his management team, the Board of Trustees, physician representatives and community members, Mr. Gruber guided the development of a long-range strategic plan. This plan led to the construction of a new patient care tower, implementation of Lean management principles throughout the organization, and a collaborative approach with community physicians to reduce variation in care among providers, resulting in improved quality, shorter length of stay and reduced costs.

Norm is a native of Ohio. He and his wife, Elyse, live in Salem and have four sons.

Gretchen Schwarze, M.D., M.P.P., F.A.C.S.
February 22, 2016 | 7:30 a.m.

Gretchen Schwarze M.D., M.P.P. is an Associate Professor in the Division of Vascular Surgery at the University of Wisconsin. She received her medical degree from Harvard Medical School and master's degree in public policy from the John F. Kennedy School of Government. She completed residency at the Massachusetts General Hospital in Boston. Her fellowship training in vascular surgery and clinical ethics was done at the University of Chicago Hospital and Clinics. Her research interests are in patient-doctor decision-making for high risk operations and end-of-life care for surgical patients. She is an alumna of the Greenwall Faculty Scholars program and currently holds a KL2 award via the University of Wisconsin CTSA and a GEMSSTAR (R03 NIA)/Jahnigen Award from the American Geriatrics Society and the Society for Vascular Surgery to test a communication intervention for older, frail surgical patients. She was recently awarded funding from PCORI to test a patient-designed and patient-mediated intervention to improve engagement during high-stakes surgical decisions. Dr. Schwarze has two daughters, ages 8 and 10.

John Maa, M.D., F.A.C.S.
February 29, 2016 | 7:30 a.m.

Continued on Page 14
AFTER graduating from UC Berkeley in 1990, John Maa, M.D. entered Harvard Medical School. He was commissioned as an officer in the United States Army in 1991, and completed the UC San Francisco general surgery residency in 2002. He conceived of the “surgical hospitalist” during a health policy fellowship at the UCSF Institute of Health Policy Studies; this new model for emergency care was implemented at UCSF in 2005. In recognition of these efforts to transform the emergency care system, he was named one of the “Top 20 People Making a Difference in Healthcare in America” in 2009. To enlighten the health reform debate, he undertook a year-long public policy sabbatical in Washington, D.C. working with members of Congress, Capitol Hill, professional medical organizations, and the media including CNN, CSPAN, the New York Times and the Wall Street Journal. A series of publications in the New England Journal of Medicine, the Journal of the American Medical Association, and other leading medical journals would lead to his recognition with the Perlman Award for Medical Journalism from the San Francisco Medical Society. He was recognized as both a “San Francisco SuperDoctor” in the San Francisco Chronicle, and “[415] Top Doctor” from Marin Magazine in 2012 and 2013. In 2013, he was elected President of the Northern California Chapter of the American College of Surgeons and awarded the national Arthur Ellenberger Award for Excellence in State Advocacy.

His current research focuses on reducing the impact of smoking on perioperative surgical outcomes. Dr. Maa serves as the Chair of the University of California Office of the President Tobacco-Related Disease Research Program SAC, and practices general surgery at Marin General Hospital. He currently also serves on the Board of Directors for the American Heart Association and the San Francisco Medical Society, on the Advisory Board of General Surgery News, and on the Executive Council of the Asian Art Museum.

In July of 2012, Dr. Maa became the first requestor of a election recount of a statewide ballot measure in the history of the State of California. He has been involved in each of the subsequent statewide California ballot recounts, and has assisted with both State and National election integrity efforts to strengthen democracy and the security of the ballot box.

Bruce Ramshaw, M.D., F.A.C.S.
March 7, 2016 | 7:30 a.m.

Bruce Ramshaw, M.D. received his undergraduate and medical degrees from the University of Florida and completed a general surgery residency at Georgia Baptist Medical Center in Atlanta, Georgia in 1994. After eight years in private practice, he moved to be a part of the Emory Endosurgery Unit at Emory University for three years and then served as Chief of General Surgery and in a tenured professorship at the University of Missouri for five years. At Missouri, he redesigned the General Surgery division to implement patient-centered care teams and saw the potential of a new model for healthcare. In July 2010, Dr. Ramshaw moved with the hernia program he had developed at Missouri to Daytona Beach, Florida and helped start a general surgery residency program at Halifax Health. During that time, the hernia program was re-named Advanced Hernia Solutions, and Dr. Ramshaw founded a healthcare data analytics company, Surgical Momentum, to help mature a new model for healthcare based on measuring and improving value for the patient. Dr. Ramshaw served as the President of the Americas Hernia Society in 2013-2014. In October 2015, he became the Chair of Surgery at the University of Tennessee Knoxville where he continues the effort to transition our healthcare system from one based on volume to one based on value for the patient.

Mark Neuman, M.D., M.Sc.
March 28, 2016 | 7 a.m.
MARK D. NEUMAN, M.D., M.Sc. is Assistant Professor of Anesthesiology & Critical Care at the Perelman School of Medicine at the University of Pennsylvania, where he is also Assistant Professor of Medicine (Geriatrics) and Senior Fellow in the Leonard Davis Institute of Health Economics. A graduate of Penn’s Robert Wood Johnson Foundation Clinical Scholars Program, Dr. Neuman is a practicing anesthesiologist and clinical researcher. His work focuses primarily on understanding the patient-, physician- and health system-level determinants of patient-centered outcomes among older adults undergoing surgery and anesthesia, with a particular emphasis on improving outcomes after hip fracture, a condition that affects more than 300,000 older adults in the U.S. each year.

Dr. Neuman’s research has appeared in JAMA, the New England Journal of Medicine, BMJ, and The Lancet, and has examined topics including the comparative effectiveness of differing anesthetic approaches for common surgeries in older adults; challenges in surgical decision-making for patients with advanced illnesses; changes in guidelines for perioperative care over time; and the role of hospital and nursing quality in determining patient outcomes after surgery. Dr. Neuman is principal investigator of the REGAIN Trial (Regional versus General Anesthesia for Promoting Independence after Hip Fracture), a multicenter, randomized trial funded through an $11.9 million contract from the Patient-Centered Outcomes Research Institute that will compare outcomes at up to one year among patients treated with spinal anesthesia versus general anesthesia for hip fracture surgery.

12th Man of the Hour

General Surgery Fellow Fernando Mier, M.D. Makes a Life-Saving Assist

On Sunday, September 13, 2015, general surgery fellow Fernando Mier, M.D. was at Lakeridge High School in Lake Oswego waiting for his daughter’s soccer game to start. Suddenly an 81-year-old man collapsed and Dr. Mier was called to evaluate him. He quickly assessed the man, noticed that he was not breathing and had no pulse. Dr. Mier asked one of the parents to call 9-1-1 and to get an AED defibrillator. He started CPR with two nurses from Eugene (who were also waiting for the game to start). He then coordinated the resuscitation by monitoring the force and speed of compressions by the other bystanders, changing roles when fatigued and giving rescue breaths. When the fire department arrived, Dr. Mier continued to coordinate the resuscitation and indicated when to shock, placement of a definitive airway, IV insertion, and administration of Epinephrine. The group was finally able to get him into a stretcher and the fire department transported him to Legacy Meridian Park.

The 81-year-old man was Dick Wittig and the grandfather of one of Dr. Mier’s daughter’s classmates. Later that same day, Mr. Wittig’s family visited Dr. Mier at his home to tell him the good news: Dick was alive, awake and with no deficits! Dr. Mier called it the best news he’d ever received on a Sunday afternoon.

In an email to Dr. Mier from the Lake Oswego Fire Department, Battalion Chief David Morris expressed both professional and personal thanks for Dr. Mier’s efforts:

“...I would like to thank you because I am also a citizen of this community and by stepping in to help Dick you made a difference to a family that I know personally. His granddaughter and my daughter started out playing soccer together and we have known the family for years. As health care providers, we all know the chances for survival from cardiac arrest are only possible with early CPR, electricity, and rapid transport to the emergency room. Because you stepped in to help that Sunday, you gave Mr. Wittig a fighting chance of survival. You delivered to our firefighters a viable patient and you have given his family some more time with him.”
HAPPY NEW YEAR from the Department of Surgery and the Operative Care Division at the Veterans Affairs Portland Health Care System! 2015 was a very productive year and we hope that 2016 will be even better for our Veterans and Operative Care Team. Given the timing of the New Year, I thought I would take this opportunity to relay some results of the Veterans Affairs Surgical Quality Improvement Program (VASQIP) – the precursor to NSQIP.

Our last quarterly report with a rolling 12 months of data showed that we had completed 6,592 cases. With regards to complexity, we performed 75 percent of VISN 20’s highly complex cases (VISN 20 encompasses Alaska, Idaho, Oregon, Washington). Our observed to expected 30-day mortality ratio is 0.7 and for VASQIP data-eligible Veterans that translates to 6 surgical mortalities over 12 months. We continue to work to sustain these results and have instituted changes over the past year to keep the ratio less than one. Policies include the use of the mortality calculator for any perceived surgical mortality risk of over 5 percent. If higher than 5 percent for elective cases, then surgeon to surgeon review is to take place and a mandatory palliative care consult is required. For urgent and emergent cases, discussion with the Surgeon-of-the-Day (SOD) is required before moving forward. There is 24/7 SOD administrative call provided by the Chief and three Assistant Chiefs of Surgery.

Our 30-day observed to expected morbidity ratio also continues to be strong at 1.09 and our 30-day readmission rate for inpatients is 10.8 percent compared to the national rate of 12.2 percent. We performed 21 liver transplants and 41 kidney transplants – the highest in the nation for kidneys. RVU productivity also continues to be high at 7,916 RVUs/10,000 uniques compared to 4,825 RVUs/10,000 nationally. Lastly, our OR efficiency numbers continue to be strong and meet VA benchmarks for block utilization, OR cancellation rates, and turnover times. While we continue to work at improving our on-time first start rate of 43 percent, 81 percent start either on time or within 15 minutes.

The Operative Care Division has several other important projects that continue to move forward. The construction plans for the cardiovascular hybrid room are approximately 60 percent complete and we are scheduled to start construction in the fall of 2016. Additionally, Project ARM (analyze, redesign, and maximize) is moving forward with regard to completely relocating all of our surgical divisions so that facilitators, nurses, mid-level providers and surgeons are all co-located for team improvement. This will also allow all of anesthesia to be close to the operating room. Our first Innovation Team completed a 10-week project to improve our surgery scheduling process and we are moving forward with their recommendations. Lastly, our staffed bed situation by nursing is finally turning around and we anticipate being back up to previous levels by the spring.

Every day I continue to be impressed with the level of commitment that all of our staff have to caring for the Veterans. Likewise, our surgery residents continue to be a vital part of our mission and their excitement in working at the VA is much appreciated. As always, I am available any time and my door is always open.

-Rob
**2016 Save-the-Dates**

Plans are already underway for this year’s events. The VirtuOHSU golf tournament will be held on **Friday, September 9, 2016** at Royal Oaks Country Club. The dinner and auction will be held the following **Friday, September 16, 2016**. We hope you will plan to join us in celebrating our eleventh year of supporting VirtuOHSU and surgical resident training. If you have any questions, please contact Pat Southard at southarp@ohsu.edu.

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**Milestone Anniversary Marked by Record Donations**

This past September, the Department of Surgery’s annual charity golf tournament and dinner auction celebrated its tenth year of raising funds dedicated to the support of the VirtuOHSU Simulation and Surgical Training Center. The milestone anniversary was marked by the most donations ever made to VirtuOHSU, amounting to over $193,000. This was made possible by the support and generosity of our donors, sponsors, Department of Surgery faculty members and grateful patients who serve on the charity committee. In the ten years of hosting this event, the gross amount raised is now close to $2 million.

In September, and for the first time since the fundraising event was initiated, the day of the golf tournament and the evening dinner auction was split into two separate events. The golf tournament was again held at beautiful Royal Oaks Country Club in Vancouver, Wash. It was a perfect, albeit hot, day of golf with temperatures creeping up into the 90’s while the players remained in high spirits and enjoyed the award-winning course. Included in the foursomes of donors and sponsors were two resident foursomes, one from the Department of Surgery and one from the Department of Orthopedics. It was some fun competition and great to have representation from the residents who benefit most from VirtuOHSU.

The evening dinner auction was held two weeks later at the Collaborative Life Sciences Building on the Portland South Waterfront. The atrium of the CLSB was transformed for the evening to the style of Hollywood glam, decorated elegantly in black, gold and red. A wine tasting area offered guests some exceptional pours while a jazz duo played throughout the tasting and silent auction. Following the dinner and oral auction, live music featuring hits from the 40’s and on was provided by the Kansas City Rhythm Kings.
ON THE CUTTING EDGE | JANUARY 2016

Department Origins

By Richard J. Mullins, M.D.
Surgery Faculty 1974 - present

Thomas M. Joyce, M.D.
A. J. Mackenzie Professor of Surgery
1934–1947

In the spring of 1914, Thomas M. Joyce M.D. was completing three years of surgical training at the Mayo Clinic, spending much of this time as first assistant to the renowned master surgeon Dr. Charles H. Mayo. The 29-year-old Joyce was confident, energetic, ambitious and not married. He decided to move to Portland, Oregon; census reports from 1910 described the city on the Columbia River as a “boom” town with a population of 207,000.

Within two years, he had developed a busy surgical practice and the native of Iowa had married an Oregonian, Ruth Kiernan. In the spring of 1917 America declared War on Germany. Dr. Joyce volunteered to serve as member of Base Hospital 46, a U.S. Army medical unit organized through the University of Oregon’s Medical School. On July 2, 1918 Major Joyce, Chief of Surgical Service, and the Hospital arrived at Bazoilles-sur-Meuse in Northeast France, close to front, and they prepared for service with 1000 beds. On September 12, 1918, the American Expeditionary Force attacked the German’s Hindenburg Line of trenches, broke through and pursued the enemy northward. Over three months there were 90,000 American casualties. During this time, Major Joyce and his colleagues at Base Hospital 46 treated 8,366 soldiers and performed 620 operations.

On June 1, 1921, and back in Portland, Dr. Joyce joined three colleagues, internists Dr. Nobel W. Jones and Dr. Laurence Selling and otolaryngologist Dr. Frank Kistner, to establish a multi-specialty clinic patterned after the Mayo Clinic. Called the Portland Clinic, it has been an enduring source of high quality care in the community to this day. Dr. Joyce led the Clinic’s surgical service for the remainder of his life.

In 1933, the Depression had impoverished tens of thousands of Oregonians. Multnomah County Hospital and Doernbecher Children’s Hospital offered for many the only access to surgical care. Throughout the 1930s, the Medical School financially struggled as it graduated 55 students a year. In September of 1933, Dr. Richard B. Dillehunt, Dean at the University of Oregon Medical School, convinced Dr. Joyce to become the Mackenzie Professor of Surgery at the Medical School and Chief of Surgery at the county hospital. It is likely Dr. Joyce’s salary was minimal. Dillehunt later wrote of Joyce: “He was the personification of gentility and generosity.” While maintaining his leading role as a surgeon at the Portland Clinic, Professor Joyce dedicated his Fridays to the Medical School, training the surgery residents in the County Hospital OR in the morning and giving lecture to the medical students in the afternoon.
By the 1930s Dr Joyce had earned nationwide reputation as an accomplished and skilled surgeon. In 1935 he traveled to Boston and attended the annual meeting of the American Surgical Association. At that time, ASA members were dissatisfied, and some indignant, because a large proportion of surgical procedures in the United States were being performed by general practice physicians trained to perform routine surgical procedures but who lacked a foundation of surgical scientific knowledge. The ASA authorized six of its members to form a National Committee. They were instructed to design a process for establishing an American Board of Surgery as, “a qualifying body to examine candidates to determine their fitness, after reasonable education and training, to practice surgery.” Dr. Thomas Joyce was appointed to the National Committee. Within two years they had completed their work. On January 9, 1937 the ABS was first convened by 13 founding members, of which one of them was Joyce, nominated by the Pacific Coast Surgical Association. He served on the Board during those critical initial six years. Three of Dr. Joyce’s successors as the Mackenzie Professor of Surgery later joined with Dr. Joyce in making a major commitment to the ABS as an organization that assured certified surgeons in America had proven they met high standards: Dr. J Englebert Dunphy, Dr. Donald Trunkey and Dr. John Hunter, who will be Chair of the ABS from 2016 to 2018.

The years between 1941 and 1945 were arduous for Joyce. His surgical work at the Portland Clinic multiplied as younger surgeons entered the military. As Professor of Surgery at the Medical School he upheld the quality of education while the curriculum was accelerated to graduate more doctors for the war. Dr. Joyce, admired by his colleagues as a “doer not a speaker,” turned age 60 in 1945 and the stress was taking a toll. On April 18, 1947, a Friday, Dr. Joyce was at the Medical School delivering his weekly lecture on surgery when he developed crushing chest pain. He was admitted to the Multnomah County Hospital and within a few hours, Dr. Joyce was dead.

In the Oregonian’s obituary, Dr. Joyce was remembered: “His charity load was enormous, according to his colleagues. He gave freely of his time at the County Hospital and Doernbecher Memorial Hospital for Children.”

Dean Richard B. Dillehunt, M.D., an orthopedic surgeon and a close friend, as well as Joyce’s boss at the Medical School, wrote a vivid description of Joyce. Thomas M. Joyce was a surgeon of “consummate skill,” who “propelled with seemingly indefatigable dynamic energy,” and could be “colorful beyond description.” Dillehunt recalled, with a measure of affection, Joyce as, “ebullient at times, and always volatile; our relations (Dillehunt was the dean) on occasion led to violent acrimonious and profane collisions, beyond description, to be forgotten at lunch thirty minutes later.” Joyce was a man who loved surgery because it was a means to help patients. He lived only for his work and likely would not have objected to dying at work.

Dr. Thomas M. Joyce should be remembered in the Department of Surgery at OHSU as surgeon-benefactor at a time when the institution needed commanding leadership. Dr. Joyce was a national leader in one of the most important achievements in the practice of surgery in 20th century America: the foundation of the American Board of Surgery and establishment of the high surgical standards ensured today.
Questions or comments? Email On the Cutting Edge Editor Sara Szymanski at szymanss@ohsu.edu – we’d love to hear from you.

OHSU School of Medicine | Department of Surgery

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OHSU includes the Schools of Dentistry, Medicine, and Nursing, OHSU Hospital and Doernbecher Children’s Hospital, numerous primary care and specialty clinics, multiple research institutes, and several outreach and community service units.

Change can’t happen if we see things just one way. That’s why diversity is so important to OHSU.