



Radical Views... from the Department of Radiology

Volume 6, Number 7
FEBRUARY 2014



Beth Israel Deaconess
Medical Center

A teaching hospital of
Harvard Medical School

Sven Paulin 1926-2014

It is with deep sadness that we received notice of Sven Paulin's passing away on Friday, January 10th, 2014. Sven was an active member of our Cardiothoracic Imaging section until his retirement just a few months ago. He was known to the world of medicine as an investigator, an innovator, a student of physiology and disease, highlighted by his years at the helm of the Radiology Department he built at Beth Israel Hospital. To us he was a colleague, a friend, and a mentor, a source of joy, laughter, encouragement, knowledge, and inspiration.

We count ourselves fortunate to have had the privilege to work with Sven, to have had the benefit of learning radiology from him, and more importantly to have seen his example of how to be and how to act. Sven had the rare and prized combination of personal integrity, judgment, wisdom, sharp intellect, humanism, and curiosity that personify "Homo Academicus." Sven will always be remembered. Our compassionate thoughts are with Birgit and the entire Paulin family.

- Cardiothoracic Imaging Section
Radiology, BIDMC
01/10/2014

Dear All:

A beacon of inspiration has dimmed, but will shine brightly forever.

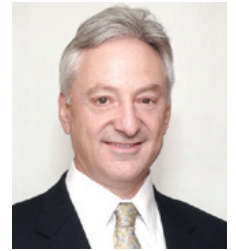
Sven Paulin's sudden passing last Friday has led to an outpouring of reminiscing along with the expressed acknowledgment of his incredible contributions to our field, to our hospital and to our department. Sven worked here for 43 years, sharing his innumerable talents, sense of humor and many passions with all who were privileged to know him. We all know about his much reciprocated love for his family, and how much fun and pleasure he enjoyed with them, and vice versa. Until the very end Sven was enjoying family time and true to form over the holidays conducted Beethoven's 9th Symphony in the Harvard Club Dining room using breadsticks as his batons! This was Sven – fun filled, happy, and energized by his family; these will be some of the many fond memories of Sven that we will always hold most close. The void that his absence leaves is palpable today, comforted in small part by knowing that his presence will long be felt, especially in the chest reading room.

A private funeral is planned for next week, and his innumerable contributions to our field will be eulogized at a Memorial Service here at BIDMC once plans are coordinated with his family.

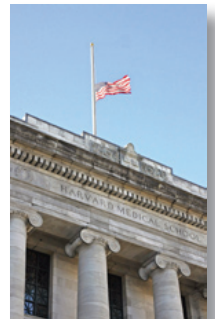
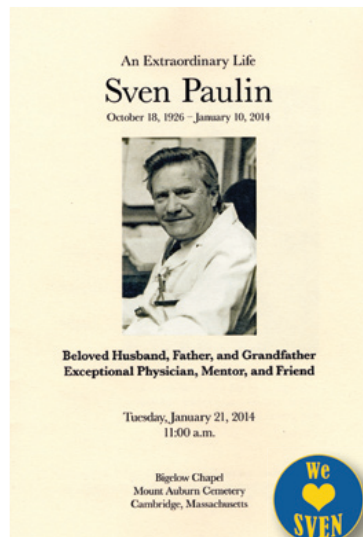
To honor Sven and in recognition of his many outstanding contributions to our hospital, flags at BIDMC were flown at half-mast on Thursday and Friday Jan 16-17.

Sven Paulin will forever be part of the heart and soul of the radiology family at BIDMC.

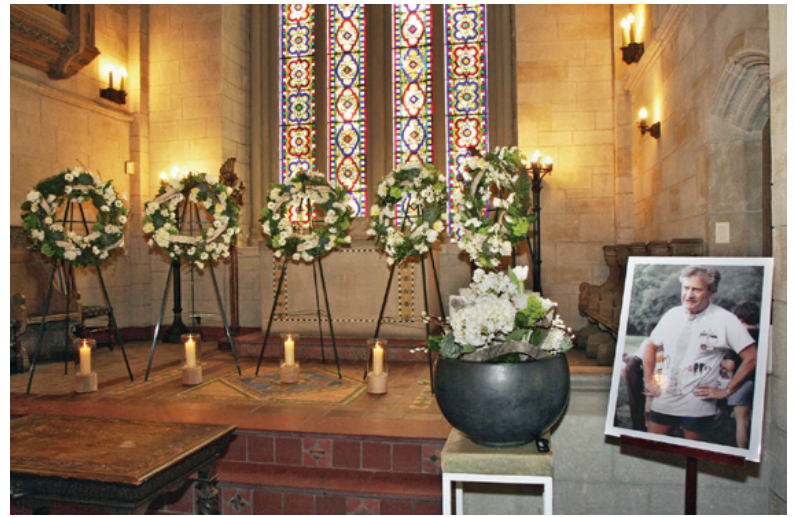
Thank you
– Jonny



FROM THE CHIEF
Jonathan B. Kruskal, MD PhD



Dr. Paulin's life was celebrated by family, friends and colleagues in a small held in the Bigelow Chapel at Mt. Auburn Cemetery on Jan 21st. A lovely program placed on every chair was accompanied by a We ♥ Sven button first used for Sven's 80th Birthday Celebration (see pg 3) and tributes included fond reminiscences by BIDMC faculty Per Eldh, Jonathan Kleefeld and Ferris Hall who spoke for all of us when they said how much Sven will be missed!



We come to mourn Sven's death, but also to celebrate his life.

Sven was an acclaimed physician and researcher but in the many conversations and e-mails I received this past week the words that stood out were wisdom, integrity, judgment and mentor. Perhaps the most touching comment came from Bob Kane who noted that 'it was Sven's humanism, his zest for life, and his positive life spirit that he would most remember' ... I really believe his passing is more a reason for celebration than for mourning.

I close with a comment from Doug Teich, another colleague and previous BI resident: 'I really believe that a great spirit never really dies but lives on through those he (or she) left behind.' This will certainly rings true for those of us here today.

- Ferris Hall

How to sum up Sven's life? Not a difficult task at all – just look around this room at all the family and friends who have come here to honor his memory. For me, Sven was irreplaceable ... May he not rest in peace, but rather be seated on the best possible bike he so much loved throughout his life, to continue riding, but now amongst the stars.

- Jonathan Kleefield

Funeral services were private; a public memorial will be announced at a later date. In lieu of flowers, donations can be made to the **Dr. Sven Paulin Research Fellowship in Cardiothoracic Imaging**. Contact Trudy Howard, BIDMC Office of Development: 617-667-3393.

To: BIDMC Community
 From: BIDMC Communications Jan 14, 2014
 Subject: In Memoriam: Sven Paulin, MD, PhD

With sadness we report the recent death of our friend and colleague Sven Paulin, MD, PhD, a pioneer in coronary angioplasty and former Radiologist-in-Chief, who died Friday, Jan. 10. He was 87.

Dr. Paulin was highly regarded throughout the world for his work by both the radiology and cardiology communities. At the time of his death, he was Professor Emeritus at Harvard Medical School and had recently retired from the BIDMC medical staff, where he was active in Cardiothoracic Imaging.

"He was known to the world of medicine as an investigator, an innovator and a student of physiology and disease, highlighted by his years at the helm of the Radiology Department he built at Beth Israel Hospital," said Alexander Bankier, MD, Chief of Cardiothoracic Imaging. "To us, he was a colleague, a friend and a mentor, a source of joy, laughter, encouragement, knowledge and inspiration. Sven had the rare and prized combination of personal integrity, judgment, wisdom, sharp intellect, humanism and curiosity that personify 'Homo Academicus.' Sven will always be remembered."

Dr. Paulin was born in Bad-Muenster am Stein, Germany, and immigrated to Sweden in 1953, where he met his wife, Birgit. In 1970, he immigrated to the United States and became an American citizen in 1979. He loved the personal and academic freedom that the United States provided him and his family. Dr. Paulin was an avid sports enthusiast, dedicated chess player, voracious reader and art and oyster lover.

In 1951, he graduated from the University of Mainz, Germany, with a Doctor of Medicine degree. He received the degree of Medical License from the Karolinska Institute in Stockholm, Sweden, in 1958, and later,

a degree of Medicine Doctor (equivalent to a PhD) from the University of Gothenburg, Sweden. His doctoral thesis, "Coronary Angiography – A Technical, Anatomic and Clinical Study," written nearly 50 years ago, was recognized as a landmark immediately after publication.

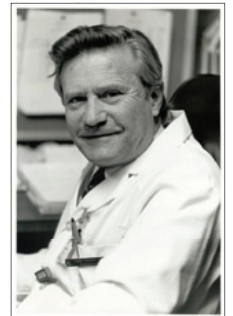
In 1970, Dr. Paulin became Radiologist-in-Chief at Beth Israel Hospital and was awarded a full Professorship in Radiology at Harvard Medical School. In 1974, he was further honored as the first recipient of an endowed chair in Radiology by the family of Miriam M. Stoneman and retired from this position in 1994.

Speaking at a conference in Gothenburg, Sweden, later in life, Dr. Paulin pointed out that "coronary angiography, the graphic demonstration of the coronary arteries in the living patient, is one of the most often practiced invasive diagnostic procedures today." His colleagues would attribute the widespread use of the procedure to Dr. Paulin himself.

Jonathan Kleefield, MD, Emeritus Chief of Neuroradiology, noted, "Sven was one of the most exceptionally fine people with whom I have had the privilege to have become acquainted, both professionally and personally. He was my strongest advocate and mentor for advancement in my academic neuroradiological career."

A former colleague, Daniel Rosenthal, MD, remembered how Dr. Paulin, trapped in the hospital by the Blizzard of 1978, slept in his office for several days and helped with procedures that were not usually performed by the department chair while no one else was available to perform them.

Dr. Paulin is survived by his wife of 57 years, Birgit, and his four children Susanne, Magnus, Helena and Viveca. He was a proud grandfather to five grandchildren and had several nieces and nephews.



CELEBRATE SVENDAY WITH RADIOLOGY
 FIRA SVENDAGEN MED RADIOLOGIEN
 FRIDAY, OCTOBER 13, 2006

Glad 80th Födelsedagon, Sven!
 Happy 80th Birthday, Sven!
 Glad 80th Födelsedagon, Sven!
 Happy 80th Birthday, Sven!
 Glad 80th Födelsedagon, Sven!
 Happy 80th Birthday, Sven!

VI ÄLSKA SVEN!
 WE LOVE SVEN!
 VI ÄLSKA SVEN!
 WE LOVE SVEN!



JOIN US FOR A SPECIAL
RADIOLOGY GRAND ROUNDS
 TO COMMEMORATE THE 80TH BIRTHDAY OF
SVEN PAULIN

"ONE OF SWEDEN'S FINEST EXPORTS"

A TRIBUTE TO SVEN PAULIN, MD, PHD
 7:30 am - 8:00 am
 presented by
FERRIS HALL, MD
 Dept. of Radiology

**CORONARY MRA:
 IN HONOR OF SVEN PAULIN**
 8:00 am - 9:00 am
 presented by
WARREN MANNING, MD
 Chief of Non-Invasive Cardiac Imaging
 Dept. of Cardiology

SVENDAY (FRIDAY), OCTOBER 13, 2006
 SHERMAN AUDITORIUM
 EAST CAMPUS

RECEPTION TO FOLLOW
 CHEST READING ROOM RAB 3

In 2006, in honor of Sven's 80th Birthday, we designated Friday Oct. 13 as SvenDay -- which also inaugurated the Annual Sven Paulin Lectureship in cardiovascular imaging. -- as well as celebrated all things Swedish!



In Oct. 2011, Sven celebrated his 85th birthday with his family at the Harvard Club where he was also honored for his forty years of service at HMS.



In Nov. 2012, BIDMC Radiology recommenced an old tradition of a black tie event at the Harvard Club to celebrate the appointment of any new professor in our Department. With the recent promotions of Alex Bankier, Ron Eisenberg and Dave Alsop, it was time to have a major celebration! This is an extremely impressive group honored to stand with Sven: (L to R) Melvin Clouse, Vassilios Raptopoulos, Jonathan Kruskal, David Alsop, Ronald Eisenberg, Phillip Boiselle, Deborah Levine, Ferris Hall, Sven Paulin, Herbert Kressel, Robert Kane, Alexander Bankier and David Hackney.

In Oct. 2013, we held the 7th Annual Sven Paulin Lectureship in cardiovascular imaging, Combined Radiology-Cardiology Grand Rounds. A reception following this event also celebrated Dr. Paulin's 87th birthday and much-deserved retirement.

Right: The Sven Paulin Lecture organizers with guest lecturere David Bluemke (center): Alexander Bankier, Diana Litmanvich, Jonny Kruskal, Sven Paulin and Warren Manning, Section Chief of Noninvasive Cardiac Imaging.



Radiology Calendar FEBRUARY 2014

Mon	Tues	Wed	Thurs	Fri
Weekly Mon Section Meetings: 3:00-4:00 ED section meeting (monthly) [ED annex, WCC]		Weekly Wed Section Meetings: 11:00-12:00 MSK clinical conf 12:00-1:00 CardioThoracic, GI/GU Oncology 3:00-4:00 Mammo [TCC-484]	Weekly Thurs Section Meetings: 12:00 - 1:30 Abd [WCC-354] 12:00-1:00 MSK	
3 7:30 - 8:15 Chest - Non-trauma (Paul Spirn) 8:15 - 9:00 Chest - Trauma (Phillip Boiselle) **12 Noon Mentoring Mtg: Authorship – Ron Eisenberg, Alex Bankier, Deb Levine (TCC484)	4 7:30 - 8:15 Spinal Infection (Jonathan Kleefeld) 8:15 - 9:00 Face and Orbit Trauma (Jonathan Kleefeld)	5 7:30 - 8:15 MSK - Non-traumatic Emergencies (Jim Wu) 8:15 - 9:00 T/L spine trauma (Andrew Bennett)	6 7:30 - 8:15 Upper extremity trauma (Mary Hochman) 8:15 - 9:00 Lower extremity trauma (Mary Hochman) 2:00-3:00 West MedRads - Senior Resident	7 12:00 - 1:00 Grand Rounds - Aaron Sodickson Addressing Medical Radiation Exposure: Current and Future Tools [Sherman Aud]
10 7:30 - 8:15 Stroke (Rafael Rojas) 8:15 - 9:00 Head & Neck emergencies (Gul Moonis) 12:00-1:00 MRI meeting [Ansin-2]	11 7:30 - 8:15 Interventional Radiology - ED (Muneeb Ahmed) 8:15 - 9:00 Cervical Spine Trauma (Sejal Shah) 10:30-11:30 NMMI meeting [GZ-103]	12 7:30 - 9:00 Aortic Emergencies (Diana Litmanovich) 7:15 - 8:00 US meeting (WCC-304A Gallery)	13 7:30 - 8:15 Post-operative abdominal emergencies (Bettina Siewert) 8:15 - 9:00 Bowel obstruction and Ischemia (Bettina Siewert)	14 12:00-1:00 Chiefs' Rounds 4th yr Resident QA Projects
17 7:30 - 9:00 Presidents Day	18 7:30 - 9:00 Physics (Matthew Palmer) [MRI - Image Formation] 8:00-9:00 IR Meeting [West Recovery]	19 7:30 - 9:00 Professionalism (Program Directors)	20 7:30 - 8:15 Interventional Oncology - RFA (Muneeb Ahmed) 8:15 - 9:00 Interventional Oncology - TACE (Muneeb Ahmed) 2:00-3:00 West MedRads - Senior Resident	21 12:00 - 1:00 Chiefs' Rounds -PIN, MEH, KHA, PME, STE, PRY
24 7:30 - 9:00 Bubbly Lesions of Bone - Didactic + Cases (Ronald Eisenberg)	25 7:30 - 9:00 MRI Ankle - Didactic + Cases (Justin Kung) 10:30-11:30 NMMI meeting [GZ-103]	26 7:30 - 9:00 MRI Elbow - Didactic + Cases (Jim Wu)	27 7:30 - 9:00 Orthopedic Hardware - Didactic + Cases (Mary Hochman)	28 12:00-1:00 No Grand Rounds: NERRS 3:30 - 6:30 NERRS -Emergency Radiology

****Authorship:** One of the most important things to figure out before embarking on a research project are the roles of the co-investigators and the issues surrounding authorship. On Monday, Feb 3rd, Alex Bankier, Ron Eisenberg and I will be holding a mentoring meeting at noon to discuss issues regarding authorship: how to discuss authorship before projects get underway, mechanisms for resolving conflict regarding authorship, how to involve authors in all steps of the process. We would like to have a vibrant conversation amongst attendings and trainees, and invite all to attend.

- Deb Levine

FYI: The ICMJE (international committee of medical journal editors) recommends the following 4 criteria for authors:

1. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND
2. Drafting the work or revising it critically for important intellectual content; AND
3. Final approval of the version to be published; AND
4. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

*Consult the webpage for the most up-to-date schedule:

<https://apps.bidmc.org/departments/radiology/residency/conferences/displayMonth.asp>

DEPARTMENTAL Grand Rounds



Friday, February 7, 2014
12 noon - 1:00 PM • Sherman Auditorium

Addressing Medical Radiation Exposure: Current and Future Tools

Aaron Sodickson, MD PhD - Section Chief, Emergency Radiology, Medical Director of CT, Brigham Radiology Network, Brigham and Women's Hospital • Associate Professor of Radiology, Harvard Medical School

In addition to being the brother of our own BIDMC alumnus Daniel Sodickson, Dr. Aaron Sodickson is also Chief of Emergency Radiology, Medical Director of CT and Director of the Brigham NightWatch Program at BWH. Aaron earned a BS in physics and a PhD in medical physics at MIT and his MD at Harvard Medical School. He completed a visiting fellowship in abdominal and vascular MRI at BIDMC in 2004 and residency training in diagnostic radiology at Brigham and Women's Hospital before joining the staff at BWH as an attending. Since 2011, he has served as an Expert Group Member in SIERRA, the Siemens Radiation Reduction Alliance and where he also served as a judge for the Right Dose Image Contest. Most recently, he has served as PI on an NIH-funded grant in "Automated Radiation Monitoring and Decision Support to Reduce Cumulative Exposure".

KUDOS -

Each month, we share the positive feedback we receive about staff members and ask you to join us in congratulating them; as always, we are especially proud to acknowledge an unprecedented constellation of staff for providing outstanding care and service!



Breast Imaging

- **Elena Shiminov** is recognized for exemplary patient satisfaction in a letter written by a patient and received in Dr. Tabb's office 1/09/14 which spoke highly of her excellent customer service skills with attention to her imaging and personal needs during her 12/2013 Breast Imaging visit.

CT

- It's a nice way to start the New Year when Patient Relations calls to relay positive patient comments about one of our crew in CT! This patient commented on **Leighton Atkin** and expressed how very nice he was, sensitive to her concerns, responsive and really just so kind. What a great experience.
- **Rich Munro** is being recognized by Dr. Michael Acord for his going above and beyond in helping with an ED CD burning issue.
- **Jae Kim** has been exceptional in his flexibility over the past couple months as he covers Shapiro and West Senior duties. Jae has provided positive leadership and support to staff. Everyone has remarked how nice it is to see Jae on the West again!
- **Chris Boncodd** did a great job in checking her images, identifying a SVC clot and alerting the Radiologists prior to the patient's departure, avoiding delays in critical results and getting the patient the right care at the right time.

Image Archive/PACS

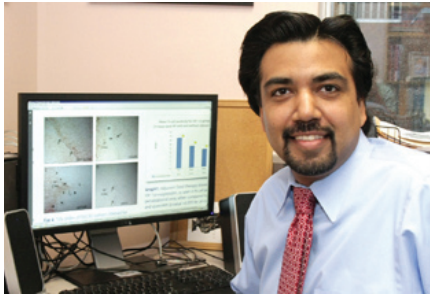
- **Susan Nelson** submitted a request to the City of Boston in October 2013 regarding the fact that cars were making left and right turns at the same time as pedestrians were trying to cross the street at the intersection of Brookline Avenue, Jimmy Fund Way and Deaconess Road. She noted that sick and handicapped patients are constantly in this area, and that the city should consider changing this light to a 4 point pedestrian signal before someone is seriously hurt. On 11/13/2013 Boston Transportation Department - Traffic Division reported that this issue has been resolved, and sent Susan a notice thanking her. *She truly exemplifies the core values of BIDMC in her concern for our patients.*
- **Mel Tayag** assisted BID-Milton on December 4, 2013 with a current state analysis of their PACS system and support in their department. He interviewed multiple staff members at all levels to aid with completing his assessment. The director at BID-Milton expressed sincere gratitude for the service provided by Mel.

IR/INR

- **Marilyn Plaistowe, Breige Kerr, Jefferson Roach** went above and beyond, staying overnight during the first snow storm to make sure patients would be taken care of.

DEPARTMENTAL NEWS: Awards & Welcomes

- Congratulations to interventionalist and associate director of the Minimally Invasive Tumor Therapies Laboratory, **Muneeb Ahmed**, on being chosen by the



Society of Interventional Radiology to receive their **Gary J. Becker Young Investigator Award** which will be presented at the 2014 SIR Annual Scientific Meeting in San Diego on March 24th at the beginning of the "The Next Big Thing in IR" plenary session. Awarded annually, the SIR's Dr. Gary J. Becker Young Investigator Award promotes excellence in academic research for members early in their careers and honors the founding editor of the Journal of Vascular and Interventional Radiology (JVIR) by recognizing the importance of the young investigator in developing the interventional solutions for the future. In 1990, the SIR Foundation established this award as a way to recognize promising young practitioners of interventional medicine early in their careers and to encourage their pursuit of academic careers. (Interestingly, our very own Max Rosen was the first recipient of this award in 1990). This award in part recognizes Muneeb's recent work studying the systemic effects of tumor ablation on distant tumor. This is truly an amazing credit to his research work and will help add tremendously to the reputation of our program.

- *Barry Sacks, MD*
Chief, Interventional Radiology

- Please join me in welcoming **Macarthur Cherenfant** to the position of Radiology Support Services Supervisor. He will be starting his new position on January 12th. MacArthur is no stranger to BIDMC, as he has been working in The Department of Surgery over the last five years has the Coordinator of Surgical Liaison. His office number is 617-667-8057 located on Shapiro SC-433A. Please take the opportunity to welcome Macarthur.

- *Peter Cousins*
Radiology Support Services Manager



- We have a new addition to welcome in the MRI department. Please help me in congratulating Tuan Luu and his family on the birth of their new child. Baby **Kynan Vo Luu** was born on December 21st 2013 @ 10:17am weight 6.2lbs & 19"! Mom, dad and baby are doing well. He is gorgeous!

- *Ines Cabral-Goncalves*
MRI Clinical Manager



- Congratulations to current Body MR Fellow **Leo Tsai** on being chosen by the Society of Abdominal Radiology (SAR) to receive the **2014 SAR Morton A. Bosniak Research Award**, for



"Quantification of perfusion and metabolism in a renal cell carcinoma mouse model during antiangiogenic response and resistance using hyperpolarized 13-C-tert-butanol and 13-C-pyruvate MRI". Formerly the SUR Research Award, this grant is awarded to proposals relevant to the field of genitourinary radiology, which may focus on basic science, clinical radiology, health services research or contrast material. Leo's research will be carried out within the next two years and is expected to be presented at the SAR 2015 Annual Scientific and Educational Meeting in San Diego, California.



Belated congratulations to **Deborah Levine**, Co-Director of Ultrasound and Director of Ob/Gyn Ultrasound, who joined the Executive Board of the Society of Radiologists in Ultrasound (SRU). She was elected secretary of the SRU on October 19, 2013, at the society's annual meeting.

DEPARTMENTAL NEWS: Upcoming Projects presented at Brown Bag, Jan 2014



Allen Reedy
Business Director

A number of major building projects in Radiology are underway this year, and promise to improve patient care and staff satisfaction across many exam and treatment areas. The project to replace the Siemens MRI in the Shapiro building will be completed this summer with the installation of a new Siemens 1.5T Aera MRI system. The MRI clinical team,

led by Koenraad Morteale and Ines Cabral-Goncalves, will be working hard to find appointment times for patients on other magnets during the anticipated 3-month downtime. This will help us maintain patient volume and referring MD relationships. The West campus RCU project to relocate the unit from Deaconess 1 to the West CC 3rd floor will be underway this summer and completed in the fall. Bridget O'Bryan, Radiology Nurse Manager, has been working collaboratively with modality managers and others to make sure that the new RCU is integrated well into Radiology in its new location. The East campus IR+ project has become much more than an IR equipment replacement project – it will

create a new interventional suite on the East 3rd floor, and also create a new reception area, holding area, new Chest reading room, and much more. This large-scale project is expected to be completed by next spring. Many staff members will be relocated as part of this project, and many more will be affected one way or another, and your continued participation in, and patience with, this project is appreciated. Final planning is underway for the Integrated Breast Care Center, which will result in a completely new suite on Shapiro 4. This very exciting project is being jointly funded via BIDMC and by major donors. Construction will take a long time – up to two years – because we need to continue to provide patient care within the existing Mammography suite while construction takes place near by. Tejas Mehta and Olga Augustus are leading the clinical team for this project, and have been persistent and creative advocates for the department. Finally, on a related note, the new BIDMC clinic at Chestnut Hill Square is slated to open this summer. The Radiology portion of this clinic will include general x-ray, women's imaging, ultrasound and CT services. The clinic is located in the largest new development in the Chestnut Hill area in some years, and is expected to draw patients to its full complement of primary care and specialty services.

Shapiro MRI

What: Renovation of Siemens Symphony MRI room and replacement with new Siemens Aera 1.5T MRI system

Where: Shapiro 4 MRI Suite

When*:

- Dec 2013: MRI system purchased
- Jan-Mar 2014: Design and planning
- Apr-May 2014: Construction
- Jun 2014: Installation
- Jul 2014: New system in operation

** all 2014 dates are preliminary*

Radiology Care Unit

What: Relocation of Deaconess 1 Care Unit to newly constructed 13-bed suite

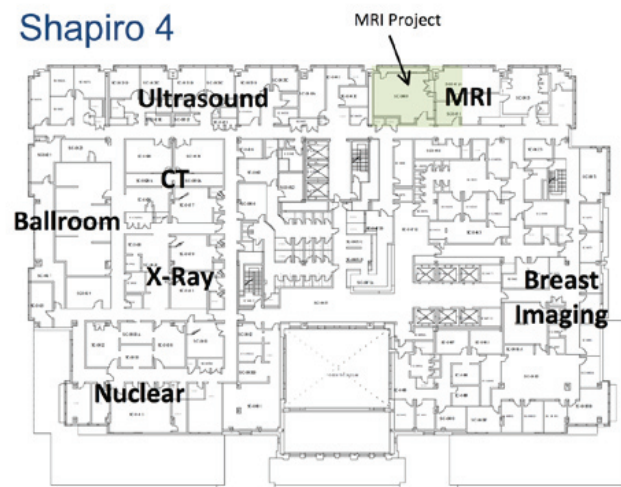
Where: West Clinical Center 3 – former PAT space plus other adjacent space

When*:

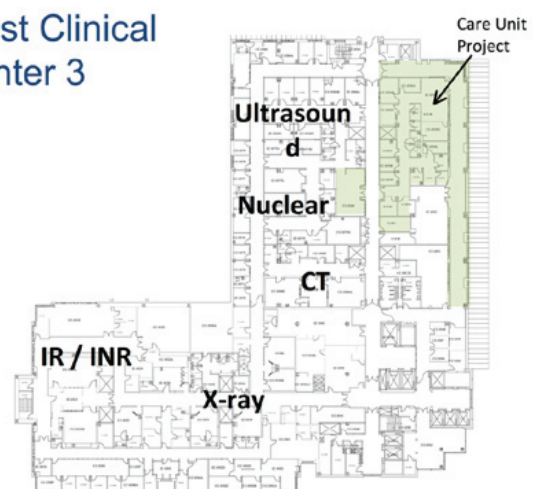
- Jan-Feb 2014: Design completed for DPH review
- Mar-Apr 2014: Final design
- Jun-Oct 2014: Construction
- Nov 2014: Move to new space and full operation

** all 2014 dates are preliminary*

Shapiro 4



West Clinical Center 3



East IR+

What: Relocation of East IR and expansion of pre- and post-procedure support space

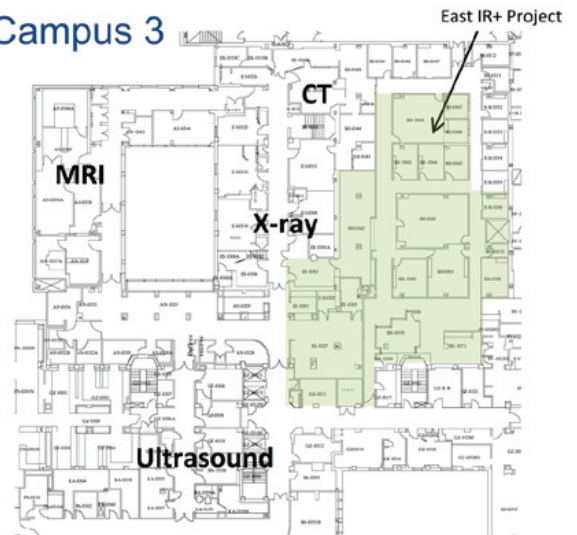
Where: East Campus 3rd floor

When*:

- Jan-Mar 2014: Design and planning
- Apr-May 2014: Final design
- Jun 2014-Feb 2015: Construction (in phases)
- Mar 2015: Move to new space and full operation

** all 2014 dates are preliminary*

East Campus 3



Breast Care Center

What: Reconfiguration and expansion of Breast Care Center

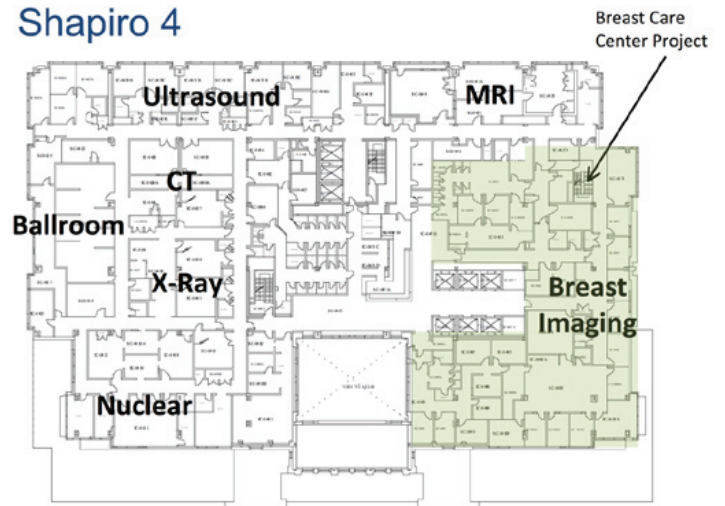
Where: Shapiro 4

When*:

- Final planning underway
- Construction will be done in phases to allow current operations to continue – likely over the next two years

** all 2014 dates are preliminary*

Shapiro 4



Chestnut Hill Square

What: Opening of new BIDMC clinic, including X-ray, Women's Imaging, Ultrasound and CT

Where: Route 9 / Chestnut Hill Square top floor – above Wegman's

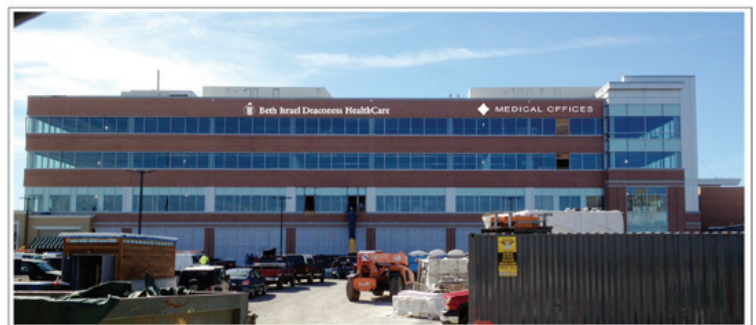
When*:

- Jan 2014: Final design
- Feb-May 2014: Construction and fit-out
- Jun 2014: Move of 25 Boylston Street equipment
- July 2014: New clinic in full operation

** all 2014 dates are preliminary*

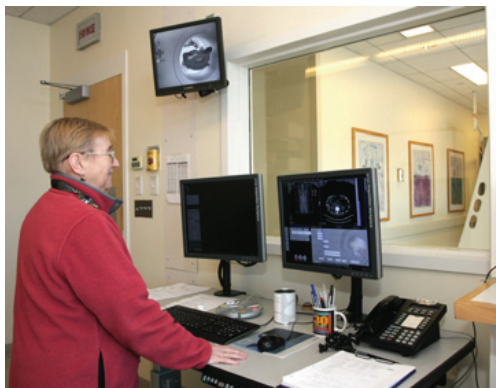


Left: Thanks to Jarrod Dore, LEED AP, Project Manager, BIDMC Facilities Planning, Design & Construction, for this most up-to-date image of progress at Chestnut Hill



North Elevation
Photo Rendering NTS

DEPARTMENTAL NEWS: What's New in Nuclear Medicine: a state-of-the-art Siemens Biograph mCT-64 PET-CT scanner!



The Division of Nuclear Medicine and Molecular Imaging is setting new standards for dose reduction and has again moved to the forefront of molecular imaging technology with the purchase of a new state-of-the-art **Siemens Biograph mCT-64 PET-CT scanner**. Located in Shapiro 4, it replaces the GE PET-CT scanner that had

previously set the mark in early 2003 as the first PET-CT scanner in Massachusetts. *The new machine is now the most advanced PET-CT scanner in Massachusetts and BIDMC is currently producing the highest quality, lowest dose PET-CT studies possible.*

The Siemens scanner brings improvements on multiple fronts. Its 3-D PET acquisition technology using time-of-flight and HD imaging, coupled with a 64-slice CT scanner, produces a significant increase in detection sensitivity. With new fully-3D iterative reconstruction techniques this results in better image quality, shorter scan times, and a lower radiation dose. Typical patient doses of the 18F-FDG radiotracer with the old scanner were in the 15-20 mCi range. With the new scanner we administer 5-10 mCi. The CT scanner incorporates state-of-the-art detectors and uses dose-modulation techniques to provide a higher quality CT image with a lower radiation dose.

The new mCT has a larger bore which is considerably more comfortable for patients, allows for the imaging of larger patients, and reduces the problems of claustrophobia. It also opens the potential for doing scans in conjunction with radiation oncology: the increased bore size will accommodate their fixation devices and allow them to perform scans exactly positioned for targeted radiation therapy procedures.

New sophisticated visualization software, the Siemens syngo.via suite, was purchased with the scanner and has given the division enhanced diagnostic tools such as multi-modality image registration, volumetric radiotracer uptake quantification, and the new standardized system for measuring lesions when assessing treatment response ("PET Response Criteria In Solid Tumors" or "PERCIST").

The Division of Nuclear Medicine and Molecular Imaging concurrently installed a sophisticated mobile automated radiotracer injection system, the **Medrad Intego Pet Infusion System** (see right), that reduces radiation exposure to the technologist. Our PET technologists typically receive radiation exposures of over 100 mrem each month, placing them in the ALARA II level of occupational exposure. Previously, the technologist manually manipulated and administered the radiotracer with a hand-held syringe. The handling of this "hot" syringe has now been replaced by the system whose fully shielded arm directly infuses the dose into the patient IV port. Previously, for the patient, approximate individual doses of radiotracer were prepared daily in Woburn by the Cardinal Health radiopharmacy based on the expected patient arrival time and the decay value of the radioisotope. The new injector system contains a single composite quantity of radiotracer and delivers a precise minimized dose based on the patient's weight and the actual time of injection.



RESIDENCY PROGRAM UPDATES

- *The residency program leadership would like to extend a heartfelt thanks to every member of our department as we just completed another successful application cycle.* With 576 applications, our talented admissions review committee (Drs. Wu, Brook, Hochman, Kung, Eisenberg, Slanetz, Ahmed) ranked the applicants, of which 129 ultimately came for a visit held on 9 separate days in November, December and January. The typical interview day began with applicants attending a didactic conference followed by a brief welcome from Associate Program Director, Dr. Ron Eisenberg. Subsequently, each applicant interviewed with 3 faculty members (Drs. Litmanovich, Kung, and Slanetz) and 1 of the Chief Residents (Drs. Shah or Senapati). The visit included a resident-led campus tour and resident lunch with a scenic view of the Longwood Medical Area. Based on a post-visit survey, applicants consistently praised the numerous opportunities to speak candidly with current residents and the meet-and-greet with the Chair of the Department during the campus tour. Overall, the applicants felt welcome and walked away with a very positive impression of the Department. Although we will not know who will match to our program until mid-March, we are confident that our program continues to attract some of the best and brightest students thanks to the hard work of every member of this Department.



*Priscilla J. Slanetz, MD, MPH
Dir., Radiology Residency
Program & Dir., Breast MRI*

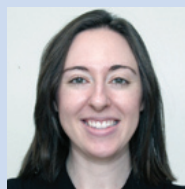
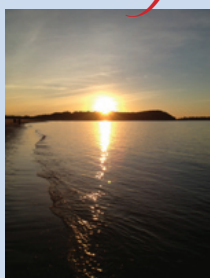


- The transition to the new accreditation structure has taken place, and the graduate medical education (GME) office at BIDMC is poised for its first **clinical learning environment review** (CLER). Scheduled to take place every 18 months beginning in August 2012, these visits focus on resident and fellow involvement in patient safety and quality improvement, supervision, transitions in care, duty hours and fatigue, and professionalism. Any faculty and trainee in our department may be asked to participate in this upcoming visit, so please become familiar with the institutional and departmental procedures and policies related to these issues. In addition, our training program is scheduled for a site visit in 2016. The purpose of this visit is primarily a self-study based on the information entered into the accreditation data system (ADS). At present, core faculty and residents are completing the annual program survey and our residents just finished entering their duty hours.
- Administratively, we are in the process of transitioning to an electronic system for all trainee records. This transition has been time-consuming, and much thanks goes to **Laura Major** who helped sort through innumerable files that are now ready for scanning into the system. In addition, the conversion to New Innovations as a trainee management system continues. At present, rotation evaluations for all residents and fellows are being performed using this system. We will continue to transition other administrative tasks into New Innovations over the next 6 months.
- Finally, the program leadership is especially grateful to have **Katie Armstrong** as the Educational Program Manager and **Scot Morrison** as Residency Program Coordinator. Without their constant efforts and amazing interpersonal skills, the educational programs would not be where they are today.

The Gallery

Now showing: Photos by 4th yr resident Liz Asch, check it out at WCC-304A!

Liz Asch, Photographer & Traveller



Inspired by IR Admin Asst Maxima Baudissin's travel diary of her recent trips to Paris and Munich, 4th yr resident Liz Asch will be displaying her photos. Many thanks to all who came to view Maxima's show. It is very heartening to see the Gallery so appreciated! As always, please contact Donna Wolfe if you would like to share your photos, paintings or sculptures: dwolfe@bidmc.harvard.edu or 4-2515

**#2 -
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Elizabeth Puscheck, MD
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¹ From the Depts of Radiology (D.L.), Obstetrics and Gynecology (H.C.H.), and Pathology (J.L.H.), Beth Israel Deaconess Medical Ctr and Harvard Medical School, 330 Brookline Ave, Boston, MA 02215; Depts of Radiology (D.L.B.) and Obstetrics and Gynecology (M.M.), Mayo Clinic College of Medicine, Rochester, MN; Dept of Radiology, Vanderbilt Univ Medical Ctr, Nashville, TN (R.F.A.); Dept of Radiology, Brigham and Womens Hosp and Harvard Medical School, Boston, MA (B.B., C.B.B., P.M.D.); Dept of Obstetrics and Gynecology, Univ of North Carolina, Chapel Hill, NC (W.R.B.); Dept of Radiology, Hosp of Univ of Pennsylvania, Philadelphia, PA (B.C.); Dept of Obstetrics and Gynecology, Univ of Kentucky, Lexington, KY (P.D.); Dept of Obstetrics and Gynecology, New York Univ Medical Ctr, New York, NY (S.R.G.); Depts of Radiology, Urology, and Pathology, Johns Hopkins Univ School of Medicine, Baltimore, MD (U.M.H.); Dept of Radiology, Albert Einstein Medical Ctr, Philadelphia, PA (M.H.); Dept of Radiology, Mayo Clinic College of Medicine, Scottsdale, AZ (M.D.P.); Dept of Obstetrics and Gynecology, David Geffen School of Medicine at UCLA, Los Angeles, CA (L.D.P.); Dept of Obstetrics and Gynecology, Wayne State Univ, Detroit, MI (E.P.); Depts of Radiology, Epidemiology and Biostatistics; and Obstetrics, Gynecology, and Reproductive Medicine, Univ of California, San Francisco, CA (R.S.B.). Received Jan 27, 2010; revision requested Mar 8; revision received Mar 30; accepted Mar 31; final version accepted Apr 5. **Address correspondence to D.L.** (e-mail: dlevine@bidmc.harvard.edu).

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Management of Asymptomatic Ovarian and Other Adnexal Cysts Imaged at US: Society of Radiologists in Ultrasound Consensus Conference Statement¹

The Society of Radiologists in Ultrasound convened a panel of specialists from gynecology, radiology, and pathology to arrive at a consensus regarding the management of ovarian and other adnexal cysts imaged sonographically in asymptomatic women. The panel met in Chicago, Ill, on October 27–28, 2009, and drafted this consensus statement. The recommendations in this statement are based on analysis of current literature and common practice strategies, and are thought to represent a reasonable approach to asymptomatic ovarian and other adnexal cysts imaged at ultrasonography.

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Normal Appearance	Follow-up*	Comments
Normal ovary appearance: Reproductive age Follicles <ul style="list-style-type: none"> • Thin and smooth walls • Round or oval • Anechoic • Size ≤ 3 cm • No blood flow 	Not needed	Developing follicles and dominant follicle ≤ 3 cm are normal findings
Normal ovary appearance: Reproductive age Corpus luteum <ul style="list-style-type: none"> • Diffusely thick wall • Peripheral blood flow • Size ≤ 3 cm • +/- internal echoes • +/- crenulated appearance 	Not needed	Corpus luteum ≤ 3 cm is a normal finding
Normal ovary appearance: Postmenopausal <ul style="list-style-type: none"> • Small • Homogenous 	Not needed	Normal postmenopausal ovary is atrophic without follicles
Clinically inconsequential: Postmenopausal Simple cyst ≤ 1 cm <ul style="list-style-type: none"> • Thin wall • Anechoic • No flow 	Not needed	Small simple cysts are common; cysts ≤ 1 cm are considered clinically unimportant

Summary of recommendations for management of asymptomatic ovarian and other adnexal cysts. * = Follow-up recommendations are for US, unless otherwise indicated. *** = Some practices may choose a threshold size slightly higher than 1 cm before recommending yearly follow-up. Practices may choose to decrease the frequency of follow-up once stability or decrease in size has been confirmed. (Figure continues.)

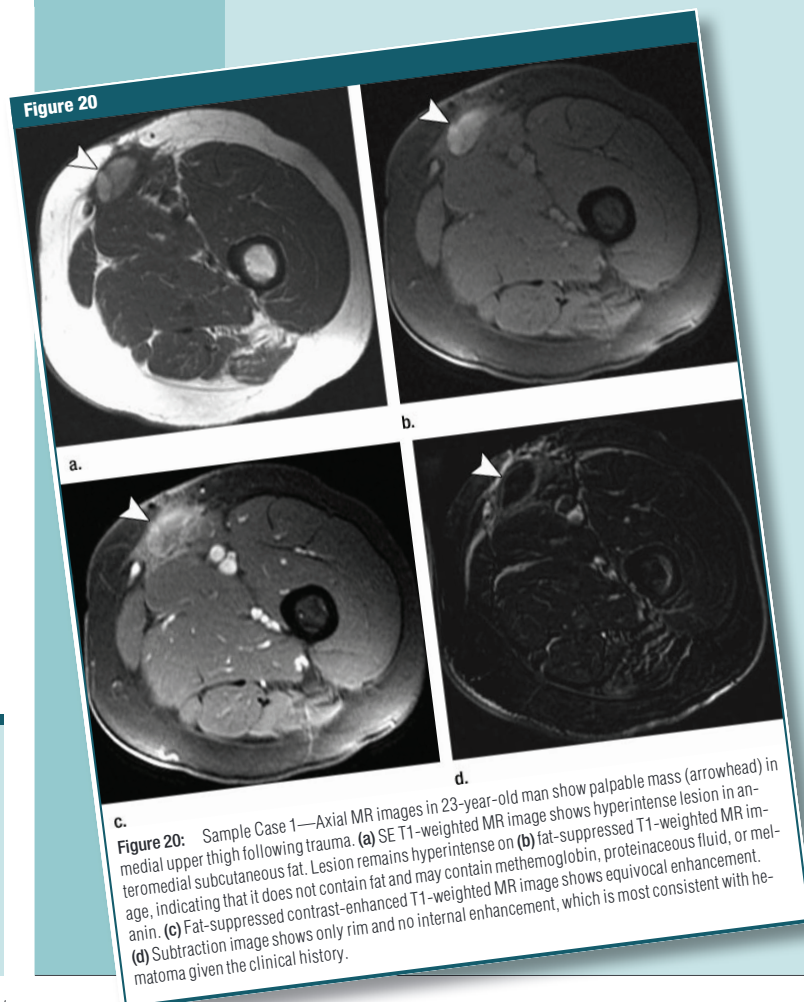
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Jim S. Wu, MD
Mary G. Hochman, MD

Soft-Tissue Tumors and Tumorlike Lesions: A Systematic Imaging Approach¹

Soft-tissue lesions are frequently encountered by radiologists in everyday clinical practice. Characterization of these soft-tissue lesions remains problematic, despite advances in imaging. By systematically using clinical history, lesion location, mineralization on radiographs, and signal intensity characteristics on magnetic resonance images, one can (a) determine the diagnosis for the subset of determinate lesions that have characteristic clinical and imaging features and (b) narrow the differential diagnosis for lesions that demonstrate indeterminate characteristics. If a lesion cannot be characterized as a benign entity, the lesion should be reported as indeterminate, and the patient should undergo biopsy to exclude malignancy.

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¹ From the Department of Radiology, Section of Musculoskeletal Imaging, Beth Israel Deaconess Medical Center, 330 Brookline Ave, Boston, MA 02215. Received July 9, 2008; revision requested August 28; revision received February 16, 2009; accepted March 9; final version accepted March 23. Address correspondence to J.S.W. (e-mail: jswu@bidmc.harvard.edu).

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Al-Hawary MM, Francis IR, Chari ST, Fishman EK, Hough DM, Lu DS, Macari M, Megibow AJ, Miller FH, **Mortele KJ**, Merchant NB, Minter RM, Tamm EP, Sahani DV, Simeone DM. Pancreatic ductal adenocarcinoma radiology reporting template: consensus statement of the society of abdominal radiology and the american pancreatic association. *Radiology*. 2014 Jan;270(1):248-60. doi: 10.1148/radiol.13131184. PMID: 24354378.

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