

Radical Views...

from the Department of Radiology

April 2010

Mon	Tues	Wed	Thurs	Fri
3:00-4:00 ED section meeting (monthly) [ED annex, WCC] check w/Sheila Blalock 4-2506	1:00 - 2:00 MRI meeting (weekly) [TCC-484]	Weekly Wed Section Meetings: 11:00-12:00 MSK clinical conference 12:00-1:00 Thoracic Imaging, GI Oncology/GU Oncology 3:00-4:00 Mammo [TCC-484]	1 7:30 - 8:15 Neuro Conference (Mani) 8:15-9:15 Neuro Conference (Kleefield) Weekly Thurs Section Meetings: 12:00 - 1:30 Abd [WCC-354] 12:00-1:00 MSK	2 7:30 - 8:00 OB-GYN US QA Cases (Cyriac - Women's Imag. Fellow) 8:00-9:00 Grand Rounds: Congenital & Acquired Disorders of the Ped. Hip: Focus on Sonography (Susan Connolly) 12:00-1:00 Resident Case Conference (Kleefield)
5 7:30-9:00 Board Review (Wei)	6 7:30 - 8:15 (Clouse) 8:15-9:00 (Reddy)	7 7:30 - 8:15 Large Airways Disease (Boiselle) 8:15-9:00 Chest Cases (Boiselle)	8 7:30 - 8:15 Board Cases (Kung- MSK Fellow) 8:15 - 9:00 Board Cases (McMahon)	9 7:30 - 9:00 No Grand Rounds 12:00-1:00 GI Radiology Board Review (R. Baron) [Clouse Conf] EVENT: 3:45-6:45 NERRS: Thoracic Imaging
12 7:30-9:00 Board Review (KS Lee)	13 7:30 - 9:00 Breast Cases (Iuanow) 10:30-11:30 Nuc Med meeting (GZ-103)	14 7:30 - 8:15 Ultrasound Board Review (Sheiman) 8:15 - 9:00 Nuc Med Cases (Parker)	15 7:30 - 8:15 Board Cases (Livingston- Neuro Fellow) 8:15-9:00 Neuro Conference (Moonis)	16 8:00-9:00 Grand Rounds: Landmarks for Imaging Head and Neck Cancer (Hugh Curtin) 12:00 - 1:00 Resident Case Conference (Hackney) [Clouse Conf]
19	20 7:30 - 8:15 (Callahan-IR Fellow) 8:15 - 9:00 8:00 - 9:00 IR meeting [West Recovery Rm] EVENT: 12 Noon Mentoring Program: Approaches to Experimental Design [Kirstein Living Rm]	21 7:30 - 8:15 Small Airways Disease (Bankier) 8:15 - 9:00 Chest Cases (Bankier)	22 7:30 - 8:15 Board Cases (Hochman) 8:15 - 9:00 Board Cases (Yablon)	23 7:30 - 8:00 Grand Rounds: Quality Assurance 12:00 - 1:00 Resident Case Conference (Moonis) [Clouse Conf]
26 7:30 - 9:00 Board Review (Siewert)	27 7:30 - 8:15 Breast Cases (TBA) 10:30-11:30 Nuc Med meeting (GZ-103)	28 7:30 - 8:15 US Board Review (McArdle) 8:15 - 9:00 Nuc Med Cases (Parker)	29 7:30 - 8:15 Board Cases (Neel Madan- Neuro Fellow) 8:15-9:00 Neuro Conference (Bhadelia)	30 7:30-9:00 Chief Rounds 12:00-1:00 Resident Case Conference (Rojas)

Reminders: RSNA Abstracts are due Thurs., April 15

Morrison Research Day has been changed to Wed., May 26

APRIL GRAND ROUNDS: Visiting Professors

Susan Connolly, MD - Congenital & Acquired Disorders of the Pediatric Hip: Focus on Sonography

Friday, April 2nd
8:00 - 9:00 am, Sherman Auditorium

Following the 7:30-8:00 am Bread & Butter lecture, "OB-GYN Ultrasound QA Cases" presented by Women's Imaging Fellow, Dr. Deepa Ann Cyriac, **Dr. Susan Connolly** will present **“Congenital & Acquired Disorders of the Pediatric Hip: Focus on Sonography”** at Grand Rounds on April 2nd. We are pleased to welcome her back as a visiting alumnus. Dr. Connolly is a graduate of Georgetown University Medical School, Wash., DC and she completed radiology residency training (serving as Chief Resident in her fourth year) at New England Deaconess Hospital, Boston, MA in 1991. She went on to complete a fellowship in Pediatric Radiology at Children's Hospital and earned a Certificate of Added Qualifications (CAQ) in Pediatric Radiology in 1995. She has served as Director of CT and Assistant Director of MR at Children's Hospital, Boston and Associate Chief of Pediatric Radiology at Massachusetts General Hospital. Currently, she is an Assistant Professor of Radiology at HMS, based at Children's Hospital. She has lectured intensively on sports injuries in children and musculoskeletal imaging with multisection CT, Ultrasound and MR. Of note, Dr. Connolly has also served as a military officer for the last 27 years and in 1987, she was awarded the Navy Achievement Medal. Currently, she is a Commander in the US Naval Reserves, stationed in South Weymouth, MA.



Hugh Curtin, MD, FACR - Landmarks for Imaging Head and Neck Cancer

Friday, April 16th
8:00 - 9:00 am, Sherman Auditorium

Dr. Hugh Curtin will present "**Landmarks for Imaging Head and Neck Cancer**" at Grand Rounds on April 16. Dr. Curtin is Professor of Radiology at HMS and Chief of Radiology at Massachusetts Eye and Ear Infirmary in Boston. He is a graduate of SUNY Upstate Medical University, Syracuse, NY and he completed an Internship in Medicine and a Residency in Radiology (serving as Chief Resident in his fourth year) at the University of Pittsburgh, Presbyterian University Hospital. He went on to complete a Clinical fellowship in Head and Neck Radiology at the Fondation Ophtalmologique, Adolphe de Rothschild, Paris, France as well as an invited research fellowship in Tokyo, Japan. In 1999, he earned a Certificate of Added Qualifications (CAQ) in Neuroradiology in 1999. In 1993, he was awarded a Presidential Citation from the American Academy of Otolaryngology for excellence in head and neck surgery and in 1999, he received a Gold Medal from the American Society for Head and Neck Radiology. A recipient of numerous Editor's Recognition Awards, he also serves on the editorial boards of the American Journal of Otolaryngology, Head and Neck, American Journal of Neuroradiology, Skull Base, and The Seminars in Ultrasound, CT and MRI. In 2000, he became a consultant to the editor of Radiology.

DEPARTMENTAL NEWS, AWARDS & HONORS



FROM THE CHIEF
Jonathan B. Kruskal, MD, PhD

RSNA Abstracts - April 15

With the RSNA abstract deadline fast approaching, I just want to make sure that all staff and trainees participating in each project have discussed and agreed upon authorship prior to submission, and that every author has made substantial contributions to all three categories established by the ICMJE (<http://www.icmje.org> <<http://www.icmje.org>>) including

- (a) conception & design, or acquisition of data, or analysis & interpretation of data,
- (b) drafting the abstract or revising it critically for important intellectual content, &
- (c) final approval of the version to be submitted

Individuals who have not made substantial contributions in all three categories should simply not be listed. The author list should be finalized prior to submission. The same principles hold for submission of manuscripts. Please pay particular attention to these criteria since we do not subscribe to "guest" authorship at any time. Section Chiefs are ultimately responsible for the content of each abstract being submitted from their section, and should ensure that these criteria are upheld and that authorship is appropriate for each abstract. I would also like to remind all staff that every accepted scientific abstract should be submitted for consideration for publication.

Congratulations Muneeb Ahmed, MD -

Please join me in congratulating **Muneeb Ahmed, MD**, on being appointed as an Assistant Professor of Radiology at Harvard Medical School. Muneeb received his undergraduate degree from The Aga Khan University Medical School in Karachi, Pakistan, after which he joined our department as a research fellow as part of Dr. Clouse's NCI-funded cancer imaging fellowship program. Muneeb successfully completed his radiology residency at Beth Israel Deaconess Medical Center and was Chief Resident in 2007. He completed his Fellowship in Interventional Radiology at Johns Hopkins Medical School and joined our Interventional Radiology Division in October last year. As an NCI-funded research fellow working under the mentorship of Nahum Goldberg, Muneeb characterized the ability of liposomes to act as vectors for the targeted delivery to chemotherapeutic agents. His peer reviewed publications describing the ability of radiofrequency ablation to enhance deposition of doxorubicin in and around solid tumors has not only already received four national, as well as societal, awards, but has been successfully translated into the clinical setting where patients are now administered intravenous liposomal doxorubicin to act as an adjuvant to radiofrequency ablation of solid liver tumors. This innovative work also received funding from the Radiological Society of North America and has led to a variety of additional investigations, exploring other vectors and chemotherapeutic agents. Objective support for Muneeb's outstanding scholarship is provided through 29 original articles in international peer reviewed journals, nine of which he has served as first author. His impressive list of publications demonstrates a focused interest in enhancing the efficacy of thermal ablation of solid tumors. More recently Muneeb has shown that a sodium chloride solution enhances thermal delivery into solid tissue both in vitro and in animal models, further increasing the extent of tissue destruction. These efforts have been rewarded by him receiving the Lawrie B. Morrison Research Award from the Department of Radiology at Beth Israel Deaconess Medical Center as well as the Felix and Risa Fleischner Young Investigator Award for Outstanding Research Performance in our training program. Dr. Ahmed also received the RSNA Resident Research Trainee Award in 2003 and a second RSNA Resident/Fellow Research Award in 2005.

These academic achievements, coupled with his recognized and outstanding clinical and teaching skills, an expert set of hands (likely the result of cricketer expertise), his collegiality and menschedik disposition make Muneeb a most deserving physician and scholar to be appointed Assistant Professor of Radiology at Harvard Medical School.

A note of thanks...

Words cannot express how I feel about the love and support you all have shown me since my husband's stroke in January. We appreciate all you have done and contributed to us, supporting the "Chip in for Chip" fundraiser given by the Lexington Hockey team and families. To see my family, my work family, hockey family, Lexington community and all our wonderful friends come together as one will be something we will never forget. I feel so lucky to work in a department that is so caring and supportive. Thank you all so much, we appreciate your kindness and all you have done for us.
Fondly,
Marge Guthrie

DEPARTMENTAL NEWS, AWARDS & HONORS

Radiology Technologist Yolette Thelusma returns from Relief Work in Haiti

We are proud to welcome back Yolette Thelusma, a technologist at our 1101 Beacon St. office, who embodies the compassion and volunteerism for which Beth Israel Deaconess Medical Center has become known.



"My name is **Yolette Thelusma** and I'm an Haitian x-ray tech who's been living in the US for 13 years and never been to Haiti since. The earthquake hit Haiti last month, and when I saw images of the devastation, the pain and the suffering of my fellow brothers and sisters coming from the reports on TV, I immediately felt the need to do something to help, however small it might be. As the days passed, this growing feeling of helplessness had become more and more unbearable. When I heard that BIDMC was looking for volunteers to send to Haiti, I jumped at the opportunity and signed up on their website. I e-mailed Dr. Molloy, the head of the ER, who referred me to Dr. Scott who's been traveling to different parts of the world with the Harvard Humanitarian Initiative (HHI) to provide relief to those in desperate need.

So Dr. Scott, who believed that my skills were greatly needed after she got to Haiti, put some colleagues and friends in charge of raising the funds to sponsor my trip. Sure enough, the generous people of the South End were more than happy to help out and actually raised the funds in less than a week. For that I will always be grateful. Then the HHI with the help of their coordinator made sure that we made it safely to Haiti by arranging a one night stay at a hotel in the Dominican Republic, and ground transportation. So I made it to Haiti on February 8th and was there until the 20th. We stayed at the Fond Parisien Disaster Recovery Center put together by the HHI. Fond Parisien is on the Haitian side of the border with the Dominican Republic. The center is staffed by a large group of highly dedicated international volunteers and Haitian teams including doctors, nurses, support staff and administrators.



When I got there, I really got a sense of how much my skills were needed after I was introduced and got a star-like welcome of cheers and claps. Needless to say I was very busy everyday that I was there. I saw more broken limbs, shattered pelvises, and amputations than I've ever seen in my five years in x-ray. But I am really glad I had the opportunity to help out a little and got to spend some time with my family. I am so proud to have been part of such an amazing humanitarian initiative and that I was able to see first hand how people from different parts of the world and with different backgrounds manage to work together from the goodness of their hearts for the good of the poor. I must say that I was really impressed by how well the HHI organized the deployment of a large group of medical and health care personnel and delivered huge loads of donated supplies. For every team that leaves, another team was already there to replace it.

For me this trip was very rewarding, healing and at times frustrating. Frustrating only because we had to work with what we had and yet what we had wasn't good enough and you wish you could do more but one can only do so much. The x-ray machine we used was the frustrating part, we had to use a small handheld x-ray machine normally used by the veterinarian. There is no light coming out to indicate where you are shooting the x-ray and you end up doing a lot of repeats because 30% of the time you miss the target. My second week there I had the chance to use a regular portable machine donated by Philips but I could not use the CR because the generator blew out. I had to continue to use the smallest size of cassettes and image parts by section because the CR that came with the veterinary machine could only fit 8 x 10. All of this was going on under a very hot tent that was designated as the radiology tent. I just found out on March 7 that the portable x-ray machine is out of order. The people of Haiti can use just about anything right now; but when it comes to radiology, either equipment or technologists, that would be a plus for all the volunteers already there that are trying to help.

I tried not to take too many sad stories with me like this ten-year-old boy who lost every member of his family in the quake and now lives in an orphanage. Or this 14-year-old boy who is the only injured member of the family, who lost his mother and recalled her final plea to his father to not let the children suffer and make sure that they get a good life. All of these stories, however, didn't take away the fact that there is still hope. When I think of all the people working on the ground, and the people like the ones in the South End and around the world, who are doing their part behind the scene to ease the pain of my brothers and sisters, it gives me great expectations for a better tomorrow."

– Yolette



Dr. Scott of HHI and Yolette Thelusma

Upon returning from Haiti, Yolette was presented with a special shirt from the Beacon St. crew that was purchased locally and all the proceeds go to Haiti. Special thanks to Jane Corey, Manager, HMFP Radiology Outpatient Practices, for making us aware of this tremendous effort!



DEPARTMENTAL NEWS, AWARDS & HONORS

• Triple score for Thoracic Imaging

- Congratulations to Luce Cantin, MD** - Please join me in congratulating our former chest fellow, Luce Cantin, on receiving a Certificate of Merit Award from the Society of Thoracic Radiology for her outstanding educational exhibit on bronchiectasis, which was coauthored by many members of the chest section. Special kudos to Donna Wolfe for her truly outstanding work on the design and execution of the exhibit!
- **Congratulations to Diana Litmanovich, MD** - I am pleased to announce that Dr. Diana Litmanovich has been awarded the Journal of Thoracic Imaging's 2009 Editor's Recognition Award for distinguished service as a reviewer for the journal. This award is given to a highly select group of our reviewers in recognition of their consistently high quality, comprehensive, scholarly, and timely reviews.
- **Congratulations to Ronald Eisenberg, MD** - for publication of "Compliance with Fleischner Society Guidelines for Management of Small Lung Nodules: A Survey of 834 Radiologists" featured in the April issue of Radiology. This has been selected for a journal podcast and was also accompanied by an editorial by Heber McMahon.
- Phillip Boisselle

• Welcome Bridget O'Bryan-Alberts, Radiology Nurse manager

I am very pleased to announce the promotion of Bridget O'Bryan-Alberts to the Radiology Nurse manager position. Bridget has been at BIDMC since 1991 starting in the IV therapy unit and then in Aphaeresis in 1996, until she join us as part of the Radiology team in 2001. She has been an valuable member of our nursing radiology team and I look forward to working with her in this expanded role. Please join me in congratulating Bridget on her promotion.

-Donna Hallett



Bridget O'Bryan-Alberts

• Thank You Transporters

March 15-19 was designated as Radiology Transporters Week and all modalities recognized the important work of our transporters with daily celebrations. For example, on the right, Jean Germain, Hope Lee, Etse Asamenew, Sam Senat, Francisco Dorosario, Fritz Honore, and Dean Annis, Jr. enjoy a Chinese lunch in the Gallery.



• BIDMC School of Diagnostic Medical Sonography Graduates Second Class!

The BIDMC School of Diagnostic Medical Sonography and the ultrasound department are proud to announce the graduation of the second DMS class! The 2010 graduates are Jennifer Benson, Michelle Levesque and Kelsey Worcester.



Program Director Cory Finn, and graduates, Jennifer Benson, Michelle Levesque and Kelsey Worcester.

Jennifer, Michelle and Kelsey completed the BIDMC 18-month certificate program in Diagnostic Medical Sonography here at BIDMC.

The class of 2010 has had many accomplishments to date. The graduates each completed over 1500 ultrasound exams during their training here at BIDMC. They presented a research poster to the Society of Diagnostic Medical Sonography Annual Conference in fall 2009. The graduates have all passed their Sonographic Principles and Instrumentation exam through the American Registry of Diagnostic Medical Sonographers. These accomplishments significantly exceed the standards of sonography students and programs! We are so proud of the class of 2010!

- ** The BIDMC DMS Program would like to thank each and every BIDMC sonographer for their contribution to the success of the program. **
- Cory Finn, BS, RDMS, Program Director
Deborah Levine, MD, Medical Director
BIDMC School of Diagnostic Medical Sonography

Dr. McArdle raises a V for Victory in Ultrasound!
(l to r: Laurie Sammons, Juanita Cook, Peggy Newman, Ellen Howe, Deborah Levine, Jennifer Benson, Michelle Levesque, Kelsey Worcester, Cory Finn, Maeve Stockbridge, Bernie Kennedy)





Robert Kane



Deborah Levine



Robert Sheiman



Colin McArdle



Tejas Mehta



Janneth Romero



Jonathan Kruskal



Maryellen Sun



Bettine Siewert



Jesse Wei

Overview: The Ultrasound Section is a large and steadily growing section within the Department of Radiology, led by Co-Chiefs, **Dr. Deborah Levine**, Chief of OB/GYN Ultrasound and **Dr. Robert Kane**, Chief of Abdominal and General Ultrasound, and **Dr. Robert Sheiman**, Co-Director of the Non-invasive Vascular Laboratory. We have seven additional staff members who are primarily involved in day-to-day ultrasound activities, including **Drs. Colin McArdle, Janneth Romero, and Tejas Mehta** in the OB/GYN side, and **Drs. Maryellen Sun, Bettina Siewert, Jesse Wei**, and our own Department Chair, Dr. **Jonathan Kruskal**, on the General/Abdominal side. The Ultrasound Section has shown steady and continuous growth, and in the year 2009 performed and interpreted 49,663 ultrasound examinations, which represents a nearly 20% increase when compared to FY 2007. There were over 2,000 ultrasound-guided procedures performed in 2009, ranging from amniocenteses and saline-infused hysterosonography exams to liver and kidney biopsies, FNAs of thyroid, lymph node and salivary gland lesions, and percutaneous cholecystostomies, and other drainage procedures. We read nearly 18,000 remote scans from the 1101 Beacon Street, Lexington and Chelsea office sites, and the mobile US network. We also performed over 250 intraoperative ultrasound examinations to help facilitate surgical procedures involving the liver, gallbladder and biliary tree, pancreas, and kidneys, and gynecological surgical procedures.

This extremely busy clinical service is ably led by our Ultrasound Manager, **Bernadette Kennedy**, our Ultrasound Supervisor, **Juanita Cook**, and **Deborah Barnhill**, Senior Vascular Technologist. Our increased clinical productivity has been accomplished without adding additional physician staff, in large part due to the extremely valuable contributions of our Sonographic Practitioners, **Gail Birch** and **Laurie Sammons**, who are an invaluable resource in helping expedite the busy clinical load, as well as serving as outstanding educational resources for our many trainees and junior technologists. The sonography staff of 35 consistently demonstrate an outstanding commitment to excellence in patient care, high quality imaging, and a conscientious work ethic. In the past year, we have added a Nurse Practitioner, **Faith Hsu**, who has proved to be an extraordinary resource in helping to manage our rather chaotic interventional schedule on the West Campus. Since April 2009, we have increased our average daily interventional procedure rate from 4.2/day to 7.4/day, and typically 20-35% of these daily cases are same day add-ons from the inpatient wards, Emergency Department, or outpatient physician offices. The entire ultrasound team consistently functions as a cohesive, highly productive unit and is deserving of our compliments and gratitude for their excellent efforts.



The OB/GYN Ultrasound Service is primarily located in the Shapiro Clinical Center and has six ultrasound rooms with state-of-the-art equipment including 3-D and 4-D imaging. This is of particular importance for fetal imaging, including evaluation of complex fetal anomalies, as well as for assessment of uterine anomalies. We have several certified techs to offer nuchal translucency screening, as well as routine and high risk obstetrical ultrasound, amniocentesis, and the full range of GYN ultrasound, including sonohysterography. Dr. Levine serves as Chair of the Ultrasound Commission for the American College of Radiology and is a member of the ACR Board of Chancellors. She also serves as Senior Deputy Editor of Radiology.

The Abdominal/General Ultrasound Service is principally sited at the West Campus, and is also active in the East Campus on Rabb 3. Major activities include serving as the principal screening modality for several thousand patients with chronic liver disease, who are imaged every 6-12 months in an effort to detect possible early development of hepatocellular carcinoma, as well as to assess for further deterioration of liver function. This is particularly important in patients with chronic hepatitis B and C who are enrolled at BIDMC in an antiviral therapeutic regimen. Other unique activities in the Abdominal/General Ultrasound Section include intraoperative and laparoscopic ultrasound assessment of patients with liver, biliary tract, and pancreatic diseases. The hepatobiliary and pancreatic surgeons have come to rely on IOUS information to make on-the-spot decisions regarding extent of surgical therapeutic approach, to perform intraoperative biopsies and other interventional procedures, and, in some cases, to significantly shorten the length of surgical procedures, such as Puestow pancreatic drainages. Transrectal assessment of local staging for rectal tumors and transanal ultrasound of the anal sphincters and H202 ultrasound perianal fistulograms are other areas of unique application of ultrasound technology. The Vascular Ultrasound Service performs the full spectrum of ultrasound assessments for peripheral arterial and venous diseases. Dr. Sheiman was one of the early users of thrombin injection for treatment of pseudoaneurysms, and has a remarkable success rate in this regard, thereby shortening patient stays and avoiding surgery in nearly all cases.

In the realm of research, the Section has continued to be very active. On the OB/GYN side, research has focused on the utility of MR as an additional aid in care of the pregnant patient, with projects focusing on assessment of ultrasound, MR and outcomes in fetuses with ventriculomegaly. On the Abdominal/General Ultrasound side, there are several papers in press or in preparation, including a long-term clinical and sonographic analysis of gallbladder polyps over an 8-10 year follow-up, an analysis of the efficacy of color and pulsed Doppler assessment for portal vein stenosis in liver transplant patients, a collaborative work with the hepatologists regarding the performance of ultrasound in prediction of the presence of fatty liver in a group of patients suspected for non-alcoholic steatohepatitis with correlation to liver biopsy results, and a requested manuscript which is submitted to RadioGraphics detailing the spectrum of uses of intraoperative ultrasound in pancreatic surgery. In the past year, there were 11 peer-reviewed publications from the Ultrasound Section (see below).

An exciting, new research development is being overseen by **Dr. Maryellen Sun**, who is the Site Principal Investigator for a Multicenter Trial to Assess the Performance of Contrast-Enhanced Ultrasound in Characterization of Liver Lesions, under the sponsorship of Bracco. This study is in its formative stages and will get underway in the next month or two. Hopefully, the results will help convince the FDA to approve the use of contrast-enhanced ultrasound for diagnostic uses in radiology. If so, Dr. Sun has other research projects in mind to continue the investigations into effective uses of contrast-enhanced ultrasound.

The Section continues its successful efforts in education. Under Dr. Levine’s leadership, there are over 4900 cases entered into the Ultrasound Digital Teaching File, which are accessible through the Intranet and include interesting pathologic cases, as well as ultrasound demonstrations of normal anatomy. This is an invaluable educational resource. We are well known and relatively unique in Radiology for our insistence on hands-on learning in Ultrasound by the radiology residents, all of whom are expected to achieve a measurable level of competence in performing ultrasound scans as well as interpreting ultrasound studies. Our residents are responsible for after-hours ultrasounds on the East Campus, a task which they perform quite well. We would like to make special note of our School of Diagnostic Medical Sonography at BIDMC, which has been established and ably led by **Cory Finn**, the Program Director. The Certificate Program in Diagnostic Medical Sonography was launched at BIDMC in 2008. This is an 18-month program which has been accredited by CAAHEP and includes 40 hours/week of clinical and didactic training within the BIDMC network. There is a rigorous curriculum consisting of ultrasound physics, anatomy, and the full spectrum of general, abdominal, OB/GYN and vascular sonography. We have had two outstanding graduating classes from this program, and many of the graduates have entered our select group of sonography staff. We look forward to the continued success of the sonography school.

It is indeed a pleasure to work amongst such a cadre of talented and dedicated individuals and we look forward to the continuing success of the Ultrasound Section in the coming years.

Do you know... that passwords should not be shared?

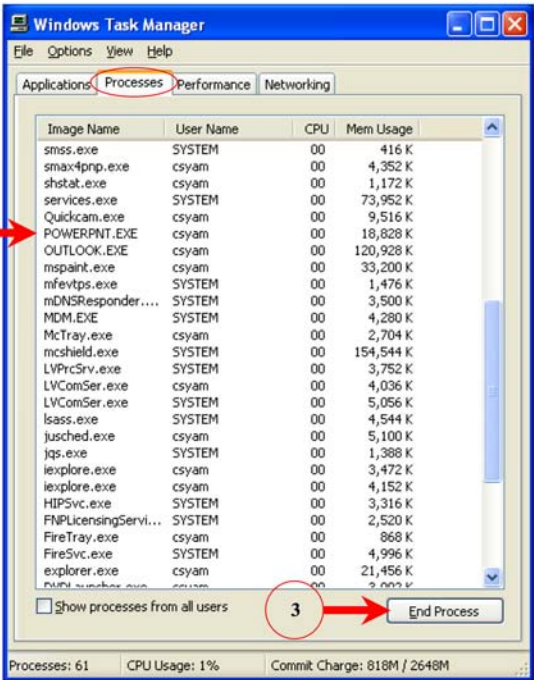
As we rely more and more on digital media for communicating and for providing care to patients, BIDMC is required by state and federal law to introduce processes to protect and prevent unauthorized access to personal patient information. You are reminded of this each year when you take the online HIPAA compliance test. This is a reminder that your IS passwords should not be given out to others, including friends, family, colleagues or your administrative assistants. Per BIDMC policy ADM-04 (Technology Resources Utilization) nobody may access the hospital computer system using another user's password.

FROM THE MEDIA LAB:

Sometimes there is a failure in launching Powerpoint or opening Powerpoint files on ITS workstations equipped with Powerpoint. Follow the steps below for a simple fix.

If you **CAN'T** open PowerPoint 2003 from an ITS desktop PC, do the following:

- 1. Hold down the [Ctrl], [Alt] & [Del] keys simultaneously to bring up the Windows Task Manager
 - 2. Locate and select “POWERPNT.EXE” in the Process tab
 - 3. Click the End Process button
- (Repeat steps 2 and 3 if there is another “POWERPNT.EXE” on the list)
- 4. Run your PowerPoint 2003 again



Do you know.... is a monthly feature designed to keep us up to date on necessary and relevant policies. Please contact the Radiology Quality Management Team for more information.

Do you know... about the 2010 Silverman Symposium?

Presented here is the 2010 Silverman Symposium Improvement Project Posters. Sponsored annually by the Silverman Institute for Health Care Quality and Safety, it celebrates BIDMC's on-efforts to improve quality and safety throughout the medical center every day. This year, approx. 95 Project Teams participated and 13 were from Radiology which will be presented here over the following months.

Problem Solving A3

LEAN Rollout in Radiology

Owner/DateAR9/29/2009AR1/8/2010

I. Background/Problem Statement

Radiology has many opportunities for waste reduction and quality improvement, but staff have limited training and skills on how to identify and address these opportunities

II. Current Condition

- Teamwork and brainstorming
- Everyone got SPIRIT training
- Much personal reflection and creative thinking

- Prior LEAN projects too condensed
- Staff defensive and unwilling to work with others
- Difficult to find time to make sustainable change

- Staff unfamiliar with LEAN philosophy
- Lack of time to become educated and practice LEAN
- Lack of examples of LEAN success at BIDMC

III. Analysis

Reflection with Radiology leadership about opportunities and challenges and conducted focus groups with managers in the department. Findings were:

- Commitment needed from department and medical center to support education and trial of LEAN concepts
- Varying levels of education and roll-out across the medical center mean that the best chances for early success are within local work units
- Leadership needs to make LEAN training and practice a key development goal for all management staff
- Managers need to build experience with LEAN in order to be effective trainers and advisors

IV. Goals/Targets

All Radiology managers and supervisors to receive initial LEAN training and engage in project work within their own areas of responsibility

V. Proposed Countermeasures

Develop a common language

- Review SPIRIT and LEAN work-to-date
- View LEAN training videos (toast, 5S)
- Demonstrate LEAN tools (A3)

Gain hands-on experience

- Identify initial projects
- Conduct LEAN intro classes with front-line staff
- Develop A3 wall

Sustaining

- Provide ongoing coaching and support to managers

VI. Implementation Plan

Monthly meetings for Radiology managers showing videos, discussing roll-out plans, reviewing project plans

1:1 meetings with managers for teaching / coaching

Director to attend LEAN intro sessions with managers and front-line staff

Set up office drop-in hours for LEAN

Promote Business Transformation office drop-in hours

Projects completed or in process:

- Image Archive: Applying LEAN to PACS computer equipment management
- Diagnostic X-ray: Standardizing Rad/Fluoro room supplies management
- Interventional Radiology: Standardizing supplies management
- Nuclear Medicine: Streamlining Endocrine patient scheduling
- Standardizing Gastric Emptying procedures
- CT: Redesigning technologist workspace
- MRI: Standardizing supplies management

VII. Follow Up

Weekly follow-up for ongoing projects

Continue monthly meetings with managers

Beth Israel Deaconess Medical Center

A teaching hospital of Harvard Medical School

Business Transformation

Many of you have probably heard the term "Lean" by now, and may have wondered what it is all about. In short, Lean is a philosophy, a methodology, and a set of tools. The philosophy is that we can improve the work we do - doing things better, faster, and cheaper - by engaging the talents and experience of our front-line staff (this includes techs, radiologists, transporters, et al). The methodology is to systematically analyze our existing work and eliminate all forms of waste (and there are at least 8 forms!). The tools include visual cues, the 5-S process, just-in-time deliveries, standardized work, checklists, and many more. The A-3 document above provides an overview for the roll-out of the Lean program in Radiology. Submitted by Allen Reedy and Team

Critical Test Result: Head CT in CODE STROKE

The Problem

- Regulatory and accrediting agencies mandate that a noncontrast Head CT be obtained and preliminary results be made available within 45 minutes of arrival of a patient with acute stroke-like symptoms (AKA CODE STROKE patient) to a facility providing stroke care so that intracranial hemorrhage or other contraindication to thrombolytic therapy can be excluded;
- BIDMC Radiology has established, in keeping with Joint Commission mandates, a standard of providing a "wet read" (WR) [AKA preliminary result] within 35 minutes of receipt of a physician order for noncontrast head CT on Code Stroke patients;
- The coordination of and rapid, reliable communication by Radiology to the various providers are keys to providing timely and accurate data pivotal in the appropriate management of patients with acute stroke.

Aim/Goal

To establish a workflow within radiology which allows the measurement of and, maximizes compliance with, placement of a WR within 35 minutes of receiving the CT order.

The Team

Marc A. Camacho, MD, MS – Chief, Emergency Radiology

Larry A. Nathanson, MD – Emergency Medicine/Information Systems

Lynn Darrah, MSPT, MHA – Radiology

Dan McGillicuddy, MD – Emergency Medicine

Donna Hallett – Radiology

Leon Sanchez, MD – Emergency Medicine

Rafeeqe Bhadelia, MD – Neuroradiology

Jonathan Edlow, MD – Emergency Medicine

Stephen Seabrook, RT CT – Radiology

Magdy Selim, MD – Neurology

The Interventions

- ED dashboard modifier to implemented (L. Nathanson) to facilitate rapid identification of stroke patients by clinicians and radiologists.
- New Provider Order Entry (POE) orderable was created "ED CODE STROKE ONLY CT" which allows both latitude to apply specific imaging protocols based on neurology input and well as rapid identification by radiologists of these cases on PACS work lists.
- Radiology residents and physician staff were trained in new workflow.
- Regular auditing was initiated to review compliance with outlier cases followed up for root cause evaluation.

The Results/Progress to Date

- Stroke response time has improved significantly but still has not met standard (see chart below);
- Red arrow = date interventions instituted (see above);
- Blue dashed line = BIDMC Radiology established critical test result value (35 minutes);
- Exclusion criteria for (~8% of Code Stroke):
 - Transfer patients already on thrombolytic therapy on arrival,
 - Patients who did not undergo CT scanning
 - Patients who were delayed due to concurrent non-stroke-related medical procedures/work-up (e.g. rule out MI, etc.)

Code Stroke Jun-Dec 2009

Month	Scan to WR	Order to Scan	Order to WR
June	0:47	0:24	0:47
July	0:59	0:43	0:59
Aug	1:00	0:17	1:00
Sept	0:45	0:30	0:45
Oct	0:39	0:22	0:39
Nov	0:22	0:17	0:22
Dec	0:23	0:18	0:23

Lessons Learned

- The challenges in meeting the established critical test result turn around time are multifactorial and span disciplines;
- A coordinated effort is necessary to begin to overcome these challenges;

Next Steps/What Should Happen Next:

- Continued refinement of the processes to further reduce time intervals to meet stated goal (consider LEAN evaluation);
- Feedback from the core central working group will be solicited to ultimately meet goal and (once achieved) to identify further opportunities and extensions of the process to other clinical scenarios (e.g. trauma alerts);
- Further investigate the various systems upon which we rely for the various time stamps used to determine intervals and compliance;
- Develop an online dashboard to collect and display data in a continuous manner to assist in rapid identification of noncompliance and facilitate reporting to regulatory and other agencies (in progress).

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The Dept of Radiology has established the "wet read" of a noncontrast head CT on a CODE STROKE patient as a critical test result. To meet established criteria as a stroke center, CTs and the corresponding "wet read" needs to entered within 35 minutes of order. In conjunction with the emergency medicine and neurology departments, steps were taken to improve the rapid identification of patients, workflow to and within radiology, and monitoring and feedback of performance. Since interventions were introduced in Sept 09, there was a 60% improvement in turn around time from Jul 09 to Dec 09, however the target time had not yet been reached by study end (but has been reached now). Submitted by Marc Camacho and Team.

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2010 Publications from our Faculty Members [\[New citations in Blue\]](#). *We do a monthly PubMed search for new BIDMC publications and may miss those in which your affiliation is not noted. If we miss your paper, please send the reference to dwolfe@bidmc.harvard.edu to be included in next month's issue. Please note that publications with Epub dates in Dec 2009 are retained here as the paper publication date will indeed be in 2010.*

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