

Radical Views... from the Department of Radiology

Volume 4, Number 11
June 2012



Beth Israel Deaconess
Medical Center



A teaching hospital of
Harvard Medical School



FROM THE CHIEF

Jonathan B. Kruskal, MD PhD

➤ Welcome our new Vice Chairs of Radiology: David Alsop & Bettina Siewert

It gives me great pleasure to announce the following appointments to our Executive Committee: **David Alsop, PhD - Vice Chair and Director of Radiology Research and Bettina Siewert, MD - Vice Chair of of Radiology for Quality, Safety & Performance Improvement**

David Alsop earned his Master of Arts and PhD degrees from the University of California, Berkeley and completed an National Research Service Award postdoctoral fellowship in MRI physics at the University of Pennsylvania Medical Center. In 2000, he was promoted to Associate Professor of Radiology at the University of Pennsylvania and that same year he joined BIDMC Radiology where

his achievements were recognized at Harvard Medical School which appointed him to the same rank. Dr. Alsop was immediately appointed Co-Director of the Center for Advanced Magnetic Resonance Imaging and became Director of MRI Research in 2007. In April 2011, he was promoted to full Professor of Radiology at HMS.

David's primary research interests center on development of novel magnetic resonance imaging technologies, many of which have been successfully translated from the laboratory into world-wide clinical practice. Perhaps best known for his groundbreaking work on Arterial Spin Labelling, David is an innovative thinker who constantly seeks to identify translational opportunities for basic MR technologies. A multidisciplinary collaborator, he continues to work and publish with investigators and clinicians on Alzheimer's disease, stroke, cancer, diabetes, angiogenesis and tumor perfusion, and Parkinson's disease. As Director of MRI Research, David is responsible for overall oversight of the MRI Research Program, including management of the research budget, as well as mentoring of junior faculty, postdoctoral fellows and Ph.D. students.

All this experience makes David the perfect candidate to head up and facilitate ongoing growth and expansion of our research enterprise. I have no doubt that David will apply his skills and knowledge effectively as a member of our Executive team.



Bettina Siewert, Chief of Abdominal Imaging, steps into the shoes recently vacated by Phil Boisselle (new Associate Dean for Academic and Clinical Affairs at HMS) and like Dave Alsop will now occupy a well-deserved place among our other Vice Chairs on our Executive Committee. I look very much forward to working with Bettina in this new capacity and leadership role where I know she will flourish.

Bettina earned her MD degree in 1986 and completed her postgraduate training in Radiology at the Medical School of the University of Bonn, Germany in 1992. She first came to New England Deaconess Hospital as an MRI research fellow in 1993 and continued in this position through the merger with Beth Israel Hospital.

In 1996, she began her clinical training at BIDMC as a fellow in CT/MR Body and then completed her radiology residency in 2002, serving as Chief Resident in 2001. She stayed on as faculty with the rank of Assistant Professor at HMS and over the years has served as Co-Director (2005-2006) then Director of the Radiology Residency Program (2006-2009), and Director of the Abdominal Imaging Fellowship Program and Chief of the Abdominal Imaging section both since 2009. Bettina is well recognized as being an outstanding abdominal radiologist and interventionalist, an educator par excellence, and has developed a proud reputation as an effective mentor. Additionally, Bettina is also the current president of the New England Roentgen Ray Society.

On the national level, Bettina is the Director of the GI section of the ABR written examination and Director and Editorial Board Member of the Multisystem Panel for RadioGraphics, and has served as a member of the Quality Initiative panel as well. Bettina has also earned a national reputation in the quality field having published the first article describing the spectrum of clinical oncology misses along with a slew of cited articles based on quality improvement projects she has mentored in our department. Most recently Bettina was invited to participate in the upcoming 2012 RSNA Quality Training Course and will be addressing attendees on the use of peer review data for improving personal performance.

Now, in her role as our newest Vice Chair, I look forward to Bettina being able to turn her significant and multiple skills to improving quality, safety and performance both at BIDMC and as a model for other radiology departments nationally. Please join me in congratulating and welcoming Bettina and David to this important leadership role in our department.

Radiology Calendar June 2012

Mon	Tues	Wed	Thurs	Fri
3:00-4:00 ED section meeting (monthly) [ED annex, WCC] call Trish Gardner 4-2506	1:00 MRI Section Meeting Shapiro 484	Weekly Wed Section Meetings: 11:00-12:00 MSK clinical conference 12:00-1:00 Thoracic Imaging, 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	1 8:00 - 9:00 Grand Rounds: Breast Imaging (Dr. Carl D'Orsi, Emory)
4 7:30 - 8:15 CT of the Airways (Dr. Boiselle) 3:30 BIDMC Resident Research Day Poster Competition Shapiro Atrium	5 7:30 - 9:00 IR (Dr. Reddy)	6 7:30 - 9:00 IR (Dr. Reddy)	7 7:30-9:00 Neuro Case Conference (Dr. Brodoefel / Dr. Peri) 1:30-2:00 East Med-Rads conference - Senior Nukes Resident (TCC 484) 2:00-3:00 West Med-Rads , Clouse - Senior Resident on Body West	8 8:00-9:00 Grand Rounds: QA 12:00 - 1:00 Neuroradiology Noon Conference (neuro reading room)
11 7:30-8:15 Chest Imaging Cases (Dr. Spirn) 8:15-9:00 HRCT Patterns (Dr. Boiselle)	12 7:30-8:15 Gyn U/S Cases (Dr. McArdle) 8:15-9:00 Digital Imaging (Dr. Lin) 10:30-11:30 Nuc Med meeting (GZ-103)	13 7:30 - 8:15 Fetal CNS Abnormalities (Dr. Levine) 7:15 - 8:00 US meeting (WCC-304A Gallery)	14 7:30 - 8:15 COPD (Dr. Bankier) 8:15-9:00 Chest Imaging Cases (Dr. Bankier) 1:30 - 2:00 East Med-Rads conference -Senior Nukes Resident Shapiro 484	15 12:00-1:00 Grand Rounds: Fleischner Lecture (Dr. James Thrall, MGH)
18 7:30 - 9:00 Breast Imaging 5:00-6:00 Best in Practice: MR Angiography of the Cerebral Aneurysm (Dr. Rafeeqe Bhadelia) Shapiro 10 - Rabkin Board Rm	19 7:30 - 9:00 Breast Imaging 8:00-9:00 IR Meeting [West Recovery Rm] 2:00-3:00 West Med-Rads , Clouse - Senior Resident on Body West	20 7:30 - 9:00 Breast Imaging	21 7:30-9:00 Professionalism (Dr. Slanetz) 1:30-2:00 East Med-Rads conference - Senior Nukes Resident (TCC 484)	22 8:00-9:00 Chiefs Rounds
25 7:30 - 8:15 Obstetric U/S Cases (Dr. Ghosh) 8:15 - 9:00 PACS, DICOM & Teleradiology (Dr. Pianykh)	26 7:30-8:15 MRI of the ankle (Dr. Kung) 8:15-9:00 MSK Ultrasound (Dr. Yablon) 10:30-11:30 Nuc Med meeting (GZ-103)	27 7:30-9:00 End of the Year MSK Fellows Talk	28 7:30-8:15 OB/Gyn U/S Cases (Dr. McArdle) 8:15-9:00 Emergency Technology (Dr. Palmer) 1:30-2:00 East Med-Rads conference - Senior Nukes Resident (TCC 484)	29 7:30 - 9:00 No Grand Rounds

➤ Congratulations Morrison Winners: 3rd Resident **Ammar Sarwar**, Abd Imaging Fellow **Balasubramanya Rangaswamy** and Research Fellow **Marwan Moussa**!

The 17th annual Morrison Research Day featured 13 talks 9 posters over which the judges, Dave Alsop, Alex Bankier, Aaron Grant and Debbie Levine, had to give some serious thought to choosing a winner among so many great presentations. Then our guest lecturer Richard Ehman drew a multidisciplinary crowd who came to hear him talk about MR Elastography, a state-of-the-art technique. *My apologies that due to space considerations in this issue of Radical Views, we will be featuring The Morrison Research Day in the July issue.*

Save the Date:
Fleischner Lecture
by James Thrall
12 Noon
Friday,
June 15, 2012

DEPARTMENTAL Grand Rounds



Friday June 1, 2012

8:00 AM - 9:00 AM • Sherman Auditorium

Breast Imaging

Carl D'Orsi, MD, Director of Breast Imaging Research at Emory University Hospital, Atlanta, GA

Carl D'Orsi returns to his old hunting grounds to present the first Grand Rounds presentation this month. Originally from New York, he earned his medical degree from SUNY Downstate Medical Center, NYC in 1966 and completed internship at the Jewish Hospital of Brooklyn followed by residency training at Kings Hospital, Brooklyn and New York Medical College, NYC in 1970. Dr. D'Orsi then headed north to spend the next 30+ years in Massachusetts. As an Instructor in Radiology at HMS, he served as a radiologist at the Peter Bent Brigham and Norwood Hospitals. In 1974 he was promoted to Assistant Professor and served as Assistant Director of Radiology at Boston's Charles A. Dana Cancer Research Center until 1980 when he went west to become Professor and Vice-Chairman of Radiology – as well as Professor of Surgery and Pathology – at UMASS Medical Center, Worcester.

In 2002, he accepted a position as Professor of Radiology at Emory University Hospital and Professor of Hematology and Oncology at Winship Cancer Institute, Emory University School of Medicine in Atlanta where he is currently Director of Breast Imaging Research at Emory University Hospital.

Throughout his career, Dr. D'Orsi has remained on the frontline of breast cancer screening. He is the founder of the Society of Breast Imaging where he has also served as Chairman and been awarded fellowship; he is a member of the Board of Directors for the National Accreditation Program for Breast Centers; and consultant on radiological devices for FDA, GE Medical Systems, Hologic Advisory Committee, Phillips Medical Advisory Committee and Fuji Imaging. To date, he has published 136 original articles and has recently published on the effectiveness of imaging and computer-aided detection in community mammography practice and at the FDA.



Friday June 15, 2012

12 Noon-1:00 PM • Sherman Auditorium

18th Annual Fleischner Lecture: Imaging in the Era of Precision Medicine

James H. Thrall, MD, Radiologist-in-Chief, Massachusetts General Hospital

We are honored to have Massachusetts General Hospital Radiologist-in-Chief Dr. James Thrall as this year's Fleischner Lecturer.

Dr. Thrall began his career at the University of Michigan, Ann Arbor with a bachelor's degree in mathematics (with high distinction) in 1964 followed by his medical degree in 1968 from the University of Michigan Medical School. He completed internship, radiology residency, and fellowship training in nuclear medicine in 1973 at Walter Reed Army Medical Center in Washington DC and stayed on as Assistant Chief of the Nuclear Medicine Service for two more years before returning to the University of Michigan Medical Center as Assistant Professor of Internal Medicine and Radiology. In 1981 he was promoted to Professor of Radiology. He went on to become Chairman of Diagnostic Radiology at the Henry Ford Hospital in Detroit before coming to Harvard Medical School in 1988 as the Juan M. Taveras Professor of Radiology and Radiologist-in-Chief at Massachusetts General Hospital. Between 1995 and 1999, he also served as Radiologist-in-Chief at the Massachusetts Eye and Ear Infirmary. Through his entrepreneurial expertise, he has developed the most successful radiology research enterprise in the world.

A gold medalist of both the American Roentgen Ray Society and the Radiological Society of North America, Dr. Thrall's leadership and research skill have been acknowledged worldwide. In 2008, he became Chairman of the Board of Chancellors of the American College of Radiology. To date, he has published more than 283 original articles including works on the role of communication in today's radiologic practices and quality initiatives for measuring and improving radiology department performance. In this year's Fleischner Lecture Dr. Thrall will elaborate on precision medicine which he defines as "coupling established clinical-pathological indexes with state-of-the-art molecular profiling and imaging to create diagnostic, prognostic, and therapeutic strategies precisely tailored to each patient's requirements."

Congratulations to our graduating resident and fellows!

➤ Congratulations New Leaders of the HMS Radiology Curriculum

I am pleased to announce an enhanced pathway in Harvard Medical Student education that we have been planning for the past year. You are all familiar with the extraordinary award winning clerkship that Gil Lieberman has been running for many years. As an additional educational offering designed to enhance the longitudinal and continuous exposure of medical students to imaging during their 3rd year, we are now formally launching an **HMS Principal Clinical Experience (PCE) Longitudinal Radiology Curriculum**. **Diana Litmanovich** will direct this effort, and **Olga Brook** and **Manjiri Didolkar** will be our PCE Longitudinal Radiology Educators who will be involved in the medical student case discussions as the major component of the PCE experience. Diana has done an excellent job of organizing the cardiac radiology curriculum for our residents, continues to receive rave reviews for her ICU teaching rounds, and I know that she will be a wonderful addition to our formidable medical student educational program.

The entire 3rd year student group will now be exposed to regular and practical radiology teaching through case discussions, and their curriculum will continue to be bolstered through the more formal month-long clerkship experience. This team of three outstanding radiologists will have interactions with the medical students throughout the year, providing a continuity of teaching that was requested by the PCE faculty.

Please join me in congratulating Diana, Manjiri and Olga in their new roles.

– Jonny

Olga Brook at this year's Morrison Research Day



Diana Litmanovich and Manjiri Didolkar (without her running cap)

➤ Picture Perfect at the 2012 Boston Marathon

Belated Congratulations to the 2 Matts in Nuclear Medicine: physicist **Matt Palmer** and technologist **Matt McMahon** who finished with a time of 4:05:21! And as reported in the May Radical Views, MSK faculty member **Manjiri Didolkar** who was able to finish the Boston Marathon in this year's 87° F heat! Thanks to Matt and Manjiri for sending "PROOF" of their achievement.



Manjiri Didolkar



Matt McMahon



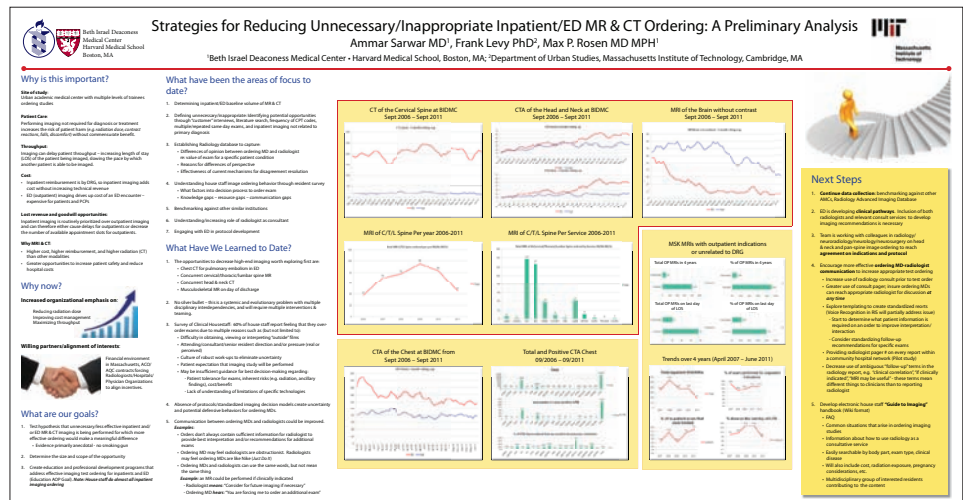
Matt Palmer running in the NY (l) and Detroit (r) marathons.

"... yes, I did finish the Boston Marthon - my 4th Boston, the most grueling and my worst time. I hope and pray for better weather next year and meanwhile I'm looking around for a cool fall marathon. Alaska in late November maybe."

– Matt Palmer

➤ **BIDMC Recognized at the 20th American College of Radiology Annual Meeting and Chapter Leadership Conference (AMCLC), April 21-25 in Washington, D.C.**

3rd yr resident, **Ammar Sarwar**, was awarded the top poster award in the Health Policy and Economics section at this year's American College of Radiology Annual Meeting and Chapter Leadership Conference (AMCLC). Ammar's poster, "Strategies for Reducing Unnecessary/Inappropriate Inpatient/ED MR & CT Ordering: A Preliminary Analysis", highlighted the innovative work that the Department of Radiology is doing at BIDMC to improve the uncritical use of advanced imaging. Dr. Kruskal notes that this work is an important component of our Annual Operating Plan (AOP) and we are delighted to offer the following interview with Dr. Sarwar (in lieu of yet another photo):



Congratulations. How did you get involved in this project?

The Department of Radiology has identified improvement in the appropriate use of advanced imaging in the ED and inpatient arenas as an issue to address this year. Jonny and the department leadership created a committee to address this issue.. They invited me to join this committee based on my interest in the area. The committee, led by Laurie Pascal, VP Business Development and Planning, consists of Max Rosen, Frank Levy, an MIT economist, Katherine Troy, a PGY-2 radiology resident, Allen Reedy, Radiology Business Director, , as well representatives from the clinical services and Graduate Medical Education including Richard Schwartzstein MD, Carrie Tibbles MD, and Larry Nathanson MD.

What are the goals of the committee?

The goals of the committee are to understand the utilization, and improve the appropriate use, of advanced imaging (MRI and CT) among ED and inpatients at the Medical Center. This includes establishing processes by which radiologists can use their knowledge to increase the value of the imaging provided to our patients so that every patient gets the right test at the right time to enable diagnosis and treatment.

Isn't that what is happening now?

Yes and no. While each of our patients gets excellent imaging after the order is placed, it sometimes happens that either a different test or even no test might have been the better choice. This might result in less than ideal patient care because the test is less sensitive, more expensive, not well tolerated by the patient or even not necessary to influence the treatment decision.. Radiologists don't often get the opportunity to guide clinicians prior to the study being ordered.

Why now?

In the past few years we have seen an increasing spotlight placed on imaging in the national media, largely due to the focus on risks of radiation and the high cost of imaging.. I think our department is ahead of the curve in realizing that despite the measures implemented through federal and state laws, CMS and private insurers, as imaging specialists we should take the lead in guiding the use of imaging studies.

What are specific areas that you are looking into?

Well the first step was to determine the scope of the problem based on data rather than anecdote. We decided on using a multipronged approach. This included analysis of trends in the use of advanced imaging in the ED and among inpatients over the past 5 years, creation of a database (the Advanced Imaging Utilization Database or AID) to record instances where radiologists feel that a study is inappropriate, as well as "benchmarking" BIDMC against other institutions such as Boston Medical Center and, University of Massachusetts Medical Center and Rhode Island Hospital.

My initial data hunt looking at the range and trends of imaging studies done over the past five years helped identify some potential low hanging fruit. This included utilization of CT angiography for pulmonary embolism, the use of concurrent head and neck CT angiography, concurrently ordered head and cervical spine CT and concurrently performed MRI of the cervical, thoracic and lumbar spine.

What have been some of the projects successes?

First of all, a project of this scope requires a culture change and that is always difficult. We have been fortunate to have strong support from the Graduate Medical Education Office, which is critical since most inpatient ordering is done by the house staff. We have been invited to present our project at the Volume and Operations Committee of the Medical Center, and have the strong support of the Chief of Emergency Medicine and other clinical chiefs.

Secondly, our initial data is already helping drive some meaningful change e.g. the ED is currently working on pathways such as those governing use of CTA for pulmonary embolism. These pathways will incorporate input from both clinicians and the relevant radiology section. Once implemented they will help standardize care according to guidelines acceptable to all involved. We also have a team continuing to explore appropriate use of concurrent MRIs of the cervical, thoracic and lumbar spines, with the goal of agreeing on consistent standards of care for different conditions.

We have also been fortunate to find allies in Alexander Norbash at BMC, Tom Egglin at Rhode Island Hospital and a team at University of Massachusetts sharing data and creating a strong collaboration.

What are the major difficulties?

First and foremost, as I mentioned before, is the difficulty in changing long-standing behaviors. But more importantly, although everyone talks about appropriateness, it is a murky area. Different specialties have differing and often conflicting guidelines about the appropriateness of imaging studies. The radiologist-clinician divide means that radiologists are often literally in the dark about why a study is ordered since the information provided in a radiology requisition is limited. This is another area we are working on with the clinical services to improve.

Also, we are all aware of the financial pressures facing radiology because of declining volumes and reimbursement. So if we are to utilize the knowledge and time of a radiologist to add value to a patient's care, then we need to figure out how to compensate for that time. There is no model currently for that, which is both a major challenge and also a major opportunity to redefine the role and reimbursement of a radiologist in healthcare.

Were there any surprises?

Of course, this has been a huge learning opportunity for me. As a resident on clinical services I have often thrown up my hands in frustration on why an imaging study was ordered. However, as I've delved into the project I realized that clinicians often have a reason that I didn't consider. This can include malpractice concerns, patient demand, an unclear clinical


picture, differences between radiologists and other specialties in their views of a particular study, discharge requirements for a rehab facility or even poor understanding of the risks and benefits of different imaging studies.

I was also surprised to see the data about studies that I thought were grossly over-ordered. An example is CTA for pulmonary embolism. Seven percent of our CTPA's are positive for pulmonary embolism, which is close to published data. Of course this could mean that everyone is over utilizing the study and so the challenge is to determine, as an institution, what the threshold that we want to be at is.

How do you plan to move forward with this?

We are continuing data analysis, benchmarking efforts, house staff education (by creation of a radiology handbook for BIDMC residents) as well as imaging pathways.

Honestly, the scope of the problem is large enough that there are many ways forward. We have just undertaken inpatient and ED, CT and MRI exams as a first step. Since I know this is going to the radiology community at BIDMC, I would love to hear questions, comments and suggestions from the different sections about areas that they think we should consider or improvements we could make as well as from other trainees who are interested in work related to health policy and economics and would like to get involved □


**Beth Israel Deaconess
Medical Center**

Department of Radiology

presents the

19th Annual Risa and Felix Fleischner Lecture:

**Imaging in the Era of
Precision Medicine**



by

James H. Thrall, MD

Professor of Radiology, Harvard Medical School
Radiologist-in-Chief
Massachusetts General Hospital

12-1 pm • Friday, June 15, 2012
Sherman Auditorium • BIDMC East Campus



International Society for Magnetic Resonance in Medicine (ISMRM)
20th Annual Meeting
5-11 May, 2012
Melbourne Convention & Exhibition Center
South Wharf, Melbourne, Australia

Saturday 5 May

Weekend Educational Course: Perfusion Imaging

ASL Outside the Brain - **David C. Alsop**

Sunday 6 May

Weekend Educational Course: Imaging Strategies

Echo-Train Sequences: EPI, RARE & Beyond - **David C. Alsop**

Thursday 10 May

13:30-15:30
Plenary Hall

Arterial Spin Labeling
David C. Alsop & Michael A. Chappell, Moderators

Alumni Special - Weekday Educational Course: Your Coils & You 2012: A Primer for the Busy Clinician & the Curious Scientist. Roland Bammer & **Daniel K. Sodickson**, Moderators

- A Case-Based Approach to RF Coils: Tips, Tricks, Myths & Artifacts.
Charles A. McKenzie & Ivan Pedrosa
- Coils in 2020: How Changes in Technology Will Change Your Workflow.
Daniel K. Sodickson

0579
14:30
Plenary Hall

Volumetric Measurement of Perfusion & Arterial Transit Delay Using Hadamard Encoded Continuous Arterial Spin Labeling.
Weiyang Dai, Ajit Shankaranarayanan, David Alsop.
Summa cum laude

Traditional Posters

Accelerated Aortic Flow Assessment with Compressed Sensing Using Sparsity of the Complex Difference Image as an Additional Constraint. Yongjun Kwak, Seunghoon Nam, Mehmet Akcakaya, Tamer A. Basha, Beth Goddu, **Warren J. Manning**, Vahid Tarokh, Reza Nezafat. *Magna cum laude*

A Hydroxyapatite-Targeted Gadolinium Contrast Agent for MRI of Breast Cancer Microcalcifications. **Jonathan Marmurek, Elaine Lunsford, Elena Vinogradov, Khaled Nasr, Fangbing Liu, Ananth J. Madhuranthakam, John V. Frangioni, Robert E. Lenkinski**

MRI Characterization of Renal Masses Using Gadolinium-Enhanced Subtraction Technique: Accuracy of a Quantitative Methods to Detect Tumor Enhancement. **Martin P. Smith, Olga Brook, Long Ngo**, Neil Rofsky, Ivan Pedrosa.

Volumetric Pseudo-Continuous Arterial Spin Label (PCASL) Imaging in Chronic Alcoholism: Return to Default Mode Network Activity Levels After a Spatial Working Memory Task. Edith V. Sullivan, Eva M. Müller-Oehring, Anne-Lise Pitel, Sandra Chanraud, Ajit Shankaranarayanan, **David C. Alsop**, Torsten Rohlfing, Adolf Pfefferbaum.

Age-Related Assessment of Intervertebral Disc Degeneration in the Lumbar Spine Using GagCEST. **Gopal Varma, Fotini Kourtellidis, Ananth Madhuranthakam, David B. Hackney, Robert E. Lenkinski, Elena Vinogradov.**

Resting Fluctuations in Volumetric Arterial Spin Labeling.
Weiyang Dai, Gopal Varma, Rachel Scheidegger, Ajit Shankaranarayanan, **Gottfried Schlaug, David Alsop**

Assessment of Brain Cholinergic Function Using Arterial Spin Labeling. **Tamara Fong, Weiyang Dai, Li-Wen Huang, Leo Waterson, Sharon Inouye, David Alsop.**

Iterative Decomposition of Water and Fat with Echo Asymmetric and Least-Squares Estimation (IDEAL) Compared to T1-Weighted Spin Echo in the Evaluation of Vertebral Body Lesions. **Behroze Adi Vachha, Subhendra Sarkar, Robert Greenman, David Hackney.**

E-Posters

Resting Cerebral Perfusion Correlates with Functional Recovery in Stroke Patients. Ruth L. O'Gorman, Laszlo K. Sztrika, Gareth J. Barker, Steven CR Williams, **David C. Alsop**, Ajit Shankaranarayanan, Lalit Kalra.

Comparison of Techniques for Assessment of Age-Related Degeneration in Intervertebral Discs. **Gopal Varma, Fotini Kourtellidis, Alexander Ivanishev, Robert L. Greenman, David B. Hackney, Robert E. Lenkinski, Elena Vinogradov.**

Sodium Imaging of Intervertebral Disc Using Weighted Signal Averaging: Application to Age-Related Degeneration. **Gopal Varma, Alexander Ivanishev, Robert L. Greenman, Fotini Kourtellidis, David B. Hackney, Robert E. Lenkinski, Elena Vinogradov.**

Hippocampal Longitudinal Sub-Region Perfusion Can Be Reliably Measured Using ASL. Xiufeng Li, Jeffrey S. Spence, **Subhendra N. Sarkar**, David E. Purdy, Gregory J. Metzger, Robert W. Haley, Richard W. Briggs.

"Form Follows Function": Anatomic and Functional Localization of Eloquent Cortex. **Mai-Lan Ho, Rafael Rojas, David Hackney.**

Monitoring Changes in Tumor Perfusion and Metabolism Following Anti-Angiogenic Therapy Using Hyperpolarized Tracers. **Aaron K. Grant, Elena Vinogradov, Xiaoen Wang, Rupal Bhatt, Robert E. Lenkinski, David C. Alsop.**

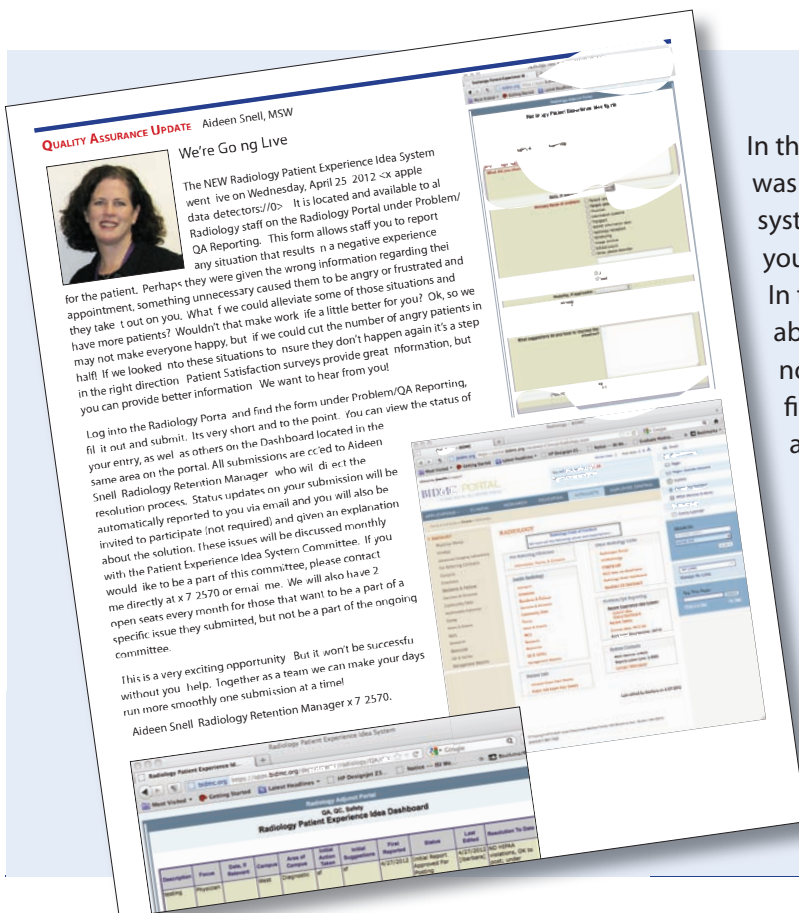
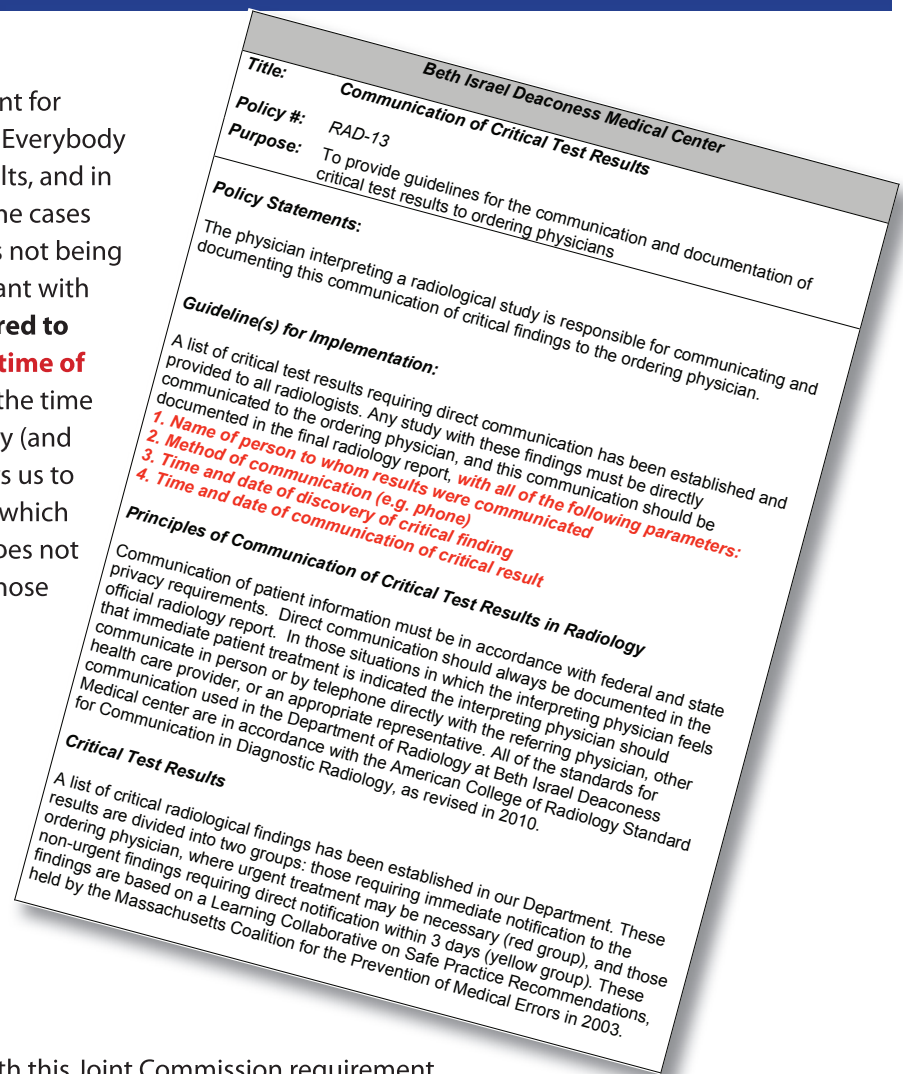
RAD13 - Critical Results Policy Update

There is still some confusion regarding the requirement for documentation of time of discovery of critical results. Everybody is compliant with directly communicating critical results, and in documenting these communications. However in some cases the time and date of discovery of the critical finding is not being documented in the report. In order to be fully compliant with current Joint Commission policies, **we are now required to add an additional element to documentation: the time of discovery of critical findings.** This element refers to the time that you first identified the critical finding/abnormality (and not the time that the exam was performed) and allows us to monitor the gap between discovery and notification, which is an important quality metric. Please note that this does not relate to other urgent or important findings, only to those conditions listed as "critical" in the enclosed policy.

As detailed on the attached, recently updated departmental critical communications policy, please remember to include all of following elements of documentation in your reports:

1. **Name of person to whom results were communicated**
2. **Method of communication (e.g. phone)**
3. **Time and date of discovery of critical finding**
4. **Time and date of communication of critical result**

Thank you for making every effort to be compliant with this Joint Commission requirement.



In the May edition of the Radiology Newsletter there was an article about the Patient Experience Idea system going live. We are looking for feedback from you that will help improve the patient experience. In the upcoming weeks you will begin to hear more about the Patient Experience Idea System, but for now start using the Idea System! It's very easy to find right on the Radiology portal and it only takes a few minutes to fill it out.

The only 'bad' idea is the one you keep to yourself!

- Aileen Snell, MSW
Retention Manager



ACR 2012

The 20th anniversary Resident and Fellow Section (RFS) meeting of the American College of Radiology (ACR) was held in conjunction with the 89th annual meeting and chapter leadership conference (AMCLC) in Washington, D.C. from April 21-25. The commonwealth of Massachusetts had an impressive showing this year and BIDMC was exceedingly well-represented in the RFS by 1st year residents **Rashmi Jayadevan** and **Annie Leylek**, 2nd year **Mark Ashkan**, and 3rd years **Ammar Sarwar** and **Mai-Lan Ho**.

The RFS hosted a variety of sessions including a Q&A with the Chair and the President of the ACR, a young physician panel, an update on the "Exam of the Future" from the ABR President-Elect, and talks on best practices for quality reporting and business leadership in radiology. The AMCLC focused on fostering change within the College, for example, by electing to form a new Young and Early Physician Section, and by sparking lively discussion on topics including value-added radiology, advocacy and engagement, enhancing radiology's relevancy and mitigating uncritical imaging. At the 3rd annual RFS AMCLC poster session, Ammar Sarwar (3rd year) was honored with an award for his timely poster titled 'Analyzing and controlling unnecessary advanced inpatient imaging.'

Following the AMCLC, our residents joined other radiologists from Massachusetts and lobby lawmakers on Capitol Hill in support of two bills:

- a bill recommending Medicare reimbursement for virtual colonography
- a bill to stop the 25% cut to the professional component of our reimbursement under the MPPR rule

BIDMC residents headed the delegation meeting with Rep. Capuano's staff and as a result of strong grassroots action by the Massachusetts Radiological Society leadership, we are happy to report that he signed on to the MPPR bill two weeks ago. This increased the number of co-signors of the bill closer to 250 (it was at 244 previously), which means that the bill will be tabled by the Majority Whip before election madness engulfs all legislative action.

The remainder of the meeting was spent exchanging ideas and networking with other residents from our own backyard and across the country including California, Delaware, Connecticut, New York, and Virginia. And, of course, sight-seeing in our nation's capital!

- Annie M. Leylek, MD
Radiology Resident, PGY-2



BIDMC Radiology was well represented on Capitol Hill by (l to r) Mark Ashkan (2nd yr), Rashmi Jayadevan (1st yr), Ammar Sarwar (3rd yr), and Annie Leylek (1st yr) -- and Nick Gallante (2nd yr Brigham & Women's Hospital radiology resident)

RESIDENCY NEWS - *Introducing...the incoming Class of 2016*

With July right around the corner, we would like to introduce our incoming class of 2016. This talented group of physicians brings diverse backgrounds and interests to our department. Several have strong research backgrounds while others bring strong teaching skills. Most are fluent in at least two languages including Spanish, Italian, Greek, and Russian.



Caitlin Connolly graduated from University of Massachusetts Medical School. As the daughter of a pathologist, Caitlin seeks an academic career focused on clinical practice and teaching. Besides admitting to knitting ugly sweaters and a love of baking, Caitlin is an amateur *lobsterman*.



Matthew Miller graduated from Yale University School of Medicine. With an MD-PhD, Matthew hopes to have a career combining clinical patient care with meaningful research and teaching. On a personal note, Matthew enjoys composing orchestral music and Ultimate Frisbee.



Lauren Ferrara graduated AOA from New York Medical College. A native of Massachusetts, Lauren is excited to train in Boston as she becomes an exemplary clinical radiologist. While in college, she was a member of the Varsity Division I Rowing Team which received a silver medal in the Big East competition and now enjoys surfing off Cape Cod and rock climbing.



Amanda Rigas graduated from Case Western Reserve University School of Medicine. A first generation Greek-American, she is the first in her family to graduate college and subsequently medical school. She aims to become a superb clinical radiologist. She enjoys photography, cooking and travelling.



David Khatami graduated AOA from University of Illinois College of Medicine in Chicago. With a PhD in electrical and computer engineering, David hopes to combine his engineering background with clinical practice. In his free time, he enjoys spending time with his wife and playing racquetball. For relaxation, he recently started learning to play piano.



Neda Sedora-Roman graduated AOA from the University of Puerto Rico School of Medicine. During medical school, she received a Howard Hughes Medical Institute Research Training Fellowship. She hopes to pursue an academic career blending clinical practice with research. In addition to an interest in neuro-oncology, she enjoys travelling and yoga.



Jonathan Kim graduated AOA from Washington University in St. Louis School of Medicine. Jonathan brings a strong background in teaching and clinical research. He hopes to build life-long friendships and become a strong clinical radiologist. With an interest in technology, Jonathan should be a great fit for our ongoing iPad initiative.



Yuri Shif graduated AOA from University of Texas Medical School at Houston. A gymnast since the age of 14 years, Yuri brings a passion to teach and excel in whatever he chooses to undertake. His greatest joy is coaching young people in gymnastics. He also loves rock climbing and swing dancing.



Pritesh Mehta graduated from Case Western Reserve University School of Medicine. He plans on pursuing an academic career with a focus on teaching and clinical research. His hobbies include Ultimate Frisbee, basketball, skiing and tennis.



George Watts graduated AOA from University of Texas Medical Branch School of Medicine at Galveston. Following in the footsteps of his grandfather, George aspires to become an outstanding clinical radiologist and educator. Being a true Texan, George likes hiking, camping, hunting, and fishing.

We are excited to have such a talented group of residents joining our program. We feel fortunate to be able to train such a dynamic group of people.

- Ron, Justin, and Priscilla

➤ **Belated congratulations (& apologies) to Ron Eisenberg**

Last month the RSNA Foundation's Board of Trustees approved funding for 3 applications from BIDMC Radiology and we failed to note that Ron Eisenberg is the co-PI with Priscilla Slanetz on the following award:

Priscilla J. Slanetz, MD MPH and Ronald Eisenberg, MD - Education Scholar Grant: "Development of a Peer Observation Teaching Program to Enhance Radiology Resident Teaching Skills"

KUDOS - Please join us in congratulating the following staff for outstanding patient care and service

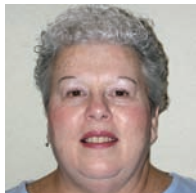
Support Services -

Danielle Warren is the March recipient of the Radiology Support Services Quality Spot On for Service Excellence Initiative Program.

Breast Imaging -

We received a letter of recommendation from a patient that CXT Tech **Karen Dowie** had cared for. The patient was going through a diagnostic work up and her comments were "Karen is so calming, so reassuring, and so kind, that I almost feel the stress recede from me. She has a manner that communicates competence and comfort. I think that she is an outstanding human being, and I hope you are aware of the gift to the patients that Karen's kind and caring demeanor is."

CT



(L to R) **Lori Maiorano, Jae Kim** and **Kim Provencher** - have all helped step in and provide support and training for the new groups at each location. Jae is supporting Toshiba and Cardiac training in Shapiro. Kim is helping on the east with training on the Toshiba, interventional procedures and Virtual Colons. Lori on the west campus has been supporting our interventional RF services and training. Great job and thank you all for the dedication that you have shown and the support you have provided to our team.



Carol Wilcox - In her position as Advanced Imaging Technologist, Carol is always required to juggle projects and responsibilities, however our first week of our new group schedules Carol jumped in and ran the floor at the east campus when we experienced a week of truly challenging staffing levels. Carol was here to make sure we had coverage, patient exams went off on time and staff at the east campus had support during the first week. Thank you Carol for wearing yet another new hat!

DX

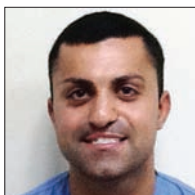


(L to R) **John Worcester, Michelle Short, Patrick Loujame** and **Kevin Sands** dealt with the outpatient schedule for fluoro during a scheduling mishap (a Radiologist was not scheduled for fluoro). They scrambled to find radiologist coverage while keeping patients informed and calm. Upon the Radiologist's arrival they quickly and efficiently moved through the schedule to get all of the patients completed as quickly as possible.



A Student Evaluation from BHCC scored **Ana Cordero** 4.2 (above satisfactory on the Likert Scale 1-5). Noted "She is very approachable....gives constructive criticism in a very professional way....very patient and kind."

Rad Tech Assistants (L to R) **Richard Bogosian, Zachary Bubar, Jennie Fitzgerald, and Josmar Silva** helped in shift coverage for a LOA (in RCU).



. . . and more KUDOS

MRI

Our EVS colleague, **Maria Dos Santos**, was extremely helpful during a Code Blue event in Shapiro MRI. She opened doors and directed the code team to the area where the patient was located. My two staff members were with the patient and without Maria directing traffic, valuable time would have been lost as the code team tried to locate the patient or had difficulty accessing the MRI department

Ultrasound



Julie Smith was recognized by a patient who sent a note acknowledging what a positive experience she had during her visit to Ultrasound. The patient mentioned how appreciative she was of Julie's kindness and grace while working with her yesterday. She went on to note that Julie had a style and an ease that made the patient feel relaxed and trusting. She thanked Julie for her professionalism and her smile. I would also like to recognize Julie Smith's work with our Ultrasound students who recently graduated. Julie and another sonographer ran a scanning lab for the vascular exams and provided technical instructions to help the students with their vascular exams. The students were proficient in the basics of vascular scanning when they completed their program. The students identified Julie as one of the staff that helped them develop their scanning skills throughout their 18 months.



Atara Korik was recognized by a patient who sent a note acknowledging what a positive experience she had during her visit to the ED Ultrasound. The patient mentioned how Atara explained everything and even though she was having a very traumatic experience Atara's compassion, kindness and caring made a big difference in her Ultrasound experience.



I received a phone call from a patient who could not say enough about her visit in Ultrasound with **Kelsey Worcester**. The patient was so grateful to Kelsey for the way she explained the procedure and engaged her throughout the exam with what she was doing. The patient was very complimentary about how skillful Kelsey was what excellent patient care she provided. She noted her intelligence and her friendly yet professional manner.



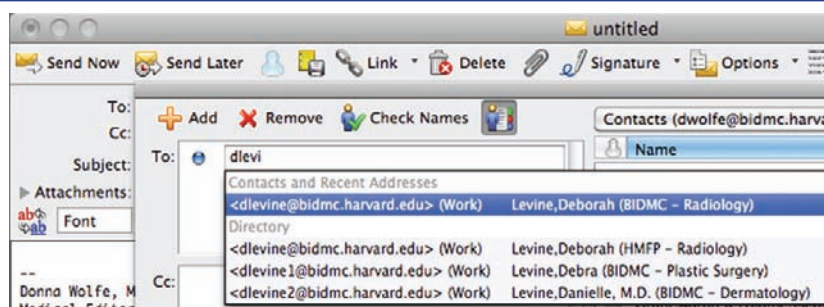
I would like to recognize **Elise Cook's** work with our Ultrasound students who recently graduated. Elise and another sonographer ran a scanning lab for the vascular exams and provided technical instructions to help the students with their vascular exams. The students were proficient in the basics of vascular scanning when they completed their program. The students recognized Elise as providing great direction and suggestions to improve their technique.



Peggy Newman completed the ICAVL re-accreditation process once again this year. This year was particularly challenging as the entry was now an electronic entry. Peggy was very attentive to completing this project through various delays but did successfully complete the application process. In the scope of this process Peggy had to rewrite all the vascular protocols to meet the new standards. She worked diligently to complete this.

Did you know...

that the last time I e-mailed Dr. Debbie Levine I was surprised not to receive a prompt reply because I didn't know that BIDMC now has three e-mail listings for D. Levine and one of them is named "Debra"? (*I remember the days when I as "dwolfe" received things meant for Dr. William Dewolf.*) So please use caution when entering your e-mail recipients.



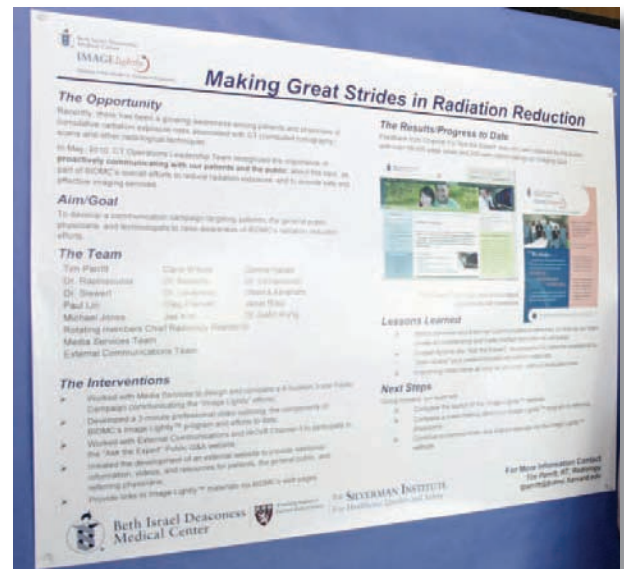
Silverman Symposium on Quality & Safety April 2-3, 2012

Please note that in the May issue of *Radical Views*, it was reported that Radiology presented 7 posters at the Silverman Symposium when there were actually 8! The editor apologizes for the error and would like to take this opportunity to remind staff to notify the editor directly (dwolfe@bidmc.harvard.edu) of any item or event that should be included in the newsletter. Ours is a large and geographically separated department and we regret any errors of omission. - DHW

Radiology presented 8 posters chronicling departmental quality initiatives in MRI (Steve Flaherty and Jeremy Stormann), CT dose reduction (Tim Parritt/Rajeev Krishnapallai), universal time out procedures (Misti Mullins) and a novel tool for fracture detection (Ammar Sarwar) at the Silverman poster sessions.



Rajeev Krishnapillai, MDS-
Advanced Imaging Informatics Specialist, CT
Advanced Imaging Lab



CT-Dose (Dose Length Product) query and tracking in CT studies using RIS based text parsing methodology along with effective dose estimation

The Problem

- Calculating and tracking individual patients cumulative radiation exposure from CT scans over time is a major initiative of many researchers. Along with it efforts to accurately estimate the total effective CT dose continue.
- The ability for clinicians to access and evaluate the CT dose parameters for each patient's CT scan as an integral part of patient's treatment plan has tremendous clinical significance in the current health care environment.

The Goal

- To develop and implement a prototype system to extract radiologist reported CT Dose parameters in the RIS and consolidating those parameters in an easily accessible, web-enabled software program.
- To accomplish this overall goal, the essential first step was to set expectations regarding the accuracy of the measurement of Dose reported by CT scanners. The wide variety of CT protocols in use and the patient size factor influencing CT Dose estimation made the challenge of deciding on an acceptable approach to report the Dose Parameters of CT study significant.
- To make the overall system design scope within manageable limits and provide a reasonable "estimate of dose", the decision was made to follow the vendor represented Dose parameter of cumulative DLP[Dose Length Product(mGy-cm)] for each of the CT studies as the reference dose parameter to monitor.

The Team

Rajeev Krishnapillai, MS –Advanced Imaging Lab (3D Lab) – Department of Radiology
Pei-Jan Lin, P. PhD – Physics Faculty – Department of Radiology
Vassilios Raptopoulos MD – Faculty, CT Director – Department of Radiology

The Implementation

- The software system is designed to extract the information represented in the RIS report of the specific study including exam related parameters and patient characteristics.
- The system is configured to receive the HL7 messages generated by the institutional RIS.
- The final report messages are processed by the system and updated into an SQL server with specific Database schemas to accommodate the various message parameters such as patient demographics, report text, study descriptors etc.
- The software application is written in ASP.NET technology with SQL Server 2008 as the back end.

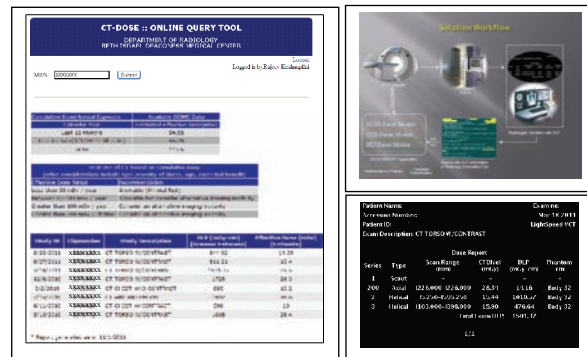
The Technique

DATA SOURCE: - Dose Report with DLP, CTDIvol, generated by CT scanners along with acquired DICOM images.

DATA TRANSFER: - Radiologist dictated report transport the DLP information in DICOM images to radiology reports.

DATA PARSER: - Radiology Result HL7 messages from RIS Systems are processed for the DLP parameters and tagged with patient information.

DATA DISPLAY: - The DLP parameters of all available studies are consolidated and processed using conversion factors in a web interface.



Summary

- Provide an easy to use web-based estimation of CT dose using DLP parameters.
- Includes an "add-on" decision support tool to enable clinicians to assess the impact on patients and consider alternatives as appropriate.
- Aid in CT Dose (DLP) information analysis of studies for protocol comparison and optimization.

Next Steps

- Integrate report with Provider Order Entry system for optimal ordering of CT studies.
- Automatically gather the Dose Information from the CT Dose sheets using optical character recognition technology.

Milestones and Transitions - *Celebrating the Years*

On Tuesday, May 15th, we celebrated the 5, 10, and 15 year anniversaries of the following Radiology colleagues with a pinning ceremony and light refreshments. (We understand that champagne is served at the 20-25-30-40 year anniversaries. Now that's incentive!) Congratulations and thank you for so many years of dedication and service!

15 years

Jeffrey English - Nuc Med
Deborah Levine - US
Tanya Martinez - CT

10 years

Kathryn Mahoney Awalt - US
Wayne Borge - Dx
James Brophy - Rad Informatics
Elizabeth Browning - MRI
Joanne Carmichael - Dx
Jason Chagnon - CT
Gabriel Class - Support Svc
James Cooney - CT
Saliha Gardner - Support Svc
Aaron Grant - MRI
Lekisha Hamilton - Dx
Janis Hurd - Nuc Med
Karen Kennedy - Nursing
Stephen Kirkpatrick - Dx
Dana Kohlstrom - US
Michael Larson - Media Svcs
Eddy Louis - Dx
Paul McDonald - MRI
Maryellen O'Rourke - CT
Patricia Peters - CT
Bernice Reznick - MRI
Andrea Sanders - CT
Carlos Silva - CT
Margaret Stokes - Nuc Med
Kathryn Sullivan - CT
Danielle Toomey - Dx
Jean Wall - Dx
Steven Warren - Dx

5 years

Rochelle Antone-Robinson - Support Svc
Ann Marie Baggs - Br Imaging
Maxima Baudissin - Admin
Nicholas Bucci - Dx
Caitlin Buchsteiner - US
Weiyang Dai - MRI
Laurie-Beth Derderian - Dx
Vandana Dialani - Br Imaging
Rodrigue Dorcil - Environmental Svc
Francisco Dorosario - Patient Transport
Isaac Dube - Dx
Cheryl Egan - Dx
Veronica Gonzales - Nuc Med
Kaiesha Harry - Support Svc
Maryellen Johnson - Nursing
Diana Litmanovich - Cardiovasc Imaging
Anika Manigo - Image Archives
Sheila Nadeau - US
Sue Nagle - MRI
Tiffany Ogonosky - Dx
Dydier Parisien - Patient Transport
Oleg Pianykh - CT
Joanne Picazio - US
Vivian Rickerson - Support Svc
Alan Robbins - Abd
Dean Rodman - Nuc Med/Community
Sara Ross - Dx
Lauren Shanbrun - Nuc Med
Martin Smith - MRI
Jeremy Stormann - MRI
Douglas Teich - Neuro/Community
Joaquin Thomas - Patient Transport
Sandro Vicente - Patient Transport
Denis Vigneault - Dx
Wenona Hazel Villasis - Nursing
Kali Wilson - VIR
Alicia Zaske - Dx

15 year service awardees came to BIDMC in 1996 when:

- F.B.I. arrests suspected Unabomber
- Clinton appoints Madeleine Albright as first female US secretary of state
- Jazz great Ella Fitzgerald dies
- Dr. Ian Wilmut and his team clone the world's first sheep from adult cells. The lamb born in July 1996 is named Dolly.
- Academy Award Best Picture: Braveheart
- Michael Jackson receives the Artist of the Century award at the American music awards

... and more years

On April 17, BIDMC hosted its annual Employee Service Award Event at the Longwood Hall, Best Western Inn at Longwood Medical to honor employees celebrating their 20, 25, 30 and 40+ year anniversaries. Radiology was wellrepresented:

20 years

Virginia Benway - IR
Laura O'Donnell - CT
Marilyn Plaistowe - IR
Vassilios Raptopoulos - Abd
Robin Young - Support Svc

25 years

Deborah Burstein - MRI
Mary Cacciatore - IR
Brian Deedy - Dx
Kimberly Fuller - CT
Gillian Lieberman - Rad Educ
Peggy Newman - US
Milton Thomas Jr - MRI

30 years

Dianne Davis - Support Scv
Norma Estwick - Image Archive

35 years

Sandra Hurwitz - Support Scv

40 years

Ferris Hall - Br Imaging



Special thanks also to **Cynthia Webster** for organizing the event and providing the contextual slide show listing key events in the induction years of our service awardees; and to **Bernie Kennedy** for photographing our photographer Michael Larson who celebrated his 10th year at BIDMC!



The Service Awardees Group Hug: (Back rows, L to R) Denis Vigneault, Laurie-Beth Derderian, Cheryl Egan, Kathryn Mahoney Awalt, Joanne Picazio, Mary Ellen O'Rourke, Lauren Cabral, Bernice Reznick, Peggy Stokes, Jean Wall, Jeff English, Jan Hurd, Gabriel Class, Vivian Rickerson, Jim Brophy, Karen Kennedy, Maxima Baudissin, Maryellen Johnson, Laurie Pascal, Steve Warren, Wayne Borge. Front Row (L to R): Jonny Kruskal, Caitlin Buchsteiner, Carlos Silva, Kaiesha Harry and Michael Larson. (Photo by Bernie Kennedy).



US: Peggy Stokes, Lauren Cabral, Jeff English, Jan Hurd and Mgr. Dace Jansons



US: Caitlin Buchsteiner, Kathryn Mahoney Awalt, Joanne Picazio and Mgr. Bernie Kennedy



Support Services: Vivian Rickerson, Gabriel Class, Kaiesha Harry and Mgr. Peter Cousins



Dx: Steve Warren, Jean Wall, Denis Vigneault, Laurie-Beth Derderian, Wayne Borge and Mgr. Betsy Grady



Michael Larson, Maxima Baudissin, Vandana Dialani, Jonathan Kruskal and Mgr. Annamarie Monks (Photo by Bernie Kennedy)



Nursing: Maryellen Johnson, Mgr, Bridget O'Bryan and Karen Kennedy



CT: Carlos Silva, Mary Ellen O'Rourke and Mgr. Tim Parritt



MRI: Bernice Reznick and Mgr. Steve Flaherty



Jim Brophy and Mgr. Donna Hallett



Dx 1101 Beacon St.: Cheryl Egan and Mgr. Annamarie Monks (for Olga Augustus)

10 year service awardees came to BIDMC in 2001 when:

- Apple announced iTunes at the Macworld Expo in San Francisco, for organizing and playing digital music and videos.
- Sep 11th - Terrorists hijack two passenger planes & destroy the World Trade Towers, killing 2,752 people. Another plane is hijacked and crashed into the Pentagon, killing 125 people. Passengers and crew of Flight 93 try to retake control of their hijacked plane causing the plane to crash in a PA field killing all 64 people onboard.

- Enron files for Chapter 11 bankruptcy.
- Tiger Woods becomes the first golfer to hold all four major golf titles simultaneously by winning the Master's Tournament in Augusta, Georgia

5 year service awardees came to BIDMC in 2006 when:

- iTunes billionth song ('Speed of Sound' by Coldplay) was downloaded in February 2006.
- Facebook opened to anyone over 13, with a valid e-mail address
- A \$415 million, 8-year federal study finds that a low-fat diet does not decrease the risk of heart disease, cancer, or stroke. Many in the medical community call the results stunning.
- Album of the Year: *How to Dismantle an Atomic Bomb*, U2
- Academy Award, Best Picture: *Crash*

Ultrasound Ergonomic Reminders

Before you start any exam:

- Adjust your environment to your body; we are all different shapes and sizes. This means adjust everything else before you compromise your posture
- Move the patient as close to you as possible
- Have the patient turn on either side
- Have the patient take a deep breathe in, you'll be amazed at how much more you can see without pushing
- Use towels, sheets or ergonomic cushions to support your arm
- Move the machine to the other side of patient if you cannot reach
- Use foot pedals
- Optimize the machine to its full capacity; select appropriate probes, use penetration options to minimize the desire for pushing!
- Minimize annotation on those difficult portable exams
- Grab a co-worker or nurse if possible to assist for the difficult cases
- Adjust the monitor and machine so it is in alignment to your body and eyes
- Adjust the chair
- Rest your feet on the machine or chair
- Adjust the height of the stretcher
- Alternate between sitting and standing
- NO twisting of the torso and neck
- DO NOT abduct your arm farther than 30 degrees
- Stretch in between patients
- Reference the ergonomic poster the students created
- In a difficult case, rest your arm for a few minutes even if you need to step out of the exam room

... and Remember to:

- Exercise
- Eat a healthy diet
- Drink plenty of water; keep your muscles and tendons well lubricated
- The Portal has great information on ergonomics along with all necessary forms for an evaluation or reporting an incident

IF you are in pain, please report to your Supervisor/Manager or Occupational health

Useful links:

www.auntminnie.com
www.sdms.org
www.ardms.org
www.soundergonomics.com
www.liko.com/na/north-america
www.cdc.gov/niosh/topics/safepatient
www.cdc.gov/niosh/topics/ergonomics
www.osha.gov
www.osha.gov/SLTC/etools/hospital/hazard/ergo/ergo.html

*We LOVE our bodies
so let's try to save
them during our
careers and lives!!*

*As a reminder and welcome
to new staff, students, residents &
fellows, Ultrasound offers the following:*

Incorrect	Correct
 <ul style="list-style-type: none"> • Right arm abduction greater than 30° • Weight is distributed only on the right hip • Trunk is twisted • Patient is positioned too far away • Monitor below eye level 	 <ul style="list-style-type: none"> • Right arm abduction less than 30° • Legs are balanced and equally supporting weight • Trunk is not twisted • Patient is positioned close to the Sonographer • Monitor at eye level
 <ul style="list-style-type: none"> • Right arm reaching across the patient with abduction greater than 30° • Looking up and leaning forward • Shoulder is hyper-extended • Monitor above eye level 	 <ul style="list-style-type: none"> • Positioned at the head of the patient with an abduction less than 30° • Normal spinal curvature • Forearm parallel to the floor • Shoulder in neutral position • Monitor at eye level
 <ul style="list-style-type: none"> • Right arm abduction greater than 30° • Neck is hyper-extended • Monitor above eye level • Twisting trunk and leaning forward • Patient positioned too far away 	 <ul style="list-style-type: none"> • Right arm abduction is less than 30° • Neck is in neutral position • Monitor at eye level • Normal spinal curvature
 <ul style="list-style-type: none"> • Right shoulder is hyper-extended • Right arm abduction greater than 30° • Wrist is hyper-flexed • Long reach with left arm • Machine is too far away • Leaning backwards and twisting the trunk • Monitor above eye level causing hyper-extension of the neck • Cable inappropriately around the neck 	 <ul style="list-style-type: none"> • Shoulder in neutral position • Right arm abduction less than 30° • Wrist in neutral position • Left arm position is relaxed • Machine positioned close to the Sonographer • Normal spinal curvature while sitting • Monitor at eye level



Greetings from the opposite side of the street

Building on the clinical and research expertise gained during BIDMC residency, two graduates of the class of 2008, **Mizuki Nishino** and **Katie Krajewski**, continue to pursue academic careers in the field of cancer imaging -- as well as their friendship.

Aside from professional life as radiologists, both Katie and Mizuki are enjoying exciting changes in their personal lives. Katie Krajewski and Peter Germano got married on April 21st, 2012 at St. Mary of the Assumption Church in Brookline, celebrated by their family and friends. Mizuki has been fully occupied with her twin daughters, Julica and Ayaka, who are going to celebrate their second birthday in July.

In 2008, **Katie Krajewski** joined the Department of Radiology at Brigham and Women's Hospital/Dana-Farber Cancer Institute in 2009 after completing residency and Abdominal Imaging fellowship training at BIDMC where she also served as a Chief Resident in 2007 and Chief Fellow in 2008. With her track record in research and education as well as experiences in leadership roles, she currently serves as Associate Director for the Cancer Imaging Fellowship at DFCI. Katie has also established collaboration with the Kidney Cancer Center at DFCI and initiated a project of response assessment in metastatic renal cell carcinoma treated with anti-angiogenic therapy. Her seminal paper from the project was selected for Poster Discussion Session at the American Society of Clinical Oncology meeting in 2010, and was published in *European Urology* in 2011. Katie recently received the GE-AUR Radiology Research Academic Fellowship award for her project, "Development of an Imaging-based Algorithm to Guide Therapeutic Decision Making in VEGF-targeted Treatment of Advanced Renal Cell Carcinoma." With her focus on imaging of genitourinary cancer, Katie published 12 articles since she started her career at DFCI, as represented by the following papers.

1. Krajewski KM, Guo M, Van den Abbeele, Yap J, Ramaiya N, Jagannathan J, Heng DY, Atkins MB, McDermott DF, Schutz FAB, Pedrosa I, Choueiri TK. Comparison of Four Early Post Therapy Imaging Changes (EPTIC) (RECIST 1.0, Tumor Shrinkage, CT Tumor Density, and Choi) in Assessing Outcome to VEGF-targeted therapy in Patients with Advanced Renal Cell Carcinoma. *Eur Urol*. 2011 May;59(5):856-62. Epub 2011 Feb 1.
2. Krajewski KM, Giardino A, Zukotynski K, Van den Abbeele AD, Pedrosa I. Imaging in Renal Cell Carcinoma. *Hematol Oncol Clin North Am*. 2011 Aug;25(4):687-715.
3. Krajewski K, Fougerey R, Choueiri TK, Pons F, Schutz FAB, Rosenberg JE, Salhi Y and Bellmunt J. Optimization of the Size Variation Threshold For Imaging Evaluation Of Response In Patients With Platinum-refractory Advanced Transitional Cell Carcinoma Of The Urothelium. *Eur J Cancer*. 2011 Dec 14.



Mizuki and Katie



Katie and her groom Peter Germano

In 2008, after completing Thoracic Imaging fellowship and residency training at BIDMC, **Mizuki Nishino** joined the Department of Radiology at Brigham and Women's Hospital/ Dana-Farber Cancer Institute and has flourished. She initiated a CT volume analysis project in advanced lung cancer treated with molecular targeted therapy in collaboration with the DFCI Thoracic Oncology Program, which was supported by an RSNA Research Scholar Grant in 2009-2011. In September 2011, Mizuki received a K23 Mentored Patient-Oriented Research Career Development Award from NIH. She is currently working on the development of imaging-based response assessment strategy in a genomically-characterized cohort of lung cancer patients. To date, Mizuki has published 15 articles from her work at DFCI, out of 51 articles in total. She is also collaborating with basic researchers of lung cancer at DFCI to further investigate the molecular mechanisms of lung cancer, and co-authored an article published in Nature in March 2012. The following papers reflect her cutting edge work in Thoracic and Oncologic imaging.



Mizuki demonstrates her commitment to the next generation of radiologists as her daughters enjoy their "picture books" as well as a "local journal" in preparation for their upcoming trip to Chicago in November 2012, their 3rd RSNA!

1. Nishino M, Jackman DM, Hatabu H, Yeap BY, Cioffredi L, Yap JT, Jänne PA, Johnson BE, Van den Abbeele AD. New Response Evaluation Criteria in Solid Tumors (revised RECIST guideline, version 1.1) in Advanced Non-Small-Cell Lung Cancer: Comparison with the original RECIST (version 1.0) and its impact on assessment of tumor response to therapy. *AJR* 2010; 195:W221-8.
2. Nishino M, JagannathanJP, Ramaiya N, Van den Abbeele AD. Pictorial review of the new Response Evaluation Criteria in Solid Tumors: revised RECIST guideline version 1.1 – What oncologists want to know and what radiologists need to know. *AJR* 2010; 195:281-9.
3. Nishino M, Jackman DM, Hatabu H, Johnson BE, Van den Abbeele AD. Imaging of Lung Cancer in the Era of Molecular Medicine. *AcadRadiol*. 2011;18:424-36.
4. Nishino M, Guo M, Jackman DM, DiPiro PJ, Yap JT, Ho TK, Hatabu H, Jänne PA, Van den Abbeele AD, Johnson BE. CT Tumor Volume Measurement in Advanced Non-small-cell Lung Cancer: Performance Characteristics of Emerging Clinical Tool. *AcadRadiol*. 2011;18:54-62.
5. Nishino M, Jagannathan JP, Krajewski KM, O'Regan KN, Hatabu H, Shapiro G, Ramaiya N. Personalized Tumor Response Assessment in the Era of Molecular Medicine: Cancer-specific and Therapy-specific Response Criteria to Complement Pitfalls of RECIST. *AJR* 2012;198:737-45.
6. Shinagare AB, Guo M, Hatabu H, Krajewski KM, Andriole K, Van den Abbeele AD, DiPiro PJ, Nishino M. Incidence of Pulmonary Embolism in Oncologic Outpatients at a Tertiary Cancer Center. *Cancer*. 2011 117:3860-6.
7. Washko GR, Hunninghake GM, Fernandez IE, Nishino M, Okajima Y, Yamashiro T, Ross JC, Estepar RSJ, Lynch DA, Brehm JM, Andriole KP, Diaz AA, Khorasani R, D'Aco K, Sciurba FC, Silverman EK, Hatabu H, Rosas IO, for the COPD Gene Investigators. Lung Volumes and Emphysema in Smokers with Interstitial Lung Abnormalities. *N Engl J Med* 2011;364:897-906.
8. Chen Z, Cheng K, Walton Z, Wang Y, Hiromichi E, Shimamura T, Liu Y, Tupper T, Ouyang J, Li J, Gao P, Woo MS, Xu C, Yanagita M, Altabef A, Wang S, Lee C, Nakada Y, Peña CG, Sun Y, Franchetti Y, Yao K, Saur A, Cameron M, Nishino M, Hayes DN, Wilkerson MD, Roberts PJ, Lee CB, Bardeesy N, Butaney M, Chirieac L, Costa D, Jackman D, Sharpless NE, Castrillon DH, Demetri G, Jänne PA, Cantley L, Kung AL, Engelman JA, Wong KK. Murine co-clinical lung cancer trials identify genetic modifiers of response to therapies. *Nature*. 2012 Mar 18;483(7391):613-7



Julica and Ayaka enjoying some time off at the beach



Kathleen West

HMFP contracts with McKesson for Revenue Cycle Management services including diagnosis coding, claims scrubbing, allowables monitoring, accounts receivable and insurance denial management, compliance and reporting. We offer this column by **Kathleen West**, McKesson's Senior Director of Account Management for Radiology, as an opportunity to keep you informed. During this time of revenue and utilization reductions, compliance scrutiny and increased payer denials, our partnership with McKesson has been vital to our ability to maintain our financial stability. Feel free to contact Kathy.west@mckesson.com should you have any specific questions or concerns related to the Revenue Cycle Management process.

McKesson Corner

MCKESSON

Empowering Healthcare

Accountable Care Organization Concept Gains Traction

Healthcare's shift away from traditional fee-for-service toward a pay-for-performance model gained momentum at year-end with the finalization of rules for accountable care organizations (ACO) and the announcement of a major ACO demonstration project by the Centers for Medicare & Medicaid Services (CMS).

The final ACO rules for the Medicare Shared Saving Program and Advance Payment ACO Model incorporated a number of changes that should make it easier for organizations to join or form an ACO. The rollout of the companion Pioneer ACO project will test variations on the ACO concept among 32 healthcare organizations providing services to about 860,000 Medicare beneficiaries in 18 states.

Taken together, the developments help flesh out a key reform concept at the heart of 2009's Patient Protection and Affordable Care Act. As CMS refines the model for Medicare enrollees, private payers are continuing to develop their own ACOs in an attempt to reduce healthcare costs and improve quality through better coordination of care.

The growing activity surrounding ACOs reflects an industry consensus that the ACO model represents the best approach for reforming the healthcare delivery and payment systems. Although it may be some time before ACOs are prevalent across the healthcare landscape, experts say that physicians and hospitals should get involved now in understanding, designing and participating in ACOs in their markets.

"You don't want to wait for someone from on high to dictate what's going to happen to your organization," says Keith Chew, a senior consultant with McKesson Practice Consulting Solutions. "Instead, you need to be at the table with groups that are currently involved in, or proposing, the development of an ACO-type care delivery system.

"That gives you an opportunity to help shape the direction of the entity, and it also allows you to better understand how the payment mechanisms and quality measures will work," he says.

Concessions in Final Rules

The release of CMS final ACO regulations in October addressed many of the perceived weaknesses in the preliminary rule and incorporated suggestions from providers aimed at increasing ACO participation. Among the key modifications from the proposed regulation, which was released in March 2011, are:

- Providers will initially be able to participate in an ACO and pursue financial incentives without the risk of losing money. In addition, ACOs will be allowed to start sharing in any savings earlier, rather than letting Medicare retain all the savings initially.
- The number of quality measures ACOs will have to meet to qualify for performance payouts has been reduced by half, from 65 to 33.
- ACOs will be informed which Medicare enrollees are expected to be part of their system. In the proposed rule, ACOs would not have known which patients were in their ACO until the completion of each annual contract period.
- Community health centers and rural health clinics, which were excluded from the proposed rule, will now be allowed to lead ACOs. In addition, CMS will give physician-owned and rural providers early access to anticipated savings in order to help fund ACO start-ups and infrastructure.

Blazing a Trail

The Pioneer ACO project -- announced in December 2011 and launched on January 1 -- will create the opportunity to test variations of the ACO theme among different providers around the country. A total of 32 organizations, including 20 health systems and 12 physician groups, were selected to participate in the program on the strength of their prior experience in providing integrated, patient-centered care, according to CMS.

The Pioneer organizations have the option of choosing from multiple payment choices with a range of possible bonus and penalty structures. Several of the options were proposed by the providers themselves during the application process, CMS said.

In addition to incorporating incentives and penalties designed to foster improvements in care quality, the Pioneer initiative also requires participating ACOs to engage other payers in similar efforts aimed at rewarding quality. Under the Pioneer ACO model, beneficiaries will maintain the full benefits available through traditional fee-for-service Medicare, as well as the right to receive services from any healthcare provider accepting Medicare patients.

CMS has established a number of quality measures that will be used to monitor the quality of care provided and beneficiary satisfaction. For more information, visit www.cms.gov/sharedsavingsprogram and view the fact sheet entitled "Improving Quality of Care for Medicare Patients: Accountable Care Organizations."

Action on the Commercial Side

Even as the CMS ACO initiatives advance, commercial payers are pursuing their own versions of the delivery model. They argue that payers are critical to the success of ACOs, given their ability to track cost and quality data. Cigna, United Healthcare, Humana and Anthem Blue Cross are among the major payers developing ACO initiatives.

Cigna, for example, recently announced the creation of the first ACO in New York City involving a physician organization and health plan. The initiative, in partnership with the Weill Cornell Physician Organization, will focus on Cigna enrollees who receive care from among 71 Weill Cornell primary care physicians. The program will rely in part on Weill Cornell registered nurses, who will serve as clinical care coordinators to help patients navigate the care system. The New York effort is one of 17 ACO initiatives Cigna is currently involved, in 15 states and encompassing more than 170,000 enrollees and 1,800 primary care physicians.²

Lingering Doubts

Despite the flurry of activity surrounding the concept, many providers remain uncertain about their own participation in an ACO. A recent poll revealed a majority of senior executives at hospitals, health systems and insurers are undecided about their organization's participation in an ACO. In fact, among hospital and health system respondents, only 23% said they planned to participate. The poll was conducted in November 2011 by KPMG Healthcare & Pharmaceutical Institute, Epstein Becker Green and the JHD Group.³ And a separate survey of 1,000 physicians nationwide – conducted in October by the Optum Institute for Sustainable Health -- found that 49% of 600 specialists and 400 primary care physicians responding said they felt they were "not at all prepared" to accept greater financial risk for managing patient care as part of an ACO.⁴

Whether ACOs are the true new paradigm in healthcare or just another phase in the ever evolving delivery model remains to be seen. But for now, healthcare providers of all types must learn not only how ACOs work, but also where their organization might fit in.

1 "HHS Releases Final Regulations for ACOs," *Kaiser Health News*, October 20, 2011. <http://www.kaiserhealthnews.org/Stories/2011/October/20/accountable-care-organization-rules-regulations.aspx>

2 "Cigna and Weill Cornell Physician Organization Launch First Accountable Care Program in New York City Involving a Physician Organization and a Health Plan," joint Cigna-Weill press release, January 11, 2012. <http://newsroom.cigna.com/NewsReleases/Cigna-and-Weill-Cornell-Physician-Organization-Launch-First-Accountable-Care-Program-in-New-York-City-Involving-a-Physician-Organization-and-a-Health-Plan.htm>

3 "Health Executives Doubtful About ACO Participation," *Information Week*, December 27, 2011. <http://www.informationweek.com/news/healthcare/leadership/232301075>

4 "Half of Docs Unprepared for More Financial Risk with ACOs," *Fierce Practice Management*, December 7, 2011. <http://www.fiercepracticemanagement.com/story/half-docs-unprepared-acos-more-financial-risk/2011-12-07>

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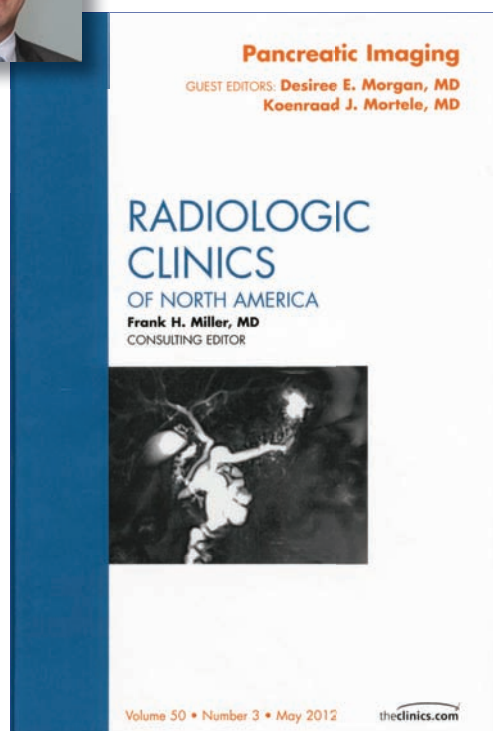
Publication Call Out: *Pancreatic Imaging*, Radiologic Clinics of North America May 2012

Guest Editor: Koenraad Morteale, MRI Clinical Director

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This issue of Radiologic Clinics explores state-of-the-art imaging approaches for a vast array of pancreatic diseases.



"Imaging of the pancreas continues to evolve with both advances in diagnostic capabilities as well as improvement in image-guided therapeutic techniques for a variety of pancreatic diseases. Progressive understanding of the pathogenesis of common pancreatic diseases, such as acute pancreatitis, and discovery or enhanced recognition of pancreatic pathologies due to both broader applications of imaging strategies as well as improvements in imaging techniques requires a practicing radiologist to keep abreast of the latest information from the literature. This issue of Radiologic Clinics North America is devoted to the practice of Pancreatic Imaging. A fantastic group of internationally recognized pancreas imaging experts has been tapped to succinctly convey state-of-the-art imaging approaches for a vast array of pancreatic diseases. . . . The intent of this issue is to update practicing radiologists in efforts to enhance the care delivered to their patients suffering from pancreatic disorders. We also hope to excite aspiring pancreatologists to pursue and achieve further advances in diagnostic imaging of this fascinating organ."

– Excerpted from the *Preface* by guest editors Desiree Morgan and BIDMC MR Clinical Director Koenraad Morteale

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The editor apologizes for any confusion!