



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

PREVENTING LYMPHEDEMA

*Pioneering surgery
offers new hope*

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Message from the Chairman

When Henry David Thoreau moved into a small cabin at the edge of Walden Pond, he was seeking, he wrote, to “live deliberately.” While he spent a lot of time alone, this was no wholesale retreat from the world. As he writes in *Walden*, “I had three chairs in my house: one for solitude, two for friendship, three for society.”

Sherry Turkle uses this quote as a central metaphor in her most recent book, *Reclaiming Conversation: The Power of Talk in the Digital Age*. She contends that digital technology created to facilitate communication actually erodes it — along with human attributes such as empathy and listening. At a time when our society has become increasingly polarized, her points are timely.

Turkle encourages readers to cultivate conversation, in the true sense of the word, as a practice that involves listening to and connecting with other people, even when they have different views. Turkle makes the case that Walden’s three chairs represent the essentials of conversation. Solitude is necessary for self-reflection, which enables people to listen more deeply to what another person is saying, and finally to engage in meaningful conversations with others.

In the Department of Surgery, we strive to promote a culture of conversation — among ourselves, with colleagues, and with patients. Many of the innovations we cover in this issue of *Inside Surgery* began with conversations between people who came from different disciplines, but who decided to collaborate to find an innovative solution.

This is a reminder that while it is certainly challenging today to find ways to support moments of solitude and self-reflection, these quiet moments are exactly what make us receptive to other possibilities and foster creativity.



Elliot Chaikof, MD, PhD



Beth Israel Deaconess Medical Center



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Spring/Summer 2017

Volume 7, No. 1

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

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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: Dhruv Singhal, MD, Director of Lymphatic Surgery, and senior plastic surgery resident Brady Sieber, MD. Photo by Danielle Duffey.

Contributing writer: Hilary Bennett

Inside photographs: Hilary Bennett, Danielle Duffey, James Derek Dwyer, Ann MacDonald, Feroze Mahmood, MD



Speaking briefly at the event were (from left in photo): Elliot Chaikof, MD, PhD, Chairman of the Department of Surgery; Catherine D'Amato, Greater Boston Food Bank CEO and President; Allen Hamdan, MD, Vice Chair of Surgery and Chairman of the GBFB Board of Advisors; Kathryn Brodowski, MD, GBFB Chief Medical Officer; and Assaad Sayah, MD, Chief Medical Officer of Cambridge Health Alliance.

Fourth Annual 'Food is Medicine' Sets Fundraising Record

In September, the Department of Surgery's Committee on Social Responsibility, in partnership with other BIDMC departments and many others within and outside the medical center, held its fourth annual "Food is Medicine" gala. All proceeds from the event support the Greater Boston Food Bank (GBFB) and the hungry families throughout eastern Massachusetts it serves.

More than 300 people from throughout the Boston health care and business communities attended the gala at the GBFB, which included cocktails, hors d'oeuvres, and a silent auction. This year's event brought in a record-breaking \$142,000, the equivalent of 426,000 meals. In the four years since its inception, Food is Medicine has raised nearly \$330,000, for the equivalent of almost 1 million meals to help feed hungry families.

For more information about Food is Medicine or how you can help, please contact Allen Hamdan, MD, Co-Chair of the Department of Surgery's Committee on Social Responsibility, at: ahamdan@bidmc.harvard.edu.

Donations to Food is Medicine are always appreciated. To make a donation in any amount, visit: gbfb.org/events/food-is-medicine.



Pete Healy (left), then CEO of Beth Israel Deaconess Hospital-Milton, and now President of BIDMC, and Kamal Khabbaz, MD, Chief of Cardiac Surgery at BIDMC, enjoyed the gala.

Continued on back cover >

Save the Date

September 14, 2017

Department of Surgery "Food is Medicine" Gala to support the Greater Boston Food Bank

Greater Boston Food Bank
70 South Bay Ave., Boston

Tickets, information, and to donate:
gbfb.org/events/food-is-medicine

November 2–3, 2017

The Diabetic Lower Extremity Symposium: From Innovation to Therapy

Presented by the BIDMC Rongxiang Xu, MD, Center for Regenerative Therapeutics and the Wyss Institute for Biologically Inspired Engineering at Harvard University
Joseph B. Martin Conference Center
Harvard Medical School
77 Ave. Louis Pasteur, Boston
To register: DLESymposium.com

November 3–4, 2017

The Lymphedema Symposium at BIDMC/Harvard Medical School

Sherman Auditorium
330 Brookline Ave., Boston
To register: harvardlymphaticsurgery.org

ALUMNI SPOTLIGHT

C. Wright Pinson, MD, MBA, 1988

Deputy CEO and Chief Health System Officer,
Vanderbilt University Medical Center
CEO, Vanderbilt Health System



Shortly after he graduated from the University of Colorado in 1970 with a degree in physics, Wright Pinson landed a great job as an engineer with IBM. During the next four years with the company, he added an MBA to his resume and, by his mid-20s, was on the fast track to a bright future in his profession.

But something was missing. The young engineer always had an interest in becoming a physician, in part because he had suffered from asthma as a young child. He knew it was now or never to pursue that dream. “I wanted to use my science background to more directly help people, so I threw it all in and applied to medical school,” recalls Dr. Pinson.

Following his graduation Alpha Omega Alpha from Vanderbilt University School of Medicine, Dr. Pinson completed his residency in general surgery at Oregon Health Sciences University. “I’d gravitated toward surgery during medical school because it gives you the opportunity to be decisive, lead a team, apply your technical skills to fix a problem, and receive immediate feedback for your efforts,” he says.

Following his residency, Dr. Pinson headed to New England to do a yearlong fellowship in gastrointestinal (GI) surgery at Lahey Clinic. Though born in New Mexico, Dr. Pinson was no stranger to New England. In fact, he lived in the Boston area as a child when his father, an Air Force general, was the commandant of Air Force research labs at Hanscom Air Force Base in Bedford.

Meeting mentors

It was during his GI fellowship in the mid-1980s that Dr. Pinson met Roger Jenkins, MD, who was then leading the transplant service at New England Deaconess Hospital, which merged with Beth Israel Hospital in 1996. “I had the opportunity to observe some liver transplants and decided that I really wanted to learn how to do them,” says Dr. Pinson. At Dr. Jenkin’s urging, Dr. Pinson spent the next (1987-1988) academic year

as the Julie Henry Fellow in Transplantation in the Department of Surgery at the New England Deaconess Hospital, then led by Glenn Steele Jr., MD, PhD.

“This was a very exciting time in liver transplantation,” recalls Dr. Pinson, who estimates that he participated in more than 35 transplants that year. “Every time we did a transplant, many would come to observe. Back then, these were very long cases involving lots of blood transfusions and considerable risk — they were truly a tour de force. The progression from those early days to what the field is now, with liver transplants almost being routine, is astonishing,” says Dr. Pinson, who has performed more than 800 liver transplants during his career.

“My years in Boston were an amazing experience,” says Dr. Pinson. “Then, as now, the hospital had an excellent surgery department with great faculty and residents. I always felt very lucky to get into that milieu, which was academically very vibrant and clinically outstanding. It was a hard year as I was the only fellow and was very busy, but I loved it. I received great mentoring on how to be a successful surgeon, including how to establish relationships with referring physicians and take excellent care of patients, which has served me well throughout my career.”

Becoming a leader

Dr. Pinson first joined the faculty at Oregon Health Sciences University. He was recruited to Vanderbilt University Medical Center in 1990, where he has since held numerous leadership positions. He was only 41 and just five years out of his fellowship training when he was named Chairman of Surgery within the Section of Surgical Sciences and also Director of the Vanderbilt Transplant Center. Other leadership positions during his nearly three decades at Vanderbilt include Chief of Staff and Chief Medical Officer.

In addition to his demanding administrative roles, until recently Dr. Pinson maintained a very

active clinical practice in hepatobiliary and transplant surgery, conducted basic and clinical research resulting in hundreds of publications, and mentored research fellows as well as countless residents and clinical fellows. “Looking back on my career, I had the most fun when I was in the thick of being an active surgeon engaged in research and teaching,” he says. “I’ve always loved my relationships with patients and trainees, and their feedback and appreciation has been a great source of satisfaction to me.”

Today, Dr. Pinson devotes most of his time to the business side of health care, including strategic planning and implementation for the four-hospital, 2,500-physician Vanderbilt Health System that he leads. He also created and is chairman of the board of the Vanderbilt Health-Affiliated Network, a statewide group of 60 previously unaffiliated hospitals and 5,000 physicians. “I consider this network the biggest accomplishment of my administrative years,” says Dr. Pinson, emphasizing that only through connected networks will providers be able to deliver well-coordinated, value-based care that controls costs.

Dr. Pinson attributes much of his career success to his combination of clinical and business skills.

“Occupying that space between the two fields has always been an important part of my life,” he says. To provide a similar opportunity to others, in 2008 Dr. Pinson co-founded a Masters of Management in Health Care at Vanderbilt’s Owen School of Management, where he is a member of the faculty. “Today, if you want to be a leader in medicine, you need to arm yourself with business skill sets.”

Dr. Pinson’s career accomplishments have garnered him many prestigious honors, including distinguished service awards from the American Hepato-Pancreato-Biliary Association and the International Hepato-Pancreato-Biliary Association, both of which he has led as president.

While he is certainly proud of his career accomplishments, Dr. Pinson also takes considerable pride in “Soul Incision,” a nine-member rhythm and blues/rock and roll band that he’s played drums with for the past 18 years. All members of the group work at Vanderbilt and have formed close bonds. “We’ve opened for some pretty big names” he says, “and performed more than 350 gigs all over the country, including Boston.”

ALUMNI NEWS



Christopher Caldarone, MD, Surgeon-in-Chief and Chief of Perioperative Services at The Hospital for

Sick Children in Toronto, was the inaugural recipient of the Sidney Levitsky Visiting Professorship in Cardiac Surgery (see related story, [page 10](#)). Dr. Caldarone completed his residency in Cardiothoracic Surgery at BIDMC in 1998.



Christine Mauro, MD, MMSc, is Medical Director of the Minimally Invasive Therapies Group, in the Surgical

Innovations Division at Medtronic. Dr. Mauro is part of a leadership team that oversees the research, development, manufacture, and safe use of more than 10,000 open and laparoscopic surgical medical devices used in hospitals around the world. She was a resident in General Surgery at BIDMC until 2014.



Clayton Peterson, MD, is a general surgeon at Berkshire Medical Center, a teaching hospital affiliated with

the University of Massachusetts Medical School. The Center serves patients living in western Massachusetts, as well as in adjacent areas in Connecticut, New York, and Vermont. He completed his residency in General Surgery at BIDMC in 2015.

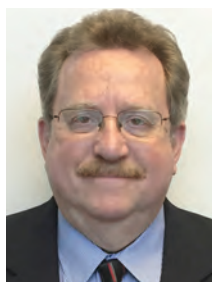
Drs. Mauro and Peterson met as residents and are married.

HARVARD MEDICAL SCHOOL

Promotions and Appointments

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

APPOINTED AS: PROFESSOR OF SURGERY



Richard D. Cummings, PhD

Richard D. Cummings, PhD, is Vice Chair of Basic and Translational Research in the Department of Surgery, and Director of the [HMS Center for Glycoscience](#), based in the department. In addition, he serves as Chair of the department's Research Council and as Associate Director of its Center for Drug Discovery and

Translational Research. Before he was recruited to BIDMC in 2015, Dr. Cummings was the William Patterson Timmie Professor and Chair of the Department of Biochemistry at Emory University School of Medicine.

Dr. Cummings received his doctorate from the Johns Hopkins University, and completed a post-doctoral fellowship at the Washington University School of Medicine in St. Louis. He is regarded as one of the nation's leading biological chemists and an international leader in the field of glycobiology, which focuses on the roles of glycans, or sugars, in all aspects of biology, health, and disease.

Since 1984, Dr. Cummings has been awarded over \$40 million in NIH grants. Currently, he serves as principal investigator for five major NIH studies. He has published nearly 300 peer-reviewed publications and holds leadership positions in numerous professional societies. Dr. Cummings is also an exceptional educator and mentor.

PROMOTED TO: PROFESSOR OF SURGERY



Jennifer F. Tseng, MD, MPH

Jennifer F. Tseng, MD, MPH, is Chief of the Division of Surgical Oncology and Co-Director of Surgical Outcomes Analysis and Research (SOAR) within the Department of Surgery. Before joining BIDMC in 2011, Dr. Tseng was on the faculty at the University of Massachusetts Medical School.

Dr. Tseng received her medical degree from the University of California School of Medicine, San Francisco, and earned a Master's in Public Health from the Harvard School of Public Health. She completed her residency in general surgery at Massachusetts General Hospital and a postdoctoral research fellowship at Boston Children's Hospital. She completed a clinical fellowship at the University of Texas MD Anderson Cancer Center.

Dr. Tseng has expertise in performing pancreatic, liver, stomach, and other upper gastrointestinal surgery. Her many research contributions include preoperative risk stratification and identifying racial and socioeconomic factors influencing treatment and outcomes. Dr. Tseng has published more than 100 peer-reviewed publications and holds multiple leadership positions in professional societies, including currently serving as Secretary of the Society for Surgery of the Alimentary Tract (SSAT). She also teaches and mentors medical students, residents, and fellows.

PROMOTED TO: ASSOCIATE PROFESSOR OF SURGERY



Tara S. Kent, MD, MS

Tara S. Kent, MD, MS, has been a member of the Division of General Surgery since 2007. She earned her medical degree from Weill Cornell Medical College in New York, and completed a residency in general surgery at the Albert Einstein College of Medicine Montefiore Medical Center in New York. She also completed a research fellowship and earned a master's degree from the Albert Einstein College of Medicine.

Dr. Kent is proficient at complex pancreatic and biliary tract surgery. Her clinical research interests include improving patient education and developing processes to prevent complications, readmissions, and other adverse outcomes. Dr. Kent has authored 48 peer-reviewed publications. She is on the editorial board of leading scientific journals, and is a member of numerous professional societies.

Dr. Kent is committed to education at every level. She is Vice Chair for Education in the Department of Surgery, Program Director of the [General Surgery Residency](#), and Associate Director of the [Core Clerkship in Surgery](#) at BIDMC.

**PROMOTED TO:
ASSISTANT PROFESSOR OF SURGERY**



Peter Chang, MD, MPH

Peter Chang, MD, MPH is Director of both the Prostate Cancer Center at BIDMC and the Program in Robotic Surgery at BID-Milton. He joined the Division of Urology in 2014.

Dr. Chang earned his medical degree, Alpha Omega Alpha, from Weill Cornell Medical College in New York. He completed his general surgery

internship and urology residency at Brigham and Women's Hospital. He completed a research fellowship and earned an MPH from the Harvard School of Public Health, as well as a clinical fellowship in urologic oncology at BIDMC.

An excellent teacher and mentor, Dr. Chang serves as Co-Director of the Minimally Invasive Urologic Surgery Fellowship Program at BIDMC. His clinical interests include robotic and laparoscopic surgery for prostate, bladder, testicular, and kidney cancers. His research interests include measuring and alleviating the effects of prostate cancer on quality of life, optimizing prostate cancer treatment decision-making, and using patient-reported outcomes in the clinical practice setting. He is leading or participating in several research studies, and has published papers in leading peer-reviewed journals.

**PROMOTED TO:
ASSISTANT PROFESSOR OF SURGERY**



Ranjna Sharma, MD, FACS

Ranjna Sharma, MD, has been a member of the Division of Surgical Oncology 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 malignant and benign breast disease, and performing advanced breast surgical oncology procedures. Her research interests include oncologic outcomes studies as well as clinical trials and translational research projects. She has published original research in peer-reviewed publications.

She is active in several professional societies at the regional and national level. Dr. Sharma is also a dedicated teacher and mentor to medical students, residents, and fellows in both the clinical setting and in didactic and technical training sessions. In 2014, she was elected to the BIDMC Academy of Medical Educators, further indicating her interest and commitment to education.

**PROMOTED TO:
ASSISTANT PROFESSOR OF SURGERY**



Michael Kearney, MD

Michael Kearney, MD, has been a member of the Division of Urology at BIDMC since 2002. Since joining the medical center, he has developed a busy clinical practice while taking on administrative and educational leadership roles. He is Director of the Urology Community Clinic and the BIDMC Site Program Director for the

Harvard Longwood Program in Urology.

Dr. Kearney earned his medical degree from Boston University School of Medicine, and completed his general surgery internship and urology residency at New York Presbyterian Hospital/Columbia Presbyterian Center in New York.

Board certified in urology, Dr. Kearney's clinical interests include stone disease, urologic cancers, and benign prostatic hyperplasia. He teaches and supervises medical students and residents in both the OR and outpatient clinic setting. He also serves as a preceptor and lecturer for several Harvard Medical School courses. In addition, he co-founded and serves as President of [Project Health CV](#), a nonprofit organization dedicated to providing medical and specialized surgical services to people living in Cape Verde.

**PROMOTED TO:
ASSISTANT PROFESSOR OF SURGERY**



Peter Steinberg, MD

Peter Steinberg, MD, is Director of Endourology and Stone Management in the Division of Urology. Dr. Steinberg received his medical degree from the University of Pennsylvania School of Medicine. He completed a urology residency at Dartmouth-Hitchcock Medical Center in New Hampshire, and a fellowship in laparoscopy,

robotics, and endourology at Montefiore Medical Center in New York.

Before being recruited to BIDMC in 2012, Dr. Steinberg was a urologist at Maine Medical Center. Dr. Steinberg specializes in minimally invasive urologic surgery, and treats patients with kidney stones and other urologic disorders. His research interests include finding biomarkers in urologic disease and improving techniques in endourology.

Dedicated to teaching, he is Co-Director of the Minimally Invasive Urology Fellowship Program at BIDMC and is a core faculty member of the Harvard Program in Urology. He has published in peer-reviewed journals and is a reviewer for several leading journals in the field. He is also active in professional societies at the regional and national level.

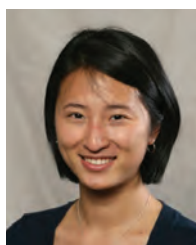
NEWS BRIEFS



Jeffrey Arle, MD, PhD, Associate Chief of Neurosurgery, has been named Co-Chair of the Research and Scientific Policy Committee for the International Neuromodulation Society. The society is dedicated to the scientific development and

awareness of neuromodulation, a field that includes deep brain stimulation, vagus nerve stimulation, and spinal cord stimulation. Dr. Arle was also selected as an Associate Editor of *Neuromodulation: Technology at the Neural Interface*, the preeminent journal in the field.

In addition, Dr. Arle was elected to the Executive Board for the International Society of Intraoperative Neurophysiology, an organization that advances education and research on the use of electroencephalography (EEG), electromyography (EMG), and other electrophysiological methods to monitor the function of nerves, the spinal cord, and parts of the brain during surgery.



Resident **Christina Feng, MD**, received the Vandenberghe-Storz Award for best podium presentation by a young investigator at the 35th Annual Meeting of the International Fetal Medicine and Surgery Society in Botswana. Dr. Feng presented a talk entitled, “Trans-Amniotic Stem

Cell Therapy (TRASCET) in a Leporine Model of Gastroschisis.” She also received a Young Investigator Travel Award, in recognition of the high quality of her abstract submission.



Christiane Ferran, MD, PhD, Lewis Thomas Professor of Surgery at Harvard Medical School, recently received a Juvenile Diabetes Research Foundation grant entitled, “Novel Means to Achieve Glycemic Control in Diabetes.”

This will further her research aimed at finding new treatments for the disease.



The Massachusetts Podiatric Medical Society Board of Directors unanimously selected **John Giurini, DPM**, Chief of Podiatry and Associate Professor of Surgery at Harvard Medical School (left in photo), as the recipient of the 2016 Lifetime Achievement Award. The award is given to a

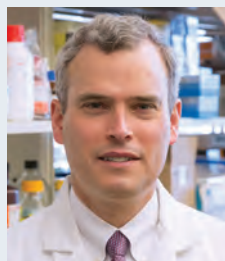
podiatrist who has led an exemplary professional life and who has made significant contributions to the profession. Over a 30-year career, Dr. Giurini has established himself as an expert in the field of diabetic foot disease and reconstructive surgery on the diabetic foot. He has authored many influential journal articles and book chapters and trained a generation of physicians in all specialties.



Ted A. James, MD, MS, FACS, Chief of Breast Surgical Oncology and Co-Director of the Joseph M. and Thelma Linsey BreastCare Center at BIDMC, received the State Chair Outstanding Performance Award from the American College of Surgeons Commission on Cancer

last fall, at a ceremony in Washington, DC. In making the award, the Commission cited Dr. James’ outstanding leadership, innovation, and significant contributions to the improvement of cancer care. It also commended him as a collaborator, innovator, and expert in advocating for quality cancer care with cancer programs, professionals, and state coalitions.

In addition, the ACS Commission on Cancer approved Dr. James’ application to access the National Cancer Database Participant Use Data File, which contains de-identified patient data from hospitals around the country. This resource will enable him to analyze data and advance a study entitled “Characteristics of Readmissions Following Breast Cancer Surgery,” which is part of his Breast Cancer Surgery Outcomes Research program at BIDMC.



A. James Moser, MD, Co-Director of the Pancreas and Liver Institute, and **Senthil Muthuswamy, PhD**, Director of the Cell Biology Program in the Cancer Research Institute, are collaborating in a precision medicine initiative to revolutionize treatment for patients with pancreatic cancer. Dr. Muthuswamy has developed a novel way of growing tumor organoids — living replicas of a cancer grown from

tissue samples collected during surgery — which can be tested for clues about how to fight a specific tumor. Eventually, this may allow physicians to customize cancer care for each individual patient.

“Organoids give us the opportunity to tailor the treatment to the patients rather than having a one size fits all approach,” Dr. Moser explains.

“It has the potential to be a game changer in cancer care for patients,” says Dr. Muthuswamy. “My laboratory is in a position to do something that could immediately impact clinical outcomes.”

Drs. Moser and Muthuswamy were interviewed for a FOX25 feature story about their work. You can view the story online at www.bidmc.org/PLI.



The American Society for Metabolic and Bariatric Surgery awarded **Daniel B. Jones, MD, MS, FACS**, a Surgery Vice Chair and Chief of Bariatric Surgery, and **Stephanie Jones, MD**, Vice Chair for Education, Department of

Anesthesia, Critical Care and Pain Medicine, the 2016 Edward E. Mason Medal for an online educational model they developed: *Essentials of Bariatric & Metabolic Surgery* (available at <http://essentials.ASMBS.org>). The award, named for a physician who is considered the father of bariatric surgery, honors the year's best contribution to the field of obesity surgery.

Dr. Jones also recently participated in medical grand rounds, “Beyond the Guidelines: Should this Patient Have Bariatric Surgery?” The discussion, with Christina Wee, MD, MPH, Internal Medicine, was filmed and will be posted on the *Annals of Internal Medicine* website.



Michael Kent, MD, Director of Minimally Invasive Thoracic Surgery, is collaborating with two colleagues in Gastroenterology, **Tyler Berzin, MD, MS**, and **Mandeep Sawhney, MD**, to offer a new type of treatment for achalasia, known as

POEM (Per Oral Endoscopic Myotomy), that is currently available at only a handful of centers in the United States.

Achalasia develops when the lower esophageal sphincter, a muscular valve at the bottom of the esophagus, fails to relax properly. As a result, patients have trouble eating or even swallowing. The Heller myotomy has long been the standard treatment for achalasia. POEM is a newer minimally invasive procedure that may be an option for some patients. While the patient is under general anesthesia, the physician inserts an endoscope down the patient's throat to make a small slit in the esophagus. The physician makes tiny cuts in the sphincter (similar to a traditional myotomy), which weakens the muscle enough to enable it to open. After repairing the slit in the esophagus, the physician removes the endoscope. The patient usually goes home the next day.

NEWS BRIEFS



Pictured are (from left) Dr. Levitsky's children, Shari Bornstein, MD, and Jonathan Levitsky, his wife, Lynne Levitsky, MD, **Kamal Khabbaz, MD**, Chief of the Division of Cardiac Surgery at BIDMC, Dr. Levitsky, Melissa Chaikof and **Elliot Chaikof, MD, PhD**, Chair of the Department of Surgery at BIDMC, Dr. Caldarone, and Pedro del Nido, MD, Chair of the Department of Cardiac Surgery at Boston Children's Hospital.

Sidney Levitsky, MD, Senior Vice Chair of the Department of Surgery at BIDMC and the David W. and David Cheever Professor of Surgery at Harvard Medical School, was feted at a special evening at the Harvard Club in November in recognition of two significant honors. Guests and family members attended a special evening at the Harvard Club to celebrate the dedication of the Sidney Levitsky Cardiac Surgery Service at BIDMC. The evening also included a lecture by Christopher Caldarone, MD, the inaugural recipient of the Sidney Levitsky Visiting Professorship in Cardiac Surgery. Dr. Caldarone is Surgeon-in-Chief and Chief of Perioperative Services in the Department of Cardiovascular Surgery at The Hospital for Sick Children in Toronto.



Tara Kent, MD, MS, Vice Chair for Education, has been named a member of the editorial board for the *Journal of Surgical Education*. The journal publishes research articles in all surgical disciplines on topics relative to the education of

surgical students, residents, and fellows, as well as practicing surgeons. Douglas Smink, the journal's editor in chief, noted that Dr. Kent was selected because she was one of "the leading experts in surgical education and surgical education research."



Bernard Lee, MD, MBA, MPH, FACS, Chief of Plastic and Reconstructive Surgery, was senior author on a paper that received the 2017 "Best Overall Manuscript" award from the Association for Academic Surgery. The paper, "Readability, Suitability, and Complexity of Online Resources for Mastectomy and Lumpectomy," was published in the *Journal of Surgical Research*. Other authors in the Department of Surgery were **Dhruv Singhal, MD**, Director of Lymphatic Surgery, Fellow **Bao Ngoc N. Tran, MD**, and Resident **Mansher Singh, MD**.



FIRST Program Launched to Support Clinical Research

The Department of Surgery has launched the FIRST Program — Facilitating Innovative Research and Surgical Trials — to aid faculty, fellows, and residents who are conducting clinical research.

James R. Rodrigue, PhD, Vice Chair of Clinical Research, directs the program. Other members of the team are Clinical Research Administrator **Aaron Fleishman, MPH**; Clinical Research Coordinator **Claire Rosenwasser, MS**; and Clinical Research Assistants **Leo Magrini, Mario Feranil, Haley Duncan**, and **Michaela Carroll**.

The FIRST Program offers a comprehensive menu of services to clinical investigators, such as:

- Research mentorship
- Protocol guidance and development
- Regulatory support
- Biostatistics support
- Study coordination
- Research staff education and training

To learn more and request services, visit: www.bidmcfirst.com.



Samuel Lin, MD, MBA, Plastic and Reconstructive Surgery, and Otolaryngology/Head and Neck Surgery, has been awarded four grants from the Small Business Innovation Research (SBIR)

program, totaling \$1.5 million. Two of the grants will support Dr. Lin's efforts to develop a device and a training model to improve treatment of battlefield injuries, while the other two will support innovations in civilian medical settings. In addition, Dr. Lin has been awarded a \$1.79 million NIH grant to support his work in designing a bioresorbable, biologically active bone fixation plating system.



Senior author **Samuel Lin, MD**, Plastic Surgery, and co-author **Bernard Lee, MD**, Chief of Plastic Surgery, were among the researchers honored with the 2016 Best International Collaboration-Silver award from *Plastic and Reconstructive Surgery — Global Open*, an open access, peer reviewed, international journal. The award was for their paper, "Three-Dimensional Printing in Developing Countries," published in July 2015. The award was based on the number of full-text article views, number of PDF views, and number of times the article was sent by email or added to a personal collection.



Frank LoGerfo, MD, Vascular and Endovascular Surgery, is the contact principal investigator of a multiple-investigator NIH grant funded consecutively for 30 years. The research grant, entitled "Mechanisms

of Prosthetic Arterial Graft Failure," has been renewed for four more years, funded by \$1.7 million dollars. Co-principal investigators include **Christiane Ferran, MD, PhD**, and **David Mooney, PhD**, of the Wyss Institute for Biologically Inspired Engineering. **Leena Pradhan-Nabzdyk, PhD, MBA**, Vascular and Endovascular Surgery, is also a key investigator on this grant.

NEWS BRIEFS



Adnan Majid, MD, was recently promoted to Chief of Interventional Pulmonology, a newly formed section of the Division of Thoracic Surgery and Interventional Pulmonology. Dr. Majid also directs BIDMC's Chest Disease Center.

The promotion recognizes Dr. Majid's many significant contributions that have enhanced the division's growth and international reputation.

Working with others in the division, Dr. Majid created disease-specific clinics for patients with emphysema; pleural diseases; and complex airway conditions, including tracheobronchomalacia (TBM), which attract patients from around the nation and the world. He also helped expand the division's research portfolio to benefit patients with a variety of lung and airway disorders.

In addition, Dr. Majid expanded and enhanced the IP fellowship program, which under his leadership merged with the Massachusetts General Hospital program in 2013. The combined BIDMC-MGH Interventional Pulmonology Fellowship Program is now the largest IP training program in North America.



Vitaliy Poylin, MD, Colon and Rectal Surgery, last fall performed the first completely robotic right colectomy in Boston. Board certified in surgery and in colon and rectal surgery, Dr. Poylin is interested in using this technology to improve outcomes for patients.



Leena Pradhan-Nabzdyk, PhD, MBA, Vascular and Endovascular Surgery, is principal investigator of a research project entitled "Development of Small Molecule Inhibitors of IL-18 to Prevent Intimal Hyperplasia," which is being funded

by a two-year, \$250,000 NIH/NHLBI grant. **Lijun Sun, PhD**, Director of the Center for Drug Discovery and Translational Research in the Department of Surgery, is Co-PI on the grant.

Mark P. Callery, MD, Chief of General Surgery and Professor of Surgery at Harvard Medical School, has been named President-Elect of the Boston Surgical Society — one of the oldest and most prestigious surgical organizations in the country. Dr. Callery, a renowned hepatobiliary and pancreatic surgeon who has authored nearly 200 papers in peer-reviewed journals, will become President in December 2017.

"As president-elect, Mark joins an elite group of luminaries in medicine," says **Elliot Chaikof, MD, PhD**, Chairman of the Department of Surgery. "This is not only an honor for Mark, but it also reflects well on the department and on BIDMC."





Marc Schermerhorn, MD, Chief of Vascular and Endovascular Surgery, chaired the 2016 BIDMC Boston Heart Walk team, which raised a record

\$47,000 to benefit the American Heart Association and the American Stroke Association. More than 200 BIDMC team members walked in the fall event. For the fourth year in a row, BIDMC won the Top Hospital Award, presented to a Boston-area hospital that raises the most money. Funds support AHA/ASA research, education and training programs.



Thirteen Department of Surgery faculty members were named as “Top Doctors” in the December 2016 issue of *Boston Magazine* — and for the first time, one of our surgeons made the cover.

Congratulations to **Jorge Arroyo, MD, MPH**; **Michael Cahalane, MD**; **Elliot Chaikof, MD, PhD**; **Sidhu Gangadharan, MD** (on cover); **Raul Guzman, MD**; **Allen Hamdan, MD**; **Daniel Jones, MD**; **Kamal Khabbaz, MD**; **Mark Kuperwaser, MD**; **Bernard Lee, MD, MPH**; **Abraham Morgentaler, MD**; **Marc Schermerhorn, MD**; **Andrew Wagner, MD**.



Martina Stippler, MD, FAANS, Neurosurgery, recently assumed leadership positions in two leading professional organizations. Dr. Stippler is serving a two-year term as a member-at-large of the Congress of Neurological Surgeons

Executive Committee. She was also recently elected secretary of Women in Neurosurgery.



Michael Yaffe, MD, PhD, Acute Care Surgery, Trauma and Surgical Critical Care; and Surgical Oncology, was recently promoted to the rank of Colonel in the Army Reserve Corps. Dr. Yaffe is currently the Deputy Commander for Clinical

Services for the 399th Combat Support Hospital at Fort Devins, Massachusetts.



Nurhan Torun, MD, Ophthalmology, **Samuel Frank, MD**, Neurology, and **Wasim Malik, PhD**, a colleague at Massachusetts General Hospital, were awarded a 2016 Huntington Disease Society of America HD Human Biology

Fellowship. The award will provide \$75,000 per year, for a two-year period, to support their collaborative research project, “Oculomotor Assessment as a Potential Biomarker for Huntington’s Disease.”

In addition, Dr. Torun was accepted into the Academy at Harvard Medical School in August. Academy members are selected from applicants who are faculty at Harvard Medical School or its affiliated teaching hospital. The mission of the Academy is to advance the education of physicians and scientists throughout Harvard Medical School by creating and supporting a community of leaders in education and a culture of excellence in teaching and learning.



Four nurses on the Farr 10 Inpatient Transplant Unit hold leadership positions in the International Transplant Nurse Society New England. Pictured left to right are **Carol Zazula, RN** (President), **Susan Chadwick, RN** (Vice president), **Caroline Ramos, RN** (Secretary). Not pictured: **Holly Bailey-Toole, RN** (Treasurer). Their two-year terms end in spring of 2017.

In addition, last fall Ms. Ramos received the Latino/Hispanic Achievement award, which honors BIDMC staff who have made significant contributions to advancing care for the Latino/Hispanic community.



Staff of BIDMC's Brain Aneurysm Institute and former patients hosted an educational booth in the Rosenberg Clinical Center to raise awareness and gain support for the Arterial Challenge, which took place on Sunday April 9 at Fenway Park. Staffing the table were (from left): **Deidre Buckley, NP**, Clinical Program Director, Brain Aneurysm Institute; brain aneurysm survivors Heather Fiore, Liz Jesionek, and Jim Fitzpatrick; **Emer O'Shea, RN**, a neurosurgery nurse on Farr 11; **Rebecca Tshonas**, Administrative Coordinator, Brain Aneurysm Institute; and **Abdul Alturki, MD**, Neurosurgery Fellow.

Following an onsite review, in November the BIDMC Trauma Center was re-verified as a Level 1 Trauma Center by the American College of Surgeons Verification Review Committee. This achievement recognizes the BIDMC trauma center's ability to provide the entire spectrum of care — from the prehospital phase through rehabilitation — to provide optimal care for all injured patients.



Martina Stippler, MD, FAANS, Neurosurgery, is directing a new program, Brain Builders, to aid the recovery of patients with traumatic brain injury. Traditionally cognitive stimulation and therapy are delayed until a patient with TBI is discharged to a rehabilitation center. But recent studies have shown that creating an enriching environment during the initial hospitalization, to challenge and stimulate the patient, can help prevent healthy areas of the brain from deteriorating and speed recovery.



Brain Builders volunteers typically work with patients to read stories, solve puzzles, play music, or engage in simple conversation. Activities are personalized for each patient based on their Glasgow Coma Scale and other medical information. The program was initially coordinated by **Emily Cambrola**, but is now being managed by **Patricia Baum**, Neurosurgery.

For more information about the program, or to refer a patient, contact Patricia Baum at pbaum@bidmc.harvard.edu or Martina Stippler at mstippler@bidmc.harvard.edu.



Inside Surgery received a 2016 Health & Wellness Design Award from **Graphic Design USA**.

GDUSA
GRAPHIC DESIGN USA



Research funding in the Department of Surgery totaled nearly **\$27 million** in 2016. Department faculty received close to **\$15 million** in NIH funding, as well as additional funding from the U.S. Department of Defense and support from major philanthropic organizations, such as the Gates Foundation. This level of research funding places the department among the top five academic Departments of Surgery in the nation.



The Department of Surgery sponsored the American College of Surgeons 9th Annual Accredited Education Institutes postgraduate course, “Perfect Practice Makes Perfect.” The two-day program took place at the BIDMC Carl J. Shapiro Simulation and Skills Center, the first simulation center in the nation to receive ACS accreditation as a Level 1 facility for simulation-based skills training.

Surgeons and physicians from more than 100 other medical centers participated in the course. During the first day, they attended lectures from faculty on topics such as how to use simulations to improve debriefing techniques, the role of simulations in robotic surgery, and the use of simulations for OR team training. On the second day, participants practiced their skills in a series of interactive workshops held inside the Shapiro Center.

Daniel B. Jones, MD, MS, FACS, Vice Chair, Technology & Innovation, and Chief of Minimally

Invasive Surgery in the Department of Surgery, led the course. Other Surgery course faculty were: **Elliot Chaikof, MD, PhD**, Chairman of the Department of Surgery; **Michael J. Cahalane, MD, FACS**, and **Alok Gupta, MD**, Acute Care Surgery, Trauma, and Critical Care; **Tara S. Kent, MD, MS, FACS**, Vice Chair for Education in the Department of Surgery; **A. James Moser, MD, FACS**, Co-Director of the Pancreas and Liver Institute; **Jaisa Olasky, MD, FACS**, Minimally Invasive General Surgery, Mount Auburn Hospital; **Andrew (Drew) Wagner, MD**, Director of Minimally Invasive Urologic Surgery; and **Emilie Fitzpatrick, MD**, and **Brian Nguyen, MD**, Minimally Invasive Surgery Fellows.

Other BIDMC faculty were Christopher Awtrey, MD, Obstetrics and Gynecology; Cullen Jackson, PhD, Stephanie Jones, MD, and John Pawlowski, MD, PhD, Anesthesia, Critical Care and Pain Medicine; and Richard M. Schwartzstein, MD, Pulmonary and Critical Care Medicine.



BIDMC opened a new cardiovascular hybrid operating room in the fall that combines advanced medical imaging technology and a state-of-the-art surgical environment. **Marc Schermerhorn, MD**, Chief of Vascular and Endovascular Surgery, says that the new hybrid OR enhances patient care. “Vascular surgeons now have an optimal environment to perform more complex endovascular surgery, guided by image fusion technology that allows us to overlay 3D data from a CTA,” he says, facilitating procedures such as endovascular repair of aortic aneurysms. **Kamal Khabbaz, MD**, Chief of Cardiac Surgery, notes that the hybrid OR will also foster growth of the transcatheter aortic valve replacement (TAVR) program.



Enhancing Treatment for Patients with Breast Cancer

Ted James, MD, MS, FACS, Chief of Breast Surgical Oncology in the Department of Surgery and Co-Director, of the BreastCare Center.

Last summer, 62-year-old Dianne Dyslin fulfilled a lifelong dream to visit Mongolia. Currently associate director of stewardship in the Advancement Department at Clark University, Ms. Dyslin had accumulated plenty of frequent flier miles in recent years, which helped make the trip possible. She spent two weeks touring the country, and enjoyed brief layovers in Hong Kong and Beijing before returning home. Life seemed good. Then a routine mammogram in September turned it upside down.

The mammogram revealed a suspicious mass, which led to more tests — 3D mammography, an ultrasound, a core needle biopsy — at a hospital in Worcester. The initial diagnosis was stage 1 invasive ductal carcinoma, but further imaging tests placed it at stage 2. A follow-up MRI with contrast revealed the tumor was larger than originally suspected, however, and the cancer was probably stage 3.

Ms. Dyslin was reeling. “I couldn’t understand how this was happening,” she says. Although she scheduled surgery in Worcester, she decided to seek a second opinion about her treatment options. A Clark colleague referred her to the Joseph M. and Thelma Linsey BreastCare Center at BIDMC. Over a two-day period, she met with a multidisciplinary team who listened to her concerns — not only about treatment,

but about quality of life afterward.

“The BIDMC team was truly exceptional, and I knew I had landed in the right place,” Ms. Dyslin says. “I decided to go with them.”

Enhancing patient-centered care

“Getting diagnosed with breast cancer is incredibly stressful,” says Ted James, MD, MS, FACS, Chief of Breast Surgical Oncology in the Department of Surgery and Co-Director (with Tejas Mehta, MD, MPH, Radiology), of the BreastCare Center. “We want to do everything we can to alleviate some of the pressure.”

Dr. James joined the BreastCare Center last fall, following a national search. “Our program is already known for delivering excellent, compassionate care,” Dr. James says. “We are now enhancing our offerings based on empirical studies and input from patients about their experiences and expectations.”

This commitment to patient-centered care is essential, he says, because it affects clinical outcomes. Research has found a high correlation between the patient experience — defined by factors such as timely diagnosis and treatment and coordination of care — and objectively measured metrics such as infection rates, hospital readmissions, and mortality.

But the research also has gaps. “Our traditional

Dianne Dyslin, shown here at the Clark University commencement in 2015, has been impressed with how patient-centered everyone is at BIDMC.

metrics are important, but they don't provide information about long-term recovery," Dr. James says, "and that is what patients often ask about."

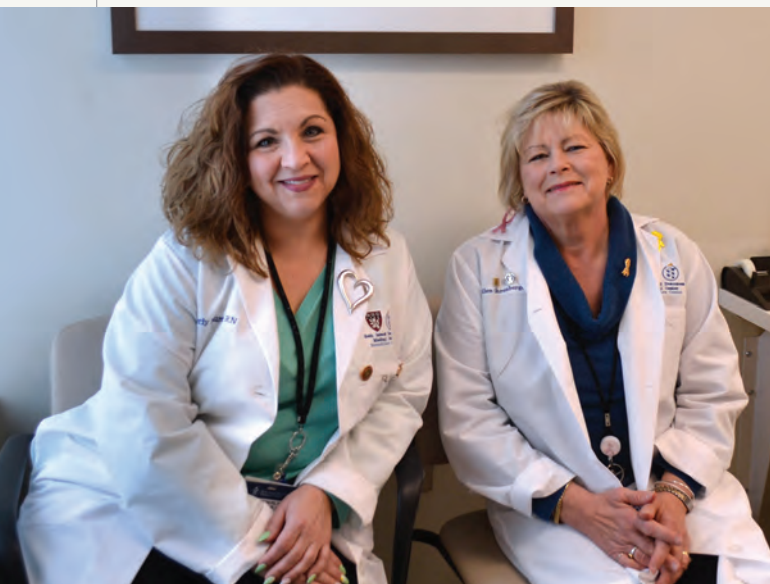
To fill this information void, Dr. James and his team are working with colleagues in Plastic Surgery to enhance an existing BIDMC database that collects information about patients' surgical and medical care, so that it will also include patient-reported outcomes. They are also collaborating to develop better surgical options (see story, [page 18](#)).

"We want to understand quality of life, function, and anxiety, and how these evolve over time," Dr. James says. "Not only will this help us better identify patients who may need assistance, but it will also enable us more accurately to predict what sort of recovery patients will have."

There's a larger goal as well. "In an era of value-based health care," Dr. James says, "patient-reported outcomes will be one of the primary means to define the quality and success of health organizations and physician practices."

Coordinated, compassionate care

Many of the enhancements Dr. James envisions are already underway. Two full-time breast oncology nurse navigators are now on staff to coordinate and facilitate patient care, so that a patient has a single point of contact for coordinating tests and office visits. They also play a key role in patient education.



Nurse navigators Kimberly Maurer, RN (at left), and Ellen Ohrenberger, RN, coordinate and facilitate patient care.

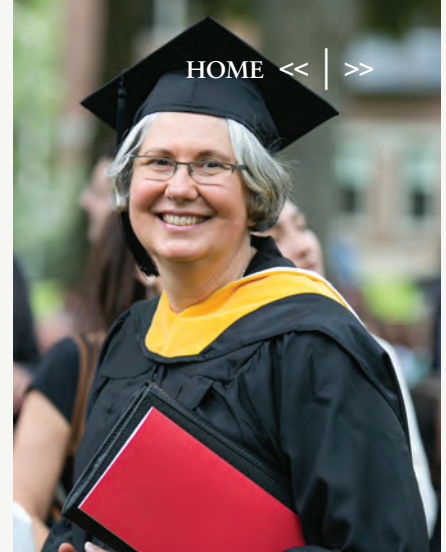
"Often I will sit with the patient after her initial meeting with a physician, to go over everything again," says nurse navigator **Kimberly Maurer, RN**. "I'm not trying to talk a patient into anything. I just want to make sure she understands her options."

A Patient Experience in Breast Cancer Committee is also in place, to find ways to solicit and respond to patient input on an ongoing basis. The committee has already conducted a patient focus group, and is working with patient representatives on streamlining care processes. In the near future, Dr. James plans to offer shared decision-making resources, such as tablet-based educational programs, to support patients in making difficult choices.

And those choices are often difficult, as Ms. Dyslin's experience illustrates. When she first contacted the BreastCare Center, Ms. Dyslin spoke with Ms. Maurer, who listened closely to her concerns. In addition to wanting the best surgical care, Ms. Dyslin was worried about developing lymphedema, because she had several risk factors. Moreover, a good friend had suffered from lower limb lymphedema following surgery for reproductive cancer. "I wanted to avoid that outcome, if at all possible," Ms. Dyslin says.

Ms. Maurer arranged multiple appointments over a two-day period. Ms. Dyslin first met with plastic surgeon **Dhruv Singhal, MD**, Director of Lymphatic Surgery (see related story, [page 20](#)). The next day, she attended MultiClinic, a multidisciplinary team meeting that included breast surgeon **Mary Jane Houlihan, MD**, radiation oncologist Abram Recht, MD, medical oncologist Neelam Desai, MD, nurse practitioner Ryan Sullivan, APN, NP, and oncology social worker **Barbara Clivio, PhD**.

Ms. Dyslin underwent surgery in November. Acting as a team, Dr. Houlihan performed a mastectomy, while Dr. Singhal performed a



"The BIDMC team was truly exceptional, and I knew I had landed in the right place."

Dianne Dyslin

lymphovenous bypass. Ms. Dyslin needed only over-the-counter pain relief for a week after surgery. “The way Dr. Houlihan made the incision has truly been a godsend,” Ms. Dyslin says, “not only from a cosmetic standpoint, but because it has allowed me to regain the mobility in my right arm quickly.” She also credits anesthesiologist Fred Shapiro, MD, for asking whether she suffered from motion sickness — which can increase the chances of nausea after anesthesia — and adding a medication to

prevent this side effect.

Unfortunately, the final pathology report after surgery indicated the cancer was locally advanced. When Ms. Dyslin met with her BIDMC team in December, she learned that additional tests revealed metastasis in the lower half of her spine. Dr. Desai wanted to share the news in person so she could immediately offer a plan to slow the cancer’s progression. Ms. Dyslin’s medical oncologist in Worcester, now directing her care, concurred with this plan.

“I have been so deeply impressed with how very patient-centered everyone at BIDMC is,” Ms. Dyslin says. “Every single medical professional and staff member I’ve encountered has been an exceptionally good listener and wants to do what is best for me.”

And that is how it should be. “Every woman with breast cancer faces unique challenges,” Dr. James says. “We want each patient to know we’re in this together.”

Enhanced Treatment Options

The BreastCare Center Surgical Team



Ted James, MD,
MS, FACS



Mary Jane
Houlihan, MD



Kari J. Kansal, MD



Ranjna Sharma,
MD, FACS

The BreastCare Center offers patients one-stop access to state-of-the-art medical and surgical care.

MultiClinic

During an initial consult, the patient attends MultiClinic, a multidisciplinary team that includes a breast surgical oncologist, radiation oncologist, medical oncologist, nurse,

social worker, and genetic counselor. All the experts are present in one room to provide the best treatment recommendations.

Tumor board

During Tumor Board review, a patient’s treatment planning and recommendations for care are discussed among a multidisciplinary team of cancer experts. This venue allows for input from the larger breast care team, including discussions about potential clinical trials.

Oncoplastic and reconstructive breast surgery

Oncoplastic breast surgery combines principles of breast cancer surgery and plastic surgery. This approach can expand options for saving the breast in certain patients who otherwise would require a mastectomy. The surgeon first removes the tumor along with enough surrounding tissue to achieve optimal cancer control. The patient next receives a plastic surgery procedure to preserve the cosmetic appearance of the natural breast. Concurrent reshaping of the healthy breast can also be performed, if necessary, to further achieve symmetry.

Oncoplastic techniques now available include:

- Oncoplastic lumpectomy, in which breast tissue is immediately reshaped after tumor excision to maintain the shape and contour of the breast
- Single incision lumpectomy and sentinel node biopsy
- Hidden scar surgery to minimize visible scars

Special reconstructive techniques are also available for patients requiring or choosing to have a mastectomy:

- Skin- and nipple-sparing mastectomy with immediate reconstruction
- Deep inferior epigastric perforator (DIEP) flap reconstruction, using skin, fat and blood vessels from the abdomen to form the new breast
- Alternative flaps for reconstruction, using tissue from the buttock or thigh
- Breast implants (saline or silicone)

➔ **To make a referral to or an appointment with the Breast Care Center, call 617-667-2900**

Using Glycobiology to Stop Inflammation

A new approach to treating sickle cell disease has broader potential

Sickle cell disease, a genetic disorder that affects millions of people worldwide, causes enormous suffering. In healthy people, red blood cells are round and flexible, moving easily through the vascular system. In people with sickle cell disease, red blood cells are rigid and sickle-shaped. They periodically clog blood vessels, resulting in vaso-occlusion, which impedes the flow of blood and causes pain and inflammation. Over time, this may damage tissues and organs, engendering premature death.

Because of the disease, patients with sickle cell are also more at risk of complications after surgery. To prevent perioperative sickle cell-related complications, patients require meticulous clinical care after an operation.

Researchers have long been searching for a way to prevent vaso-occlusion and inflammation in sickle cell disease, with little success. “The traditional view was that the sickle cell itself was the complete source of pathology in this disease,” says Richard Cummings, PhD, Vice Chair of Basic and Translational Research in the Department of Surgery and Director of the [Harvard Medical School Center for Glycoscience](#). For example, the only FDA-approved drug, hydroxyurea, works by reducing the number of sickle cells circulating in the bloodstream.

“Often the simple explanations for things in biology turn out to be wrong,” Dr. Cummings says. “And it turned out it wasn’t the sickle cell itself that was causing problems, it was that it becomes highly adhesive. That is what triggers the inflammation.”

A key target in preventing inflammation is P-selectin, a protein expressed in the endothelial cells that line blood vessel walls. Once activated, P-selectin initiates a multistep process that promotes adhesion of sickle cells, white blood cells (leukocytes), platelets, and other cells to blood vessel walls. Other researchers had tried developing P-selectin inhibitors, but they were clinically ineffective.

As one of the world’s leading experts in

glycobiology, Dr. Cummings understands the potential of using glycans — sugars and other carbohydrates — to develop new therapeutics. More than a decade ago, he and two colleagues, Richard Alvarez and Rodger P. McEver, MD, at the Oklahoma Medical Research Foundation, thought there might be a way to use an understanding of glycan recognition to engineer a better P-selectin inhibitor. They formed a new company, Selexys Pharmaceuticals, that began developing antibodies to prevent activation of P-selectin.

One of the antibodies they developed, SelG1 (crizanlizumab), was evaluated in the SUSTAIN trial, a Phase 2, randomized controlled trial published in the *New England Journal of Medicine* in February. Investigators at 60 sites tested SelG1 against placebo in 198 patients with sickle cell disease. During the year-long study, the antibody reduced the number of painful crises by 43.5 percent. Moreover, patients who received the antibody went without a pain crisis for an average of 4 months, nearly three times longer than those on placebo.

“This work has much broader implications,” says Elliot Chaikof, MD, PhD, Chairman of the Department of Surgery at BIDMC. “The P-selectin pathway contributes to many diseases that involve inflammation and tissue damage, such as blood clots, heart disease, and inflammatory bowel disease.”

Dr. Cummings, Dr. Chaikof, and others are now collaborating in research to determine how to use insights from glycan recognition to develop small molecules that can efficiently target P-selectin to treat many other types of inflammation. This translational research may lead to additional therapeutics.

“Glycobiology can suggest solutions at complete variance with the standard way of thinking,” Dr. Cummings says, “but great science requires risks.” And he intends to keep taking them.



Pioneering Innovative Surgery for Lymphedema

Recent advances in microsurgery and imaging enable surgeons to locate and reroute damaged lymphatic channels (glowing green) to reduce the risk of lymphedema.

Dhruv Singhal, MD, Director of Lymphatic Surgery at BIDMC, has for years participated in lymphedema conferences where the focus has been how to better manage this disease. He wants to reframe the conversation. He says, “Why do patients ever need to develop lymphedema in the first place?”

Recruited to the Division of Plastic and Reconstructive Surgery in the fall of 2016, Dr. Singhal is one of the few physicians in the world pioneering innovative surgery that aims to prevent lymphedema in patients most at risk. He’s also advancing another type of surgery that offers relief to patients with chronic lymphedema.

A challenging condition

In the United States, lymphedema most often occurs after lymph nodes and the vessels that connect them are removed during cancer surgery or damaged by radiation therapy. Lymph fluid accumulates, usually in the arm or leg closest to the site of treatment. This causes an uncomfortable and sometimes painful swelling that may make clothes and shoes feel tight, and impede movement. Although it is usually not life-threatening, lymphedema significantly affects quality of life — and can cause great distress. There is no known cure.

“Most patients with cancer who come to see us for lymphedema treatment feel like they’ve already fought

the battle of their lives,” says **Kathleen Shillue, PT, DPT, OCS**, Clinical Services Manager of Outpatient Rehabilitation Services at BIDMC, “and it’s like they can’t leave it behind.”

Patients with breast cancer are most often affected, but lymphedema can also occur after treatment of ovarian, uterine, prostate, and skin cancers. Although it is hard to predict who will develop lymphedema, risk increases with more extensive dissections of the lymph nodes.

In most cases, lymphedema develops slowly over time, and swelling can range from mild to severe. Until recently, the only management options were compression garments, exercise, and manual lymphatic drainage, a type of massage performed by physical therapists.

Prevention:

Lymphovenous bypass

As the name implies, lymphovenous bypass involves rerouting damaged lymph channels so that lymphatic fluid is able to drain properly. First developed in Italy, the procedure is offered only at a few select hospitals in the United States, including BIDMC.

Dr. Singhal operates in conjunction with a cancer surgeon, so that the patient only goes to the OR once. For example, after a breast surgeon has performed

a lumpectomy or mastectomy and is preparing to perform an axillary dissection to remove lymph nodes, Dr. Singhal injects a fluorescent dye into the patient's arm.

Using a specially designed microscope made for lymphatic surgery, with a filter that can visualize the glowing dye, Dr. Singhal locates the tiny lymph vessels and observes how fluid is flowing through them. If he detects any leaking vessels, he isolates the damaged channels and reroutes them into a vein nearby. After ensuring lymphatic flow is restored, Dr. Singhal steps aside and the breast surgeon completes the original operation.

"It's not 100 percent," Dr. Singhal cautions, "but early data is pointing towards significant reductions in the risk of developing lymphedema. It just makes sense."

Although statistics vary widely — in part because studies use different measurements — approximately 30 percent of women with breast cancer undergoing an axillary lymph node dissection develop lymphedema. With lymphovenous bypass, the risk drops to 5 to 12.5 percent.

Assessment and follow-up are also key. For patients with breast cancer at risk of lymphedema, Ms. Shillue takes measurements of the arm that may be impacted. The traditional method — a tape measure — has been supplanted by more precise tools including bio-impedance spectroscopy, and the use of a perometer. The patient is assessed before treatment, and then at three-to-six month intervals afterwards, depending on risk profile, for two years.

"Our goal is to detect even a slight increase in limb size, before the patient sees it or feels it," Ms. Shillue says. Additional interventions — such as compression or massage — are more effective the earlier they begin.

Treatment:

Vascularized lymph node transfer

For patients with chronic lymphedema who are not getting adequate relief from physical therapy, compression, and exercise, vascularized lymph node transfer now provides another option. During the



Dhruv Singhal, MD, Director of Lymphatic Surgery, looks into a specialized microscope while performing lymphovenous bypass, as Senior Plastic Surgery Resident Brady Sieber, MD, looks on. The screen in the background displays an enlarged image of what Dr. Singhal is looking at (see related image).

procedure, Dr. Singhal and his team remove healthy lymph nodes and vessels (along with blood vessels and some surrounding tissue) from another area of the body and implant them in the extremity affected by lymphedema. The surgeons then connect the blood vessels.

"I've performed this procedure on patients who had lymphedema for four, five, or even six years," Dr. Singhal says, "and within six months of treatment, they had great improvement." Physical therapy is still necessary after surgery, as it improves the flow of lymphatic fluid in the affected area as the body heals.

"Lymphedema is often underestimated and can be a serious complication for some patients undergoing cancer treatment," says **Ted James, MD, MS, FACS**, Chief of Breast Surgical Oncology and Co-Director of the Joseph M. and Thelma Linsey BreastCare Center at BIDMC (see related story, [page 16](#)). "By eliminating this side effect of treatment, we can make patients more comfortable, improve their physical function, and enhance their care experience."



For more information about lymphatic surgery at BIDMC, visit our webpage: bidmc.org/lymphedema

**For appointments or referrals,
call 617-632-7827.**

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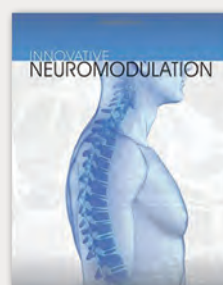
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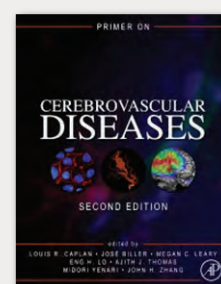
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Horacio Asbun, MD, **Daniel Jones**, MD, Alfons Pomp, MD, Raul Rosenthal, MD. *ACS Multimedia Atlas of Surgery: Bariatric Surgery Volume*. 50 chapters. Published by Ciné-Med, 2017.



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Louis R. Caplan, MD, José Biller, MD, Megan Leary, MD, Eng Lo, PhD, **Ajith Thomas, MD**, Midori Yenari, MD, John Zhang, MD, PhD. *Cerebrovascular Diseases, Second Edition*. 968 pages. Published by Academic Press, 2017.



In many issues of *Inside Surgery*, we focus on the question a member of our faculty “owns” — a question that inspires his or her research.

THE QUESTION I OWN — Kamal R. Khabbaz, MD

Chief of Cardiac Surgery

David S. Ginsburg Associate Professor of Surgery

Four days a week, **Kamal R. Khabbaz, MD**, operates on adult patients with a range of heart conditions, from narrowed coronary arteries and heart failure to leaky heart valves and cardiac rhythm abnormalities. Last year alone, Dr. Khabbaz completed more than 350 heart surgeries among nearly 1,100 performed by the four-surgeon division he has led for the past eight years. Dr. Khabbaz joined the Department of Surgery in 2004.

In the operating room and at patients’ bedsides, Dr. Khabbaz also teaches and mentors residents in the department’s accredited cardiothoracic surgery residency program, as well as general surgery residents and medical students. And once a week, Dr. Khabbaz sees patients in clinic and devotes time to managing the myriad administrative responsibilities of a division that, under his leadership, has become one of the busiest, most respected cardiac surgery programs in the Northeast, with an impressive record of safety and quality.

Even while balancing these and many other responsibilities, Dr. Khabbaz carves out time to pursue his diverse research interests, which focus on improving treatments and outcomes for patients with valvular and other cardiac disorders. For years, he has

been co-principal investigator at BIDMC of the U.S. CoreValve Study, a multicenter national clinical trial conducted in collaboration with BIDMC interventional cardiology colleagues to investigate new transcatheter (minimally invasive) aortic valve replacement options.

Still ongoing, these pivotal studies have expanded the population of patients who can be considered candidates for less invasive replacement of their aortic valves, including those who previously had no treatment options due to their age or co-existing medical conditions. He also is engaged in numerous other clinical trials of cardiac devices.

Valve Research Group

Several years ago, Dr. Khabbaz and BIDMC Director of Cardiac Anesthesia Feroze Mahmood, MD, teamed up to establish the Valve Research Group, an echocardiography and cardiovascular research collaboration. The group now includes BIDMC faculty from surgery, anesthesiology, and medicine, research fellows, medical students, and student interns, and publishes more than 20 scholarly papers a year.

Initially, the team’s collaboration focused on using 3D



transesophageal echocardiography (TEE) to better understand the anatomy and motion of normal and abnormal heart valves, particularly the mitral valve, the least well understood of the heart’s four valves. Previous studies relied on 2D echocardiography, which fails to fully capture the complex anatomy and dynamic behavior of these complex structures. Numerous papers have been published as a result of this work, one of which describes the role of 3D TEE in helping identify patients for whom mitral valve replacement would likely result in better outcomes than repair.

An idea is born

One day in the OR, Dr. Khabbaz was looking at the monitor with the 3D image of his patient’s mitral valve to determine how he was going to proceed with the repair, which requires a great deal of surgical finesse. “Wouldn’t it be great to have the valve in your hands instead?” mused Dr. Mahmood. Indeed it would, thought Dr. Khabbaz — and an idea was born.

Using 3D TEE data from patients, Drs. Khabbaz and

Mahmood and members of the Valve Research Group determined how to use computer-aided design software and 3D printing technologies to create patient-specific, 3D models of mitral and other heart valves. “We were the first to achieve this,” notes Dr. Mahmood.

The ability to create patient-specific, 3D valve models will have many significant potential applications, says Dr. Khabbaz. “The conventional adage in surgical training is, ‘See one, do one, and teach one,’ but with a patient-specific 3D valve model, trainees can practice a procedure in a simulator as many times as it requires to become proficient.”

Experienced cardiac surgeons could also use these valve models to plan and actually perform a repair in advance. “The idea is to do the operation *before* you do the [actual] operation,” says Dr. Khabbaz.

Based on a simulated operation, the surgeon could determine with a higher degree of certainty than is currently possible whether repair — which is almost always the preferred approach — is very likely to be successful or whether replacing the valve would achieve the best outcome. This information would help patients, particularly those who are currently asymptomatic, decide whether to proceed with surgery, which studies now show achieves greater longevity if done early. “It would also be reassuring to patients to know that their surgeon has already practiced the operation on their unique valve before they even go into the OR,” says Dr. Khabbaz.

Another potential benefit of this research is the ability to create patient-specific, customizable valves and valve products, versus the off-the-shelf products now being used. “Each patient is different

so it would be advantageous to customize a valvular product [valve or ring that provides structural support to the valve] that is specific to that patient’s unique anatomy,” says Dr. Khabbaz.

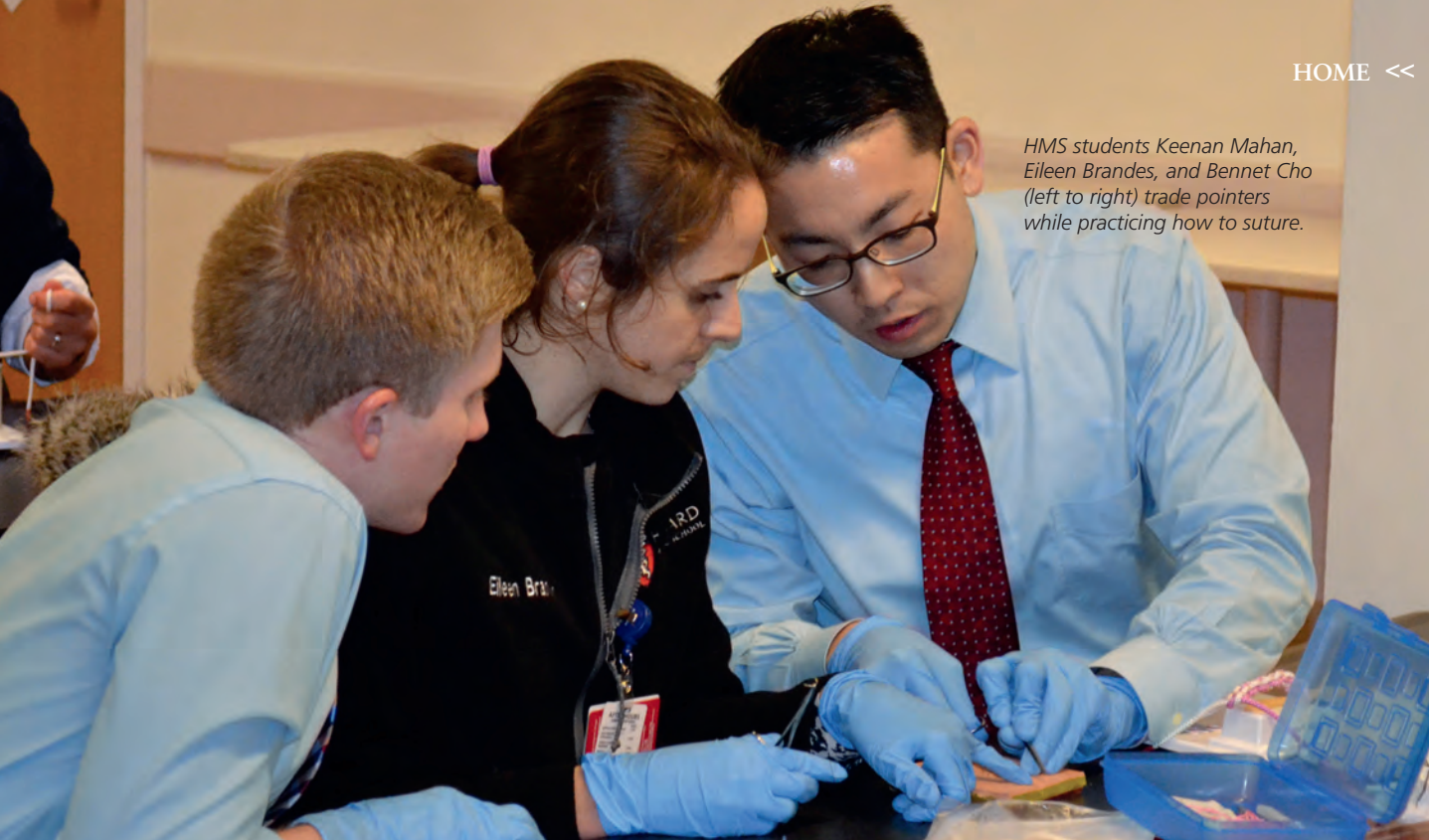
“The idea is to do the operation before you do the [actual] operation.”

Kamal Khabbaz, MD

While this research is in the proof-of-concept phase, Drs. Khabbaz and Mahmood predict it will not be very long before patients routinely go into the OR having had their own “valve” previously operated on, and that someday, off-the-shelf products used to repair and replace valves will be the stuff of history.



These patient-specific, 3D printed mitral valves enable BIDMC cardiac surgeons to practice and refine complicated procedures before an operation.



HMS students Keenan Mahan, Eileen Brandes, and Bennet Cho (left to right) trade pointers while practicing how to suture.

From Classroom to Clinic

The Core Clerkship in Surgery

On a cold morning in January, 24 Harvard Medical Students filed into the [Carl J. Shapiro Simulation and Skills Center](#) at BIDMC to undergo orientation for their Core Clerkship in Surgery. They learned to scrub up to their elbows, maintain a sterile surgical field in the OR, and practice sutures on synthetic skin. The next day, they joined a team of attending surgeons and surgical residents to begin their three-month surgical training.

The point at which learning moves out of the classroom and into the clinic has always marked a significant transition in the life of a medical student. This year marked a turning point for the [Core Clerkship in Surgery](#) as well: Half of the medical students were in their third year at HMS, the final group enrolled in the traditional curriculum; the others were second-

year medical students enrolled in the new Pathways curriculum that launched in September 2015.

This change has coincided with a leadership transition within the Department of Surgery. **Michael Cahalane, MD**, who directed the surgical clerkship for 22 years, decided it was time to retire from the position. He is now spending more time on his clinical practice, which includes acute care surgery, geriatric surgery, hernia repair, gastrointestinal surgery, and general

surgery. **Amy Evenson, MD, MPH**, a transplant surgeon, has taken the helm as the new Director of Undergraduate Education in the Department of Surgery. Dr. Evenson loves teaching; she is also fellowship coordinator for the Transplant Institute and has long been involved in training residents.

But in many other respects, the Core Surgical Clerkship remains the same. The goal is to teach medical students how surgeons make decisions and how to apply these lessons in practice.

Earlier exposure to the clinic

Students at HMS, like those at many other medical schools, have traditionally started their clinical rotations following two years of classroom instruction given in lecture-style format, and very little exposure to patients. Under the new

"We want to help medical students understand that surgeons are not just technicians, but are thinking of the care of the patient as a whole person."

Amy Evenson, MD, MPH

HMS Pathways curriculum, students spend 14 months in small-group sessions, where they are assigned readings and expected to participate in discussions and problem-solving work in groups. The goal is to help students think through complex clinical scenarios and work together to come up with solutions.

“This format sets students up to become better lifetime learners,” says Dr. Evenson. “It’s an approach based on adult learning principles such as active learning and case-based collaborative learning.”

By enabling students to gain clinical experience earlier than before, the new curriculum gives them more time to think about their career plans and the type of research they would like to do. During their clerkship year, HMS students spend three month rotations in both Surgery and Medicine. They also spend six weeks in both Obstetrics/Gynecology and Pediatrics, and one month in Neurology, Radiology, and Psychiatry.

Thinking like a surgeon

“The primary objective of the Core Clerkship in Surgery is to provide a thorough introduction to general surgery, regardless of students’ future career plans,” says **Tara Kent, MD, MS**, Vice Chair of Education in the Department of Surgery.

“We want to help medical students understand surgical decision making and the scope of surgical disease and management,” Dr. Evenson says. “But we also want to demonstrate that surgeons are not just technicians, but are thinking of the care of the patient as a whole person.”

During their surgical clerkship, students are assigned rotations so that their general surgery education is augmented by experience in anesthesia and surgical subspecialties. Students come together for didactic sessions focused on topics in general surgery led by a faculty member who is a specialist in the area under discussion.

A big focus is on collaboration. “Students learn how we decide if an operation will help a patient, and when it is better to seek another option,” Dr. Evenson says. “As surgeons, we work closely with our colleagues in other departments.”

Dr. Cahalane, who helped nearly 1,200 HMS students progress through the surgery clerkship, agrees. “We want to

enable medical students to use what they learned during a surgical rotation to become a better doctor. There is a lot of medicine in surgery, and surgery in medicine.”

Award winning program

The Core Clerkship in Surgery is consistently highly rated by students, who cite the high quality of teaching and the progressive approach to surgical education. In a measure of the clerkship’s success, in 2016 Department of Surgery faculty and staff leading the



Core Clerkship in Surgery leaders who gathered to celebrate an award-winning year in 2016 included (from left) Amy Evenson, MD, Director of Undergraduate Education in the Department of Surgery; Michael Cahalane, MD, former director; Bonnie Gallivan, Medical Education Coordinator; and Richard M. Schwartzstein, MD, Vice President for Education at BIDMC.



Deborah Savage, RN, MSN, Perioperative Educator at BIDMC, coaches HMS student Sophia Meyerson on how to glove-and-gown up properly during orientation for the Core Surgical Clerkship.

clerkship received three major HMS teaching awards.

Dr. Cahalane received the HMS Special Faculty Prize for Sustained Excellence in Teaching, in recognition of his many contributions over the years. **Bonnie Gallivan**, Medical Education Coordinator, received

the L. James Wiczai Award, recognizing innovation and excellence in medical education. And the HMS graduating class selected **Stephen Odom, MD**, Acute Care Surgery, Trauma, and Critical Care, and Associate Director of Undergraduate Education, as the recipient of

the Excellence in Clinical Instruction at BIDMC Award.

“The surgical clerkship can have a lifetime impact on a young physician,” Dr. Evenson says. “We’re committed to providing a meaningful and challenging experience.”

Lifelong Impact



Ariana Metchik (HMS 2017)

Ariana Metchik graduated from the University of California in Los Angeles with a degree in Political Science and French, intending to pursue a career in international law. A stint in the Peace Corps sparked her

interest in medicine. But it was the Core Clerkship in Surgery at BIDMC that confirmed her decision to become a surgeon.

“I love using my hands. I knew I would find the tactile aspects of surgery, and the creative problem solving it involves, appealing,” she says. “But during the clerkship I really came to appreciate how much of a difference you could make in someone’s life.”

The teamwork she witnessed in the OR also inspired her. “It made me appreciate the transformative process of surgery, where someone could go into the OR so ill and come out a totally changed person.”

Ms. Metchik was recently accepted to the General Surgery Residency Program at Georgetown University Hospital — her first choice. “Surgery allows you to form a really special bond with patients,” she says. “It’s one of the biggest rewards of becoming a surgeon. I’m grateful the surgery clerkship let me experience that.”



Mary Tate (HMS/HSPH 2018)

Mary Tate always knew she wanted to become an obstetrician/gynecologist. After becoming more aware of health care disparities as an undergraduate at Dartmouth College, she gained a new

career focus. “I want to pursue both clinical medicine and public health,” she says, “in order to reduce racial and ethnic disparities in birth outcomes.”

But Ms. Tate enjoyed her surgical clerkship at BIDMC so much that she has considered becoming a surgeon. “The surgery clerkship was phenomenal,” she says. “The residents and attending physicians really involved the medical students and made us feel like part of the team, from the very beginning.”

Although she values the technical skills she gained, she says, “What I took away from the clerkship were fundamental principles about how to think as a physician.” By observing surgeons interacting with patients, she also learned how to show care and concern at a difficult time. “I felt the impact of simple gestures, such as an attending surgeon holding a patient’s hand, or taking the time to call a nervous patient the day before major surgery. The surgery clerkship will have a huge impact on how I practice medicine in the future.”

New Faculty



Gabriel Brat, MD, MPH

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

Medical School: Stanford University School of Medicine, Palo Alto, CA

Residency: General Surgery, Johns Hopkins University Hospitals, Baltimore, MD

Fellowship: Surgical Critical Care and Acute Care Surgery, Brigham and Women's Hospital, Boston, MA

Clinical interests: complex abdominal wall reconstruction, advanced laparoscopy, trauma, general and emergency surgery, surgical critical care

Research interests: surgical informatics and digital innovation

Phone: 617-632-9979

Dr. Brat sees patients at BIDMC.



Mihir S. Parikh, MD

Division: Thoracic Surgery/Interventional Pulmonology

Medical School: Mount Sinai School of Medicine, New York, NY

Residency: Internal Medicine, Massachusetts General Hospital, Boston, MA

Fellowship: Pulmonary and Critical Care Medicine, Interventional Pulmonology, University of California–San Francisco, CA

Clinical interests: lung cancer, malignant obstruction of central airways, and endoscopic treatment of COPD and emphysema

Research interests: lung cancer screening and diagnosis, simulation-based education for medical trainees

Phone: 617-632-8252

Dr. Parikh sees patients at BIDMC and BID–Milton



Christopher P. Tveter, DPM, AACFAS

Division: Podiatry

Medical School: Temple University School of Podiatric Medicine, Philadelphia, PA

Residency: Podiatric Surgery, Steward St. Elizabeth's Medical Center, Boston, MA

Clinical interests: reconstructive foot surgery, diabetic foot wounds, heel/forefoot pain

Research interests: forefoot pathology, diabetic foot wounds

Phone: 617-632-8428

Dr. Tveter sees patients at BIDMC and BID–Needham.

→ Find A Doctor

All Department of Surgery faculty are listed on Beth Israel Deaconess Medical Center's Find A Doctor website at findadoc.bidmc.org. There you can search for a surgeon by name, specialty, hospital, and location. Listings include gender, practice locations, educational backgrounds, languages spoken, and clinical interests.

MAKING A DIFFERENCE

Honoring a Legacy While Advancing Regenerative Medicine

In November, Kevin Xu, Founder of the National Rongxiang Xu Foundation, visited BIDMC and Harvard Medical School with Li Li, MD, his mother and Chair of the foundation, and other foundation leaders to celebrate the groundbreaking initiatives that honor his father's legacy and advance his vision for transforming the field of regenerative medicine. A remarkably generous gift from the foundation established the Rongxiang Xu, MD, Professorship of Surgery in the Field of Regenerative Therapeutics at Harvard Medical School, and the Rongxiang Xu, MD, Center for Regenerative Therapeutics at BIDMC.

Both honor the legacy of renowned Chinese physician Rongxiang Xu, MD (1958 – 2015), who graduated from Qingdao Medical College in China and trained as a surgeon. Determined to improve treatment for burn patients, Dr. Xu became an early pioneer in the field of regenerative medicine in China, making important discoveries that saved lives, revolutionized wound treatment, and dramatically improved the quality of life for patients around the world.

During dinner at the Harvard Club of Boston, the Xu family congratulated Aristidis Veves, MD, DSc, on his formal appointment as the inaugural incumbent of the Rongxiang Xu, MD, Professorship in Surgery in the Field of Regenerative Therapeutics. Dr. Xu had a longstanding collaboration with Dr. Veves, an international leader in the field of regenerative therapeutics and wound healing.

During their visit, the Xu family and their guests also toured the Rongxiang Xu, MD, Center for Regenerative Therapeutics, which is directed by Dr. Veves. The center advances research in the field, which is dedicated to finding novel ways to repair, replace, and regenerate damaged tissue — by harnessing the body's own ability to heal itself or by deploying new technologies. The ultimate goal is to improve treatment of patients worldwide with chronic wounds, burns, and other conditions resulting from a failure of tissue repair and regeneration.



At a celebration of the appointment of Aristides Veves, MD, DSc, as the inaugural incumbent of the Rongxiang Xu, MD, Professorship in Surgery in the Field of Regenerative Therapeutics at Harvard Medical School are (left to right): Maria Veves, Dr. Veves, Kevin Xu, Founder of the National Rongxiang Xu Foundation, Elliot Chaikof, MD, PhD, Chairman of the Department of Surgery, and Li Li, MD, Chair of the National Rongxiang Xu Foundation.

As part of that mission, the center hosted its first annual symposium, “The Diabetic Lower Extremity Symposium: From Innovation to Therapy,” led by Dr. Veves, Raul Guzman, MD, Vascular and Endovascular Surgery, and David J. Mooney, PhD, the Wyss Institute at Harvard University. Physicians, scientists, and engineers from institutions around the country attended the symposium, where world-renowned speakers led discussions about topics such as the role of angiogenesis in developing new therapies; new biomaterials and technologies to improve wound healing; and the development of organs-on-chips to model wound pathology and test new therapies. Geoffrey Gurtner, MD, FACS, the Johnson & Johnson Professor of Plastic and Reconstructive Surgery at Stanford University, delivered the Rongxiang Xu, MD, Keynote Lecture, “Chronic Wound Treatment: Transition for Research to Practice.”

“With the National Rongxiang Xu Foundation as our partner, we are positioned to transform the field of regenerative therapeutics,” says Dr. Veves. “We are grateful for the Xu family's generosity and vision.”

Grateful Family Creates Research Fellowship in TBM

Betty-Jo Booth, of McLean Virginia, enjoys staying active. About a year and a half ago, that began to change. “In January 2016 my husband David and I enjoyed a five mile walk while on vacation,” she says. “Two weeks later, back home, I felt out of breath after walking only a few blocks. Any type of exertion, even singing, made me short of breath.”

In March Mrs. Booth went to her primary care physician, who referred her to a specialist. After seeing a cardiologist and pulmonologist, Mrs. Booth was diagnosed with probable asthma. But when treatments provided no relief, and her symptoms worsened, she was referred to an ear nose and throat specialist. He observed that her airway was closing off when she exhaled, but did not know why. Mrs. Booth returned to her pulmonologist, who asked a colleague, Amit “Bobby” Mahajan, MD, to consult on the case.

As it happens, Dr. Mahajan had completed a fellowship in Interventional Pulmonology at BIDMC in 2014. He recognized the problem right away. “You have tracheobronchomalacia,” he told her. “We can’t treat it, so I’m going to refer you to the world experts in Boston.”

BIDMC’s [Chest Disease Center](#) is recognized as an international leader in treating tracheobronchomalacia (TBM), a condition in which the walls of the trachea and bronchi — the central airways — weaken so much that the windpipe collapses when people breathe. Sidhu Gangadharan, MD, Chief of the Division of Thoracic Surgery and Interventional Pulmonology at BIDMC, and Adnan Majid, MD, Chief of Interventional Pulmonology, have pioneered innovations in care and diagnosis that make a dramatic difference in the lives of patients with TBM.

As Mrs. Booth’s story illustrates, TBM is often misdiagnosed because its symptoms can mimic other respiratory conditions. She is very grateful that Dr. Mahajan was able to diagnose the problem early on. In late August, she underwent an operation at BIDMC to repair her airway. Dr Gangadharan performed a tracheobronchoplasty, a procedure in which sections of mesh are sutured at multiple points on the outside of the floppy airway to stabilize it.

The Booths spent the first month after the operation in Boston, so that Mrs. Booth’s recovery could be monitored. “I have such confidence in the surgeons and other clinicians at BIDMC because they know this disease,” she says. “In three weeks, I went from stopping after 12 or 15 steps to catch my breath to walking 6 or 7 miles a day. It was like someone opened up a highway in my lungs. It was unbelievable.”

Now back home, she has resumed most of her usual activities. Determined to help improve the situation for others with TBM, Betty-Jo and David Booth are funding The Booth Family Research Fellow, under the direction of Dr. Gangadharan. The fellowship will support research to uncover what causes TBM, better identify those at risk, and improve diagnosis and treatment.

“I have my life back,” Mrs. Booth says, “and we are so grateful for the incredible care I received at BIDMC.”

“The unknowns of this disease process are still very numerous,” says Dr. Gangadharan. “The Booth family’s generous gift and their dedication to helping the discovery process is so incredibly important. We are very grateful for their generosity.”



Betty-Jo and David Booth

MAKING A DIFFERENCE

Patient and Family Charitable Organizations Support Pancreatic Cancer Research



The BIDMC Pancreas and Liver Institute received three generous gifts in the fall from charitable organizations founded by patients and families. “These gifts will do much to advance pancreatic cancer research at BIDMC,” says A. James Moser, MD, Co-Director of the Pancreas and Liver

Institute. “We are very grateful to the individuals and families who provide this support.”

On November 17, during a symposium that coincided with World Pancreatic Cancer Day, leaders of the Greg and Cathy Griffith Family Foundation presented Dr. Moser with a check for \$30,000. The Foundation honors the memory of Greg Griffith, who succumbed to pancreatic cancer in 2011. Over the past three years, the Griffith Foundation has donated \$130,000 to BIDMC.

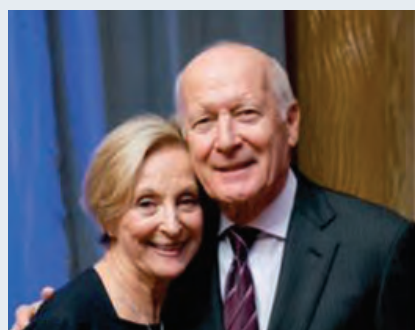


In December, leaders of the Alliance of Families Fighting Pancreatic Cancer (AFFPC), a partnership of grassroots foundations and families across the country determined to improve treatment for pancreatic cancer, presented Dr. Moser with a check for \$115,000. Over the past three years, the AFFPC has graciously donated over \$420,000 to BIDMC.

The John F. Fortney Pancreatic Cancer Research Group provided a check for \$35,000 – reaching a total of \$98,000 in donations over the past three years.

These generous gifts will advance pancreatic cancer research at BIDMC, by supporting initiatives such as Project Survival, which uses tissue donated by patients to find biomarkers that will enable earlier and more precise diagnosis, and guide the development of better treatments.

Generous Gift Launches Endowed Fellowship in Minimally Invasive Urologic Surgery



Esta and Robert Epstein

In response to outstanding care from Andrew Wagner, MD, Director of Minimally Invasive Urologic Surgery, and William DeWolf, MD, Chief of the Division of Urology, Esta and Robert Epstein

generously donated \$1 million as a lead gift to establish and name the Esta and Robert Epstein Fellowship in Minimally Invasive Urologic Surgery. More than \$500,000 in additional philanthropy from grateful patients and donors has helped launch this endowed fellowship, which will focus on training urological surgeons in advanced techniques for treating urologic cancer.

The Epstein Fellowship supports a one- or two-year experience after urologic residency that not only encompasses focused training in minimally invasive and

robotic surgery, but also provides an opportunity for the fellow to develop their skills as an educator by teaching residents and medical students, as well as the ability to conduct vital research and innovate in the field.

“The fellowship ensures that BIDMC can develop the next generation of surgeons who lead the field,” Dr. DeWolf says. “We are very grateful to the patients who supported this fellowship because they are enabling us to provide great care to patients beyond Boston.”

IN MEMORIAM: George L. Blackburn, MD, PhD

The Department of Surgery mourns the loss of George Blackburn, MD, PhD, who passed away on February 20 at age 81.

Dr. Blackburn was a member of the Department of Surgery for 45 years, beginning his career at the New England Deaconess Hospital. Since 1998, he held the S. Daniel Abraham Professorship in Nutrition at Harvard Medical School, served as the Director of the [Center for the Study of Nutrition Medicine](#) at BIDMC, and as the Director of the [Feihe Nutrition Laboratory](#) in the Department of Surgery.

Dr. Blackburn is survived by his wife, Susan Kelly Blackburn, MD, Gastroenterology, and their daughter, Vali Blackburn Udin. He is also survived by his first wife, Dona L. Seacat and their three children, David, Amy, and Matthew Blackburn, 10 grandchildren, and one great-grandchild.

Born in McPherson, Kansas, Dr. Blackburn earned his medical degree from the University of Kansas, graduating Alpha Omega Alpha. He completed his surgical residency on the Harvard (Fifth) Surgical Service at Boston City Hospital, and served as a research fellow in the Sears Surgical Laboratory. He received his PhD in Nutritional Biochemistry from MIT.

In the 1970s, together with his collaborator Bruce Bistrian, MD, PhD, Chief of Clinical Nutrition at BIDMC, Dr. Blackburn was among the first to recognize that many of hospitalized surgical patients suffered from moderate to

severe malnutrition. To address these challenges, Dr. Blackburn pioneered the development of intravenous hyperalimentation formulations, introduced novel formulations containing branch chain amino acids, and established the first multidisciplinary Nutrition Support Service in the United States for the safe delivery of total parenteral nutrition.

Dr. Blackburn and colleagues also recognized that poor nutrition contributed to a growing epidemic of obesity. He was among the first to perform a Roux-en-Y gastric bypass in New England and would later develop the first evidence-based guidelines for weight loss surgery, catalyzing the formation of accreditation bodies and standards for certification of weight loss surgery centers and providers. More recently, Dr. Blackburn highlighted a novel link between diet and cancer, demonstrating that reducing dietary fat intake improves disease-free survival among breast cancer patients.

Dr. Blackburn authored more than 400 original peer reviewed research publications, including 44 publications as part of the Look AHEAD study, a multicenter, randomized controlled trial designed to determine whether intentional weight loss reduces cardiovascular morbidity and mortality in overweight individuals with type 2 diabetes. He edited nine books and wrote numerous professional educational materials, guidelines and reports. A true visionary and



innovator, he made many seminal contributions to the fields of surgery, metabolism, nutrition, and obesity that have positively affected the lives, health, and well-being of thousands of patients.

Recognized and honored by numerous medical societies and universities, he also held editorial board positions on prestigious journals, and led many societies and organizations. Dr. Blackburn was unparalleled as a mentor, training and advising more than 100 fellows who now hold important positions through the United States and abroad.

In addition to his extraordinary mentorship activities, for 25 years Dr. Blackburn served as Course Director for the Harvard Medical School Continuing Medical Education International Conference on “Practical Approaches to the Treatment of Obesity.”

“We hope that the Blackburn Surgical Service at BIDMC will continue to reflect the very best of all the ideals and values that Dr. George Blackburn represented — as a compassionate surgeon, imaginative investigator, and dedicated mentor,” says Elliot Chaikof, MD, PhD, Chairman of the Department of Surgery.



Allen Hamdan, MD, Co-Chairman of the Department of Surgery Committee on Social Responsibility and Chairman of the Greater Boston Food Bank Board of Advisors, spoke passionately at the event about his longstanding commitment to helping feed hungry families.

[< Continued from page 3](#)

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