NOVEMBER / DECEMBER 2011

Volume 1, No. 2

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The table of contents, web addresses, and e-mail addresses in this newsletter are interactive.

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

INSIDE SURGERY

IN THIS ISSUE

Research Scholarship Honors Douglas Hanto, MD, PhD

Ted Boylan's first encounter with BIDMC was unequivocally positive — 24 years ago, his third child and only daughter, Carolina ("Nina"), was born at the hospital. The Concord resident's recent experiences at the hospital have, unfortunately, been considerably less so. Last year, Nina was diagnosed with advanced liver cancer at BIDMC, and began a long and arduous journey that continues to this day.

Douglas Hanto, MD, PhD, Chief of Transplantation

Following her diagnosis, Nina's only chance at beating her cancer was the surgical removal of a large liver tumor, which **Douglas Hanto, MD, PhD,** Chief of the Division of Transplantation, performed in January 2011. Nina fared very well until, four months later, follow-up tests revealed that the cancer had spread. After three months of chemotherapy this summer, Nina underwent a second operation in late September to remove tumors in her lungs and abdomen.

'A humane surgeon who leads by example'

Throughout this ordeal, Boylan, a retired businessman, says he has been "impressed by Dr. Hanto as a surgeon, a teacher, and a person," adding that "Nina trusts him completely."

In addition to providing superlative clinical care, Boylan says Hanto once spent hours searching for "Bebe," Nina's beloved childhood stuffed bear who had gotten left behind in her room at BIDMC. Thanks to Hanto's tireless efforts, Bebe was discovered two days later, none the worse for wear, at the hospital's laundry service in Somerville. Nina was thrilled. "Dr. Hanto epitomizes the humane, patient-focused surgeon, and he leads his trainees by example," says Boylan.

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Beth Israel Deaconess Medical Center
A teaching hospital of Harvard Medical School

Inside Surgery is published by the Office of the Chairman of the Department of Surgery at Beth Israel Deaconess Medical Center for all the department's faculty, trainees, staff, alumni, and affiliates. Please forward comments, suggestions, and news/calendar items to the editor: Hilary Bennett, Beth Israel Deaconess Medical Center, Department of Surgery, LMOB-9C, 110 Francis St., Boston, MA 02215.

E-mail: hbennett@bidmc.harvard.edu **Tel:** 617-632-9913 **www.bidmc.org/surgery**

New Departmental Leadership Structure

To position the Department of Surgery to meet the challenges of the future, Elliot Chaikof, MD, PhD, department Chairman, announced the creation of a new leadership structure and the promotion of several faculty to senior positions within that structure.

"We are extremely fortunate to have such talent, dedication, and expertise within our own ranks," says Chaikof. "We have an A-list team that will help ensure that the department remains a leader in American surgery going forward." Congratulations to the following faculty on their promotions, each of whom shared some thoughts about their roles and what they hope to accomplish.

Douglas Hanto, MD, PhD

Chief of the Division of Transplant Surgery, was named Associate Chairman of Surgery, Associate Surgeon-in-Chief, and Vice Chair for Faculty Development and Academic Affairs.

"As Associate Chairman, my role is to support the Chairman, the department's strategic initiatives, and the mission of BIDMC so we can align our goals and be the best that we can possibly be. In my faculty development role, I'll be the primary liaison between the department and Harvard Medical School, and provide resources and guidance to both senior and junior faculty so they can achieve their career goals."

Mark Callery, MD

Chief of General Surgery, was named Chair of the Division Chiefs' Council.

"I'll work to build a unified and highly functional advisory council to the Chairman's office. Through this council, our senior leaders will have ample, fair, and respectful opportunities to share their knowledge, wisdom, and perspectives."

Allen Hamdan, MD

Clinical Director of Vascular and Endovascular Surgery, was named Vice Chair for Communications.

"We're one of the leading surgery departments in the country. But to continue to thrive in today's health-care environment we need to tell our story well, often, and in multiple venues. In this role, my goal is to ensure that our many strengths are effectively communicated to all our constituencies."

Daniel Jones, MD

Chief of Minimally Invasive Surgery, was named Vice Chair for Technology and Innovation.

"Our challenge is to step back from the day-to-day clinical and research activities and ask, 'What might we do better in surgery?' and then drill down on the instruments, infrastructure, training, and people to make it happen. I'm exploring many opportunities, and will support faculty to develop new procedures, patent devices, and advance the field to ultimately improve patient care."

Existing members of the leadership team are **Per-Olof Hasselgren, MD, PhD,** Vice Chair for Research; **Scott Johnson, MD,** Vice Chair for Education; and **Richard Whyte, MD, MBA,** who recently joined the department as Vice Chair for Clinical Affairs, Quality, and Safety.

Richard Whyte, MD, MBA, Assumes New Position as Vice Chair of Clinical Affairs, Quality, and Safety

In November, **Richard Whyte, MD, MBA,** joined the department in the newly created position of Vice Chair for Clinical Affairs, Quality, and Safety. He will lead a quality team that was recently expanded to include a Quality Improvement Project Manager and a Surgical Informaticist (see below), which will further strengthen the department's commitment to providing the safest, highest-quality patient care.

Whyte comes to BIDMC from Stanford University, where he was Professor and Associate Chair of the Department of Cardiothoracic Surgery. He attended the University of Pittsburgh, where he obtained his BS degree *magna cum laude* in chemistry. After obtaining his medical degree with numerous honors from the University of Pittsburgh School of Medicine, he did his general surgery residency at Massachusetts General Hospital (MGH).

During his general surgery training, Whyte spent a year as a registrar in thoracic surgery in Liverpool, England, and an additional year as a research fellow at MGH under Warren Zapol, MD. After completing his residency in general surgery in 1990, Whyte did his cardiothoracic surgical training at the University of Michigan, where he remained as an Assistant Professor. In 1997, he moved to Stanford University to become Associate Professor and the Head of the Division of Thoracic Surgery.

At Stanford, Whyte held a number of roles and served on numerous committees. He was promoted to Professor of Cardiothoracic Surgery in 2003 and, in 2006, earned an MBA from the Wharton School of Business at the University of Pennsylvania. In 2008, he became Associate Chair of the Department of Cardiothoracic Surgery, which involved oversight of the quality initiatives and clinical and educational activities of Stanford's cardiothoracic surgical service. He was also Associate Program Director for the country's first integrated cardiothoracic surgical residency program.

Whyte's clinical practice has focused on general thoracic surgery. He is interested in lung transplantation and the surgical management of lung and esophageal tumors. He was one of the first to report on the use of stereotactic radiosurgery for the treatment of lung cancer and he has spoken widely on the multidisciplinary management of the disease.

Whyte has authored or co-authored more than 80 peer-reviewed articles as well as more than 20 book chapters and many other publications. In addition, he has held leadership positions in numerous regional and national surgical societies.

Quality Team Grows

John Z. Tumolo, MBA, recently joined Surgery Administration as Quality Improvement Project Manager. With broad experience in the health-care sector; a master's in both Business Administration and Public Health with a focus on health care; and diverse project management, process-improvement, and analytical skills, Tumolo brings a wealth of relevant experience to this position. Before joining the department, Tumolo was a Senior Performance Analyst for Partners HealthCare System, where he oversaw quality and performance management and performance initiatives.

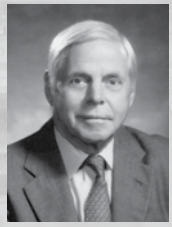
Varun Ramprasad, MS, joined Surgery Administration as Surgical Informaticist. Ramprasad is responsible for the design, development, and maintenance of a department performance database and dashboard to support clinical operations, research, and quality improvement. He is also a liaison between the department and BIDMC Decision Support to facilitate the use of data for departmental activities.

Ramprasad has a master's in both medical informatics and public health sciences. Prior to joining the department, he was Quality Informatics Specialist at Penn State Hershey Medical Center.

In Memoriam

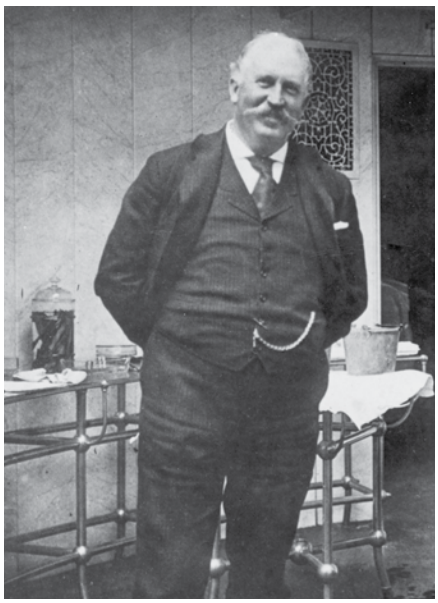
We are sad to announce the recent passing of several luminaries of the Department of Surgery, whose pioneering contributions to the field of surgery are recognized internationally.

Fritz Heinz Bach, MD, *Emeritus* Professor of Surgery at Harvard Medical School and longstanding member of the Department of Surgery, the Division of Transplantation, and the Transplant Institute at Beth Israel Deaconess Medical Center, passed away in August after a long illness. He was 77.



Frank Henry Ellis Jr., MD, PhD, *Emeritus* Professor of Surgery at Harvard Medical School and longtime chief of the Division of Thoracic and Cardiovascular Surgery at New England Deaconess Hospital, passed away in September at the age of 91.

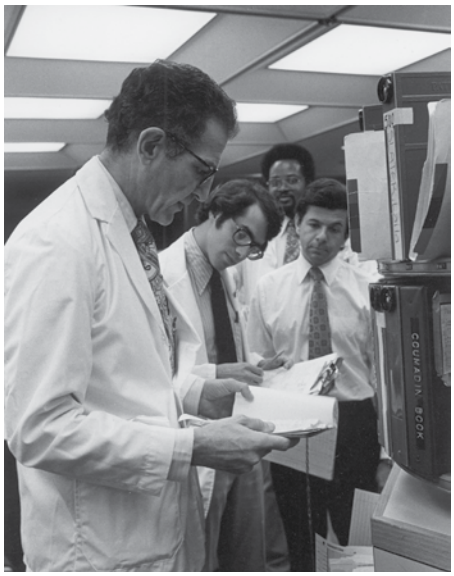
Edwin W. Salzman, MD, *Emeritus* Professor of Surgery at Harvard Medical School and former Associate Chief of Surgery at Beth Israel Hospital, passed away in October at age 82.



Maurice Howe Richardson, MD (1851-1912), the first surgeon of New England Deaconess Hospital, ca. 1900. Richardson, known in medical circles as the "Jolly Giant," often liked to entertain staff and patients by playing tunes on the hospital piano.

Looking Back

In this and many future issues of *Inside Surgery*, we will publish photographs from the medical center's archives, which provide a fascinating glimpse of the long, proud history of Beth Israel Hospital and New England Deaconess Hospital. (*Photos courtesy of the Ruth and David Freiman Archives at Beth Israel Deaconess Medical Center.)*



William Silen, MD (left), Surgeon-in-Chief of Beth Israel Hospital from 1966-1994. Silen, Emeritus Professor of Surgery at Harvard Medical School (HMS), is still actively engaged in teaching HMS students.

In this and many future issues of *Inside Surgery,* we focus on the question a member of our department "owns" — a question that motivates the individual and inspires his or her work.

THE QUESTION I OWN — Wolfgang G. Junger, PhD

It's the bane of trauma surgeons everywhere: patients who they've helped survive the most devastating traumatic injuries — burns, gunshots, falls, or major car accidents — who succumb within a week from rampant infection or multiple organ failure.

Identifying the complex cascade of events that cause this tragic but all-too-common phenomenon and finding ways to halt it is the life's work of **Wolfgang Junger, PhD,** a laboratory scientist in the Department of Surgery's Research Division. Junger's discoveries, which are regularly published in high-profile publications like *Science* and *Nature,* could lead to more effective treatments not only for victims of trauma, but someday also for many other patients.

Neutrophils: 'Good guys' gone bad

Junger, a native Austrian, spends most of his time studying neutrophils and other cells of the immune system. Normally, neutrophils are "good guys" that rally forth to fight infection. But in trauma patients, inflammation causes neutrophils to become excessively activated, transforming them into "bad guys" who ruthlessly attack the body's tissues and organs. "The lungs of trauma patients can be completely destroyed by neutrophils," says Junger.

As a postdoctoral fellow doing trauma research at the University of California at San Diego, Junger discovered "quite by coincidence" that hypertonic saline solution can block neutrophils and, at the same time, upregulate infection-fighting T cells. Unknown to Junger at the time, many surgeons were injecting this super-salty fluid into trauma victims in the field to rapidly raise their blood pressure and resuscitate them. While this often worked, no one understood how.

'Solutions to real problems'

Junger, who came to BIDMC in 2007, decided to find out, taking advantage of the opportunity to work in close proximity to clinicians. "That's why I've been working in clinical departments and why I joined BIDMC," says Junger. "I want to do research that is clinically relevant…to find solutions to real problems."

Supported by several ongoing National Institutes of Health RO1 grants and funding from the Department of Defense, the U.S. Navy, and NATO, Junger has devoted years to understanding the molecular and cellular mechanisms by which hypertonic saline influences immune cells.

Discoveries from the laboratory of Wolfgang Junger, PhD, may benefit trauma patients and people suffering from chronic or acute inflammatory conditions.

Out of this work came his discovery that hypertonic solutions cause the release of an intra-cellular mediator called ATP — the energy source of cells — from neutrophils into the space outside the cells. He discovered that this, and a complex system that converts ATP to adenosine, can block neutrophils and influence their function, as well as the functions of other cells, including T cells, that are activated by ATP.

An improved resuscitation system

Gaining an understanding of how hypertonic resuscitation fluids work is no mere intellectual exercise. Junger's group and scientists around the world are using this knowledge in research labs and multi-center clinical trials to develop an improved resuscitation system that "harnesses the beneficial effects of hypertonic saline in order to benefit trauma patients," he says.

Despite significant progress in that area, what excites Junger the most these days is that his discoveries about ATP release have revealed "much more general mechanisms regulating the activation of immune cells and their many functions in health and disease," he says. Junger's lab is studying these ATP release systems in the hope that this new knowledge will ultimately benefit anyone whose health is compromised by acute or chronic inflammation, such as people with rheumatoid arthritis and inflammatory bowel disease. In a surprising twist, Junger's recent research may also shed new light on how cancer cells metastasize and spread throughout the body.

Research Notes

Here are some recent highlights of the department's research activities. For a listing of selected faculty publications, books, and book chapters, see page 14.

Daniel Jones, MD, Chief of Minimally Invasive Surgery, reports that the Foundation for Surgical Fellowships awarded funding for two fellows in 2012-2013 for a total of $125,000. It is very rare for any program to receive more than one award, says Jones. He credits **Robert Andrews, MD, Benjamin Schneider, MD, George Blackburn, MD, PhD, Maritza Avendano, and Christine Lynch,** for this achievement.

In September, transplant psychologist **Jim Rodrigue, PhD,** Transplant Surgery, received funding from the Health Resources and Services Administration (HRSA) of the U.S. Department of Health for his research grant application, "Massachusetts Registry of Motor Vehicles: Increasing Donor Registry Enrollment Using Targeted Community Outreach and Online Media Campaigns." This is a community-based collaborative research effort among BIDMC, the New England Organ Bank, and the Massachusetts Registry of Motor Vehicles (RMV).

The $750,000 grant was awarded for two years. Among the primary objectives of this research is to determine the relative effectiveness of a targeted RMV media campaign to increase donor registry enrollment in Massachusetts, which has one of the lowest percentages of licensed drivers who are registered organ donors.

Vascular Surgery Chief **Marc Schermerhorn, MD,** is the national principle investigator of a new post-approval study that will follow patients who have received the U.S. Food and Drug Administration-approved Medtronic Endurant stent graft to treat abdominal aortic aneurysms. The study, coordinated by **Mary Trovato, RN,** will enroll some 178 patients at 25 sites, including BIDMC.

The September 21 issue of the *Journal of the American Medical Association* (JAMA) published a study led by BIDMC Prostate Center Director **Martin Sanda, MD,** Urology, that found that the increasing survivability of early-stage prostate cancer has made health-related quality of life issues an increasingly important aspect of treatment. In particular, sexual function in previously potent men is among the most important factors in satisfaction with treatment. The study, which spanned two years and included nearly 3,000 men nationwide, enables physicians to better predict a man's recovery of sexual function after prostate cancer treatment, making a conversation between doctor and patient an important part of pre-treatment planning. JAMA selected the paper for its weekly press release, which featured a videotaped interview with Sanda.

Save the Date

November 14, 5-6 PM

Event: BIDMC "Surgical Horizons" Seminar: Nanotechnology in Thoracic Surgery, presented by Yolonda Colson, MD, PhD, Department of Surgery, Brigham and Women's Hospital

Location: Simulation and Skills Center, G20 (East Campus), BIDMC

For more information: Molly Jay, mjay@bidmc.harvard.edu; 617-667-8258

November 29, 6:30 PM

Event: By invitation only, dinner in honor of Jeffrey B. Matthews, MD, the 2012 George H. A. Clowes Visiting Professor in Surgical Research, and special tribute to William Silen, MD, former Chief of Surgery at Beth Israel Hospital, with the naming of the Silen Service and the Silen Resident Learning Center

Location: Harvard Faculty Club, 20 Quincy Street, Cambridge

For more information: Kara May, klmay@bidmc.harvard.edu; 617-632-9236

November 30, 8-9 AM

Event: Surgical Grand Rounds: The 2012 George H. Clowes Visiting Professor in Surgical Research, presented by Jeffrey B. Matthews, MD, Dallas B. Phemister Professor of Surgery, The University of Chicago Medical Center

Location: Kennedy Building, G2A (West Campus), BIDMC

For more information: Kara May, klmay@bidmc.harvard.edu; 617-632-9236

December 12, 5-6 PM

Event: BIDMC "Surgical Horizons" Seminar: "Danger" Molecules as Inflammatory Agonists and Biomarkers in Sepsis and SIRS, presented by Carl J. Hauser, MD, Department of Surgery, BIDMC

Location: Simulation and Skills Center, G20 (East Campus), BIDMC

For more information: Molly Jay, mjay@bidmc.harvard.edu; 617-667-8258

ALUMNI SPOTLIGHT

Amy Evenson, MD

Surgeon, Transplant Surgery, BIDMC

Throughout much of her childhood, **Amy Evenson, MD,** dreamed of becoming a veterinarian. But when her high school friend's mother died of cancer, Evenson realized she wanted to help people and decided to become a physician.

After earning her bachelor's degree, *summa cum laude*, from The George Washington University, Evenson attended the University of Maryland School of Medicine, graduating *magna cum laude*. During her fourth year of medical school, Evenson did a one-month rotation at BIDMC in vascular surgery. "I absolutely loved BIDMC, the great team dynamics, and extensive contact with faculty and decided I wanted to return there after graduation and train to become a surgeon," says Evenson.

Excellent training

She was thrilled when, in 2000, she was matched with her top choice — the BIDMC General Surgery Residency Program. For the next seven years, Evenson progressively mastered the knowledge and complex skills needed to become a top-notch general surgeon. During that time, she also did a two-year research fellowship focused on basic research of sepsis and muscle metabolism. "I received excellent technical and research training from an outstanding faculty during my residency," says Evenson.

Inspired, in part, by her mentors, **Douglas Hanto, MD, PhD,** and **Scott Johnson, MD,** Evenson decided to follow in their footsteps and become a transplant surgeon. After graduation, she did a two-year fellowship in transplantation surgery at Northwestern Memorial Hospital in Chicago. As soon as she was able, she returned to Boston and, in 2009, joined the Division of Transplant Surgery at BIDMC.

Transformative effects

Evenson loves her work on many levels. "I enjoy transplant surgery because it's multidisciplinary, technically challenging, and involves caring for the sickest patients," she says. She also finds it rewarding to follow patients for a long time before and following a transplant, and to witness the "transformative" effects of a successful transplantation. "There's an immediate gratification that comes from seeing a kidney transplant patient come off dialysis," she says.

Today, in addition to a busy clinical schedule that entails treating current and former transplant patients and adults with hepatobiliary disorders, Evenson teaches trainees at all levels and serves as director of BIDMC's Transplant Fellowship Program. She also conducts clinical outcomes research focused on decision-making in transplantation — for example, determining which organs should be transplanted into which patients to achieve the best possible outcomes.

> *"I enjoy transplant surgery because it's multidisciplinary, technically challenging, and involves caring for the sickest patients."*
>
> **General Surgery Residency Program alumnus**
> **Amy Evenson, MD**

To acquire the knowledge to do that research more rigorously, Evenson recently started working on a master's degree at the Harvard School of Public Health, a part-time, two-year program that she somehow finds time to fit into her already packed schedule.

But Evenson is not all work and no play. She loves to ski, run, and participate in marathons, including last year's Boston Marathon. And when time allows, she enjoys baking and often brings in homemade chocolate chip cookies to share with her appreciative colleagues.

George L. Blackburn, MD, PhD, with the award he received for presenting the Kenneth W. Warren, MD, Lecture at New England Baptist Hospital.

George Blackburn, MD, PhD, General Surgery/Center for the Study of Nutrition Medicine, presented the Kenneth W. Warren, MD, Lecture at New England Baptist Hospital, on metabolic considerations in the management of surgical patients. Warren (1911-2001), who served as chairman of General Surgery at Lahey Clinic and chief of Surgery at New England Baptist Hospital, was internationally recognized as an authority on diseases of the pancreas, liver, and biliary tract.

Recently, **Blackburn** appeared on WCVB-TV Channel 5 to discuss a new study published in the *Journal of the American Medical Association* about the ability of cholesterol-lowering foods and dietary advice to significantly reduce low density lipoprotein (LDL, or "bad" cholesterol) levels in older adults.

The "Clinical Corner" feature of a recent issue of BIDMC's popular e-newsletter, which has 5,500 subscribers, was authored by **Elliot Chaikof, MD, PhD,** department chairman. Chaikof addressed the questions patients should ask prior to surgery and when they should seek a second opinion. A video interview of Chaikof discussing these topics, as well as a welcome video, can be viewed on the Department of Surgery website.

Robin Dann, RN, Otolaryngology,

was honored as a compassionate caregiver by a patient who made a donation to the Schwartz Center for Compassionate Healthcare in her name.

William Deterling, Surgery

Administration, joined the department as Manager of Professional Revenue Cycle in September. Bill has more than 25 years of professional physician billing and reimbursement experience, including serving as president and CEO of Managed Services, Inc., a firm he founded, and as vice president of Medical Business Systems, a national physician-billing service. Bill is the son of the late Ralph A. Deterling, MD, former president of the New England Society of Vascular Surgery and former president of the International Cardiovascular Society.

For the second time in three years, **Mary Jane Houlihan, MD,** General Surgery/ BreastCare Center, received the Cancer Liaison Physician Outstanding Performance Award from the American College of Surgeon's Commission on Cancer. The award recognizes clinicians who exceed expectations for improving and providing direction to their cancer program.

Daniel Jones, MD, Chief of Minimally Invasive Surgery, accepted an invitation to represent the American Society for Metabolic and Bariatric Surgery (ASMBS) on the Fellowship Council Board. **Benjamin Schneider, MD,** will formally represent BIDMC on the Fellowship Council and transition to MIS/Bariatric Fellowship Program Director this year.

Kamal Khabbaz,MD, Chief of Cardiac Surgery, was recently elected to the prestigious American Association for Thoracic Surgery (AATS). Members are surgeons who have a proven record of distinction within the international cardiothoracic surgical field and have made meritorious contributions to the profession.

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Martin Sanda, MD, Urology, was awarded a Challenge Award of $1 million from the Prostate Cancer Foundation (PCF) to lead a cross-disciplinary team of investigators in his pursuit of new treatments for patients with advanced prostate cancer. The team's research combines nanotechnology and cancer immunology expertise to develop a vaccine to treat prostate cancer by boosting patients' immune systems. The PCF awards support 10 scientific projects nationwide; BIDMC was the only institution to receive funding for two projects (Steven Balk, MD, PhD, Department of Medicine, received the other). Sanda's research team, which is co-led by **Simo Arredouani, PhD,** Surgery Research, includes investigators at two other institutions.

Linda Trainor, RN, BSN, re-launched the quarterly newsletter for bariatric surgery patients, *Weight Loss & Well Being: Making Your Goals Obtainable*. Among the features in every issue will be a patient's success story, a nutrition quiz, and a profile of a staff member. The newsletter will also feature an image of the Weight Loss Surgery Center's "Now I Can" patient quilt (below).

Department Chairman **Elliot Chaikof, MD, PhD,** was this year's spokesman for the Red Cross Day of Remembrance Blood Drive at Fenway Park in honor of the victims of the September 11 attacks. BIDMC has been a sponsor of the drive since it began nine years ago. The drive netted a record-breaking 1,811 units of blood.

Christin Rogers, PharmD, BCPS, FCCP, Transplantation, was elected a Fellow of the American College of Clinical Pharmacy, and was inducted at a ceremony in Pittsburgh in October. Fellowship status, the highest honor the college bestows on its members, recognizes excellence in the practice and science of clinical pharmacy.

BIDMC **Cardiac Surgery** received the highest possible (three stars) rating by *Consumer Reports* magazine (September 2011 issue) for its performance of coronary artery bypass surgery. The ratings, based on 2009-2010 (the most recent) data from the Society of Thoracic Surgeons, were based on overall performance, complications, and other quality measures. BIDMC affiliates Mount Auburn Hospital and Saint Vincent Hospital also received three-star ratings.

Three groups of third-year Harvard Medical School students, including (above, left to right) Yiyin ("Erin") Chen, PhD, Zachary Abramson, DMD, Emir Sandhu, and Taylor Lloyd, were challenged to create the highest free-standing tower using only 20 strands of uncooked spaghetti, a yard each of string and masking tape, and a marshmallow, within 18 minutes. The challenge, led by department Chairman **Elliot Chaikof, MD, PhD,** during his twice-monthly Professor's Hour meeting, emphasizes the importance of innovation and teamwork among surgeons.

Surgical residents **Bidhan Das, MD,** and **Scott Atay, MD,** participated in the highly competitive "Surgical Jeopardy" competition at the American College of Surgery meeting in October, taking second place among 26 teams from surgical residency programs across the country. In a packed exhibition hall and cheered on by faculty members **Tara Kent, MD, Russell Nauta, MD,** and **John Schuler, MD,** Das and Atay exhibited their wide-ranging, in-depth surgical knowledge through multiple rounds. "It was very challenging," says Das, a chief resident, "but lots of fun."

On a Mission to Cape Verde

Michael Kearney, MD, Urology, provides care for a large population of patients from the African nation of Cape Verde in BIDMC's Urology Community Clinic, which he oversees. So when BIDMC medical interpreters at the clinic suggested a missionary trip to Cape Verde, which has just one urologist for its entire population of a half-million people, Kearney leapt at the chance. "Missionary urology was something I'd always wanted to do," says Kearney.

Loaded with donated supplies, last November (2010) Kearney, along with urology residents **David McDermott, MD,** and **Ravi Kacker, MD,** and medical interpreters **Bubacar Balde, Carla Iozza,** and **Luis DaCosta,** headed off to Cape Verde, where they spent 72 hours at a hospital about 40 miles from the capital.

During that brief period of time, the team, which also included an internist from Miriam Hospital in Rhode Island, treated about 90 patients and completed five operations, including the country's first trans-urethral resection of the prostate.

They also shared their expertise with several Cape Verdean physicians, who were eager to learn urologic techniques. In fact, Kearney invited a Cape Verdean general surgeon, **Elsa Leonor Teixeira Semedo, MD,** to come to Boston for six weeks this summer to observe BIDMC surgeons, including: **William DeWolf, MD, Andrew Wagner, MD,** and **Martin Sanda, MD,** Urology; **Deborah Nagle, MD,** Colon and Rectal; **Nicholas Tawa, MD,** Surgical Oncology; **Mary Jane Houlihan, MD,** General Surgery/BreastCare Center; and **Peter Mowschenson, MD,** General/Endocrine Surgery.

Elsa Leonor Teixeira Semedo, MD, a Cape Verde general surgeon, and Michael Kearney, MD, Urology. At Kearney's invitation, Semedo spent six weeks at BIDMC this summer.

The first mission was such a success that **Kearney, McDermott** (who graduated last year), a current urology resident, and several interpreters (**DaCosta, Iozza,** and **Ernestina Damoura-Moreria**), along with BIDMC gastroenterologist **Alphonso Brown, MD,** are heading back to Cape Verde this November (2011) for a full week, and expect to return every year.

Urologist Michael Kearney, MD (holding his young patient), with (left to right): David McDermott, MD, Ravi Kacker, MD, the patient's father, and medical interpreter Bubacar Balde at the Hospital Regional de Santiago Norte in Santa Catarina, Cape Verde.

Sidhu Gangadharan, MD, Named Chief of Thoracic Surgery/Interventional Pulmonology

The newly appointed Chief of the Division of Thoracic Surgery/ Interventional Pulmonology is **Sidhu Gangadharan, MD**, who served as acting chief of the division since 2009. Gangadharan is an Assistant Professor of Surgery at Harvard Medical School, Associate Program Director for the Cardiothoracic Residency Program, and Assistant Program Director for the General Surgery Residency Program.

Gangadharan was responsible for initiating the minimally invasive thoracic surgery program, with an emphasis on video-assisted thoracoscopic lobectomy (VATS) for lung cancer, as well as the development of a complex airway surgery program for patients with benign and malignant tracheal and bronchial disease. In collaboration with Interventional Pulmonology, he developed a nationally recognized center for the evaluation and treatment of tracheobronchomalacia, a condition that leads to airway collapse, breathlessness, and repeated pneumonia or bronchitis.

Gangadharan is an active clinical investigator with research programs focused on the development of innovative techniques for tracheal replacement and the diagnosis and treatment of tracheobronchomalacia, endobronchial ultrasound for staging of non-small cell lung cancer, and the efficacy of CyberKnife for the treatment of lung cancer.

He has published more than 40 peer-reviewed articles, case reports, book chapters, and reviews, and has been an invited lecturer in thoracic surgery and surgical education in national and international forums. In addition, he has taught tracheobronchoplasty surgery as a visiting surgeon at hospitals around the country.

As a Rabkin Fellow in Medical Education, Gangadharan has also been a leader in redefining the surgical curriculum at BIDMC, and has received a number of prestigious teaching awards.

Gangadharan received his AB with honors from Dartmouth College and his MD from Dartmouth Medical School, where he was elected Alpha Omega Alpha. He completed his internship and residency in general surgery and thoracic surgery at Brigham and Women's Hospital, as well as a two-year research fellowship.

New Faculty

In September, **Erik Folch, MD, MSc**, joined the Division of Thoracic Surgery/Interventional Pulmonology. He also has an appointment with the BIDMC Department of Medicine's Division of Pulmonary, Critical Care, and Sleep Medicine.

Folch comes to BIDMC from Baptist Memorial Hospital in Memphis, Tenn. He received his medical degree from Universidad Nacional Autonoma de Mexico, completed his residency at Emory University, and did a fellowship in pulmonary and critical care medicine at Cleveland Clinic. He also earned a master's of science in clinical research from Emory.

Dr. Folch is board-certified in internal medicine, pulmonary disease, and critical care medicine. His primary clinical interests are lung cancer, pleural disease, and thoracic endoscopy. His research interests include the staging of lung cancer, pleurodesis techniques, and advanced thoracic endoscopy.

The CyberKnife: An Innovative, New Treatment for Pancreatic Cancer

Tony DeLorean* had always enjoyed good health, so when, at age 62, he noticed that his skin and eyes were taking on a yellowish hue, he figured it was due to some minor problem. But a CT scan taken at his local hospital revealed otherwise — lurking in DeLorean's abdomen was a suspicious-looking mass.

The doctor referred him to BIDMC, which DeLorean considers his first of many strokes of good luck, where he was diagnosed with pancreatic cancer. "If I hadn't gone to Beth Israel Deaconess, I have no doubt I would not be alive today," says DeLorean, a quality engineer who lives with his wife in a suburb of Boston.

That is no exaggeration. Had he gone elsewhere, the odds that DeLorean would not only be alive two years after diagnosis, but also feeling great, and — remarkably — completely cancer-free, are extremely low.

Some 44,000 people every year in the United States are diagnosed with pancreatic cancer, which has a dismal five-year survival rate of less than five percent. Like 40 to 50 percent of patients at diagnosis, DeLorean's cancer was locally advanced and inoperable. Most patients in this situation live only between eight and 14 months despite treatments that typically include chemotherapy, radiation therapy, or combinations of both.

Anand Mahadevan, MD (left), and Mark Callery, MD, in the BIDMC CyberKnife Center, the first such center in New England.

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*The patient's name was changed to protect his privacy.

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A multidisciplinary team

But DeLorean did not receive standard therapy. Instead, he underwent an innovative, high-tech treatment by a multidisciplinary team at BIDMC that includes **Mark Callery, MD**, chief of the Division of General Surgery, and Anand Mahadevan, MD, of the Department of Radiation Oncology.

The treatment involves a combination of chemotherapy and the CyberKnife®, a state-of-the-art technology that delivers extremely targeted, very high doses of radiation directly to a tumor, sparing most adjacent healthy tissue.

Unlike conventional radiation therapy, which often requires weeks of daily treatments, CyberKnife therapy is often completed within one to five sessions lasting only about 90 minutes. BIDMC's Keith C. Field CyberKnife Center, the first in New England, opened in 2005 and was upgraded to the most advanced technology in 2010.

This novel treatment approach, which was developed and refined at BIDMC, has gained worldwide attention among the medical community for its positive results. These include reduced side effects; dramatically shorter length of treatment; and, in some cases, extending the survival of patients with locally advanced, unresectable (unable to be surgically removed) pancreatic cancer.

"Our collaborative approach to treatment and use of the CyberKnife has enabled us to take an even more aggressive approach to patients whose pancreatic cancer is deemed unresectable at operation," says Callery, an internationally acclaimed pancreatic cancer surgeon who treats hundreds of patients with pancreaticobiliary diseases each year. "Some patients, like Tony DeLorean, have had truly amazing responses to this innovative therapy."

Unprecedented accuracy

Callery first operated on DeLorean in July 2009, but determined that his tumor was impossible to remove because of its size and location close to major blood vessels. After doing a palliative bypass procedure and before closing DeLorean's incision, Callery implanted several "fiducial" seeds around the tumor. These rice-sized slivers of gold serve as coordinates that enable the CyberKnife's sophisticated computer-tracking system to target the patient's tumor with unprecedented accuracy.

With chemotherapy administered under the supervision of medical oncologist Ryan Sullivan, MD, DeLorean's tumor started regressing, which made him a candidate for CyberKnife treatment. "I had almost no side effects from chemo and the CyberKnife treatments were a breeze," says DeLorean, who required just three sessions. Not long after, in January 2010, Callery re-operated on DeLorean and was able, during a nine-hour procedure, to completely remove the tumor.

"Our collaborative approach to treatment and use of the CyberKnife has enabled us to take an even more aggressive approach to patients whose pancreatic cancer is deemed unresectable at operation."

Mark Callery, MD

"At the completion of his treatment, there was no evidence of cancer," says Callery. And periodic follow-up tests continue to show no signs of disease.

DeLorean says that the care he received from everyone at BIDMC was "beyond belief" and "the best of the best." But he reserves special praise for Callery, whom he credits with saving his life. "I'm one lucky man to have had him as my surgeon," he says.

Selected Faculty Publications

Acute Care Surgery

RESEARCH INVESTIGATIONS:

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Cardiac Surgery

RESEARCH INVESTIGATIONS:

Burgess TA, **Robich MP**, Chu LM, Bianchi C, Sellke FW. Improving glucose metabolism with resveratrol in a swine model of metabolic syndrome through alteration of signaling pathways in the liver and skeletal muscle. Arch Surg 2011; 146(5):556-64.

Chu LM, Lassaletta AD, **Robich MP**, Sellke FW. Resveratrol in the prevention and treatment of coronary artery disease. Curr Atheroscler Rep 2011; in press.

Feng J, Liu Y, Chu LM, Clements RT, **Khabbaz KR**, Robich MP, Bianchi C, Sellke FW. Thromboxane-induced contractile response of human coronary arterioles is diminished after cardioplegic arrest. Ann Thorac Surg 2011;92(3):829-36.

Matyal R, Mahmood F, Robich M, Glazer H, **Khabbaz K**, Hess P, Bianchi C, **Hagberg R**, Hu SX, Sellke FW. Chronic type II diabetes mellitus leads to changes in neuropeptide Y receptor expression and distribution in human myocardial tissue. Eur J Pharmacol 2011;665(1-3):19-28.

Colon and Rectal Surgery

RESEARCH INVESTIGATION:

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General Surgery

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REVIEWS, CHAPTERS, MONOGRAPHS, AND EDITORIALS:

Kent TS, Sachs TE, Callery MP, Vollmer Jr CM. Readmission after major pancreatic resection: A necessary evil? J Am Coll Surg 2011;213(4):515-23.

Neurosurgery

RESEARCH INVESTIGATIONS:

Kasper EM, Bartek J Jr, Johnson S, Kasper BS, Pavlakis M, Wong M. Post-transplant aspergillosis and the role of combined neurosurgical and antifungal therapies under belatacept immunosuppression. Surg Neurol Int 2011;2:75.

Shih LC, Vanderhorst V, **Papavassiliou E**, Tarsy D. Sustained dyskinesias following elective cessation and reactivation of chronic subthalamic nucleus deep brain stimulation for a surgical procedure. Neuromodulation 2011; in press.

Plastic and Reconstructive Surgery

RESEARCH INVESTIGATIONS:

Khansa I, Colakoglu S, Tomich DC, Nguyen MD, **Lee BT**. Factor V Leiden associated with flap loss in microsurgical breast reconstruction. Microsurgery 2011;31(5):409-12.

Song YA, Melik R, **Rabie AN, Ibrahim AM**, Moses D, Tan A, Han J, Lin SJ. Electrochemical activation and inhibition of neuromuscular systems through modulation of ion concentrations with ion-selective membranes. Nat Mater 2011, Oct 23 (Epub ahead of print).

Momoh AO, Colakoglu S, de Blacam C, Curtis MS, **Lee BT**. The forked liposuction cannula: A novel approach to the correction of cicatricial contracture deformities in breast reconstruction. Ann Plast Surg 2011; in press.

Podiatry

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Selected Faculty Publications

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Thoracic Surgery

RESEARCH INVESTIGATIONS:

Ernst A, Odell DD, Michaud G, Majid A, Herth FF, **Gangadharan SP**. Central airway stabilization for tracheobronchomalacia improves quality of life in patients with chronic obstructive pulmonary disease. Chest 2011; in press.

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Hanto DW, Veatch RM. Uncontrolled donation after circulatory determination of death (UDCDD) and the definition of death. Am J Transplant 2011;11(7):1351-2.

Monaco AP, Morris PJ. Everolimus and long-term outcomes in renal transplantation: Seeking an optimal strategy for immunosuppression. Transplantation 2011;92(3 Suppl):S1-2.

Otterbein LE, Hedblom A, Harris C, Csizmadia E, Gallo D, Wegiel B. Heme oxygenase-1 and carbon monoxide modulate DNA repair through ataxiatelangiectasia mutated (ATM) protein. Proc Natl Acad Sci USA 2011;108(35):14491-6.

Rodrigue JR, Hanto DW, Curry MP. Patients' willingness to accept expanded criteria donor liver transplantation. Am J Transplant 2011;11(8):1705-11.

Urology

RESEARCH INVESTIGATIONS:

Chang P, Szymanski KM, Dunn RL, Chipman JJ, Litwin MS, Nguyen PL, Sweeney CJ, Cook R, **Wagner AA, DeWolf WC**, Bubley GJ, Funches R, Aronovitz JA, Wei JT, **Sanda MG**. Expanded prostate cancer index composite for clinical practice: Development and validation of a practical health related quality of life instrument for use in the routine clinical care of patients with prostate cancer. J Urol 2011; in press.

Hyams ES, Pierorazio P, Proteek O, Sukumar S, **Wagner AA**, Mechaber JL, Rogers C, Kavoussi L, Allaf M. Latrogenic vascular lesions after minimally invasive partial nephrectomy: A multi-institutional study of clinical and renal functional outcomes. Urology 2011;78(4):820-6.

Vascular and Endovascular Surgery

RESEARCH INVESTIGATIONS:

Caves JM, Cui W, Wen J, Kumar VA, Haller CA, **Chaikof EL**. Elastin-like protein matrix reinforced with collagen microfibers for soft tissue repair. Biomaterials 2011; 32(23):5371-9.

Ejaz A, **LoGerfo FW**, Pradhan L. Diabetic neuropathy and heart failure: Role of neuropeptides. Expert Rev Mol Med 2011;13:e26.

Jordan SW, **Chaikof EL**. Simulated surface-induced thrombin generation in a flow field. Biophys J 2011;101(2):276-86.

Sachs T, Pomposelli F, Hamdan A, Wyers M, Schermerhorn M. Trends in the national outcomes and costs for claudication and limb threatening ischemia: Angioplasty vs bypass graft. J Vasc Surg 2011;54(4):1021-31.

White CJ, Avula SB, Mintz RT, Iskander A, Chervu A, Feldman RL, **Schermerhorn ML**, Woo HH, Hopkins LN. Carotid artery revascularization with distal protection in high surgical risk patients in routine clinical practice: Rationale and design of the CABANA safety surveillance program. Catheter Cardiovasc Interv 2011; in press.

The Bookshelf

A selection of books and book chapters by our faculty

BOOKS

Mark Callery, MD, Editor. *Handbook of Reoperative General Surgery.* Published by Blackwell Publishing, 2006.

Melanie Goldfarb, MD, Mark Gromski, James Hurst, MD, **Daniel Jones, MD,** co-authors. *Pocket Surgery.* Published by Wolters Kluwer/Lippincott Williams & Wilkins, 2011.

Aristidis Veves, MD, DSc, John M. Giurini, DPM, Frank W. LoGerfo, MD, Editors. *The Diabetic Foot,* second edition. Published by Humana Press, 2006 (The third edition is in press and will be published in early 2012).

Leo Otterbein, PhD, Brian S. Zuckerbraun, MD, Editors. *Heme Oxygenase: The Elegant Orchestration of its Products in Medicine.* Published by Nova Publishers, 2006.

BOOK CHAPTERS

John M. Giurini, DPM "Foot Problems in the Diabetic Patient," in *Mastery of Surgery*, sixth edition (to be published in 2011). Josef Fischer, MD, Editor. Published by Lippincott Williams & Wilkins.

Carl J. Hauser, MD, David H. Livingston, MD "Pulmonary Contusion and Flail Chest," in *Current Therapy of Trauma and Surgical Critical Care.* Juan A. Asensio, MD, and Donald D. Trunkey, MD, Editors. Published by W.B. Saunders/Elsevier, 2008.

Philip Basile, DPM, **Barry I. Rosenblum, DPM** "Surgical Management and Stepwise Approach to Diabetic Foot Infections" in *Surgical Reconstruction of the Diabetic Foot and Ankle.* Thomas Zgonis, DPM, Editor. Published by Lippincott Williams & Wilkins, 2009.

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Boylan has been a longtime supporter of the Mount Desert Island Biological Laboratory (MDIBL), where his cousin, Terence Boylan, served as Chairman of the Board of Trustees. MDIBL is a nonprofit marine biology lab on the Maine coast where scientists and students conduct a broad range of biomedical research.

To honor Hanto, Boylan recently made a gift of $50,000 to create the Douglas Hanto Research Scholarship. The scholarship provides five years of funding that allows four second-year surgical residents to attend a weeklong intensive course in comparative physiology at MDIBL. Boylan first learned about the course from BIDMC Chief of Medicine, Mark Zeidel, MD. For several summers, selected medical residents have attended the course and been very enthusiastic about their experience.

Exploring physiology and Maine's coastline

According to Vice Chair for Education **Scott Johnson, MD**, the weeklong course incorporates six modules that explore landmark experiments in comparative physiology, which are expanded on by resident teams. Residents gain experience in dissection, basic science principles, and data analysis, presenting their work to the group at the conclusion of each module. The course also allows time for exploring the Maine coastline, including nearby Acadia National Park, and concludes with a lobster bake.

This year, the surgical residents invited to attend the MDIBL course were chosen because they achieved the highest scores on their ABSITE (American Board of Surgery In-Service Training Exam) test. In ensuing years, at Boylan's request, three of the highest scorers will be invited, along with a "Captain's Choice" selected by Hanto using other criteria that he deems important. Boylan also committed to purchasing fleece jackets with the MDIBL and BIDMC logos for each year's participants.

This summer, the first group of surgical residents **— Prathima Nandivada, MD, Alessandra Mele, MD, KC Collins, MD, and Thomas Curran, MD —** spent the week of August 27 through September 2 at MDIBL.

Wearing their donated fleece jackets are surgical residents (left to right): Thomas Curran, MD, KC Collins, MD, Prathima Nandivada, MD, and Alessandra Mele, MD, with Mark Zeidel, MD (center), BIDMC Chief of Medicine.

"We're so grateful for the opportunity to step back from clinical practice to expand our minds in the lab, share ideas across disciplines, and rejuvenate our passion for improving patients' lives," says Nandivada.

> *"I'm humbled and flattered by this honor and deeply appreciate [Ted Boylan's] gift, which has and will continue to provide an enriching experience for our surgical residents."*
>
> **Douglas Hanto, MD, PhD**