

THIS NEWSLETTER IS INTERACTIVE

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INSIDE SURGERY

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Trial Underway for Patients with Severe Aortic Stenosis

The aortic valve is the workhorse of the heart's four valves, responsible for controlling blood flow from the left ventricle to the aorta, the main vessel through which blood courses to the rest of the body.

When the aortic valve becomes narrowed (stenotic) — which can occur as a result of normal aging — and symptoms like shortness of breath, chest pain, or fainting occur, the prognosis is poor. "Without surgery to replace the faulty valve, most patients with severe, symptomatic aortic stenosis will have a very poor quality of life and die within a few years," says **Kamal Khabbaz, MD**, Chief of [Cardiac Surgery](#).

Surgical aortic valve replacement achieves excellent results overall. But approximately 30 to 40 percent of symptomatic patients, most of whom are older than 75, are not candidates for surgery because they have other health conditions that make a major operation too risky or are simply too frail. "Usually these patients do not even come to the attention of cardiac specialists," says Khabbaz.

A less-invasive approach

Until recently, these patients had very few options. Fortunately that is changing. A *Continued on page 20 >*



Kamal Khabbaz, MD, Chief of Cardiac Surgery (left), and Robert Hagberg, MD, outside the hybrid operating room.

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 the department's faculty, trainees, staff, alumni, affiliates, and friends.

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**Beth Israel Deaconess
Medical Center**



A teaching hospital of
Harvard Medical School

Department of Surgery Alumnus is Clowes Visiting Professor

Jeffrey B. Matthews, MD, this year's Clowes Visiting Professor in Surgical Research, was a familiar face to many in the Department of Surgery. Years before rising to his current position as Chair of the Department of Surgery at the University of Chicago Medical Center and Dallas B. Pheemister Professor of Surgery, Matthews did his surgical residency at Beth Israel Hospital, training under former Beth Israel Surgeon-in-Chief **William Silen, MD**.



Jeffrey B. Matthews, MD, at the dinner held in his honor. At right is an enlarged photo of William Silen, MD (center), and the 1989-1990 surgical chief residents, including Matthews (second from right).

The Clowes Visiting Professorship in Surgical Research, named for the late Deaconess Hospital surgeon and researcher George H. A. Clowes, Jr., MD, was instituted at BIDMC in 1990. Since then, distinguished surgeons like Matthews from institutions across the country have come to BIDMC to share their knowledge and insights during an event-filled, two-day visit.

This year was no different. On November 29, Matthews participated in a Surgery Research Symposium featuring presentations on basic science and clinical topics by trainees in the department, as well as several roundtable discussions with faculty and

residents. That evening, a black-tie dinner in honor of Matthews was held at the Harvard Faculty Club in Cambridge.

A highlight of the dinner was a special tribute to Silen, *Emeritus* Professor of Surgery at Harvard Medical School, who attended with his wife, Ruth, and other members of his family. Department Chairman **Elliot Chaikof, MD, PhD**, announced the naming of the Silen Service on the hospital's East Campus (the former Beth Israel Hospital) and the Silen Resident Learning Center, which will open on the East Campus in 2012.

Matthews and other former Silen trainees gave heartfelt, touching tributes to a man whose dedication, excellence, integrity, and compassion shaped their careers and lives. Former trainees who spoke about Silen were: **Michael Cahalane, MD, Peter Mowschenson, MD, Jonathan Critchlow, MD, Mary Jane Houlihan, MD, and Richard Hodin, MD.**

On Wednesday morning, November 30, Matthews presented Surgical Grand Rounds to a full auditorium on "Truth and Truthiness in Surgery" — a discussion about the critical importance of knowledge-based evidence in surgery and surgery outcomes.



William Silen, MD, and his daughter, Deborah Silen, MD, display the gift presented to him by the Department of Surgery.

Giving Back in Many Ways: Roberta and Stephen R. Weiner

Their names are on Department of Surgery business cards, in large letters in the West Clinical Center lobby, and even etched in limestone on the façade of the Feldberg Building.

Virtually everyone in the Department of Surgery recognizes the names Roberta and Stephen R. Weiner. But few know much about the couple after whom the department was named and who have given generously of their time, expertise, and financial resources to the department and BIDMC for decades.

Roberta and Stephen Weiner are a dynamic, busy couple who divide their time between Boston and Palm Beach, Florida. Both came from modest circumstances — she grew up in Chelsea; he was raised in Lynn. The couple met in their early 20's and married nine months later. Like many young couples just starting out, they struggled to make ends meet.

But through lots of hard work and a dose of good fortune, the Weiners achieved financial success in the real estate investment and development business. S.R. Weiner and Associates, which Stephen Weiner founded, owns or manages millions of square feet of property, including malls, hotels, lifestyle centers, and luxury condominiums in Boston and New England. The Weiners have been happily married for 43 years, and have two grown children — Adam and Melissa (Janfaza), who live locally — and five grandchildren.

Actively involved with BIDMC

Roberta Weiner's relationship with BIDMC reaches back 35-plus years. She began as a volunteer with the Beth Israel Hospital Ladies Group, which helped raise funds for the hospital. Since then she has chaired many successful BIDMC fundraising events in both Boston and Palm Beach, and has served on the Board of Trustees for years.

Stephen Weiner has also been actively involved with BIDMC for decades and is an Overseer *Emeritus*. Even the Weiners' children are committed to BIDMC. Both Melissa, a social worker, and Adam, head of Weiner Ventures, are on the Board of Overseers.

In addition to their time and expertise, the Weiners have made major gifts to BIDMC over the past few decades, including a \$1 million gift to Beth Israel Hospital and, more recently, a \$6 million gift to the



Stephen R. and Roberta Weiner, after whom the Department of Surgery was named.

Department of Surgery. Their support is fueled by their longstanding conviction that BIDMC is a “nurturing place with wonderful doctors who provide excellent care,” says Roberta Weiner.

BIDMC is not the only grateful recipient of the Weiners' philanthropy. They also support and are involved with a long list of other nonprofit organizations dedicated to health, education, and the arts. “We have been very fortunate in our lives,” says Stephen Weiner. “Roberta and I both want to give back and do what we can to help improve the quality of other people's lives.”

The Weiners plan to stay involved with the Department of Surgery and BIDMC and are excited about its new leadership. “Dr. Chaikof is taking the Department of Surgery to a new level,” says Roberta Weiner, “and we're thrilled to be a part of it.”

Jeremy W. Cannon, MD

Lt. Col. U.S. Air Force, Med Corps
General Surgery Residency Program alumnus, 2005

A 22-year-old U.S. Army soldier who was shot and seriously wounded in 2010 in Afghanistan is alive and well today because **Jeremy Cannon, MD**, a Lieutenant Colonel in the U.S. Air Force, believed that soldiers with post-traumatic acute respiratory failure should have access to extracorporeal membranous oxygenation (ECMO) in the combat theater.

ECMO, an advanced technology that takes over the functions of the lungs for days to weeks, had previously been considered too costly and cumbersome to be made available to wounded soldiers in the combat theater. Cannon, who served three tours of duty in Afghanistan and Iraq, wasn't convinced.

He knew, for example, that recent advances had made ECMO safer and more compact, and that it potentially saved lives, even in austere environments. Knowing also that respiratory failure greatly complicated patient transport and was responsible for a significant number of post-resuscitation combat deaths, Cannon felt compelled to act.

Backed by research, Cannon persuaded the top brass that ECMO should be offered to soldiers in combat settings and then set the wheels in motion to make it happen. The 22-year-old soldier, who Cannon treated once the young man arrived stateside, is just one of potentially hundreds of soldiers whose lives will be saved as a result.

'Most significant contribution'

For his role in establishing the first Department of Defense Adult ECMO Program, as well as his exemplary service as Deputy Commander of Clinical Services in Afghanistan, in September the Air Force Association presented Cannon with the 2011 Paul W. Myers Award.

The prestigious award, given to an Air Force Med Corps officer who "made the most significant



Lt. Col. Jeremy Cannon, MD, in a Blackhawk helicopter en route to Bagram Air Base in Afghanistan.

contribution to the continued good health of the men and women of the U.S. Air Force," was presented at a ceremony in Washington, D.C., which was attended by luminaries such as the Secretary of the Air Force.

How Cannon came to be on that stage in September is a tribute to his intelligence, dedication, and leadership. But serendipity also played a role. Cannon attended the U.S. Air Force Academy intending to become a pilot. "But I soon realized it wasn't like 'Top Gun' and I found it hard to get excited about ground school," says Cannon, so he majored in biochemistry. One day he had an opportunity to observe a surgical operation, and got hooked. "I knew then I wanted to become a surgeon," he says.

After graduating from Harvard Medical School, Cannon was accepted to the BIDMC General Surgery Residency Program. He made an indelible mark on his mentors, who remember him fondly, and they made an equally lasting impression on him. "Even now, I can still hear Dr. [Jonathan] Critchlow's voice in my head telling me how to throw each stitch," he quips.

During his residency, Cannon earned a master's of science in mechanical engineering from Massachusetts Institute of Technology and, following graduation, completed a one-year clinical fellowship in surgical critical care at Children's Hospital Boston.

"I'm very fortunate to have trained at BIDMC, where I had fantastic mentors and a broad experience with many high-risk, high-acuity patients," says Cannon. "When I went into combat, I felt so well-trained that I was able to walk into the OR without fear and get to work."

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Living in 'dog years'

Today, Cannon is at San Antonio Military Medical Center (SAMCC) in Texas, where he is Medical Director of the Trauma Intensive Care Unit, Program Director of the Trauma/Critical Care Fellowship Program, and Medical Director of the new Adult ECMO Program. He also conducts trauma research. He is married to an internist, Jane Cannon, MD, who also trained at BIDMC, and has two sons, ages 7 and 9. "I feel like I've been living in dog years the past five-plus years; the pace has been pretty fast and furious," he says.

In three years, after Cannon finishes paying back his nine-year commitment to the Air Force (which paid his Air Force Academy and medical school tuitions), he would like to continue as a trauma surgeon, but in an academic medical center — perhaps even returning to Boston. "I had some of the best experiences of my life there," he says, "and would love to come back some day."



Lt. Col. Jeremy Cannon, MD (second from left), after receiving the 2011 Paul W. Myers Award. At the ceremony were (left to right): S. Sanford Schlitt, Chairman of the Board, Air Force Association; Gen. Edward A. Rice Jr., Commander, Air Education and Training Command; and Lt. Gen. Charles B. Green, MD, Surgeon General of the Air Force. In attendance were Michael B. Donley, Secretary of the Air Force, and Gen. Norton A. Schwartz, Chief of Staff of the Air Force.



OR 1 in the "Balad Tent Hospital," 332nd Air Force Theater Hospital, Balad Air Base, in Iraq. (Photo by J. Cannon)



BreastCare Center Receives NAPBC Accreditation

BIDMC's BreastCare Center has received full three-year accreditation by the National Accreditation Program for Breast Centers (NAPBC). To date, it is the only breast center in an academic medical center in Boston to achieve this elite status, says **Michael Wertheimer, MD**, Director of the BreastCare Center and Chief of Breast Surgery.

NAPBC is a consortium of national professional organizations launched in 2008 to improve the quality of care for patients with breast diseases. According to Wertheimer, the accreditation process required "opening all aspects of the BreastCare Center to critical, rigorous internal and external review and comparing them to ideal national standards."

Full accreditation by the NAPBC — a part of the Commission on Cancer of the American College of Surgeons — requires that a breast center provide 17 program components and meet 27 exacting standards that collectively provide the most efficient, contemporary, multidisciplinary care for patients with diseases of the breast.

'A national leader'

The standards — which span areas from a center's leadership to its research, clinical management, professional education, quality improvement, and more — were established by the NAPBC's multidisciplinary board, which is composed of experts representing

the disciplines that work together to diagnose and treat breast diseases.

"We met or exceeded 100 percent of the standards for accreditation," says Wertheimer. "This demonstrates that our BreastCare Center is a national leader in providing outstanding, multidisciplinary care for patients."

The currently voluntary accreditation process, which included a November 17 site visit, required months of preparation and involved staff from many areas: general surgery, medical oncology, radiation oncology, social work, pathology, plastic surgery, radiology, health information/medical records, health care quality, oncology nursing, and community benefits.

'Truly exemplary'

In his written summary remarks, the NAPBC surveyor, Arnold H. Herman, MD, described the BreastCare Center as "a model for any large institution" and a "truly exemplary program that will hopefully start a trend in large academic centers coming forward for NAPBC accreditation."

Herman made special note of the "superb" weekly tumor board. He also commended the "unique" multidisciplinary evaluation process for new breast cancer patients and the high quality of support services, "which serve...patients in a manner that could be cloned for all to use."



Earning full NAPBC accreditation of the BreastCare Center was a team effort. Pictured are (left to right): Maria Andrade, Tracey Hall, MSN, NP, OCN, Barbara Clivio, LICSW, PhD, Stephanie Swan, Ranjna Sharma, MD, Karen Resnick, Michael Wertheimer, MD, Karen Galluccio, RN, BSN, Mary Jane Houlihan, MD, Susan Cohen, Martha Kleinerman, RN, NP, MS, April Isaac, Stephanie Tarantino, RN, Nancy Avendano, and Sally Burke.



John D. Birkmeyer, MD, presented the 2011 Judith and Robert Melzer Lecture in Healthcare Quality.

Making the Case for Outcomes Research

At Surgical Grand Rounds on October 12, before a packed auditorium, John D. Birkmeyer, MD, the 2011 Judith and Robert Melzer Lecturer in Healthcare Quality, made a compelling case for the role of outcomes research in making surgery safer.

Birkmeyer, the George D. Zuidema Professor and Chair of Health Services Research in the Department of Surgery at the University of Michigan, discussed his research and presented examples of how monitoring surgical outcomes and sharing that data has led to changes in clinical practice that have reduced surgical complications and deaths.

In addition to presenting at Grand Rounds, Birkmeyer spent a day participating in roundtable discussions with faculty and residents on a wide range of topics, including mentorship and building an outcomes program. He also attended a dinner in his honor hosted by the department.

Robert Melzer, a former Chairman of the Board and interim CEO at BIDMC, and his wife, Judith, who endowed this lectureship, have been driving forces in the ongoing effort to improve the quality and safety of health care.

Save the Date

January 23, 5-6 PM

Event: BIDMC “Surgical Horizons” Seminar, presented by Frederick Y. Chen, MD, PhD, Cardiac Surgery, Brigham and Women’s Hospital; Director, Cardiac Surgery Research Laboratory; Associate Professor of Surgery, Harvard Medical School. Topic to be announced.

Location: Carl J. Shapiro Simulation and Skills Center, G20 (East Campus), BIDMC

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

January 25, 5:30-7 PM

Event: IDEAS poster session, presented by third-year Harvard Medical School students

Location: West Clinical Center lobby (West Campus), BIDMC

For more information: Leanne Sylvia, lsylvia@bidmc.harvard.edu; 617-632-8363

February 8, 5:30-6:30 PM

Event: Department of Surgery Faculty Meeting; Seminar in Health Care Policy: “No Exit”— The Impossibility and Inevitability of Further Health Care Reform in the U.S., presented by Marc J. Roberts, PhD, Professor of Political Economy and Health Policy, Harvard School of Public Health

Location: Carl J. Shapiro Clinical Center (East Campus), Rabkin Board Room (10th floor), BIDMC

For more information: Emily Hunter, ehunter@bidmc.harvard.edu; 617-632-8377

February 13, 5-6 PM

Event: BIDMC “Surgical Horizons” Seminar, presented by David J. Mooney, PhD, Robert P. Pinkas Family Professor of Bioengineering, Harvard School of Engineering and Applied Sciences; Core Faculty, Wyss Institute for Biologically Inspired Engineering, Harvard University. Topic to be announced.

Location: Carl J. Shapiro Simulation and Skills Center, G20 (East Campus), BIDMC

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

March 12, 5-6 PM

Event: BIDMC “Surgical Horizons” Seminar, presented by Robin S. McLeod, MD, BSc, Professor of Surgery, Head of the Division of General Surgery, Mount Sinai Hospital, Head of the Surgical Clinical Epidemiology Group, University of Toronto. Topic to be announced.

Location: Carl J. Shapiro Simulation and Skills Center, G20 (East Campus), BIDMC

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

April 4, 8-9 AM

Event: Surgical Grand Rounds: The 2012 Francis W. Capper/Louis Hermanson Visiting Professor of Surgery; William C. Wood, MD, Distinguished Joseph Brown Whitehead Professor, Department of Surgery, Emory University

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

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



Present at the Boston Surgical Society annual meeting at which Beth Israel Hospital former Surgeon-in-Chief William Silen, MD, received the Bigelow Medal were (left to right, standing): Jonathan Gates, MD, Richard Hodin, MD, Ralph Purcell, MD, Don Morris, MD, Jonathan Critchlow, MD, Peter Mowschenson, MD, William Silen, MD, Sally Davis, MD, William Goodman, MD, Mary Jane Houlihan, MD, David Martini, MD, and Michael Cahalane, MD; (left to right, seated): Ronald Weintraub, MD, Dana Fugelso, MD, Mark Rubin, MD, and Lisa Ferzoco, MD.

William Silen, MD, Surgeon-in-Chief of Beth Israel Hospital from 1966 to 1994, was presented with the Bigelow Medal at the 95th annual meeting of the [Boston Surgical Society](#) on December 5 in Boston. The Bigelow Medal, named after Henry Jacob Bigelow, MD, one of the most influential surgeons of the 19th century, is awarded every few years to one of the world's leading surgeons.

The Boston Surgical Society recently announced its new slate of officers and members, many of whom are Department of Surgery faculty members. **Russell Nauta, MD** (Mount Auburn Hospital), is the President-Elect; **Mark Callery, MD**, is Secretary; and **Steven Schwaitzberg, MD** (Cambridge Hospital), is the Dinner Chair, a position occupied for the past six years by **Daniel Jones, MD**. Department of Surgery Chairman **Elliot Chaikof, MD, PhD**, was elected to the Council, and **Robert Andrews, MD**, **Mary Jane Houlihan, MD**, **Stephen Odom, MD**, **Vitaliy Poylin, MD**, **Ranjna Sharma, MD**, **Jennifer Tseng, MD**, **Michael Wertheimer, MD**, and **Richard Whyte, MD**, were accepted as members.

A well-attended poster session in the West Clinical Center lobby in mid-October highlighted the innovative work of 13 third-year Harvard Medical School (HMS) clerkship students who were completing their three-month surgery rotation at BIDMC.

The inaugural poster session, which will be a regularly occurring event for each group of HMS students (see "Save the Date," [page 7](#)), was part of IDEAS™ (Innovation, Design, and Emerging Alliances in Surgery).



Harvard Medical School student Taylor Lloyd discusses his project with department Chairman Elliot Chaikof, MD, PhD.

The students were challenged to identify an unmet clinical need and present innovative ways to address that need at the interface between surgery and another



Harvard Medical School student Valencia Miller presents her ideas to Stephen Odom, MD, Acute Care Surgery.

discipline, whether the social, biological, or physical sciences. Presenters in the first IDEAS poster session and their projects were:

- Zachary Abramson: *Image-Guided Percutaneous Endoscopic Lymph Node Biopsy*
- Daniel Buckland: *Ultrasound Screening for Cervical Spine Clearance*

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- Erin Chen: *Laser Sighting to Increase Intraoperative Accuracy*
- Nkemdiche Elele: *Health Metrics in Surgery*
- Michael Honigberg: *Developing a Functional Surgical Registry for Accelerated Clinical Research*
- Taylor Lloyd: *Atraumatic Laparoscopic Surgical Tools*
- Valencia Miller: *Enhancing Collaboration on Strategies for Managing Surgical Challenges Associated with Obese Patients*
- Vikram Pattanayak: *Focal and Quick Enzymatic Adhesionolysis to Reduce Operating Times*
- Hari Prabhakar: *Rural Surgical Kits — Providing Low-Cost Emergency Surgical Capability to Rural Health Centers*
- Emir Sandhu: *A Self-Loading Needle Driver*
- David Shulman: *Pre-Operative Nutrition Tool for Reducing Surgical Complications in Malnourished Patients*
- Christian Strong: *Patient-Doctor Course for Surgeons*
- Christine Westra: *Procedures for Surgical Students: iPhone App*

Andrew Wagner, MD, and Martin Sanda, MD, Urology, will be course directors of the New England Urology Resident Training Course in Robotic Surgery, which will



be held in the Carl J. Shapiro Simulation and Skills Center at BIDMC on May 5-6. The free course, designed

for PGY-3 and PGY-4 residents, will provide instruction in robotic approaches to kidney, prostate, and bladder surgery. Course faculty are Steven Chang, MD, and Jim Hu, MD, of Brigham and Women's Hospital.



Minimally Invasive Surgery fellow **Omar Yusef Kudsi, MD, MBA**, was selected in November as the recipient of the 2012 SAGES Karl Storz/IRCAD Visiting Fellowship Award. With the support of Karl Storz Endoskope, SAGES (the Society of American Gastrointestinal and Endoscopic Surgeons) bestows an annual award of a three-day, all-expenses paid traveling fellowship to the IRCAD Institute in Strasbourg, France. A private organization focused on digestive cancers, IRCAD has a world-renowned training center in minimally invasive surgery. Selection for the fellowship was highly competitive, says **Daniel Jones, MD**, Chief of Minimally Invasive Surgery and a SAGES board member.



Michael Cahalane, MD, Acting Chief, Acute Care Surgery, received the most votes from members of the Association of Academic Surgery (AAS) for his proposed title for the association's new newsletter. For naming *Academic Surgeon*, Cahalane received complimentary registration to the 2012 AAS Academic Surgery Congress in Nevada.



Thirteen members of the Department of Surgery were cited by *Boston Magazine* as "Top Docs" in its 2011

annual listing: **Richard Bartlett, MD**, Plastic Surgery; **Michael Cahalane, MD**, Acute Care Surgery; **Mark Callery, MD**, Chief, General Surgery; **Elliot Chaikof, MD, PhD**, Chairman, Department of Surgery; Vascular and Endovascular Surgery; **Andy Das, MD**, Urology; **Allen Hamdan, MD**, Vascular and Endovascular Surgery; **Daniel Jones, MD**, Chief, Minimally Invasive Surgery; **Abraham Morgentaler, MD**, Urology; **Deborah Nagle, MD**, Chief, Colon and Rectal Surgery; **Peter Rubin, MD**, Ophthalmology; **Martin Sanda, MD**, Urology; **Benjamin Schneider, MD**, General Surgery/Minimally Invasive Surgery; and **Sumner Slavin, MD**, Plastic Surgery.



Barbara Ramos, Thoracic Surgery/Interventional Pulmonology, recently received an Eleanor Chayet Scholarship.

The scholarships are available to employees wishing to advance their skills in any way that will improve care at the medical center or advance medical knowledge. Ramos is working toward her bachelor's degree.



Jennifer F. Tseng, MD, MPH, Appointed Chief of Surgical Oncology

In December, **Jennifer F. Tseng, MD, MPH**, joined the department as Chief of the new Division of Surgical Oncology. Tseng also serves as Deputy Director of the [BIDMC Cancer Center](#).

“The keystone of a successful Cancer Center is a dynamic Division of Surgical Oncology committed to the interdisciplinary management of patients using the very best available approaches to cure cancer,” says department Chairman **Elliot Chaikof, MD, PhD**. “This can only be achieved through teamwork and collaboration, which will be exemplified by our new Division of Surgical Oncology.”

Previously, Tseng was Associate Professor of Surgery, Cancer Biology, and Quantitative Health Sciences at the University of Massachusetts Medical School and an attending surgeon at UMass Memorial Medical Center, where her clinical focus has been pancreatic and upper gastrointestinal cancers.

Tseng attended Stanford University, where she earned a BS and AB in biological sciences and English. After graduating from the University of California-San Francisco School of Medicine, Tseng completed a residency in general surgery at Massachusetts General Hospital (MGH).

During her residency, Tseng completed a three-year postdoctoral fellowship in molecular medicine in the laboratory of Richard Mulligan, PhD, at Harvard Medical School. Tseng subsequently completed a fellowship in surgical oncology at the MD Anderson Cancer Center, after which she returned to MGH as staff surgeon and chief resident of the ward service. She earned a master’s degree from the Harvard School of Public Health in 2007.

Tseng was recruited to the University of Massachusetts in 2005 as Assistant Professor of Surgery and was promoted to Associate Professor in 2009. She was the founding Director of the Surgical Outcomes Analysis & Research (SOAR) Center, which has focused on strategies to enhance the quality and quantity of life of patients with gastrointestinal malignancies.

Her other research interests have included the identification and analysis of population disparities in cancer care and the use of unique markers to personalize cancer therapeutics. She is the recipient of a Howard Hughes Medical Institute Early Career Award and an American Surgical Association Foundation

“The keystone of a successful Cancer Center is a dynamic Division of Surgical Oncology committed to the interdisciplinary management of patients using the very best available approaches to cure cancer.”

Elliot Chaikof, MD, PhD

Fellowship. Tseng has authored more than 80 peer-reviewed articles and other publications, is frequently invited to lecture nationally, and has mentored numerous trainees.

Tseng will work closely with **Mark Callery, MD**, Chief of the Division of General Surgery, and **Tara Kent, MD**, General Surgery, to further the growth and development of the department’s internationally recognized pancreaticobiliary surgery program.

New ARC Grant Program Promotes Interdisciplinary Research

The Department of Surgery recently launched a new grant program to promote and support interdisciplinary bench-to-bedside research aimed at finding innovative solutions to unmet clinical needs.

The Affinity Research Collaborative (ARC) provides interdisciplinary groups of faculty members who share a common research interest with organizational structure, financial support, and



Department of Surgery laboratory scientist Christiane Ferran, MD, PhD, is Chair of the Affinity Research Collaborative (ARC).

motivation to seek further external funding, says **Christiane Ferran, MD, PhD**, ARC Chair and member of its Executive Committee, which also includes **Susan Hagen, PhD**, and **Elliot Chaikof, MD, PhD**, department Chairman.

To be considered, projects must be led by a full-time Department of Surgery faculty member, include at least two department members, and involve four to five investigators across multiple disciplines. Projects must be innovative, have the potential to receive external funding, and be capable of being translated to clinical settings. ARC grant support will be provided for two to three years — recipients will receive up to \$15,000 for the first year and up to \$100,000 for the final year or years.

ARC received 11 applications, all of which were “very high quality,” says Ferran. Following a rigorous

review of each application by three experts within and outside BIDMC, four were selected — three from seasoned investigators and one from a junior faculty member (see below).

Initially just three ARCs were to be funded. But one of the reviewers, **Vikas Sukhatme, MD, PhD**, Chief Academic Officer at BIDMC, was so impressed by the applications that he contributed money from his office’s budget, which allowed a fourth project to be funded for the first year.

“There has been so much enthusiasm for this program,” says Ferran, adding that many applicants whose projects were not selected this time plan to reapply for the next funding cycle. “In today’s environment, collaboration across disciplines is critical to moving bench-to-bedside research forward, and ARC is an important first step in that direction.”

“I’m so appreciative for this funding,” says ARC grant recipient **Samuel Lin, MD**, plastic surgery. “This support will enable us to fast-track our research and take it to the next level as quickly as possible so it can potentially benefit patients.” Another grant recipient, **Frank LoGerfo, MD**, vascular surgery, says, “ARC grants are a great stimulus to crystallize ideas around a research focus that also take advantage of the talent throughout the medical center.”

ARC PRINCIPAL INVESTIGATORS AND FUNDED PROJECTS:

Per-Olof Hasselgren, MD, PhD
General Surgery

Transcription factors, nuclear co-factors, and muscle wasting

Carl J. Hauser, MD
Acute Care Surgery

Activation of innate immunity by surgery and injury

Samuel J. Lin, MD
Plastic Surgery

The use of functional electrochemical stimulation in nerve paralysis rehabilitation

Frank LoGerfo, MD
Vascular Surgery, and
Aristidis Veves, MD,
Podiatry, Surgery Research

Neuropeptides in wound healing, health, and disease

THE QUESTION I OWN — Carl J. Hauser, MD

Systemic inflammatory response syndrome (SIRS) is a frequent cause of organ failure and can lead to death. Patients with severe infections are at risk for developing SIRS, as are patients who have been injured or undergone major surgery without infection. Although the symptoms and complications of SIRS may be identical in all these circumstances, the optimal treatment for patients with inflammation due to infection differs from treatment for patients with sterile inflammation.

For example, antibiotics can be lifesaving when there is inflammation due to infection, a syndrome called sepsis. But antibiotics can be ineffective — or even harmful — when patients’ inflammatory responses are due to surgery or injury. Those patients might benefit from a different treatment or even no treatment at all.

“I’m primarily a translational scientist who looks for innovative ways to bring basic science to bear on common clinical problems.”

Carl J. Hauser, MD

The problem is, there are no quick ways to know what is causing inflammation. Consequently most patients are assumed to have infections and given antibiotics.

It is just such a predicament that inspires the research of trauma surgeon **Carl J. Hauser, MD**. “I’m primarily a translational scientist who looks for innovative ways to bring basic science to bear on common clinical problems,” he says.

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Trauma surgeon Carl J. Hauser, MD, looks for innovative ways to bring basic science to bear on common clinical problems.

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As such, Hauser has devoted much of his career to finding out what ignites immune responses to trauma and major surgery. The goal of this research, which has been published in such influential journals as *Nature*, has not been just to shed light on a poorly understood phenomenon — although that has certainly happened — but to improve care by ensuring that patients receive appropriate therapies.

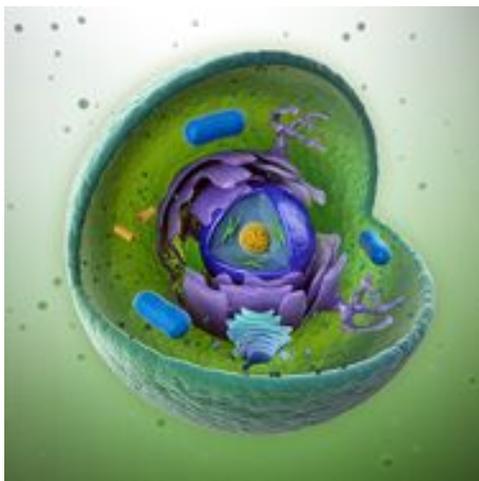
Desperately seeking danger molecules

When infection occurs, our innate immune system uses ancient pattern-recognition molecules to identify and attack pathogens (disease-causing microbes such as bacteria) in our bodies. It does this by recognizing the specific molecular patterns, or “motifs,” of the pathogens. On sensing these “danger signals” the innate immune system instantly swings into action, attempting to wipe out the enemy.

Hauser discovered that the innate immune system, which patrols outside the cells, also perceives mitochondria — the energy factories within our cells — as danger molecules, but only if they are released into the circulation through damaged cell walls, as can occur after major surgery or injury.

Mistaken identity

But why? Mitochondria are thought to have evolved almost a billion years ago from bacteria. Hauser reasoned that when mitochondria were released from the safe confines of the cell by surgery or injury, there



Mitochondria (the blue “capsules” in this illustration of a cutaway of a cell) are the power plants within cells. If released into the circulation by surgery or injury, the innate immune system mistakenly perceives them as pathogens and attacks them.

could be a case of “mistaken identity” if their retained molecular motifs signaled danger to the innate immune system. Indeed, perceiving circulating mitochondrial molecular patterns as pathogens, the innate immune system responds just as though there is a major infection. The scenario is, in essence, a case of friendly fire.

“The questions I own have always started out with one sick patient that current knowledge didn’t allow me to treat well enough.”

Carl J. Hauser, MD

Hauser’s discovery that circulating mitochondria can be instigators of inflammation may have implications not only for surgery and trauma patients, but also for people with a range of inflammatory conditions such as autoimmune diseases and even heart attacks. It has been widely hailed as a groundbreaking conceptual advance that, according to a major review in the *New England Journal of Medicine*, “may lead to new, intriguing candidates for drug discovery.”

Lab on a chip

Hauser has been continuing research in this area with funding from the National Institutes of Health, the Department of Defense, CIMIT, and, just recently, a Department of Surgery ARC grant (see [page 11](#)). The CIMIT grant supports a project being done in collaboration with bioengineers at Boston Medical Center to develop a “lab on a chip” that will enable civilian or military medical personnel to determine within minutes whether patients have infection, sterile inflammation, or both, so they can be properly treated.

“The questions I own have always started out with one sick patient that current knowledge didn’t allow me to treat well enough,” says Hauser. “From there, I’ve asked myself, ‘How can I apply modern biology to achieve a better result?’”

Department Well-Represented at ACS Clinical Congress

The annual American College of Surgeons (ACS) Clinical Congress is the premier annual educational and scientific meeting for American surgeons, offering participants a broad spectrum of educational opportunities and a forum for sharing ideas and forming new collaborations.

The theme of the 97th ACS Clinical Congress, held October 23-27 in San Francisco, was “The Surgeon as a Leader: Addressing Health Care Disparities.” As in years past, the Department of Surgery was well-represented at the meeting — faculty and residents presented new scientific papers; conducted skills courses and surgical forums; and participated as chairs, facilitators, or moderators for many of the sessions.

This year’s presenters included surgical residents Ammara Abbasi, MD, Denis Gilmore, MD, Yue-Yung Hu, MD, Kiran Lagisetty, MD, Antonio Lassaletta, MD, and Michael Robich, MD, and faculty members Robert Andrews, MD, Mark Callery, MD, Deborah Nagle, MD, and Per-Olof Hasselgren, MD, PhD, who presented on behalf of surgical resident Steven Tizio, MD, who was unable to attend.

As reported in the previous issue of *Inside Surgery*, Scott Atay, MD, and Bidhan Das, MD, participated in the highly competitive “Surgical Jeopardy,” capturing second place among 26 teams.



Among the department’s attendees at the American College of Surgeons annual Clinical Congress are (standing, left to right): Allen Hamdan, MD, Denis Gilmore, MD, Scott Atay, MD, Amy Evenson, MD, and (seated, left to right): Kiran Lagisetty, MD, Sidhu Gangadharan, MD, and Vitaliy Poylin, MD.



Enjoying dinner together in San Francisco are (left to right): Tara Kent, MD, Michael Robich, MD, Harvard Medical School student Charity Glass, Antonio Lassaletta, MD, and Carl J. Hauser, MD.

Looking Back



Surgeon Frank H. Lahey, MD, New England Deaconess Hospital, circa 1920. Lahey founded the Lahey Clinic in Boston in 1925. The clinic moved to Burlington, Mass. in 1980.

In each issue of *Inside Surgery*, we publish photographs from the medical center's archives (*photos courtesy of the Ruth and David Freiman Archives at Beth Israel Deaconess Medical Center*).



Hyman Danzig, founder and first president of Beth Israel Hospital, observes surgery in the hospital's first location on Townsend Street in Roxbury (circa, 1917).

Vascular Surgery Now Part of Regional Study Group

The Division of Vascular and Endovascular Surgery's vascular surgeons perform approximately 2,000 procedures a year, making BIDMC's division one of the highest-volume vascular surgery services in New England.

Data from patients undergoing a range of open and endovascular procedures at BIDMC, which has been collected and analyzed internally for more than two decades, will now be shared with many other New England hospitals through the Vascular Study Group of New England (VSGNE).

According to **Marc Schermerhorn, MD**, Chief of the division, several months ago BIDMC became a member of VSGNE, joining a growing list of more than two dozen academic and community hospitals across all five New England states. He said the group will ultimately be linked to other regional groups via an initiative of the Society of Vascular Surgery Patient Safety Organization.

Founded in 2002, VSGNE is a voluntary consortium of clinicians and researchers who collect

and exchange data with the goal of improving the quality, safety, efficacy, and cost-effectiveness of caring for patients with vascular disease.

On behalf of its member institutions, VSGNE maintains a central data registry and distributes quality and benchmark reports on a regular basis, allowing participating hospitals to compare and assess their performance and identify best practices based on the aggregated data from many thousands of procedures.

In addition to the benefits of sharing data for quality-improvement measures, membership in VSGNE provides BIDMC vascular surgeons and residents with a treasure trove of data with which to conduct clinical outcomes research.



At the dinner in their honor are faculty who were recently promoted by Harvard Medical School (left to right): Guy Rochman, MD, Joseph Upton, MD, Janice Saal, MD, Daniel Jones, MD, Sidhu Gangadharan, MD, Barbara Wegiel, MSc, PhD, Marc Schermerhorn, MD, Wolfgang Junger, PhD, Jin-Rong Zhou, PhD, Bernard Lee, MD, and Simo Arredouani, PhD. Not present for the photo were: Thanh Dinh, DPM, Thomas Lyons, DPM, Deborah Nagle, MD, and Mark Wyers, MD.



Harvard Medical School Promotes 15 Faculty Members

Harvard Medical School recently promoted 15 Department of Surgery faculty members in recognition of their academic excellence and achievements. On November 2, a dinner in their honor was held at the Harvard Faculty Club in Cambridge. The evening featured guest speaker Martin S. Indyk, Vice President and Director of the Foreign Policy Program at The Brookings Institution.

PROMOTED TO:

PROFESSOR OF SURGERY

Daniel Jones, MD

Chief, Minimally Invasive Surgery;
Vice Chair, Technology and Innovation
Area of Excellence: Clinical innovation in minimally invasive surgery

Wolfgang Junger, PhD

Area of Excellence: Fundamental investigations in trauma and inflammation

CLINICAL PROFESSOR OF SURGERY

Joseph Upton, MD

Area of Excellence: Clinical innovation in plastic surgery

ASSOCIATE PROFESSOR OF SURGERY

Marc Schermerhorn, MD

Chief, Vascular and Endovascular Surgery
Area of Excellence: Clinical innovation in vascular surgery

Jin-Rong Zhou, PhD

Area of Excellence: Fundamental investigations in cancer and nutritional sciences

ASSISTANT PROFESSOR OF SURGERY

Simo Arredouani, PhD

Area of Excellence: Fundamental investigations in urologic oncology

Thanh Dinh, DPM

Area of Excellence: Clinical innovation in podiatry

Sidhu Gangadharan, MD

Chief, Thoracic Surgery/Interventional Pulmonology
Area of Excellence: Clinical innovation in thoracic surgery

Bernard T. Lee, MD

Area of Excellence: Clinical innovation in plastic surgery

Thomas Lyons, DPM

Area of Excellence: Clinical innovation in podiatry

Deborah Nagle, MD

Chief, Colon and Rectal Surgery
Area of Excellence: Clinical innovation in colon and rectal surgery

Guy Rochman, MD

Area of Excellence: Clinical service in plastic surgery

Barbara Wegiel, MSc, PhD

Area of Excellence: Fundamental investigations in immunology and cancer

Mark Wyers, MD

Area of Excellence: Clinical innovation in vascular surgery

ASSISTANT CLINICAL PROFESSOR OF SURGERY

Janice Saal, MD

Area of Excellence: Clinical service in surgical oncology



Harvard Professor Daniel Jones, MD, and his wife, Stephanie Jones, MD.



Harvard Professor Wolfgang Junger, PhD, and his wife, Sachiko Junger.

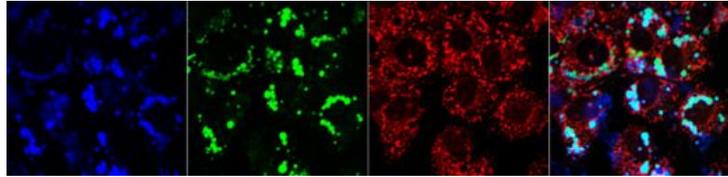
Research Notes

It is well-established that N-methyl d-aspartate (NMDA) channels in neurons (nerve cells) drive neural transmission and are also responsible for brain damage in stroke.

According to an article in the September 16 issue of *Gastroenterology* by **Ji Hye Seo, PhD**, and **Susan Hagen, PhD**, General Surgery, NMDA channels are also found in stomach epithelial cells and are solely responsible for driving cell death during infection with *Helicobacter pylori*, a known risk factor for stomach cancer. Hagen's research was inspired by the published work of former Beth Israel Hospital Surgeon-in-Chief and Harvard Professor *Emeritus* **William Silen, MD**.

In their paper, "N-methyl d-aspartate channels link ammonia and epithelial cell death mechanisms in *Helicobacter pylori* infection,"

the authors showed that NMDA channels, which transport toxic levels of calcium, are activated by ammonia produced by urease from *H. pylori*. Hagen says this paper represents "an exciting new frontier to pursue" in understanding the development of stomach cancer and investigating potential new therapies for a disease that ranks as the second most common cause of cancer deaths worldwide.



Living stomach cells have been stained with fluorescent dyes to show components within the cells. Left to right: blue is the endoplasmic reticulum, green is calcium, and red are mitochondria. The image on the far right is merged from the previous three images—the turquoise shows that the calcium (green) is in the endoplasmic reticulum (blue).



Samuel J. Lin, MD, is engaged in innovative research aimed at improving care for patients with nerve disorders.

The goal of functional electrical stimulation (FES) is to restore functional motor activity in patients with disabilities resulting from nerve injury, spinal cord injury, or neurological disorders. However, FES-related intervention currently lacks an effective, implantable method that can reliably stimulate injured nerves and muscles.

In a paper published in October in *Nature Materials* online ahead of print, authors **Samuel Lin, MD**, **Plastic Surgery**, and **Ahmed Ibrahim, MD**, research fellow, reported on a novel electrochemical method they and their colleagues, Jongyoon Han, PhD, and Yong-Ak Song, PhD, developed that can

both activate and inhibit a nerve using microfabricated Ca²⁺ ion-selective membranes. This work was done in collaboration with a multidisciplinary team of scientists from Massachusetts Institute of Technology, Ain Shams University in Egypt, Rice University, and the University of Minnesota.

The new electrochemical-stimulation method, which was evaluated in a frog model but will later be tested in mammalian nerves, could have potential applications in current implantable devices used to selectively stimulate nerves in patients with total or partial paralysis of facial or peripheral nerves.

It could also offer an effective intervention for patients with chronic diseases caused by uncontrolled nerve activation, such as spinal cord injury, neurologic diseases like ALS, pain, and involuntary muscle or limb movement (synkinesis). "There is a clinical need for a new method of both nerve stimulation and nerve inhibition in a neuroprosthetic device that is clinically effective and well-tolerated," says Lin.

"Electrochemical activation and inhibition of neuromuscular systems through modulation of ion concentrations with ion-selective membranes," was authored by Yong-Ak Song, PhD, Rohat Melik, PhD, Amr Rabie, MD, Ahmed Ibrahim, MD, David Moses, Ara Tan, Jongyoon Han, PhD, and Samuel J. Lin, MD.

Selected Faculty Publications



Acute Care Surgery

RESEARCH INVESTIGATIONS:

Gardino AK, **Yaffe MB**. 14-3-3 proteins as signaling integration points for cell cycle control and apoptosis. *Semin Cell Dev Biol* 2011;22(7):688-95.

Itagaki K, Adibnia Y, Sun S, Zhao C, Sursal T, Chen Y, **Junger W, Hauser CJ**. Bacterial DNA induces pulmonary damage via TLR9 through cross-talk with neutrophils. *Shock* 2011;36(6):548-52.

Vincent JL, Dutton R, Parr M, **Hauser C**. Massive bleeding in polytrauma: How can we make progress? *Crit Care* 2011; 15(5):196.

Cardiac Surgery

RESEARCH INVESTIGATIONS:

Chu LM, **Robich MP, Lassaletta A**, Burgess T, Liu Y, Sellke N, Sellke FW. Hypercholesterolemia and chronic ischemia alter myocardial responses to selective cyclooxygenase-2 inhibition. *J Thorac Cardiovasc Surg* 2011;142(3):675-81.

Chu LM, **Robich MP, Lassaletta AD**, Feng J, Laham RJ, Burgess T, Clements RT, Sellke FW. Resveratrol supplementation abrogates pro-arteriogenic effects of intramyocardial vascular endothelial growth factor in a hypercholesterolemic swine model of chronic ischemia. *Surgery* 2011;150(3):390-9.

General Surgery

RESEARCH INVESTIGATIONS:

Duda RB, Anarfi JK, Adanu RM, Seffah J, Darko R, Hill AG. The health of the "older women" in Accra, Ghana: Results of the Women's Health Study of Accra. *J Cross Cult Gerontol* 2011;26(3):299-314.

Gong Y, Li Y, Lu Y, Li L, Abdolmaleky H, **Blackburn GL, Zhou JR**. Bioactive tanshinones in salvia miltiorrhiza inhibit the growth of prostate cancer cells in vitro and in mice. *Int J Cancer* 2011; 129(5):1042-52.

Hutter MM, Schirmer BD, **Jones DB**, Ko CY, Cohen ME, Merkow RP, Nguyen NT. First report from the American College of Surgeons Bariatric Surgery Center Network: Laparoscopic sleeve gastrectomy has morbidity and effectiveness positioned between the band and the bypass. *Ann Surg* 2011;254(3):410-20.

Mason C, Foster-Schubert KE, Imayama I, Kong A, Xiao L, Bain C, Campbell KL, Wang CY, Duggan CR, Ulrich CM, Alfano CM, **Blackburn GL**, McTiernan A. Dietary weight loss and exercise effects on insulin resistance in postmenopausal women. *Am J Prev Med* 2011;41(4):366-75.

Nadig SN, Pedrosa I, Goldsmith JD, **Callery MP**, Vollmer CM. Clinical implications of mucinous nonneoplastic cysts of the pancreas. *Pancreas* 2011; in press.

Seo JH, Fox JG, Peek RM Jr, **Hagen SJ**. N-methyl d-aspartate channels link ammonia and epithelial cell death mechanisms in helicobacter pylori infection. *Gastroenterology* 2011; 141(6):2064-75.

Zerbini LF, Tamura RE, Correa RG, Czibere A, Cordeiro J, Bhasin M, Simabuco FM, Wang Y, Gu X, Li L, Sarkar D, **Zhou JR**, Fisher PB, Libermann TA. Combinatorial effect of non-steroidal anti-inflammatory drugs and NF- κ B inhibitors in ovarian cancer therapy. *PLoS One* 2011; 6(9):24285.

Neurosurgery

RESEARCH INVESTIGATION:

Sturla LM, Zinn PO, Ng K, Nitta M, Kozono D, Chen CC, **Kasper EM**. Src homology domain-containing phosphatase 2 suppresses cellular senescence in glioblastoma. *Br J Cancer* 2011; 105(8):1235-43.

Plastic and Reconstructive Surgery

RESEARCH INVESTIGATIONS:

Curtis MS, Arslanian B, Colakoglu S, **Tobias AM, Lee BT**. Immediate microsurgical breast reconstruction and simultaneous sentinel lymph node dissection: Issues with node positivity and recipient vessel selection. *J Reconstr Microsurg* 2011; 27(7):445-8.

Ibrahim AM, Rabie AN, **Lee BT, Lin SJ**. Intraoperative CT: A teaching tool for the management of complex facial fracture fixation in surgical training. *J Surg Educ* 2011;68(5):437-441.

Lee BT, Duggan MM, Keenan MT, Kamatkar S, Quinlan RM, Hergrueter CA, Hertl MC, Shin JH, Truppin NB, Chun YS. Commonwealth of Massachusetts Board of Registration in Medicine expert panel on immediate implant-based breast reconstruction following mastectomy for cancer: Executive summary, June 2011. *J Am Coll Surg* 2011;213(6):800-5.

Ogunleye AA, de Blacam C, Curtis MS, Colakoglu S, **Tobias AM, Lee BT**. An analysis of delayed breast reconstruction outcomes as recorded in the American College of Surgeons National Surgical Quality Improvement Program. *J Plast Reconstr Aesthet Surg* 2011; in press.

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Thoracic Surgery

RESEARCH INVESTIGATION:

Bakhos CT, Fabian T, Oyasiji TO, Gautam S, **Gangadharan SP, Kent MS**, Martin J, **Critchlow JF**, Decamp MM. Impact of the surgical technique on pulmonary morbidity after esophagectomy. *Ann Thorac Surg* 2011; in press.

Transplantation

RESEARCH INVESTIGATIONS:

Balasubramanian S, Kota SK, **Valerius MT**. The rejection barrier to induced pluripotent stem cells. *J Am Soc Nephrol* 2011;22(9):1583-6.

Haschemi A, **Chin BY**, Jeitler M, Esterbauer H, Wagner O, Bilban M, **Otterbein LE**. Carbon monoxide induced PPAR γ SUMOylation and UCP2 block inflammatory gene expression in macrophages. *PLoS One*. 2011; 6(10):e26376.

Ladin K, **Hanto DW**. Rational rationing or discrimination: Balancing equity and efficiency considerations in kidney allocation. *Am J Transplant* 2011; 11(11):2317-21.

Rodrigue JR, Nelson DR, Reed AI, **Hanto DW**, Curry MP. Is model for end-stage liver disease score associated with quality of life after liver transplantation? *Prog Transplant* 2011;21(3):207-14.

Urology

RESEARCH INVESTIGATIONS:

Alemezaffar M, Regan MM, Cooperberg MR, Wei JT, Michalski JM, Sandler HM, Hembroff L, Sadetsky N, Saigal CS, Litwin MS, Klein E, Kibel AS, Hamstra DA, Pisters LL, Kuban DA, Kaplan ID, Wood DP, Ciezki J, Dunn RL, Carroll PR, **Sanda MG**. Prediction of erectile function following treatment for prostate cancer. *JAMA* 2011;306(11):1205-14.

Williams SB, Salami S, Regan MM, Ankerst DP, Wei JT, Rubin MA, Thompson IM, **Sanda MG**. Selective detection of histologically aggressive prostate cancer: An early detection research network prediction model to reduce unnecessary prostate biopsies with validation in the Prostate Cancer Prevention Trial. *Cancer* 2011; in press.

Vascular and Endovascular Surgery

RESEARCH INVESTIGATIONS:

Ejaz A, **LoGerfo FW, Khabbaz K, Pradhan L**. Expression of neuropeptide y, substance p, and their receptors in the right atrium of diabetic patients. *Clin Transl Sci* 2011;4(5):346-50.

Kaczmarek E, Koziak K. Targeting stenosis with nucleotide-hydrolyzing enzymes. *Curr Pharm Biotechnol* 2011; in press.

Kim W, Xiao J, **Chaikof EL**. Recombinant amphiphilic protein micelles for drug delivery. *Langmuir* 2011;27(23):14329-34.

O'Malley AJ, Cotterill P, **Schermerhorn ML**, Landon BE. Improving observational study estimates of treatment effects using joint modeling of selection effects and outcomes: The case of AAA repair. *Med Care* 2011;49(12):1126-1132.

Sachs T, Schermerhorn M, Pomposelli F, Cotterill P, O'Malley J, Landon B. Resident and fellow experiences after the introduction of endovascular aneurysm repair for abdominal aortic aneurysm. *J Vasc Surg* 2011;54(3):881-8.

The Bookshelf

A selection of books and book chapters by our faculty

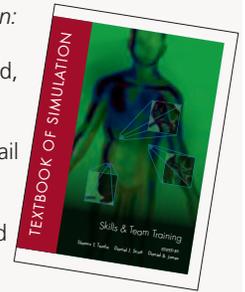
BOOKS

Shawn Tsuda, MD, Daniel Scott, MD, and **Daniel Jones, MD**, Editors.

Textbook of Simulation: Skills & Team Training.

Published by Ciné-Med, 2011. The publisher is offering a discount of \$100 off the \$365 retail cost of this book to readers of *Inside Surgery*. Discount valid through February 28,

2012. To place your order, call 1-800-253-7657; refer to code 010112.



E. Gerasimovskaya and **Elzbieta Kaczmarek, PhD**, Editors. *Extracellular ATP and Adenosine as Regulators of Endothelial Cell Function*. Published by Springer, 2010.

Judith G. Regensteiner, PhD, Jane E.B. Reusch, MD, Kerry J. Steward, EdD, **Aristidis Veves, MD, DSc**, Editors. *Diabetes and Exercise*. Published by Humana Press, 2009.

BOOK CHAPTERS

John M. Giurini, DPM, Jeremy J. Cook, DPM, Emily A. Cook, DPM "Elective Surgery for the Neuropathic Diabetic Foot" in *Surgical Reconstruction of the Diabetic Foot and Ankle*. Thomas Zgonis, DPM, Editor. Published by Lippincott Williams & Wilkins, 2009.

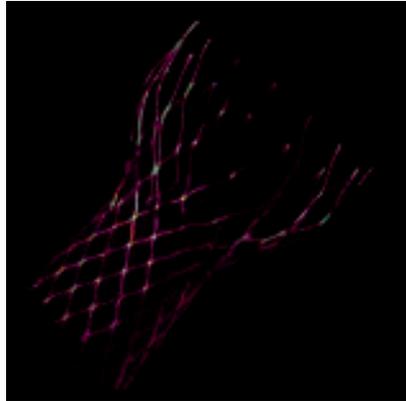
Carl J. Hauser, MD, David H. Livingston, MD "Trauma to the Chest Wall and Lung" in *Trauma*, sixth edition. Ernest E. Moore, MD, Kenneth L. Mattox, MD, and David V. Feliciano, MD, Editors. Published by McGraw-Hill, 2008.

Elzbieta Kaczmarek, PhD

"Nucleotides, P2 receptors and new signaling pathways in endothelial cells" in *Extracellular ATP and Adenosine as Regulators of Endothelial Cell Function*. E. Gerasimovskaya and Elzbieta Kaczmarek, PhD, Editors. Published by Springer, 2010.

< *Continued from page 1*

nationwide clinical trial involving 45 sites, including Beth Israel Deaconess Medical Center, is now underway to evaluate the safety and effectiveness of an investigational device, called CoreValve. This device enables eligible patients at extreme or high risk for surgery to be



The replacement aortic valve, made of porcine tissue, is encased in an expandable wire frame.

treated using a percutaneous (less-invasive) approach.

Instead of a large incision and heart-lung bypass, the less-invasive approach provides access through a small incision in the groin or an alternative site through which the replacement valve, made of porcine tissue and encased in an expandable wire frame, is delivered via a catheter.

BIDMC is one of only two other centers in New England taking part in the CoreValve U.S. Pivotal Trial, which began enrolling patients in 2010. Participating physicians are cardiac surgeons Khabbaz and **Robert Hagberg, MD**, and interventional cardiologists Jeffrey Popma, MD, the national cardiology principal investigator for the trial, and Roger Laham, MD.

The national trial will enroll more than 1,300

patients. Those who are at extreme risk for surgery (in other words, inoperable) are treated with the less-invasive approach. Patients deemed at high risk are randomly selected to undergo conventional surgery or the less-invasive approach. To date, 28 patients, most of them elderly, have been treated at BIDMC, 24 of whom have received the CoreValve.

Interdisciplinary teamwork

Transcatheter aortic valve implantation (TAVI) requires highly choreographed, interdisciplinary teamwork among very experienced cardiac surgeons and interventional cardiologists, as well as many other specialists and nurses. “This is a very complex procedure that requires an interdisciplinary approach,” says Hagberg, noting that TAVI is performed in BIDMC’s hybrid operating room, a combined OR and cardiac catheterization lab.

Patients will continue to be enrolled in the initial trial for approximately another year, and it is anticipated that enrollment may be expanded in the near future to include patients at intermediate risk for surgery.

Every year in the United States, more than 70,000 patients undergo major surgery to have an aortic valve replaced, and many thousands more have no option whatsoever. Depending on the results of this and future trials, less-invasive treatment could provide a new, more attractive, option to many of them.

For more information about the CoreValve U.S. Pivotal Trial, contact Kim Guibone at kguibone@bidmc.harvard.edu, Kamal Khabbaz, MD, at kkhabbaz@bidmc.harvard.edu, or Robert Hagberg, MD, at rhagberg@bidmc.harvard.edu.