



Beth Israel Deaconess
Medical Center



HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

News from the Roberta and Stephen R. Weiner Department of Surgery
at Beth Israel Deaconess Medical Center

INSIDE SURGERY

RESIDENTS AS INNOVATORS

*A new type of
hackathon*

page 16



IN THIS ISSUE

- | | |
|---|---|
| <p>3 ■ Save the Date
 ■ Department Welcomes Scharukh Jalisi, MD, MA, FACS</p> <p>4 ■ Alumni Spotlight — E. Patchen Dellinger, MD</p> <p>5 ■ Alumni News</p> <p>6 ■ HMS Promotions and Appointments</p> <p>7 ■ New Faculty</p> <p>8 ■ News Briefs</p> <p>16 ■ Encouraging Surgery Residents to Become Medical Innovators</p> | <p>19 ■ Awards Recognize Faculty and Residents</p> <p>20 ■ Saving Limbs, Saving Lives</p> <p>23 ■ Glycobiology Provides New Insights into IBD and Colon Cancer</p> <p>24 ■ Selected Faculty Publications</p> <p>27 ■ Department Welcomes New Trainees</p> <p>28 ■ Congratulations to Our 2017 Graduates</p> <p>29 ■ Making a Difference</p> |
|---|---|

Message from the Chair

It was once an assumed fact that creativity was an inborn trait, not an ability that people could cultivate. In recent years, however, research in cognitive science, psychology, and education has demonstrated not only that creativity can be learned, but that it grows stronger with practice.

Keith Sawyer, PhD, a professor of psychology and education, explores this concept and its implications in his book, *Zig Zag*. He describes eight behaviors, such as increasing mindful awareness, seeking out new experiences and imagining alternative realities, which everyone can practice to enhance their own creativity. Dr. Sawyer emphasizes this is a dynamic process, full of twists and turns. Fundamentally, while great ideas may arise from an individual, true innovation flourishes in groups.

In the Department of Surgery, we are committed to fostering the development of imaginative master surgeons who will change the practice of medicine. To accomplish this goal, we offer both exceptional clinical training in surgery and novel educational opportunities that promote innovative problem finding and problem solving.

In this issue of *Inside Surgery*, you will read about a newly established initiative, the Harvard Surgical Program in Innovation (SPIN), which combines the collaborative spirit of a hackathon with a structured series of educational workshops. Surgery residents who participated in SPIN last spring worked as individuals and in groups, reframing clinical problems, generating multiple solutions, choosing among the most promising, and fusing their ideas together to create highly novel medical device prototypes that promise to impact the lives of patients.

This is just one example of our commitment to prepare the next generation of leaders in American medicine.



Elliot Chaikof, MD, PhD



Beth Israel Deaconess Medical Center



HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

FALL/WINTER 2017

Volume 7, No. 2

Inside Surgery is published by the Office of the Chairman of the Roberta and Stephen R. Weiner Department of Surgery at Beth Israel Deaconess Medical Center for faculty, trainees, staff, alumni, affiliates, and friends.

The mission of the Department of Surgery:

- Provide care of the very highest quality
- Improve health through innovation and discovery
- Prepare future leaders in American surgery
- Serve our communities with sensitivity and compassion

Chairman, Surgery

Elliot Chaikof, MD, PhD

Vice Chair, Communications

Allen Hamdan, MD

Director, Surgery Communications Editor

Ann MacDonald

Please forward comments, news items, and requests to be added to or removed from the mailing list to: Editor, *Inside Surgery*, Beth Israel Deaconess Medical Center, Department of Surgery, LMOB-9C, 110 Francis St., Boston, MA 02215.

E-mail: surgerycommunications@bidmc.harvard.edu

Tel: 617-632-8384

bidmc.org/surgery

Cover photo: Residents Kirsten Dansey, MD, and Christopher Digesu, MD.

Inside photographs: Bill Brett, Danielle Duffey, James Derek Dwyer, Ann MacDonald, Rachel Sampson, Ting-Yu Shih

Department Welcomes Scharukh Jalisi, MD, MA, FACS

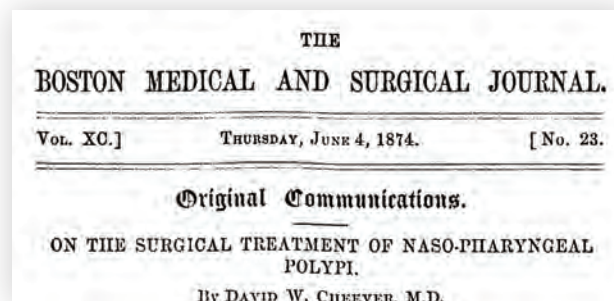
Following a national search, the Department of Surgery is pleased to announce that Scharukh Jalisi, MD, MA, FACS, has joined BIDMC as Chief of Otolaryngology (ENT)/Head and Neck Surgery. Renowned for his expertise in surgical oncology—especially in robotic and skullbase surgery—Dr. Jalisi has advanced techniques that have significantly improved outcomes and quality of life for patients with head and neck tumors.

Dr. Jalisi was formerly Director of the Head and Neck Cancer Center of Excellence at Boston University (BU), as well as Director of BU's Division of Head and Neck Surgical Oncology and Skullbase Surgery. While at BU, Dr. Jalisi created a multispecialty head and neck service, forged strategic partnerships across disciplines and, in the process, greatly expanded inpatient care with a focus on the management of highly complex patients. Dr. Jalisi has been repeatedly recognized by *Boston* magazine as one of the city's best otolaryngologists. In an article highlighting 14 medical breakthroughs, he was recognized by *Boston* as a pioneer in transoral robotic surgery.

A dedicated educator, Dr. Jalisi served as Director of BU's Head and

Neck Surgical Oncology Fellowship and received the Charles Vaughan Excellence in Teaching Award from the residents in otolaryngology. Dr. Jalisi has authored more than 60 original papers, case reports, and reviews in peer-reviewed journals, as well as book chapters and textbooks. He is the author of three otolaryngology and robotic surgery textbooks. Dr. Jalisi has served as president of the Massachusetts Society of Otolaryngology and is a Fellow in The Triological Society, the premier academic society in otolaryngology.

"We are fortunate to have recruited Dr. Jalisi to our department,"



says Elliot Chaikof, MD, PhD, Chair of Surgery. "Over the past 150 years, members of our department have made many important contributions to the field of head and neck surgery. In an 1874 publication in the *Boston*



Medical and Surgical Journal, the forerunner of the *New England Journal of Medicine*, our founding Chair, David Cheever, MD, described a novel surgical approach for the treatment of nasopharyngeal cancer, which established the standard of care for these complex tumors. In the late 20th century, Daniel Miller, MD, the founding Chief of our modern Division of Otolaryngology/Head and

Neck Surgery, was an international leader in the field. Dr. Miller served as President of The Triological Society and was a driving force in promoting multimodality care that included chemotherapy,

radiation, and surgery for advanced cancer of the oral cavity and pharynx. Dr. Jalisi's vision and leadership will build on this strong heritage to enable BIDMC to achieve new levels of excellence in this field of medicine."

Save the Date – Surgery Grand Rounds

January 17, 2018

Capper-Hermanson Visiting Professor of Surgery—Jonathan Woodson, MD
Boston University School of Medicine; Boston University School of Public Health

Preparing Surgeons for the Future: Leading in Times of Accelerating Change

March 7, 2018

Visiting Professor of Vascular Surgery—Michael Makaroun, MD
University of Pittsburgh School of Medicine

Twenty-Five Years of EVAR: The Procedure That Defined a Specialty

March 14, 2018

Visiting Professor of Thoracic Surgery—James Huang, MD
Memorial Sloan Kettering Cancer Center

The Seat of the Soul: The Thymus, Autoimmunity, Neoplasia and Progress in Rare Diseases

April 4, 2018

Starkey Visiting Professor of Surgery—Jo Buyske, MD
American Board of Surgery
To Protect the Public and Enhance the Profession: Lifelong Learning in Surgery

ALUMNI SPOTLIGHT

E. Patchen Dellinger, MD, 1977

Professor and Vice Chair, Department of Surgery
Former Chief, Division of General Surgery
University of Washington



Today E. Patchen Dellinger, MD, is a nationally recognized expert in patient safety and infection control. Among other achievements, he is a past President of the Surgical Infection Society, a Fellow at the Infectious Disease Society of America (IDSA), the Society for Healthcare Epidemiology of America (SHEA), and a member of the international working group on Surgical Site Infection Prevention that is part of the WHO Second Global Patient Safety Challenge, “Safe Surgery Saves Lives.”

But he wasn’t intending to become a doctor when he entered Swarthmore College. “I wanted to be an electrical engineer,” he says. “Then I met a young lady, who asked me why I was attending such a great liberal arts college but not taking any liberal arts classes.” To impress the woman who is now his wife of 50 years, Lissa Dellinger, he switched his major to Mathematics, which had fewer required courses, and began taking classes on Russian literature, psychology, and art. “By junior year, I knew I didn’t want to do high-tech math,” he says. “I stumbled onto a journal called *The Bulletin of Mathematical Biology*, which published research on the life sciences, but from a mathematical perspective. And somehow that led to medical school.”

If this all sounds serendipitous, it is. “When I talk to trainees, I tell them you don’t know what the future is going to bring. You may think you know what you’re planning to do next, but often you end up doing something else. What you need to do is take advantage of opportunities and options in front of you.” That philosophy has served him well in his own career.

Opportunity for improvement

Dr. Dellinger attended Harvard Medical School, initially intending to become a general practitioner. Once again, he followed his instincts and took another path. “I loved studying microbiology, and I enjoyed my infectious disease clerkship,” he said. A surgery

clerkship at Beth Israel Hospital (now BIDMC) during his last year of medical school convinced him he wanted to be a surgeon.

“The Chair at the time was a real inspiration,” Dr. Dellinger says, referring to William Silen, MD, Surgeon-in-Chief at Beth Israel Hospital from 1966 to 1994. “My wife will tell anyone to this day that it’s Bill Silen’s fault that I’m a surgeon.”

During his general surgery residency, what most impressed him was Dr. Silen’s philosophy of training—one that endures today at BIDMC. “His view was that a surgeon is an internist who can operate. I was impressed with the depth of medical knowledge, the broad discussion of biology and physiology that went into the care of patients, and the attention to detail,” Dr. Dellinger says.

Three years into his residency, Dr. Dellinger assisted an attending who performed a colectomy. Four or five days later, the patient developed peritonitis from an anastomotic leak, a life-threatening complication.

“The attending surgeon called me and said, this patient is in trouble and we need to operate right away.” They also called in an infectious disease specialist to consult.

The patient survived, but Dr. Dellinger saw opportunity for improvement. “The infectious disease specialist appeared to have no understanding about surgery, and my attending knew little about infectious disease. I said to myself, there is clearly a need for a person trained in both areas.”

He told Dr. Silen he wanted to pursue an infectious disease fellowship. Dr. Silen put him in contact with Louis Weinstein, MD, at Tufts University, esteemed as one of the founding fathers of the field of infectious disease, which was then in its infancy. “After I was at Tufts for several months, I knew why Bill recommended I train there. He knew Lou had a surgical personality—sometimes wrong but never in doubt.”

Making surgery safer

After completing his general surgery residency in 1977, Dr. Dellinger accepted a position at the University of Washington, where he maintains an active practice in general surgery. He also performed bariatric surgery from 1978 to 2014, at which point he reduced his work hours and transitioned to the Urgent Care Surgery Service. He served as Chief of the Division of General Surgery from 1991 to 2014, and Vice Chair of the Department of Surgery. As his career progressed, he emerged as a leader in improving patient outcomes by reducing infections. He has been on the hospital Infection Control Committee since joining the University of Washington. About 15 years ago, he helped start the Surgical Infection Prevention Subcommittee, which involves all surgical disciplines, as well as the Departments of Anesthesia, Nursing, Infection Control, Pharmacy, and Central Sterile Supplies. Among other accomplishments, Dr. Dellinger

has helped develop professional guidelines on surgical antibiotic prophylaxis and infection prevention, and has authored more than 220 peer-reviewed papers and textbook chapters. His research has focused on the most efficient ways to deliver antibiotics, their most effective timing and duration, and how to prevent antibiotic resistance.

The biggest challenge in making surgery safer, he says, is human nature. “Everyone’s in favor of quality improvement, but change doesn’t happen easily.” He is proud that the University of Washington has participated in international clinical trials to improve patient safety, such as the timing of antibiotic administration and the implementation of the WHO safe surgery checklist.

“Beth Israel was an absolutely wonderful place to start in this profession,” Dr. Dellinger says. “And the University of Washington has been an incredibly supportive place to continue.”

ALUMNI NEWS



In September, Maria Millan, MD, was named President and CEO of the California Institute for Regenerative Medicine, the state’s stem cell agency. Joining CIRM in 2012, Dr. Millan was the Medical Officer for two of CIRM’s early first-in-human clinical trials and led the formation of the Alpha Stem Cell Clinics Network, which now actively supports almost 40 clinical trials.

Dr. Millan completed her general surgery residency at BIDMC in 1997, during which she spent two years completing a fellowship in transplant immunology at Harvard Medical School. She next completed a transplant surgery fellowship at Stanford University School of Medicine. She served as Associate

Professor of Surgery and Director of the Pediatric Organ Transplant Program at Stanford before leaving for a career in regenerative medicine.



IN MEMORIAM: Scott L. Spear, MD, 1977

Scott L. Spear, MD, founding Chair of the Georgetown University Hospital Department of Plastic Surgery and a past President of the American Society of Plastic Surgeons, passed away in March. He was 68.

An internationally recognized leader in plastic surgery, Dr. Spear specialized in breast surgery and cosmetic and reconstructive surgery. A pioneer in nipple-sparing mastectomy, he also advanced techniques to reconstruct the irradiated breast.

He earned his medical degree at the University of Chicago, completed a general surgery residency at Beth Israel Hospital (now BIDMC), and a plastic surgery residency at the University of Miami. Dr. Spear published more than 200 peer-reviewed papers and authored three editions of a seminal textbook, *Surgery of the Breast: Principles and Art*.

“Dr. Spear was a visionary leader in our field,” says Bernard T. Lee, MD, MBA, MPH, FACS, Chief of Plastic and Reconstructive Surgery. “Our faculty and residents were fortunate to spend time with him when he visited BIDMC as the 2015 Robert M. Goldwyn Visiting Professor in Plastic Surgery. He was a brilliant thinker and educator and will be missed.”

Dr. Spear is survived by his wife, Cindy, three children, and two grandchildren.

HARVARD MEDICAL SCHOOL

Promotions and Appointments

The Department of Surgery congratulates the following faculty members on their Harvard Medical School promotions or appointments.

PROMOTED TO: PROFESSOR OF SURGERY



**Bernard T. Lee, MD,
MBA, MPH, FACS**

Dr. Lee is Chief of the Division of Plastic and Reconstructive Surgery and Co-Director of the Peter Jay Sharp Program for Aesthetic and Reconstructive Breast Surgery. He specializes in breast reconstruction after mastectomy, using advanced microsurgical techniques.

Dr. Lee earned his medical degree from Tufts University School of Medicine in Boston, his MBA from the University of Massachusetts Isenberg School of Management, and his MPH from the Harvard School of Public Health. Dr. Lee completed his residency in general surgery at Tufts-New England Medical Center and a plastic surgery residency at Montefiore Medical Center in New York City. He joined the BIDMC Department of Surgery in 2003.

He has published more than 140 peer-reviewed papers, and is a co-editor of a leading textbook in the field of reconstructive surgery, the *Encyclopedia of Flaps*. He is also Editor-in-Chief of the *Journal of Reconstructive Microsurgery*, and Chair of the Plastic Surgery Executive Committee for the Harvard Plastic Surgery Combined Residency Program.

PROMOTED TO: PROFESSOR OF SURGERY



Marc L. Schermerhorn, MD

Dr. Schermerhorn is Chief of the Division of Vascular and Endovascular Surgery. He is an international leader in the field of clinical effectiveness research with a particular focus on the impact of new endovascular therapies directed at aortic aneurysm repair.

He received his medical degree from Georgetown University School of

Medicine in Washington, DC, and completed his residency in general surgery at BIDMC. Dr. Schermerhorn subsequently completed a fellowship in vascular surgery at Dartmouth-Hitchcock Medical Center in Hanover, New Hampshire, where he was on faculty before joining the Department of Surgery at BIDMC in 2004.

Dr. Schermerhorn has authored 122 peer-reviewed publications, and 17 book chapters. He is a member of the editorial boards for several leading medical journals, and is an active member of several professional societies. He serves as Co-Chair of the Clinical Scholarship Program and Associate Program Director of the Vascular Surgery Fellowship at BIDMC.

PROMOTED TO: ASSOCIATE PROFESSOR OF SURGERY



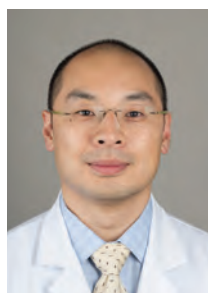
Jonathan Critchlow, MD

Dr. Critchlow is Associate Chief of the Division of General Surgery and Associate Director of the General Surgery Residency Program. He is also Director of the Surgical Morbidity and Mortality Conference, Director of the Venous Access Service, Co-Director of the Surgical Intensive Care Unit, Chair of the Organ Donation Council, and Associate Director of the Surgical Critical Care Fellowship Program.

Dr. Critchlow received his medical degree from the University of California, San Diego School of Medicine. He completed his internship and residency in surgery at what was then Beth Israel Hospital, joining the staff in 1984. Dr. Critchlow maintains a busy clinical practice focused on gastrointestinal surgery. Known for his superb technical skills and vast knowledge of clinical

surgery, he is frequently consulted on complex cases. Dr. Critchlow is a dedicated mentor and teacher. His peer-reviewed papers have been published in top specialty journals. He has co-authored multiple book chapters and co-edited two popular textbooks.

New Faculty



Alex (Chun Min) Chee, MD

Division: Thoracic Surgery and Interventional Pulmonology

Medical School: Queen's University, Kingston, Ontario, Canada

Residency: Internal Medicine, Queen's University, Kingston, Ontario, Canada

Fellowship: Respiriology, University of British Columbia, Vancouver, Canada; Interventional

Pulmonary Medicine, University of Calgary, Alberta, Canada; Pulmonary and Critical Care Medicine, Massachusetts General Hospital/Harvard University, Boston, MA

Phone: 617-632-8252

Dr. Chee sees patients at BIDMC.



Andy Lee, MD

Division: Vascular and Endovascular Surgery

Medical School: University of Illinois College of Medicine, Chicago, Illinois

Residency: Beth Israel Deaconess Medical Center, Boston, Massachusetts

Fellowship: Clinical Research, Vascular Surgery, BIDMC; Vascular Surgery, Stanford University Medical Center, Palo Alto, California

Phone: 617-632-9959

Dr. Lee sees patients at BIDMC and Metro West Medical Center.



Charles Parsons, MD

Division: Acute Care Surgery, Trauma, and Surgical Critical Care

Harvard Medical School title: Instructor in Surgery

Medical School: The Robert Larner, MD, College of Medicine at the University of Vermont, Burlington, VT

Phone: 617-632-9922

Dr. Parsons sees patients at BIDMC.



Madhu Siddeswarappa, MD, MRCS

Division: General Surgery

Medical School: Karnataka Institute of Medical Sciences, Hubli, India

Residency: Mercy Catholic Medical Center, Philadelphia, Pennsylvania

Fellowship: Minimally Invasive and Bariatric

Surgery, Duke University Hospital, Durham, North Carolina

Phone: 508-746-6385

Dr. Siddeswarappa sees patients at BID-Plymouth.

NEWS BRIEFS



Ron Alterman, MD, Chief of Neurosurgery, has been elected to the Society of Neurological Surgeons, the oldest neurosurgical professional organization in the world. SNS membership comprises department chairs, residency

program directors, and other senior leaders in the field. The SNS is dedicated to advancing neurosurgical education through residency and fellowship programs.



Each year, the Department of Surgery and the Joseph M. Koufman Foundation award educational grants to three surgical nurses. These grants, established in 2005 for nursing career enhancement, recognize nurses with prominent leadership potential who also demonstrate humanism and excellence in patient care. A celebratory lunch enables the award winners and those who nominated them to meet the Koufman family, which has multigenerational ties to BIDMC Surgery and Anesthesia.

Pictured from left are **Elliot Chaikof, MD, PhD**, department chairman, Clinton Koufman, MD, a general surgeon who trained and worked at BIDMC and whose late brother established the foundation; this year's award winners **Susan Pobywajlo, BSN, MPH**, Perioperative Services, Cardiac Surgery; **Deidre Buckley, NP**, Ambulatory Surgical Care, Brain Aneurysm Institute; and **Kristin McMahon, RN**, Inpatient Services, Cardiac Surgery; and Dr. Koufman's grandson, Steven Leckie, MD, Orthopedic Surgery, BID-Plymouth.



Governor Charles Baker proclaimed April 21, 2017 as George Blackburn Nutrition Medicine Day in the Commonwealth of Massachusetts. The honor recognized the many contributions made by the late **George Blackburn, MD, PhD**, a

member of the Department of Surgery for 45 years. Dr. Blackburn was a pioneer in nutrition medicine and obesity treatment, as well as an influential mentor to more than 100 fellows who carry on his legacy by advancing the field.



Mark Callery, MD, Chief of General Surgery, was nominated for a 2017 Harvard Medical School Excellence in Mentoring Award. Each year, HMS canvasses faculty, residents, fellows, and medical students at BIDMC and its other

teaching hospitals to identify mentors who have had an impact on their careers. The HMS advisory committee noted that nomination itself is a great honor.



William C. DeWolf, MD, Chief of Urology, received the 2016–2017 J. Hartwell Harrison, MD, Memorial Resident Education Award from the chief residents in the Harvard Program in Urology. The award is named after the urologic surgeon who participated in the world's

first successful organ transplant. This is the fourth time Dr. DeWolf, who is also Professor of Surgery at Harvard Medical School, has won the award, a testament to his impact as an inspiring educator on the careers of future leaders in American medicine.



Neurosurgery Resident **Aristotelis Filippidis, MD, PhD**, has received the Hydrocephalus Association's Innovator Award for 2017. The \$50,000 award will fund research to identify patients at risk for developing delayed hydrocephalus

after suffering a subarachnoid hemorrhage. Delayed hydrocephalus, in this subset of patients, is a significant risk for cognitive and functional decline. Early detection with minimally invasive techniques, such as MRI relaxometry, might enable early interventions that improve outcomes. Dr. Filippidis is the principal investigator of the project, and will collaborate with a world-renowned expert team of investigators that includes **Christopher Ogilvy, MD**, Director of the Brain Aneurysm Institute; **Ajith Thomas, MD**, Co-Director of the Brain Aneurysm Institute; **Magdy Selim, MD, PhD**, Neurology; and **Rafeeqe Bhadelia, MD**, Neuroradiology. **Luis Carlos Ascanio, MD**, Neurosurgery Research Fellow, will also be a co-investigator.



Sidhu Gangadharan, MD, Chief of Thoracic Surgery and Interventional Pulmonology, was honored as the Outstanding Physician of the Year by the Philippine Medical Association (PMA) of New England. He is the first to receive this award, which recognizes a Filipino-American surgeon who has made significant contribution to the field of medicine, while inspiring his students, residents, fellows, and colleagues. PMA New England is a nonprofit organization of Filipino-American health care leaders united to develop and implement strategic charitable health care programs in underserved communities in New England and abroad.



Raghav Gupta, a medical student at Rutgers New Jersey Medical School and a research fellow in the Division of Neurosurgery at BIDMC, was awarded a \$2,500 Medical Student Summer Research Fellowship by the American Association of

Neurosurgeons (AANS) and the Neurosurgery Research and Education Foundation. Mr. Gupta has been conducting research under the guidance of **Christopher S. Ogilvy, MD**, and **Ajith J. Thomas, MD**, who together lead BIDMC's Brain Aneurysm Institute.

Mr. Gupta also won the first-place Socioeconomic E-Poster Award from the AANS for his abstract, titled "An Assessment of Medical Malpractice Litigation in Neurosurgery." The AANS received more than 1,000 electronic poster submissions for its 2017 annual scientific meeting in Los Angeles, California this April and noted that Mr. Gupta's first-place win represents an extraordinary accomplishment.



Daniel Jones, MD, Vice Chair of Surgery, and Professor of Harvard Medical School, was named president of the Society of the American Gastrointestinal & Endoscopic Surgeons (SAGES) at its annual meeting in March. One of the largest and most influential organizations in general surgery, SAGES has approximately 6,000 members.

Dr. Jones has championed numerous SAGES education initiatives, including the Fundamental Use of Surgical Energy (FUSE), a national program to teach and promote safety in the operating room, and the Fundamentals of Laparoscopic Surgery, which assesses basic laparoscopic skills. Dr. Jones also leads the SAGES Masters Program, a structured curriculum after residency and fellowship to promote deliberate, lifelong learning through online lectures, videos, and social media forums. Dr. Jones is a graduate of the BIDMC Rabkin Fellowship in Medical Education and Co-director of the Carl J. Shapiro Simulation & Skills Center at BIDMC.

NEWS BRIEFS



Bernard Lee, MD, MBA, MPH, FACS, Chief of Plastic and Reconstructive Surgery, received the 2017 Department of Surgery Award for Excellence in Clinical Research Mentorship. The award recognizes a faculty member who is committed

to mentoring medical students, residents, fellows, and junior faculty so they will excel as clinical researchers. In their nomination letters, colleagues praised Dr. Lee for his dedication to nurturing well-rounded surgeon-scientists who are leaders and collaborators; his strong commitment to research ethics and protocols; and his ability to inspire those around him.

Four members of the Division of Podiatry won second place for their poster exhibit at the 2017 Annual Scientific Conference of the American College of Foot and Ankle Surgeons. **Barry I. Rosenblum, DPM, FACFAS**, Associate Chief of Podiatry (at right in photo), was senior author of their case study, titled “Incisional Negative Pressure Wound Therapy: Its Role in the Diabetic Foot.” Co-authors include (from left) residents **Alison M. Migonis, DPM**, and **Justin Kaminski, DPM**, and attending podiatrist **Kevin L. Riemer, DPM, FACFAS**.



Michael Kent, MD, Director of Minimally Invasive Thoracic Surgery, was first author of a study on public perceptions about overlapping surgery that was published in February in the *Journal of the American College of Surgeons*.

Co-authors included Surgery Vice Chairs **Richard Whyte, MD**, and **James Rodrigue, PhD**, and resident **David Tomich, MD**. The team interviewed nearly 1,500 adults using an online survey tool to assess knowledge and attitudes of the general public toward overlapping surgery. The survey found that few people—only four percent of respondents—had heard of overlapping surgery. Once they understood the concept, only 31 percent supported or strongly supported the practice and 95 percent wanted to be informed in advance if their operation would occur simultaneously with that of another patient’s. The study was reported in Reuters Health, Fox Health News, and other outlets.



Christopher S. Ogilvy, MD, Director of the Brain Aneurysm Institute at BIDMC (second from left in

photo), was awarded the 2017 Brain Aneurysm Foundation Physician Champion Award. The award recognized Dr. Ogilvy’s lifelong dedication to raising awareness of brain aneurysms, developing interventions, and to helping survivors recover. At an event celebrating the award on March 31, Dr. Ogilvy was joined by (from left) Christine Buckley, Executive Director of the BAF; **Deidre Buckley, NP**, Clinical Program Manager of the Brain Aneurysm Institute; and Pete Healy, President of BIDMC. In addition, the event honored one of Dr. Ogilvy’s patients, WCVB Sports Reporter Bob Halloran, successfully treated for a brain aneurysm last fall, and WCVB General Manager Bill Fine. *(Photo courtesy of Bill Brett.)*



(Left to right): Elliot Chaikof, MD, PhD; Rouzbeh Motiei Langroudi, MD; Gyulnara Kasumova, MD; Christopher Digesu, MD; Eliza Lee, MD; Qing Zhao Ruan, MD; Ana Sofia Ore, MD; Theocharidis Georgios, PhD; Allan Kirk, MD, PhD; Per-Olof Hasselgren, MD, PhD. Not pictured: Christopher Barrett, MD; Daniel Buitrago, MD; and Tonghui Lin, PhD.

The Clowes Surgery Research Symposium took place in February. The annual event, held in conjunction with the Clowes Distinguished Visiting Professorship in Surgery Research, invites residents and research fellows in the Department of Surgery to submit abstracts in one of two categories: basic science or clinical research.

This year's Clowes Visiting Professor, Allan D. Kirk, MD, PhD, Chair of the Department of Surgery at Duke University School of Medicine, was one of the judges in the competition. Ten abstracts were selected for presentation at the symposium: five in

basic research and five in clinical research. Following the presentations, the judges selected a winner in each category, each of whom received recognition and an award at Surgery Grand Rounds.

The award recipient for basic science was **Christopher Digesu, MD**, whose presentation was titled "A Mechanistic Case for Paclitaxel-Eluting Polymer Films in Chondrosarcoma." The clinical research award went to **Gyulnara Kasumova, MD**, for a presentation titled, "Surgical Management of Gallbladder Cancer: Simple Versus Extended Cholecystectomy and the Role of Adjuvant Therapy."

The Association of periOperative Registered Nurses (AORN), the preeminent perioperative nursing organization in the country, held its Global Surgical Conference & Expo in Boston in April. Presenting at the conference were (from left) **Richard Whyte, MD, MBA**, Surgery Vice Chair for Quality, Safety & Clinical Affairs; **Charlotte Guglielmi, MA, BSN, RN, CNOR**, Perioperative Specialist; **John Tumolo, MBA, MPH**, Surgery Director of Quality Programs; and **Mary Beth Cotter, BSN, RN**, NSQIP Program Manager.

Speaking before an audience of nearly 1,000 nurses and health professionals, the team presented a talk titled "Meeting the Quality Needs of the Surgical and Perioperative Staff." They shared a rapid debriefing model they developed based on the WHO Surgical



Safety Checklist postoperative debriefing. The team has been piloting the perioperative debriefing at BIDMC to increase communication during transitions in care.

NEWS BRIEFS



(From left): Glen Richardson, Volunteer Services; Leslie Bosworth, MSW, LICSW, Psychiatry; Tiffany Phelan, NP, Vascular Surgery; Benjamin Ehrenfeld, MSW, LCSW, Social Work; David McCracken, Volunteer Services.

The Amputation Support Group, launched at BIDMC in March 2016, was inspired by a call from a patient. **Stacy Silver, RN**, Vascular and Endovascular Surgery, took the call from a woman who had recently undergone surgery at BIDMC. A community support group she attended was so crowded that she had to sit outside in the hallway, and was never able to ask a question. The woman wished to know if could she obtain a referral to another support group.

Ms. Silver conferred with **Tiffany Phelan, NP**, Vascular and Endovascular Surgery, who thought why not start our own? She brainstormed ideas with **Leslie Bosworth, MSW, LICSW**, who was then helping patients to recover after amputations.

Although surgeons prefer to preserve limbs whenever possible (see related story, [page 20](#)), there are times when amputation is the only alternative. Diabetes, cancer, and trauma can all necessitate limb amputations. Even with rehabilitation following surgery, patients face significant challenges in learning to regain their mobility and independence.

Each month, eight to 10 patients gather on Farr 5 for the Amputation Support Group. Ms. Phelan leads the group with volunteers who have undergone amputations for different reasons. At some sessions, invited speakers talk about topics such as how to choose the right prosthetic or how to cope with phantom pain. Participants share their own experiences and ask one another for advice on how to live full and active lives.

“The best part of this support group,” Ms. Phelan says, “is being able to watch patients who were in and out of hospital, living with debilitating pain or an open wound, make the decision to have an amputation and then help another patient navigate through that same challenge.”



Alia Qureshi, MD, General Surgery, has been selected as the recipient of this year’s Eleanor and Miles Shore Fellowship from Harvard Medical School, established to help faculty early in their careers. The \$30,000 stipend can be used for protected time to conduct research, prepare a manuscript, or to pursue other academic work.

“This is an exceptional and well-deserved honor for Alia,” said **Mark Callery, MD**, Chief of General Surgery. “We can all predict her success and be very proud. The fellowship reflects so well on Alia, but also on our division and department.”

Dr. Qureshi was invited to speak at the Association of Women Surgeons New England Exchange, held in April at Yale University. Dr. Qureshi gave a talk titled “Finding Your Path to Surgery.” Surgery colleague **Dana Fugelso, MD, MPH**, also spoke at the event. The AWS provides networking and mentorship opportunities. The organization’s New England Exchange is open to medical students, residents, and attending physicians in Connecticut, Massachusetts and New Hampshire.



James Rodrigue, PhD, Vice Chair of Clinical Research in the Department of Surgery and a clinical psychologist in the Division of Transplant Surgery (at left

in photo), was selected as the 2017 recipient of the American Society of Transplantation's Clinician of Distinction Award. The award recognizes professionals who have made outstanding contributions to the field of transplant medicine. Anil Chandraker, MD, FRCP, FAST, President of AST, presented the award in May at the American Transplant Congress in Chicago. Dr. Rodrigue was honored for developing and implementing behavioral health services into the medical and surgical care of transplant patients and living donors. In addition, Dr. Rodrigue was appointed to the Living Donation Committee of the American Society of Transplant Surgeons (ASTS). His three-year term began in May and will continue until June 2020.

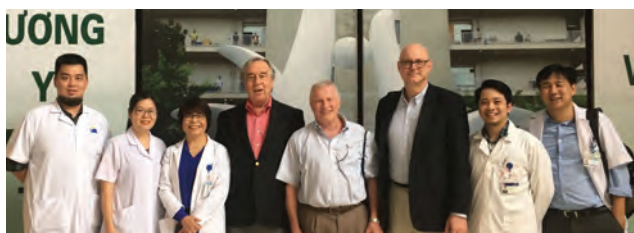


Ranjna Sharma, MD, FACS, Surgical Oncology, was named Director of Breast Surgery at BID–Needham and Co-Director of its BreastCare Center, effective August 1.

Dr. Sharma, an Assistant Professor of Surgery at Harvard Medical School, has been a member of the BIDMC Department of Surgery since 2010. She received her medical degree from the Ohio State University College of Medicine. She completed a general surgery residency at Cleveland Clinic and the University of Illinois at Chicago, and a fellowship in breast surgical oncology at the University of Texas MD Anderson Cancer Center. Dr. Sharma's clinical interests include benign breast disease, breast cancer, skin sparing and nipple sparing mastectomy, and oncoplastic reconstruction. Dr. Sharma will continue to see patients at BIDMC in Boston while expanding her practice to BID–Needham.



Two representatives of the Department of Surgery—**Mary Beth Cotter, RN**, NSQIP Program Manager; and **Mary Ward, RN**, NSQIP Quality Improvement Specialist—presented findings from several quality-improvement initiatives during the poster session at the American College of Surgeons 2017 Quality and Safety Conference, in New York City. Ms. Cotter presented results of two studies: “Can You Handle the Truth About UTI?” and “Utilizing the Smooth Rate Report to Supplement the Semi-Annual Report.” Ms. Ward presented her findings in a poster titled “Our Unplanned Intubation Rate is in the Tenth Decile, Now What?” In addition, Ms. Ward was first author of an article titled “Practice Changes for Reducing UTIs in Colon and Rectal Surgery Patients,” published in the *Bulletin of the American College of Surgeons* in March.



Two members of the Department of Surgery joined a colleague in Medicine on a service trip to Vietnam earlier this year, to consult with local physicians and provide training in the management of diabetic foot ulcers and limb salvage. Shown with Vietnamese doctors in the photo above are (from left) **Arturo Rolla, MD**, Endocrinology, Diabetes, and Metabolism; **David Campbell, MD**, Vascular and Endovascular Surgery; and **Barry Rosenblum, DPM, FACFAS**, Podiatry. The team spent nearly two weeks visiting four hospitals in Ho Chi Minh City and Hanoi. This was the 10th service trip to Vietnam Dr. Campbell has organized.

BIDMC's first annual Trauma Survivors Day, which took place on May 17, brought together four BIDMC patients and their families with the first responders, physicians, nurses, and staff who helped them put their lives back together after they sustained critical injuries.

Alok Gupta, MD, Acute Care Surgery, Trauma, and Surgical Critical Care, moderated the event, which was organized by **Margot Cronin-Furman, LICSW**, Injury Prevention and Outreach Coordinator, and **Darlene Sweet, MSN, RN**, Trauma Program Director. The patients provided heartfelt stories about lives changed in an instant. Their positive outlooks attest to the resilience of the human spirit.

Martin O'Connell was moving heavy equipment when a machine rolled over him suddenly and crushed his legs, one of which had to be amputated. He now looks back at his extended hospital stay and recovery with appreciation, while embracing a positive outlook on his experience and life. "I think of it as my six-month vacation. Now I'm back at work."

Philip Zona was working with a log splitter when the machine severed his arm below the elbow. Quick thinking and a tourniquet saved his life. Surgeons were able to reattach his arm. "What impressed me was how caring people were at BIDMC. I refer to you as my angels."

Jodi Hirschman was walking her dog one night



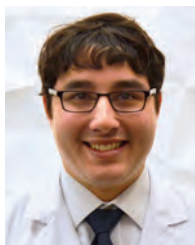
Patients who spoke at Trauma Survivors Day were (from left): Martin O'Connell, Philip Zona, Jodi Hirschman, and Matthew Garabedian.

when she was hit by a car; two weeks later she woke up from a coma. It took several more months to recover from the traumatic brain injury, but she is now back at work. "This experience made me realize there are people out there who spend their days helping others. There is so much more good and compassion in the world than you hear about."

Matthew Garabedian was riding his motorcycle when he hit a pothole and went flying, severely injuring both arms and legs. His recovery was daunting, but he is now back at work as an engineer. "Something like this changes your perspective." His father, himself a first responder, said, "I go to the scene of accidents all the time. But nothing prepares you for how it will feel when it's someone in your own family." He added, "You all make differences in lives that are so important. As a family, we want to say thank you."



Barbara Wegiel, PhD, DSc, Transplant Surgery, and BIDMC Cancer Research Institute, was senior author of a paper featured on the cover of *Cancer Research* in July. The paper, "Deletion of Lactate Dehydrogenase-A in Myeloid Cells Triggers Antitumor Immunity," describes research that suggests lactic acid, expressed by macrophages, is a major contributor to the suppression of T cells in the tumor microenvironment. Not only does this research add to the understanding of how immunosuppression encourages tumor growth, but it also suggests new targets for treatment. This work is a part of collaborative effort with Pankaj Seth, PhD, Medicine, a co-senior author of the paper. Surgery research fellow **Andreas Hedblom, PhD**, was also an author on the paper.



The American College of Surgeons has awarded resident **Daniel Wong, MD**, a Resident Research Scholarship. The two-year scholarship will provide \$30,000 annually to support Dr. Wong's research project titled, "Generation of Living Arterial Substitutes from Human Pluripotent Stem Cells." The ACS awards only six Resident Research Scholarships each year. "This is a highly competitive award, and an honor not only for Dan, but for the department," said **Elliot Chaikof, MD, PhD**, Chair of the Department of Surgery.



Jack Eckert, a librarian at the Countway Library (second from right), talks about centuries-old surgical textbooks with (from left): Oliver Chow, MD, Cardiothoracic Surgery Fellow; Lorenzo Anez-Bustillos, MD, Surgical Resident; Per-Olof Hasselgren, MD, PhD, Endocrine Surgery; Sidney Levitsky, MD, Cardiac Surgery; and Louis Chu, MD, Cardiac Surgery.

The field of surgery has a vibrant history. To explore and better understand this legacy, two members of the Department of Surgery—**Per-Olof Hasselgren, MD, PhD**, Vice Chair of Research, Director of Endocrine Surgery, and the George H.A. Clowes Professor of Surgery at Harvard Medical School; and **Sidney Levitsky, MD**, Senior Vice Chair and the David W. and David Cheever Professor of Surgery at Harvard Medical School—have launched the Surgical History Group.

At the group's inaugural meeting at the Countway Library in May, Drs. Hasselgren and Levitsky were joined by a group of residents, fellows, and surgeons. The group first visited the Center for the History of Medicine, where librarian Jack Eckert talked about the rare book collection. Participants were able to page through surgical textbooks dating back to 1497, examine surgical instruments from the 1800s, and read case notes

written by John Collins Warren, MD, in which he described how he performed the first operation under ether anesthesia in 1846.

Next the group visited the Warren Anatomical Museum, the oldest such collection in the country. Curator Dominic Hall provided background and context for several special exhibits from the 19th century, such as the twisted skeleton of a patient suffering from rickets, the hip injury malpractice case of Charles Lowell, and the skull of Phineas Gage, a railroad worker who lost most of his brain's left frontal lobe after a blasting accident drove an iron bar through his head. Also on display were examples of Civil War battlefield surgical techniques—most honed under duress.

Future events are planned. Contact Dr. Hasselgren at phasselg@bidmc.harvard.edu or Dr. Levitsky at slevitsk@bidmc.harvard.edu for more information.



ENCOURAGING SURGERY RESIDENTS *to Become Medical Innovators*

Posing with the winning team after the Pitch Finale were (from left) Elliot Chaikof, MD, PhD, Chair, Department of Surgery; Peter Stebbins, MBA, Vice President of Business Development at Johnson & Johnson; residents Kirsten Dansey, MD, and Eliza Lee, MD, of the winning team; Henry Feldman, MD, FACP, FHM, Chief Information Architect at BIDMC; Samuel Lin, MD, MBA, Plastic and Reconstructive Surgery; and Frank Gentile, PhD, Venture Partner at Third Rock Ventures. (Not pictured: resident Christopher Digesu, MD.)

Scalpels. Retractors. Suture needles. To these traditional tools of the surgeon's trade, a group of general surgery residents at BIDMC can now add a few more: Computer-aided design. 3-D printing. Circuit boards.

This year, the Department of Surgery launched the Harvard Surgical Program in Innovation (SPIN), a pilot program that combined the collaborative spirit of a hackathon with a more structured series of educational workshops. All general surgery residents at BIDMC were eligible to participate; about one-third of them applied and 16 were selected. Most had no prior experience in the fundamentals of innovation, but by the end of the program, they were pitching medical innovations like professionals.

"Innovation drives progress in surgery," notes Elliot Chaikof, MD, PhD, Chair of the Department of Surgery and one of three expert advisors for SPIN. "Residents bring fresh eyes and thinking about how to solve clinical problems. We're hoping this experience will have a ripple effect that carries on throughout their careers."

SPIN evolved organically and collaboratively. It began with a May 2016 grand rounds lecture by alumnus William Cohn, MD, Distinguished Visiting Professor of Cardiac Surgery, titled "Fostering a Culture of Physician Innovation." Dr. Cohn, an award-winning

innovator who is now Vice President for Johnson & Johnson Medical Device Companies, completed a cardiothoracic fellowship at BIDMC in 1994, and subsequently joined the hospital's faculty.

Dr. Cohn's presentation inspired a series of discussions about how to foster a culture of innovation within the Department of Surgery. These conversations culminated in SPIN, a program for residents that is the brainchild of their peers: Prathima Nandivada, MD, a chief resident at BIDMC; David Miranda Nieves, a PhD candidate in the Harvard-MIT Program in Health Sciences and Technology; and Daniel Hashimoto, MD, MS, and Madhukar Patel, MD, MBA, MS, general surgery residents at Massachusetts General Hospital. Dr. Patel was a member of Dr. Chaikof's research program at BIDMC over the past two years, and Mr. Miranda Nieves is currently pursuing his PhD with Dr. Chaikof.

Two innovators at BIDMC—Henry Feldman, MD, FACP, FHM, Chief Information Architect; and Samuel Lin, MD, MBA, Plastic and Reconstructive Surgery—agreed to join Dr. Chaikof as expert advisors.

"We wanted to find a way to develop surgeon-innovators who could creatively solve clinical ingenuity gaps," says Dr. Nandivada.

"In developing SPIN, we wanted to involve people from different institutions in Boston, and really take

advantage of the area's biomedical ecosystem," says Mr. Miranda Nieves.

Workshops and teamwork

Between February and June, while juggling patient care duty and overnight calls, the residents met for a series of four Saturday sessions in which they learned skills necessary to design and produce a medical device prototype. In between sessions, they met as teams and individually with the course directors and expert advisors. Assigned readings and videos demonstrating techniques were posted online.

"Hackathons bring together different groups of people who solve a common problem," says Dr. Hashimoto. "The most disruptive solutions come from engaging different perspectives and thinking broadly about a problem."

"What makes our program unique," adds Dr. Patel, "is that we included a series of workshops so residents could learn the skills they need to develop medical device prototypes."

Session 1: Mini-hackathon. To gain an understanding of the innovation process, residents first worked together to solve a clinical problem: improving chest tube placement. Participants developed a problem statement, brainstormed solutions, chose one to produce a low-fidelity prototype (made of cardboard or Play-Doh), developed a pitch, and made a brief presentation. Now they were ready for a deeper dive.

Session 2: Rapid prototyping. In this session, residents learned to think like engineers. They used OnShape, an open-source CAD (computer-aided design) software, to design complex structures. They also learned how 3-D printing would enable them to create their own prototypes within hours.

Session 3: Electronics. Using Arduino, an open-source electronics prototyping platform, residents learned to write computer code and program a working electronic closed circuit—a step necessary to make their medical devices functional. José de Arcos, PhD, a postdoctoral research fellow and computer engineer at Brigham and Women's Hospital, was guest lecturer.

Session 4: Putting it together. In the weeks before the fourth session, residents met with advisors and came up with team proposals. Each team was tasked with designing a novel medical device to solve a problem of

their choosing in one of five surgical specialties (see sidebar, page 18).

At the final workshop, each team met with experts to learn how to create an effective sales pitch to investors, develop business plans, and how to protect their intellectual property. The experts included three area innovators—Fouad Azzam, PhD, MBA, Senior Partner of Life Sciences Partners; Jonathan Gertler, MD, MBA, CEO of Back Bay Life Science Advisors; and José Gómez-Márquez, Co-Director of the MIT Little Devices Lab—as well as two BIDMC leaders, Dr. Feldman and Richard Whyte, MD, MBA, Surgery Vice Chair for Quality, Safety, and Clinical Affairs.

Course Directors



Daniel Hashimoto, MD, MS, General Surgery Resident, MGH



David Miranda Nieves, PhD Candidate, Harvard-MIT Program in Health Sciences and Technology



Prathima Nandivada, MD, General Surgery Resident, BIDMC



Madhukar Patel, MD, MBA, MS, General Surgery Resident, MGH

BIDMC expert advisors

Elliot Chaikof, MD, PhD, Chair, Department of Surgery

Henry Feldman, MD, FACP, FHM, Chief Information Architect, BIDMC

Samuel Lin, MD, MBA, Plastic and Reconstructive Surgery



SPIN encouraged teamwork and collaboration among residents.

The pitch finale

On a Friday night in June, the residents arrived at an amphitheater at Harvard Medical School, ready to pitch their medical innovations before an audience of friends, family, and expert judges. Two noted investor-innovators—Frank Gentile, PhD, Venture Partner at Third Rock Ventures; and Peter Stebbins, MBA, Vice President of Business Development at Johnson & Johnson—gave presentations about the business of medical device innovations.

Then it was time for the residents to pitch their ideas before the official judges—Dr. Gentile, Dr. Lin, and Mr. Stebbins—and to audience members, who would vote for a “People’s Choice” award. By the end of the evening, the HemoPort team had emerged as the winner of both contests.

The winning team—Kirsten Dansey, MD; Christopher Digesu, MD; and Eliza Lee, MD—tackled a particularly vexing problem: tunneled dialysis catheters, used in patients with end-stage renal disease, traverse the skin and, as a result, are prone to infection that may lead to life threatening sepsis. The HemoPort team prototyped a low-cost, practical alternative that combined a standard catheter with a proprietary O-ring design, allowing the dialysis device to be fully implanted under the skin and accessed through a port.

“It seemed so obvious,” Dr. Lee said during the team presentation, “that we were surprised someone else hadn’t already thought of it.” Then again, the best medical innovations usually do seem obvious—but only after someone has the vision to create them.

SPIN Teams

Group 1: The Access Cervical Collar (Trauma Surgery)

Team: Mark Kashtan, MD; Jonathan Pastrana Del Valle, MD; Kortney Robinson, MD; Daniel Wong, MD

Problem: Improve neck brace design for patients with spinal trauma

Solution: An adjustable collar that improves access to the airway and blood vessels, while providing more stable support to the cervical spine

Group 2: Smart OX (Thoracic Surgery)

Team: Oliver Chow, MD; Michelle Fakler, MD; Asish Misra, MD

Problem: Improve oxygen delivery for patients recovering from thoracic surgery

Solution: A continuous, automated titration of oxygen

Group 3: Bioabsorbable Wound Vac Sponge (Colorectal Surgery)

Team: Meredith Baker, MD; Ngoc-Quynh Chu, MD; Jordan Pyda, MD

Problem: Improve healing of complex wounds

Solution: A biodegradable, negative-pressure wound sponge that is gradually absorbed as the wound heals

Group 4: Radiolucent Adjustable Lower Extremity Restraint System (Vascular Surgery)

Team: Daniel Buitrago, MD; Patric Liang, MD; Claire Sokas, MD

Problem: Improve stabilization of lower extremities during arteriograms and vascular interventions

Solution: An easily adjustable device that attaches to a gurney and comfortably immobilizes the lower extremities

Group 5: HemoPort Dialysis System (Transplant Surgery)

Team: Kirsten Dansey, MD; Christopher Digesu, MD; Eliza Lee, MD

Problem: Develop an alternative to a tunneled catheter used in dialysis

Solution: A subcutaneous catheter with an O-ring port



Awards Recognize Faculty and Residents

Every June, years of hard work and dedication are recognized and celebrated at the Department of Surgery's White Coat Ceremony, when incoming chief residents receive their new white coats from graduating chief residents, and departmental teaching awards are presented. Congratulations to this year's new chief residents and award recipients.

ABSITE* AWARDS

Highest Junior-Level Resident on the 2017 ABSITE
Meredith Baker, MD

Highest Senior-Level Resident on the 2017 ABSITE
John Tillou, MD

Residents scoring above the 90th percentile on the 2017 ABSITE
Meredith Baker, MD
Eran Brauner, MD
Kayla Isbell, MD
John Tillou, MD
Daniel Wong, MD

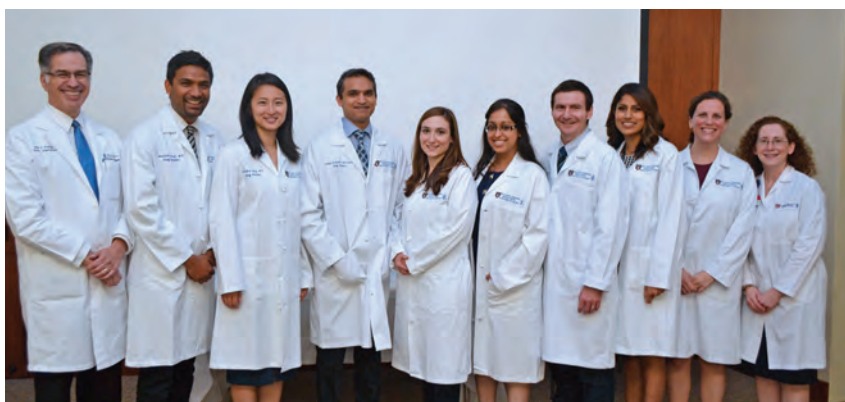
RESIDENT TEACHER AWARD

Thomas Curran, MD
Voted by residents as the senior resident who best exemplifies teaching to other residents.



Resident Peter Soden, MD (left), presents the Resident Teacher Award to Thomas Curran, MD.

* ABSITE: American Board of Surgery In-Service Training Exam



With Surgery Chair Elliot Chaikof, MD, PhD (far left), and General Surgery Residency Program Director Tara Kent, MD, MS (far right), the new Chief Residents don their Chiefs' white coats for the first time. From left are: Mansher Singh, MD; Christina Feng, MD; Nakul Raykar, MD; Alessandra Mele, MD; Anita Mamtani, MD; Peter Soden, MD; Prathima Nandivada, MD; and Ali Linsk, MD. The new chief residents received their white coats from the 2017 graduates during the time-honored White Coat Ceremony on June 21.



Russell Nauta, MD, Chair of the Department of Surgery at Mount Auburn Hospital, presents the Isaac O. Mehrez, MD, Award to resident Ngoc-Quynh Chu, MD.

ISAAC O. MEHREZ, MD, AWARD Ngoc-Quynh Chu, MD

To the third-year resident selected by Mount Auburn Hospital surgeons for "Dedication to the highest quality care, honesty, willingness to learn, and a sense of humor."

GEORGE W.B. STARKEY AWARD Michael Kent, MD

To the faculty member with the highest-rated teaching evaluations from third-year Harvard Medical School students in the Core Surgery Clerkship.

HAROLD BENGLOFF AWARD Dana Fugelso, MD

Voted by residents as the faculty member who best exemplifies humanism in teaching.

JOHN L. ROWBOTHAM AWARD David Liu, MD

Voted by residents as the faculty member who best exemplifies excellence in teaching.

MOUNT DESERT ISLAND BIOLOGICAL LABORATORY

Also announced at the awards ceremony were the second-year residents selected to attend a weeklong course in comparative physiology at Mount Desert Island Biological Laboratory on the Maine coast in August. Now in its sixth year, this unique educational and team-building experience was made possible by generous donor Ted Boylan. The top five ABSITE scorers are invited to participate.

Eran Brauner, MD
Kayla Isbell, MD
Daniel Kent, MD
Stefanie Lazow, MD
Alessandra Storino, MD

LEARNING TEAM AWARD

For the second year in a row, Team Cooley won the Learning Team award, which recognizes the group of residents that earned the highest quiz scores and ABSITE scores, and who excelled in technical skill contests and teaching awards.

Team Cooley:
Eran Brauner, MD
Jane Cheng, MD
Oliver Chow, MD
Kirsten Dansey, MD
Mark Kashtan, MD
Jennifer Li, MD
Anita Mamtani, MD
Mansher Singh, MD
Kathryn Stackhouse, MD
John Tillou, MD
Ammara Watkins, MD
Daniel Wong, MD



Jack and Adele Burns

Saving Limbs, Saving Lives

Multidisciplinary care and translational research advance diabetic wound healing

Boston accountant Jack Burns, 66, values his mobility and independence. But a series of foot ulcers and infections over the last 20 years—a complication of diabetes—have provided an ongoing challenge. Most recently, Mr. Burns developed Charcot foot, a serious condition in which the arch collapses as bones become unstable. By August 2014, this led to an infected ulcer on the sole of his foot.

Foot ulcers are common, affecting 15 percent of patients with diabetes at some point in their lives. Charcot foot, which involves both peripheral neuropathy and inflammation, is particularly tough to treat. As the condition progresses, bones become infected, and amputation of a foot or lower limb may be necessary.

“The traditional cornerstones of treatment for a diabetic foot ulcer involve debridement of necrotic tissue around the wound, applying a cast or some other orthotic device to take pressure off the foot, and treatment to fight infection,” says Mr. Burns’ podiatrist, Barry Rosenblum, DPM. For a year and a half, Dr. Rosenblum tried one intervention after another,

seeking to avoid amputation. “When a wound won’t heal, there’s got to be a reason,” says Dr. Rosenblum. “It was time to bring in a larger team.”

A coordinated, flexible approach

BIDMC is a world leader in diabetic limb preservation thanks to a longstanding collaboration by three divisions in the Department of Surgery: Podiatry; Plastic and Reconstructive Surgery; and Vascular and Endovascular Surgery. This comprehensive approach has improved outcomes. Nationally, the success rate for diabetic limb preservation surgery is about 60 percent at 5 years. At BIDMC, the success rate has recently been closer to 85 percent.

“What makes us unique is our multidisciplinary collaboration,” says John Giurini, DPM, Chief of Podiatry. “This enables us to do a comprehensive evaluation, develop a treatment plan, review a patient’s progress, and change course as necessary.” That expertise and flexibility is vital, as Mr. Burns’ story demonstrates.

Dr. Rosenblum first consulted with Allen Hamdan, MD, Vascular and Endovascular Surgery. Diabetes damages blood vessels throughout the body, impairing the ability of infection-fighting cells to reach the site of an injury. Under the leadership of Marc Schermerhorn, MD, Chief of Vascular and Endovascular Surgery, BIDMC has emerged as an international leader in minimally invasive revascularization techniques to aid people with diabetes. Dr. Hamdan inserted a stent in Mr. Burns' left leg to increase the flow of blood to his foot.

Dr. Rosenblum next reached out to Matthew Iorio, MD, Plastic and Reconstructive Surgery, who has expertise in microsurgery, hand and foot reconstruction, and limb preservation techniques. "Our goal in limb preservation is to maintain function and patient independence," says Dr. Iorio. "It's not preservation at any cost, but what is best for the patient? How can we maintain a functional, pain-free limb safely?"

"Most patients with diabetes have significant comorbidities, such as heart or kidney disease, and the team takes that into consideration when planning treatment," says Bernard Lee, MD, MBA, MPH, FACS, Chief of Plastic and Reconstructive Surgery.

As it happens, Mr. Burns had already undergone a kidney transplant at BIDMC, which could complicate his recovery from limb preservation surgery. His diabetes raised risk of infection. Two other members were added to the team: Martha Pavlakis, MD, Nephrology, who was Mr. Burns' transplant doctor, and Simi Padival, MD, Infectious Disease, who has treated Mr. Burns for years. Both provided critical know-how.

"It was a real coordinated effort," Mr. Burns says. "Everyone was brought in from the beginning. I knew I was in good hands."

Operating in stages

"One of our major concerns is preventing a resurgence of infection after an operation," says Dr. Iorio. "We operate in stages, so that we can make sure we have a clean margin of healthy tissue before closing the wound."

First Dr. Rosenblum debrided Mr. Burns' wound to remove diseased tissue. Four days later, after pathology results indicated that the wound and bones were free of infection, Dr. Iorio performed an anterolateral thigh flap. He transplanted a section of skin and blood vessels from

Mr. Burns' thigh to his foot, to cover the wound and enable it to heal. Mr. Burns then underwent a second operation to improve circulation to his foot.

"I went home on April 15," says Mr. Burns. "From then until Labor day, I could not put weight on my foot." He used a knee walker to get around and keep pressure off his foot as it healed.

Today he is able to walk on his own. He wears an orthotic leg brace and shoe to redistribute weight and take pressure off his foot. "The ulcer is completely healed," Mr. Burns says. "I've had no complications, no infection. I couldn't be happier." He and his wife Adele have two daughters, Michelle and Janine, and just welcomed their fourth grandchild into the world. "The baby was born at BIDMC," says Mr. Burns. "It's a great hospital."



Jack Burns discusses his recovery with podiatrist Barry Rosenblum, DPM, at a follow-up visit.



FOR APPOINTMENTS OR REFERRALS:

Podiatry: 617-632-8428

Plastic and Reconstructive Surgery: 617-632-7827

Vascular and Endovascular Surgery: 617-632-9959

On the horizon: tissue regeneration

Aristidis Veves, MD, DSc, Director of the [Rongxiang Xu, MD, Center for Regenerative Therapeutics](#), is leading the effort to find new options for saving limbs—ideally by coaxing the body to heal foot ulcers on its own. He is collaborating in this quest with two research colleagues from Vascular and Endovascular Surgery: Frank LoGerfo, MD, and Leena Pradhan-Nabzdyk, PhD.

Wound healing is complex and dynamic. Normally it involves three coordinated and overlapping phases: acute inflammation; cell proliferation and tissue regeneration; and tissue remodeling.

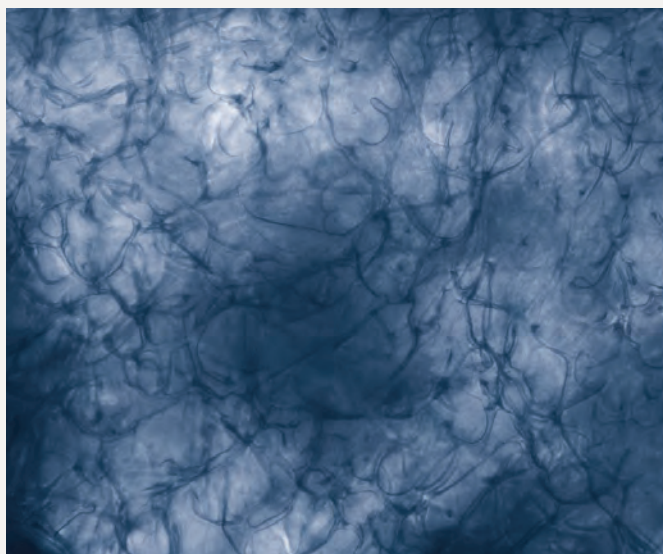
Drs. Veves, LoGerfo, and Pradhan-Nabzdyk have published a series of ground-breaking studies over the past few years which found that many people with diabetes have systemic chronic inflammation—similar to what is found in people with metabolic syndrome and cardiovascular disease—even before they develop a foot ulcer. This low-grade inflammation impedes the normal process of healing. In essence, the healing process gets “stuck,” and cannot progress to the tissue rebuilding/remodeling phases.

The team wants to find a way to convert chronic inflammation into acute inflammation—thereby kick-starting the normal healing process. To do so, they are investigating multiple agents simultaneously: neuropeptides, growth factors, and other molecules.

“We’re looking at Substance P and Neuropeptide Y because they affect the functioning of both nerves and blood vessels,” says Dr. Pradhan-Nabzdyk. “We know that neuropathy and vascular disease both contribute to problems in healing.”

For instance, in one study, they found that substance P could improve wound healing in mice with diabetes. In another animal study, they found that an asthma medication, disodium cromoglycate (DSCG) helped stabilize mast cells, a type of immune cell, and can also enhance healing.

Dr. Veves and Lijun Sun, PhD, Director of the Center for Drug Discovery and Translational Research at BIDMC, have collaborated to develop a mast cell stabilizer suitable for topical use. Experiments in animal models show that it is just as effective as injected DCSG. With funding, the next step will be phase 1 and 2 studies in people.



A microscopic view of an alginate hydrogel bandage, one of the biomaterials now under development to improve wound care. (Image courtesy of Ting-Yu Shih, Harvard University.)

Drug delivery systems are always a challenge in wound healing. The team is also collaborating with David Mooney, PhD, of the Wyss Institute for Biologically Inspired Engineering, to develop extended-release bandages made of alginate, a polysaccharide obtained from algae, and other biomaterials. “The healing process evolves over time,” says Dr. Pradhan-Nabzdyk, “so an extended release delivery system is essential.”

“This is truly translational research,” Dr. Veves says. “We start with observations in patients with diabetes, we go back to the laboratory and come up with new options, and then we test them in animal models of the disease. Our ultimate goal is to find ways to intervene early to restore the normal healing process in people.”

The support of the National Rongxiang Xu Foundation has been enormously helpful. “The Xu family’s visionary support of this research is making regenerative therapy for diabetes a real possibility,” Dr. Veves says.

Glycobiology Provides New Insights into IBD and Colon Cancer

Inflammatory bowel disease (IBD) is a scourge that affects about 1.6 million Americans. Certain types of IBD affect men more often than women. The most common forms of IBD, Crohn's disease and ulcerative colitis, cause abdominal pain, irregular bowel habits, fatigue, weight loss, and other problems. There is no cure. Treatment consists of symptom management through medication and diet, with surgical resection of the intestine necessary in severe cases.

IBD involves chronic inflammation that damages the intestines, but it remains unclear what initiates the disease and causes it to progress. Most research so far has focused on IBD-related abnormalities in gut microbiota, the diverse population of bacteria and other organisms that colonize the intestines and aid digestion.

Richard D. Cummings, PhD, Vice Chair of Basic and Translational Research in the Department of Surgery and Director of the Harvard Medical School Center for Glycoscience, decided to take a broader view. "We can't just say, eat more yogurt to replenish your microbiome," he says. "To improve treatment of IBD, we really need to understand this disease at the genetic and molecular level."

In a series of studies, Dr. Cummings and his research team are making significant progress towards that goal. After examining published studies on genome-wide analyses to identify genetic variations in patients with IBD, they realized that a gene known as Cosmc (officially C1GalT1C1) was often associated with the disease. Its location on the X chromosome could explain why males are more likely than females to develop IBD. The next step was to understand Cosmc's function in the intestines.

"In earlier research, we showed that Cosmc is a molecular chaperone that regulates only one enzyme, T synthase," says Dr. Cummings. (Hence the name: Cosmc stands for Core 1 Specific Molecular Chaperone.) "When we looked further, we found that T synthase

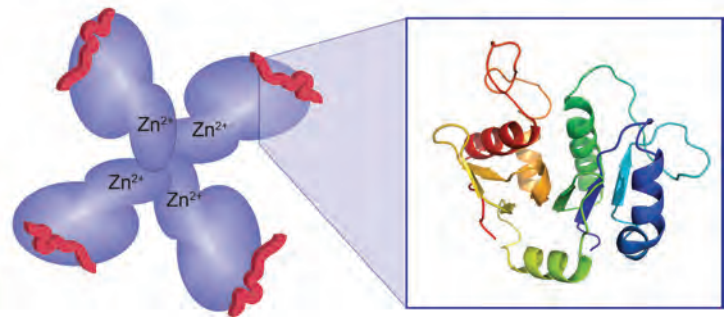


Image from Hanes MS, Moreman KW, Cummings RD (2017), "Biochemical Characterization of Functional Domains of the Chaperone Cosmc," *PLOS One* 12(6):30180242.

regulates the addition of one sugar to proteins and, after that step, many other sugars may be added by other enzymes," he says. "That might not sound like much, but it turns out this enzyme has a very big job."

As described in a paper published in the *Proceedings of the National Academy of Sciences*, Dr. Cummings and his team genetically engineered mice so that the Cosmc gene was deleted in intestinal epithelial cells. This both altered and depleted the microbiome in the knock-out mice, but not in a uniform way throughout the intestine. Instead, Cosmc deletion had the greatest impact in the colon, in a pattern similar to the changes seen in IBD.

In an unexpected finding, however, Cosmc deletion had an even more devastating effect on the structure of the colon itself. Normally intestinal epithelial cells are protected from microbes and pathogens by a physical barrier known as the gut mucosa. This barrier consists largely of mucins, which are made up of glycoproteins.

"Deleting Cosmc, and preventing the T synthase enzyme from functioning, resulted in a measurable depletion of the colon mucosa, exposing epithelial cells to microbes, toxins, viruses, and other pathogens," Dr. Cummings says. "So this suggests that IBD develops not only because of abnormalities in the microbiome, but because the colon itself is more susceptible to damage."

Studying Cosmc may also provide novel clues about how colon cancer develops. When the knock-out mice matured, all developed invasive adenocarcinomas, the most common type of colon cancer in people. Dr. Cummings and his team are now conducting further research to better understand how Cosmc mutations may contribute to colon cancer—research that ultimately may help to identify new targets for therapy.

"This is a large, complicated story," Dr. Cummings says. "We are just at the beginning of trying to figure all this out."

Selected Faculty Publications

Acute Care Surgery, Trauma, and Surgical Critical Care

Itagaki K, Riça I, **Zhang J**, Gallo D, DePrato M, **Otterbein LE**, **Hauser CJ**. Intratracheal instillation of neutrophils rescues bacterial overgrowth initiated by trauma damage-associated molecular patterns. *J Trauma Acute Care Surg* 2017; 82(5):853-60.

Sullivan E, **Gupta A**, **Cook CH**. Cost and consequences of surgical site infections: A call to arms. *Surg Infect (Larchmt)* 2017;18(4):451-4.

Cardiac Surgery

Mahmood F, Knio ZO, Yeh L, Amir R, Matyal R, Mashari A, Gorman RC, Gorman JH 3rd, **Khabbaz KR**. Regional heterogeneity in the mitral valve apparatus in patients with ischemic mitral regurgitation. *Ann Thorac Surg* 2017;103(4):1171-77.

Popma JJ, Reardon MJ, **Khabbaz K**, Harrison JK, Hughes GC, Kodali S, George I, Deeb GM, Chetcuti S, Kipperman R, Brown J, Qiao H, Slater J, Williams MR. Early clinical outcomes after transcatheter aortic valve replacement using a novel self-expanding bioprosthesis in patients with severe aortic stenosis who are suboptimal for surgery: Results of the Evolut R U. S. study. *JACC Cardiovasc Interv* 2017;10(3):268-75.

Colon and Rectal Surgery

Tillou J, **Poylin V**. Functional disorders: Slow-transit constipation. *Clin Colon Rectal Surg* 2017;30(1):76-86.

General Surgery

Watkins AA, Gondek SP, Lagisetty KH, Castillo-Angeles M, **Gangadharan SP**, **Cahalane MJ**, **Kent TS**. Weekly e-mailed teaching tips and reading material influence teaching among general surgery residents. *Am J Surg* 2017;213(1):195-201.

Castillo-Angeles M, **Watkins AA**, Acosta D, Frydman JL, Flier L, Garces-Descovich A, **Cahalane MJ**, **Gangadharan SP**, Atkins KM, **Kent TS**. Mistreatment and the learning environment for medical students on general surgery clerkship rotations: What do key stakeholders think? *Am J Surg* 2017;213(2):307-12.

Hagen SJ. Non-canonical functions of claudin proteins: Beyond the regulation of cell-cell adhesions. *Tissue Barriers* 2017; in press.

Jones DB, Stefanidis D, Korndorffer JR Jr, Dimick JB, Jacob BP, Schultz L, Scott DJ. SAGES University MASTERS Program: A structured curriculum for deliberate, lifelong learning. *Surg Endosc* 2017; in press.

Patriarca L, Magerowski G, **Alonso-Alonso M**. Functional neuroimaging in obesity. *Curr Opin Endocrinol Diabetes Obes* 2017;24(2):154-9.

Telem DA, Majid SF, Powers K, DeMaria E, Morton J, **Jones DB**. Assessing national provision of care: Variability in bariatric clinical care pathways. *Surg Obes Relat Dis* 2017;13(2):281-4.

Interdisciplinary Center Research

Bai S, Nagai M, Koerner SK, **Veves A**, **Sun L**. Structure-activity relationship study and discovery of indazole 3-carboxamides as calcium-release activated calcium channel blockers. *Bioorg Med Chem Lett* 2017;27(3):393-7.

Jernigan FE, Hanai JI, Sukhatme VP, **Sun L**. Discovery of furan carboxylate derivatives as novel inhibitors of ATP-citrate lyase via virtual high-throughput screening. *Bioorg Med Chem Lett* 2017;27(4):929-35.

Hanes MS, Moremen KW, **Cummings RD**. Biochemical characterization of functional domains of the chaperone Cosmc. *PLoS One* 2017;12(6):e0180242.

Neurosurgery

Adeeb N, **Griessenauer CJ**, Foreman PM, Moore JM, Shallwani H, Motiei-Langroudi R, **Alturki A**, Siddiqui AH, Levy EI, Harrigan MR, **Ogilvy CS**, **Thomas AJ**. Use of platelet function testing before pipeline embolization device placement: A multicenter cohort study. *Stroke* 2017;48(5):1322-30.

Adeeb N, **Griessenauer CJ**, Patel AS, Foreman PM, Baccin CE, Moore JM, **Gupta R**, **Alturki A**, Harrigan MR, **Ogilvy CS**, **Thomas AJ**. The use of single stent-assisted coiling in treatment of bifurcation aneurysms: A multicenter cohort study with proposal of a scoring system to predict complete occlusion. *Neurosurgery* 2017; in press.

Alterman RL. One step backward: Magnetic resonance guided focused ultrasound thalamotomy for the treatment of medically refractory tremor. *Ann Neurol* 2017;81(3):348-50.

Griessenauer CJ, Ogilvy CS, Foreman PM, Chua MH, Harrigan MR, He L, Fusco MR, Mocco JD, Stapleton CJ, Patel AB, Sonig A, Siddiqui AH, Thomas AJ. Pipeline embolization device for small intracranial aneurysms: Evaluation of safety and efficacy in a multicenter cohort. *Neurosurgery* 2017;80(4):579-87.

Griessenauer CJ, Piske RL, Baccin CE, Pereira BJA, Reddy AS, Thomas AJ, Abud TG, Ogilvy CS. Flow diverters for treatment of 160 ophthalmic segment aneurysms: Evaluation of safety and efficacy in a multicenter cohort. *Neurosurgery* 2017;80(5):726-32.

Laviv Y, Bayoumi A, Mahadevan A, Young B, Boone M, **Kasper EM.** Meningiomas in pregnancy: Timing of surgery and clinical outcomes as observed in 104 cases and establishment of a best management strategy. *Acta Neurochir (Wien)* 2017; in press.

Patel AS, **Griessenauer CJ, Gupta R, Adeeb N, Foreman PM, Shallwani H, Moore JM, Harrigan MR, Siddiqui AH, Ogilvy CS, Thomas AJ.** Safety and efficacy of noncompliant balloon angioplasty for the treatment of subarachnoid hemorrhage-induced vasospasm: A multicenter study. *World Neurosurg* 2017;98:189-97.

Phan K, Moore JM, **Griessenauer CJ, Ogilvy CS, Thomas AJ.** Aspirin and risk of subarachnoid hemorrhage: Systematic review and meta-analysis. *Stroke* 2017;48(5):1210-17.

Stippler M, Liu J, Motiei-Langroudi R, Voronovich Z, Yonas H, Davis RB. Complicated mild traumatic brain injury and the need for imaging surveillance. *World Neurosurg* 2017; in press.

Zhang D, **Papavassiliou E.** Spinal intradural arachnoid webs causing spinal cord compression with inconclusive preoperative imaging: A report of 3 cases and a review of the literature. *World Neurosurg* 2017;99:251-58.

Ophthalmology

Bouffard MA, Caplan LR, **Torun N.** Divergence palsy due to divalproex and oxcarbazepine. *Clin Neuropharmacol* 2017; 40(3):154-55.

Bouffard MA, **Torun N.** The mystery of the locking eye. *JAMA Neurol* 2017;74(5):601-02.

Otolaryngology/ Head and Neck Surgery

Campbell AP, **Phillips KM, Hoehle LP, Feng AL, Bergmark RW, Caradonna DS, Gray ST, Sedaghat AR.** Depression symptoms and lost productivity in chronic rhinosinusitis. *Ann Allergy Asthma Immunol* 2017;118(3):286-89.

Gray ST, Hoehle LP, **Phillips KM, Caradonna DS, Sedaghat AR.** Patient-reported control of chronic rhinosinusitis symptoms is positively associated with general health-related quality of life. *Clin Otolaryngol* 2017; in press.

Phillips KM, Hoehle LP, Bergmark RW, Caradonna DS, Gray ST, Sedaghat AR. Acute exacerbations mediate quality of life impairment in chronic rhinosinusitis. *J Allergy Clin Immunol Pract* 2017;5(2):422-26.

Plastic and Reconstructive Surgery

Kamali P, Curiel D, van Veldhuisen CL, Bucknor AEM, **Lee BT, Rakhorst HA, Lin SJ.** Trends in immediate breast reconstruction and early complication rates among older women: A big data analysis. *J Surg Oncol* 2017;115(7):870-7.

Kamali P, Lee M, Becherer BE, Wu W, Curiel D, **Tran BN, Tobias AM, Lin SJ, Lee BT.** Medial row perforators are associated with higher rates of fat necrosis in bilateral DIEP flap breast reconstruction. *Plast Reconstr Surg* 2017; in press.

Kamali P, Zettervall SL, Wu W, Ibrahim AM, Medin C, Rakhorst HA, **Schermerhorn ML, Lee BT, Lin SJ.** Differences in the reporting of racial and socioeconomic disparities among three large national databases for breast reconstruction. *Plast Reconstr Surg* 2017;139(4):795-807.

Seth AK, **Iorio ML.** Super-thin and suprafascial anterolateral thigh perforator flaps for extremity reconstruction. *J Reconstr Microsurg* 2017; in press.

Tran BNN, Fadayomi A, Lin SJ, Singhal D, Lee BT. Cost analysis of postmastectomy reconstruction: A comparison of two staged implant reconstruction using tissue expander and acellular dermal matrix with abdominal-based perforator free flaps. *J Surg Oncol* 2017; in press.

Vosbikian MM, Harper CM, Byers A, Gutman A, Novack V, **Iorio ML.** The impact of safety regulations on the incidence of upper-extremity power saw injuries in the United States. *J Hand Surg Am* 2017;42(4):296.e1-296.e10.

Walley KC, Taylor EM, Anderson M, Lozano-Calderon S, **Iorio ML.** Reconstruction of quadriceps function with composite free tissue transfers following sarcoma resection. *J Surg Oncol* 2017;115(7):878-82.

Podiatry

Chen SY, **Giurini JM, Karchmer AW.** Invasive systemic infection after hospital treatment for diabetic foot ulcer: Risk of occurrence and effect on survival. *Clin Infect Dis* 2017;64(3):326-34.

Surgical Oncology

de Geus SW, **Eskander MF, Bliss LA, Kasumova GG, Ng SC, Callery MP, Tseng JF.** Neoadjuvant therapy versus upfront surgery for resected pancreatic adenocarcinoma: A nationwide propensity score matched analysis. *Surgery* 2017;161(3):592-601.

Kasumova GG, **Eskander MF, de Geus SW, Neto MM, Tabatabaie O, Ng SC, Miksad RA, Mahadevan A, Rodrigue JR, Tseng JF.** Regional variation in the treatment of pancreatic adenocarcinoma: Decreasing disparities with multimodality therapy. *Surgery* 2017; in press.

Kasumova GG, Tabatabaie O, **Eskander MF, Tadikonda A, Ng SC, Tseng JF.** National rise of primary pancreatic carcinoid tumors: Comparison to functional and nonfunctional pancreatic neuroendocrine tumors. *J Am Coll Surg* 2017;224(6):1057-64.

van Paridon MW, Kamali P, Paul MA, Wu W, Ibrahim AMS, **Kansal KJ, Houlihan MJ**, Morris DJ, **Lee BT, Lin SJ, Sharma R**. Oncoplastic breast surgery: Achieving oncological and aesthetic outcomes. *J Surg Oncol* 2017; in press.

Thoracic Surgery and Interventional Pulmonology

Beqari J, Lembo A, **Critchlow J, Hamden A, Kent MS**. Pseudoachalasia secondary to thoracic aortic aneurysm. *Ann Thorac Surg* 2017;103(6):e517-18.

Buitrago DH, Wilson JL, Parikh M, Majid A, Gangadharan SP. Current concepts in severe adult tracheobronchomalacia: Evaluation and treatment. *J Thorac Dis* 2017;9(1):E57-E66.

Majid A, Kheir F, Chung J, Alape D, Husta B, Oh S, Folch E. Covered balloon-expanding stents in airway stenosis. *J Bronchology Interv Pulmonol* 2017;24(2):174-7.

Parikh MS, Seeley E, Nguyen-Tran E, Krishna G. Endobronchial ultrasound-guided transbronchial needle injection of liposomal amphotericin B for the treatment of symptomatic aspergilloma. *J Bronchology Interv Pulmonol* 2017; in press.

Wilson JL, Whyte RI, Gangadharan SP, Kent MS. Teamwork and communication skills in cardiothoracic surgery. *Ann Thorac Surg* 2017;103(4):1049-54.

Transplant Surgery

Fisher RA. Living donor liver transplantation: Eliminating the wait for death in end-stage liver disease? *Nat Rev Gastroenterol Hepatol* 2017;14(6):373-82.

Kent M, Whyte R, Fleishman A, Tomich D, Forrow L, **Rodrigue J**. Public perceptions of overlapping surgery. *J Am Coll Surg* 2017;224(5):771-78.

Urology

Gay HA, Sanda MG, Liu J, Wu N, Hamstra DA, Wei JT, Dunn RL, Klein EA, Sandler HM, Saigal CS, Litwin MS, Kuban DA, Hembroff L, Regan MM, **Chang P**. Prostate Cancer Outcomes and Satisfaction with Treatment Quality Assessment Consortium. External beam radiation therapy or brachytherapy with or without short-course neoadjuvant androgen deprivation therapy: Results of a multicenter, prospective study of quality of life. *Int J Radiat Oncol Biol Phys* 2017;98(2):304-17.

Salonia A, Adaikan G, Buvat J, Carrier S, El-Meliegy A, Hatzimouratidis K, McCullough A, **Morgentaler A**, Torres LO, Khera M. Sexual rehabilitation after treatment for prostate cancer-part 1: Recommendations from the fourth international consultation for sexual medicine (ICSM 2015). *J Sex Med* 2017;14(3):285-96.

Vascular and Endovascular Surgery

Bodewes TCF, Ultee KHJ, **Soden PA**, Zettervall SL, Shean KE, Jones DW, Moll FL, **Schermerhorn ML**. Perioperative outcomes of infrainguinal bypass surgery in patients with and without prior revascularization. *J Vasc Surg* 2017;65(5):1354-65. e2.

Chen J, Howell C, Haller CA, Patel MS, Ayala P, Moravec KA, Dai E, Liu L, Sotiri I, Aizenberg M, Aizenberg J, **Chaikof EL**. An immobilized liquid interface prevents device associated bacterial infection in vivo. *Biomaterials* 2017;113:80-92.

Darling JD, **McCallum JC, Soden PA, Guzman RJ, Wyers MC, Hamdan AD, Verhagen HJ, Schermerhorn ML**. Predictive ability of the society for vascular surgery wound, ischemia, and foot infection (WIFI) classification system after first-time lower extremity revascularizations. *J Vasc Surg* 2017;65(3):695-704.

Patel MS, **Chaikof EL**. Ruptured aneurysm systems of care: A national imperative to improve clinical outcomes. *J Vasc Surg* 2017;65(3):589-90.

Shean KE, **Soden PA, Schermerhorn ML**, Zettervall SL, Deery SE, Darling JD, Hamdan A, **LoGerfo FW**. Lifelong limb preservation: A patient-centered description of lower extremity arterial reconstruction outcomes. *J Vasc Surg* 2017; in press.

Soden PA, Zettervall SL, Curran T, Vouyouka AG, Goodney PP, Mills JL, Hallett JW Jr, **Schermerhorn ML**. Society for Vascular Surgery Vascular Quality Initiative. Regional variation in patient selection and treatment for lower extremity vascular disease in the vascular quality initiative. *J Vasc Surg* 2017;65(1):108-18.

Ultee KH, Zettervall SL, **Soden PA**, Buck DB, Deery SE, Shean KE, Verhagen HJ, **Schermerhorn ML**. The impact of endovascular repair on management and outcome of ruptured thoracic aortic aneurysms. *J Vasc Surg* 2017; in press.

Zettervall SL, Karthaus EG, **Soden PA**, Buck DB, Ultee KH, **Schermerhorn ML, Wyers MC**. Clinical presentation, management, follow-up, and outcomes of isolated celiac and superior mesenteric artery dissections. *J Vasc Surg* 2017;65(1):91-98.

Zettervall SL, **Schermerhorn ML, Soden PA, McCallum JC**, Shean KE, Deery SE, O'Malley AJ, Landon B. The effect of surgeon and hospital volume on mortality after open and endovascular repair of abdominal aortic aneurysms. *J Vasc Surg* 2017;65(3):626-34.

Zettervall SL, Ultee KH, **Soden PA**, Deery SE, Shean KE, Pothof AB, Wyers M, **Schermerhorn ML**. Predictors of renal dysfunction after endovascular and open repair of abdominal aortic aneurysms. *J Vasc Surg* 2017;65(4):991-6.

Zaiem F, Almasri J, Tello M, Prokop LJ, **Chaikof EL**, Murad MH. Surveillance after endovascular aortic repair. *J Vasc Surg* 2017; in press.

Department Welcomes New Trainees

In June, the Department of Surgery hosted the 2017-2018 new interns and upper-level residents to the BIDMC community at a reception at the Harvard Club in Boston. At the event, chief residents and faculty members welcomed the new trainees to the department and to BIDMC.



Tara Kent, MD, MS, Vice Chair of Education in the Department of Surgery, delivered brief remarks at the reception to welcome incoming trainees.

Categorical Interns

Jordan Broekhuis, MD

University of Nebraska College of Medicine

Carly Comer, MD

Sidney Kimmel Medical College at Thomas Jefferson University

Omar Haque, MD

Mayo Medical School

Rashi Jhunjunwala, MD

Emory University School of Medicine

Jessica Means, MD

Columbia University College of Physicians and Surgeons

Nicole Moraco, MD

Geisel School of Medicine at Dartmouth

Samia Osman, MD

Harvard Medical School

Alison Pease, MD

State University of New York Downstate Medical Center College of Medicine

Jacqueline Wade, MD

University of Vermont College of Medicine

Integrated Vascular Surgery (0-5) Intern

Christina Marcaccio, MD

University of Pennsylvania School of Medicine

Preliminary Interns

Daniel Alvarez Valero, MD

Universidad Panamericana Escuela De Medicina

Lucas Daily, MD

University of Louisville School of Medicine

Khaled Hammouda, MD

Syrian Private University

Lydia Kaoutzani, MBBS

University of Sidney, Sydney Medical School

Abiodun "AJ" Mafolasire, MD

Yale University School of Medicine

Juan Manuel Ramirez

Decrescenzo, MD

Universidad De Monterrey Facultad De Medicina

Omidreza Tabatabaie, MD

Tehran University of Medical Sciences School of Medicine

New Upper-Level Residents (PGY 4)

David Chen, MD

New York Medical Colleges

Brenna Fullerton, MD

Warren Alpert Medical School of Brown University

Neurosurgery Intern

Anirudh Penumaka, MD

Duke University School of Medicine

Podiatry Interns

Amish Dudeja, DPM

Dr. William M. Scholl College of Podiatric Medicine

Christopher Sullivan, DPM

California School of Podiatric Medicine at Samuel Merritt University

Fellows

Aesthetic and Reconstructive Plastic Surgery

Munique P. Maia, MD

Hofstra North-Shore LIJ School of Medicine

Aesthetic and Reconstructive Breast Surgery/Microsurgery

Andreas Lamelas, MD

Icahn School of Medicine at Mount Sinai

Breast Surgery

Ryan Gruner, MD

Drexel University

Cardiothoracic Surgery

Oliver Chow, MD

Harvard University

Hand/Microsurgery

Kevin Han, MD

Georgetown University

Interventional Pulmonology

Christian Ghattas, MD

Tufts University

Van Holden, MD

University of Maryland

Timothy Leclair, MD

University of Vermont

Surgical Critical Care

Lucy Martinek, MD

Hofstra University

Sylvester Paulasir, MD

University of Michigan

Vascular Surgery

John McCallum, MD, MPH

Harvard University



Nicole Moraco, MD, a general surgery intern, and guest listen to a speaker at the event.

Congratulations to Our 2017 Graduates

Graduating residents and fellows were joined by faculty, family, and friends to receive their diplomas and celebrate their accomplishments at the Department of Surgery graduation dinner on June 25 at the Boston Harbor Hotel. Our heartfelt congratulations to the graduates.

GENERAL SURGERY

Victor Chien, MD, MA

Resident, Plastic Surgery
Emory University School of Medicine
Atlanta, GA

Oliver Chow, MD

Fellow, Cardiothoracic Surgery
Beth Israel Deaconess Medical Center
Boston, MA

William Collins, MD, MBA

Resident, Plastic Surgery
Harvard Combined Plastic Surgery
Residency Program
Boston, MA

Thomas Curran, MD, MPH

Fellow, Colon and Rectal Surgery
University of Minnesota
Minneapolis, MN

Nassrene Elmadhun, MD

Fellow, Cardiothoracic Surgery
Memorial Sloan Kettering Cancer Center
New York, NY

Omar Karim, MD

Fellow, Vascular Surgery
Montefiore Medical Center, Albert
Einstein College of Medicine
Bronx, NY

Emily Koeck, MD

Fellow, Surgical Critical Care, Trauma,
and Burn
John H. Stroger, Jr., Hospital of Cook
County
Chicago, IL

John McCallum, MD, MPH

Fellow, Vascular Surgery
Beth Israel Deaconess Medical Center
Boston, MA



At the graduation dinner, Tara Kent, MD, MS, General Surgery Residency Program Director (far left), and Elliot Chaikof, MD, PhD, Chair of the Department of Surgery (far right), posed with recent General Surgery Residency Program graduates (from left): Omar Karim, MD; John McCallum, MD, MPH; Victor Chien, MD, MA; Nassrene Elmadhun, MD; John Tillou, MD; Emily Koeck, MD; William Collins, MD, MBA; Oliver Chow, MD; and Thomas Curran, MD, MPH.

John Tillou, MD

Fellow, Colorectal Surgery
Washington Hospital Center
Washington, DC

PODIATRY

Justin Kaminski, DPM

Peabody Podiatry
Peabody, MA

Alison Migonis, DPM

Central Vermont Medical Center
Berlin, VT

FELLOWS

Aesthetic and Reconstructive
Plastic Surgery

Emile Brown, MD

Private practice, Facial Plastic Surgicenter
Pikesville, MD

Aesthetic and Reconstructive
Breast Surgery

Justin Cohen, MD

Private practice, Long Island Plastic
Surgical Group
New York, NY

Breast Surgery

Sarah Kimball, MD

Attending, Scott & White Healthcare
Temple, TX

Cardiothoracic Surgery

Antonio Lassaletta, MD

Assistant Professor of Surgery
Tufts University School of Medicine
Boston, MA

Hand/Microsurgery

Arriyan S. (Sammy) Dowlatshahi, MD

Instructor in Surgery, Harvard
Medical School
Beth Israel Deaconess Medical Center
Boston, MA

Minimally Invasive Surgery

Emilie B.D. Fitzpatrick, MD

Attending, William Beaumont Army
Medical Center
El Paso, TX

Brian Nguyen, MD

Private practice, Kaiser Permanente
San Diego, CA

Surgical Critical Care

Charles Parsons, MD

Instructor in Surgery, Harvard
Medical School
Beth Israel Deaconess Medical Center
Boston, MA

Vascular Surgery

Douglas Jones, MD

Assistant Professor of Surgery
Boston University School of Medicine
Boston, MA

MAKING A DIFFERENCE

Advancing Precision Medicine for Pancreatic Cancer

Three BIDMC patients, three unique stories: a 52-year-old man who had surgery for pancreatic cancer and was making a decision about adjuvant therapy; a 71-year-old woman who inherited the BRCA gene, survived breast cancer, and was undergoing evaluation for a suspicious pancreatic mass; a 65-year-old woman with a family history of pancreatic cancer, recently diagnosed herself.

Pancreatic cancer is personal. And a multidisciplinary team at BIDMC is determined to leverage the powers of precision medicine to make treatment personal as well.

“The people and organizations who invested money in this research early on have really made an impact,” says A. James Moser, MD, Co-Director of the Pancreas and Liver Institute. “We are learning more about the genetic and molecular basis of this disease, which will enable us to find ways to target each patient’s tumor in a more precise way.” A few highlights:

Project Survival: The largest biomarker-discovery program in the world, Project Survival is an effort to collect pancreatic tumor samples and identify genes, proteins, and other molecules to guide individualized treatment. The study is now underway at five sites nationwide, including BIDMC. “More than 90 percent of patients at participating sites have agreed to donate tissue,” notes Dr. Moser, Co-National Principal Investigator of Project Survival. “That demonstrates the commitment of patients to improving future care.”

CancerNext: Researchers at BIDMC and two other academic medical centers are collaborating with Ambry Genetics on the CancerNext project to better identify genetic risk factors for pancreatic cancer in the general population. Mary Linton Bounetheau Peters, MD, Department of Medicine, presented preliminary results at the 2017 national meeting of the American Society of Clinical Oncologists. The data showed that 11 percent of patients selected at random had at least one cancer risk gene, including 4 percent with mutations not previously associated with pancreatic cancer. “This study is helping us identify new genes implicated in the disease,” Dr. Peters says, “and is broadening our

understanding of who is at risk.”

PDX model: Manuel Hidalgo, MD, PhD, Chief of Hematology/Oncology, helped develop a patient-derived xenograft (PDX) by transplanting human tumor tissue into mice. Using the PDX platform, researchers can test new drugs in a living model of pancreatic cancer. One drug tested in this way, Nab-paclitaxel, is now FDA-approved for pancreatic cancer, and another is in early clinical trials.

Organoids: These three-dimensional mini-tumors, grown from tissue taken at biopsy, provide another personalized platform for developing and testing new drugs. “We now have 47 organoids growing from patients’ donated tissue,” says Senthil Muthuswamy, PhD, Director of the Cell Biology Program in the BIDMC Cancer Research Institute, who is leading this effort. “Currently, all of these are in the preclinical phase of research,” says Dr. Moser, “but we hope, within a year, to be able to offer organoid testing to patients through clinical trials.”

Clinical Trials: Another half-dozen clinical trials are either underway or opening soon at BIDMC. Later this year, patients will have access to Precision Promise, a multi-site clinical trial designed to simultaneously test multiple treatment options for pancreatic cancer under a single protocol. If one approach fails, another option will be offered—in contrast to typical clinical trials in which only one method is tested.

“Our long-term goal is to turn pancreatic cancer into a chronic disease that can be managed, and one day eradicated,” says Dr. Moser. “With a tremendous multidisciplinary team in place at BIDMC, and the support of generous philanthropists, that goal is getting closer.”

The research mentioned in this article has been supported by many generous contributors. We are grateful in particular for the ongoing support of Ambry Genetics, Berg, the Alliance of Families Fighting Pancreatic Cancer (AFFPC), the John F. Fortney Charitable Pancreatic Cancer Group, the Greg and Cathy Griffith Family Foundation, and the Pancreatic Cancer Action Network (PanCAN).

Excellence in Cardiac Care Featured at Palm Beach Celebration

BIDMC's annual Palm Beach celebration, which took place earlier this year, showcased the medical center's excellence in cardiac care and research. Held in the Venetian Ballroom at The Breakers, the interactive evening featured a rendition of the television game show, "What's My Line?," informative videos, and discussions with BIDMC experts in heart health.

Four physician-leaders from BIDMC participated in the game show: Loryn Feinberg, MD, Director of the Women's Cardiovascular Health Program; Robert Gerszten, MD, Chief of the Division of Cardiovascular Medicine; Kamal Khabbaz, MD, Chief of the Division of Cardiac Surgery; and Peter Zimetbaum, MD, Associate Chief and Director of Clinical Cardiology. The "What's My Line?" panel featured Sam Kennedy, President of the Boston Red Sox and member of the Trustee Advisory Board; Pam Lesser, Vice Chair of the Trustee Advisory Board; Susan Wornick, former WCVB-TV anchor and member of the Board of Overseers; and Mark Zeidel, MD, Chair of the Department of Medicine and BIDMC Physician in Chief. Emcee for the evening was former WBZ-TV news and sports anchor Scott Wahle. In addition, Kevin Tabb, MD, Chief Executive Officer of BIDMC, provided an update on the medical center's recent accomplishments and his vision for the future.



Enjoying the Palm Beach celebration were (from left) Kevin Tabb, MD, Caron Tabb, and long-time BIDMC supporters Roberta and Stephen R. Weiner, after whom the Department of Surgery is named.



Longtime BIDMC and Department of Surgery friends and supporters Diane and Martin Trust were also among the 159 guests who joined in the Palm Beach celebration.

Arterial Challenge Raises Awareness and Funds

On Sunday, April 9, a BIDMC team led by Christopher Ogilvy, MD, and Ajith Thomas, MD, who direct the BIDMC Brain Aneurysm Institute, participated in the 16th annual "Arterial Challenge" at Fenway Park. This year, BIDMC President Pete Healy also participated in the event, a 5k run/walk that raises awareness and funds for the Brain Aneurysm Foundation. Established in 1994 by Dr. Ogilvy and Brain Aneurysm Institute nurse practitioner Deidre Buckley, NP, the Brain Aneurysm Foundation is the nation's foremost nonprofit organization dedicated to providing awareness, education, support, and research



funding to reduce the incidence of brain aneurysm ruptures. This year's Arterial Challenge raised more than \$100,000 to support these efforts.

Giving Back to the Community

Members of the Department of Surgery continued to give back to the community, both on an individual basis and through the Committee on Social Responsibility, which is led by Surgery Vice Chairman Allen Hamdan, MD, Vascular Surgery, and Ted James, MD, MS, FACS, Chief of Breast Surgical Oncology. Here are a few recent highlights.

Volunteering during orientation

The General Surgery Residency program holds an orientation each year in late June for incoming interns and residents. This year, it included something new: an afternoon volunteering at the Greater Boston Food Bank.

"Our department is committed to giving back to the community," says Dr. Hamdan. "This is a wonderful way to include the concept of volunteering as part of the training our surgery residents receive."

The mission of the GBFB is to end hunger in eastern Massachusetts. Among its programs are a Brown Bag program for seniors, school-based pantries for children, and mobile markets that bring fresh food to communities in need. The Department of Surgery also holds an annual fundraiser, [Food Is Medicine](#), to benefit the GBFB and its programs.



Volunteering at the GBFB were incoming residents (from left): Lucas Daily, MD; Brenna Fullerton, MD; Omar Haque, MD; Jordan Broekhuis, MD; Lydia Kaoutzani, MBBS; Anirudh Penumaka, MD; Rashi Jhunjhunwala, MD; Christina Marcaccio, MD; Carly Comer, MD; Jessica Means, MD; Khaled Hammouda, MD; Samia Osman, MD; Nicole Moraco, MD; David Chen, MD; Jacqueline Wade, MD; Omid Tabatabaie, MD; Abiodun Mafolasire, MD; and Alison Pease, MD.

Sock drive a success

The Division of Podiatry and the department's Committee on Social Responsibility held their annual sock drive in conjunction with Boston Healthcare for the Homeless and the Boston Red Sox. This year, more than 3,000 pairs of socks were collected. Since the drive began six years ago, BIDMC has contributed nearly 12,000 pairs of socks to help homeless people avoid serious conditions like frostbite.



A double marathon

Stephen Odom, MD, Acute Care Surgery, Trauma, and Surgical Critical Care, ran the Boston Marathon for a fourth consecutive year on Monday, April 17, as part of Team BIDMC. This year he took on a new challenge: he ran the marathon twice.

Dr. Odom and Joseph DeAngelis, MD, Orthopaedics, first ran from Copley Square to the starting line in Hopkinton, and then—after a brief rest and some food—ran back to the finish line at Copley Square. They covered a distance of 52.4 miles.

Dr. Odom raised \$8,300 for Team BIDMC.

The funds will support BIDMC's Bowdoin Street Healthy Champions Program, designed to create a way for economically disadvantaged young people to become ambassadors of health within their own families, schools, and the community.



Joseph DeAngelis, MD, Orthopaedics (left) and Stephen Odom, MD, Acute Care Surgery, Trauma, and Surgical Critical Care



Just a few of the 58 cards and letters sent by children at the Richard J. Murphy School

MAKING A DIFFERENCE

A special thank you

Administrators at the Richard J. Murphy School in Dorchester installed water coolers in classrooms after tests revealed that high lead levels in the school's water supply made the school bubblers unsafe. The grade schoolers now fill paper cups with water, but those sometimes spill. Jeffrey Dawson, Perioperative Services, a member of the Department of Surgery's Committee on Social Responsibility, had a brainstorm: Why not donate BIDMC stainless steel tumblers to the children?

The children were so delighted with their “silver cups,” as they call them, that they handwrote thank-you cards and letters to BIDMC, care of Mary Beth Cotter, BSN, RN, Surgery Administration. Here are a few quotes (with names changed to protect privacy) from the 58 thank-you notes:

“This might be one of the best gifts that people gave me.” – Tom

“I even use it when I am not in school.” – Nell

“I see it every night and it puts a smile on my face. Thank you!” – Valerie