



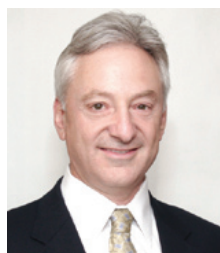
Radical Views...

from the Department of Radiology

Volume 7, Number 2
SEPTEMBER 2014



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



FROM THE CHIEF
Jonathan B. Kruskal, MD PhD

BIDMC Radiology in the news

Congratulations to **Ammar Sarwar** for recently being selected to be on the Committee on Publications for the New England Journal of Medicine. Speaking of which, congratulations to **Nahum Goldberg** whose work has been cited in Academic Radiology's August 2014 issue in the list of Top 100 Most Cited Articles in Radiologic Journals:

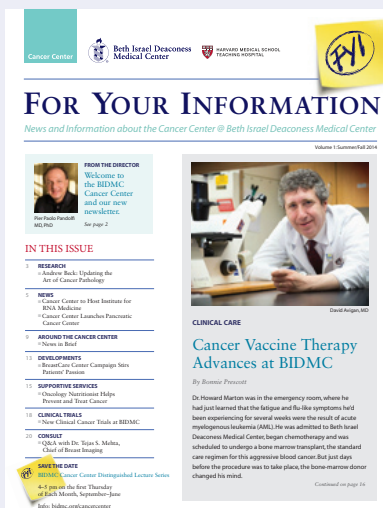
Rank	Article	Citations	Citations per year
16	Livraghi T, Goldberg SN , Lazzaroni S, Meloni F, Solbiati L, Gazelle GS. Small hepatocellular carcinoma: treatment with radio-frequency ablation versus ethanol injection. Radiology. 1999 Mar;210(3):655-61. PMID: 10207464.	850	60.7
38	Livraghi T, Goldberg SN , Lazzaroni S, Meloni F, Ierace T, Solbiati L, Gazelle GS. Hepatocellular carcinoma: radio-frequency ablation of medium and large lesions. Radiology. 2000 Mar;214(3):761-8. PMID: 10715043.	648	49.8
52	Livraghi T, Solbiati L, Meloni MF, Gazelle GS, Halpern EF, Goldberg SN . Treatment of focal liver tumors with percutaneous radio-frequency ablation: complications encountered in a multicenter study. Radiology. 2003 Feb;226(2):441-51. PMID: 12563138.	575	57.5
62	Solbiati L, Livraghi T, Goldberg SN , Ierace T, Meloni F, Dellanoce M, Cova L, Halpern EF, Gazelle GS. Percutaneous radio-frequency ablation of hepatic metastases from colorectal cancer: long-term results in 117 patients. Radiology. 2001 Oct;221(1):159-66. PMID: 11568334.	517	43.1
87	Goldberg SN , Gazelle GS, Mueller PR. Thermal ablation therapy for focal malignancy: a unified approach to underlying principles, techniques, and diagnostic imaging guidance. AJR Am J Roentgenol. 2000 Feb;174(2):323-31. Review. PMID: 10658699.	447	34.4
89	Solbiati L, Goldberg SN , Ierace T, Livraghi T, Meloni F, Dellanoce M, Sironi S, Gazelle GS. Hepatic metastases: percutaneous radio-frequency ablation with cooled-tip electrodes. Radiology. 1997 Nov;205(2):367-73. PMID: 9356616.	445	27.8

As far as we can tell, with 6 papers, Nahum is tied with his co-author Tito Livraghi for the largest number of articles most cited in radiologic journals!

Also please note that BIDMC Radiology received the highest HMS Core Clerkship ratings this year from the medical students. Congratulations Gillian Lieberman, Radiology faculty and fellows! See page 3 for the actual Radiology Clerkship ratings and program strengths cited by the medical students.

And check out the features on Radiology in the new HCA and Cancer Center newsletters (right and page 2)!

- Jonny



<http://www.bidmc.org/fyi>

"The Cancer Center at BIDMC has published the first issue of its new newsletter, FYI, a twice-yearly publication designed to provide all parts of our community with news and information about our activities." *Click on the link above to check out the interview with Tejas Mehta and a feature on our new liver tumor treatment.*

Breast Imaging: A Consult with Dr. Tejas S. Mehta

Continued from last page
from screening women annually at ages 40-49 compared to biennially at 50-74, with mortality reduction increasing from 21 percent to 40 percent.

What impact has 3D breast imaging - digital breast tomosynthesis or DBT - had on screening?
Dr. Mehta: DBT is a technology which allows for a 3-dimensional image of the breast. Currently two sets of images are obtained including 2D and 3D images, adding to radiation exposure (which remains within federal regulations). The breast is compressed for about 10 seconds longer to acquire these 3D images. The radiologist interprets these images at a special workstation.

There is literature showing that DBT increases cancer detection and decreases false positives. In 2012, doctor T. J. Mehta, MD, PhD, was awarded a DBT unit at our Boston



By the ACS. We provide the same high level of service at our Boston location.

CONSULT Breast Imaging: An Interview with Dr. Tejas S. Mehta

Radiologist Tejas S. Mehta, MD, MPH, Chief of Breast Imaging, was recently appointed Co-Director of the Breast Cancer Center at BIDMC, where he oversees diagnostic Co-Director Michael G. Warshawsky, MD, Chief of Breast Surgery.

In February, a large study concluded that screening mammography does not reduce breast cancer mortality beyond that of a physical exam. What are your thoughts on this study?

Dr. Mehta: Data from the Canadian National Breast Screening Study (CNBS) was initially published in the 1990s and this recent study is a 25 year follow up. The initial study was flawed and thus is the follow up. The main issue was poor quality mammography images were obtained with second hand machines, were often girls which help with resolution. All were film screen, before the advent of digital technology. There was poor positioning of the breasts by technologists, resulting in cancers not being included on the images. Radiologists did not have specific training in interpreting the mammograms. They report a cancer detection rate by mammography alone of 32 percent, very low given reported sensitivities of mammography being between 65 and 85 percent.

The other aspect questioned by some critics was the study design as a "randomized controlled trial." The authors stated that trained medical staff performed breast exams on nearly 90,000 women between the ages of 40 and 59. Then the women were randomized by a coordinator to either physical exam only or to the physical exam plus mammography arm. The authors state the coordinator had no knowledge of the physical exam but the critics state that they could have had knowledge, meaning them to place the patient in the mammography arm. I am not in a position to pass judgment on this aspect of the study but the poor image quality alone should be enough to think twice before using the results of this study to change one's practice from screening to no screening.

Should women be screened?

Dr. Mehta: I obviously support screening mammography. Before 1985 the mortality from breast cancer was far for 35 years. In the late 1980s, screening became routine and since then, there has been a 30 percent reduction in death from breast cancer. How much is due to screening mam-



Tejas S. Mehta, MD, MPH

ograms and how much is due to advances in treatment? I believe it is a combination, but therapy is more successful when the cancer is smaller and detected earlier.

In regard to how often and what age to start and stop screening, two sets of guidelines are followed in the United States. The American Cancer Society (ACS) recommends starting screening at age 40 and continuing every year until a woman's life expectancy is less than five to seven years, "without a specified upper age cut-off."

In 2009, the US Preventive Services Task Force proposed different recommendations that women start at age 50 and get screening mammography every other year until age 74. The Task Force stated that there was no proof of added benefits beyond 74. They initially did not support screening from 40-49, but then amended their recommendations to state that women should discuss this with their doctor.

My breast imaging colleagues and I support the ACS guidelines. There is a 72 percent greater mortality benefit

Continued on page 19



Beth Israel Deaconess
Medical Center



HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

Updates from HCA—July 2014

Updates on Initiatives

UPDATE: Same-Day Mammograms

Recently, our practice began partnering with the Radiology Department to make same-day mammogram examinations available to our patients. Below, Diane Brockmeyer, MD, shares her experience which exemplifies the value of this new service.

"A few months ago, a woman in her 60s came to establish care with me. The visit was fairly straightforward - she needed to schedule a mammogram, her BP was good. Her only issue was very significant post-menopausal vasomotor symptoms. She had been on HRT (Hormone Replacement Therapy) several years prior, but not recently. After a long discussion of all the options, including her breast cancer risk which was low, she left with a prescription to resume HRT with a re-evaluation appointment scheduled in a few months. (I don't hand out a lot of estrogen prescriptions, but she really had a strong preference.)

At the end of the visit, I asked her to do the same-day mammogram, which made her laugh, as it had been 2 - 3 years [since her last exam], and she works full-time. She said, 'Yeah, I'll probably never get around to doing it otherwise.' Within an hour, she was on her way back to work after the mammogram.

That mammogram revealed a breast cancer, which was estrogen-receptor positive. She has done well with treatment, and didn't go back on HRT.

This experience really re-crystallized for me that half our work is making recommendations, but it feels like the other half is making those recommendations possible. Getting health care and navigating our complex medical systems is really hard for people. Doing things like same-day mammograms is such a good step towards making things easier for everyone. My personal thanks to both HCA and Radiology for making this possible."

Upon hearing this great story, Olga Augustus, Clinical Manager, Breast Imaging, wrote: "This provides powerful affirmation as to the tremendous benefits that the 'Same-Day Access' partnership is able to offer our patients." Olga also shared this anecdote with her technical team along with Dr. Tejas Mehta, Breast Imaging Section Chief, and Donna Hallett, the Radiology Operations Director.



Click to access:
<http://www.bidmc.org/fyi>

Interventional Radiology Offers New Treatment for Liver Tumors



The Division of Interventional Radiology now offers transarterial Yttrium-90 radioembolization (Y-90) as outpatient therapy for primary and metastatic liver tumors. Interventional radiologists provide the service in collaboration with medical oncology, radiation oncology, nuclear medicine, transplant surgery, hepatobiliary surgery and surgical oncology. The therapy typically requires four to five patient visits (a consultation, two procedures and one or two follow-up visits) before the patient returns to the referring physician for ongoing care. Y-90 is a minimally-invasive, image-guided, catheter-based therapy that delivers internal radiation to liver tumors in the form of small particles that are injected directly into the hepatic arteries. This allows for a higher, local dose of radiation, without subjecting healthy tissue to the radiation. The Y-90 radiates from within and, since it is administered in the hepatic artery, can be viewed as "internal" radiation.



Appointments and referrals: Dr.
Muneeb Ahmed, 617-754-2523



DEPARTMENTAL NEWS: BIDMC Radiology Ranks Highest in HMS Core Clerkship Evaluations

Summary of HMS Student Clerkship Evaluation Data AY1314: RADIOLOGY

Data compiled from MyCourses. 1 = Excellent; 5 = Poor

Clerkship and Site	Total Number of Students in AY1314	Total Response	Response Rate	How well were the objectives stated at the outset	Were the criteria used to evaluate you explained at the outset	Rate the organization	Were the faculty accessible	Rate the quality of the teaching overall	Was there enough content to master core knowledge of subject	How appropriate was the responsibility you were given for patients	Rate the clerkship overall
RADIOLOGY											
BIDMC	42	40	95%	1.02	1.20	1.12	1.20	1.18	1.13	1.67	1.08
BWH	49	46	94%	1.67	1.96	2.47	1.52	1.57	1.65	2.16	1.98
CIC	12	12	100%	1.08	1.25	1.33	1.08	1.17	1.08	1.33	1.17
MGH	54	54	100%	1.39	1.57	1.74	1.26	1.41	1.48	1.69	1.44
Total/Average	157	152	97%	1.29	1.50	1.67	1.27	1.33	1.34	1.71	1.42

Random sample of program strengths cited by this year's students in their exit evaluations:

- Incredible online resources by Dr. Lieberman.
- Excellent well organized online modules that allowed me to master a basic fund of knowledge. All faculty including those in reading rooms were universally welcoming and agreeable to teaching.
- Materials and website are extremely organized, helpful, and thorough.
- Teaching is high quality all around, and instructors are very accessible.
- Organization is well thought out and productive, administration is excellent.
- Amazing teaching by Dr Lieberman, attendings and residents.
- Great organization of the course - first solidifying basic radiology principles and then learning about specific findings and/or diagnoses.
- Great teaching on PACS - utilizing real films.



DEPARTMENTAL GRAND ROUNDS - Guest Speakers



Friday, September 5, 2014

12 noon - 1:00 PM • Sherman Auditorium

Chronic Pancreatitis

Giulia Zamboni, MD - Institute of Radiology, University Hospital GB Rossi, Verona, Italy

We welcome the return of Dr. Zamboni who served as a Research Fellow in Computer Tomography under the mentorship of Dr. Raptopoulos (2005-2006), returning annually between 2007-2012 as a visiting research fellow and co-authoring 10 papers and one book chapter with BIDMC faculty.

Dr. Zamboni earned her medical degree with honors from the School of Medicine, University of Verona, Italy. Following her year as a CT Research Fellow at BIDMC, she completed a degree in Radiology at the Institute of Radiology of the University Hospital GB Rossi and joined the staff there in late 2006. She has served as a Reviewer for such journals as Radiology and RadioGraphics, European Radiology, and Radiologia Medica and received Radiology's "Editor's Recognition Award" in 2010 and 2011. Her commitment to academic medicine was further recognized by her being awarded the new ESR Albert L. Baert Editorial Fellowship at the European Congress of Radiology (ECR) 2014 meeting in Vienna: "The editorial fellowship programme aims to provide training in editorial skills, such as manuscript evaluation, manuscript editing, organisation of peer review, manuscript production and publishing, including electronic publication. This year's successful candidate is Dr. Giulia Zamboni, from Verona, Italy. Dr. Zamboni, a specialist in the field of gastrointestinal and abdominal radiology, will spend 3 weeks at the editorial offices in Vienna and Munich."

Radiology Calendar September 2014

Check for the most up-to-date schedule at: <https://apps.bidmc.org/departments/radiology/residency/conferences/displayMonth.asp>

Mon	Tues	Wed	Thurs	Fri
Weekly Mon Section Meetings: 3:00-4:00 ED section meeting (monthly) [ED annex, WCC]		Weekly Wed Section Meetings: 11:00-12:00 MSK clinical conf 12:00-1:00 CardioThoracic, GI/GU Oncology 3:00-4:00 Mammo [TCC-484]	Weekly Thurs Section Meetings: 12:00 - 1:30 Abd [WCC-354] 12:00-1:00 MSK	Friday Grand Rounds: Sherman Auditorium, East Campus (unless stated otherwise)
1 7:00 - 9:00 No Conference (Labor Day)	2 7:30 - 9:00 Professionalism (Program Directors)	3 7:30 - 8:15 IR and women's health (Salomao Faintuch) 8:15 - 9:00 IR in hemodialysis (Salomao Faintuch)	4 7:30 - 8:15 Image guided spine interventions (Ian Brennan) 8:15 - 9:00 Bronchial artery embolization (Ian Brennan)	5 12:00-1:00 pm Grand Rounds: Chronic Pancreatitis (Giulia Zamboni, University of Verona, IT)
8 7:30 - 9:00 Neuro (TBD)	9 7:30 - 9:00 Neuro (TBD) 10:30-11:30 NMMI meeting [GZ-103]	10 7:30 - 9:00 Physics (TBD) 7:15 - 8:00 US meeting (WCC-304A Gallery)	11 7:30 - 9:00 Neuro (TBD)	12 12:00-1:00 pm M&M Conference: Complications of Liver Biopsy (Bettina Siewert)
15 7:30 - 8:15 Mediastinal masses (Phillip Boiselle) 8:15 - 9:00 Chest cases (Phillip Boiselle) 12:00-1:00 MRI Meeting [Ansin 2]	16 7:30 - 8:15 Management of pulmonary nodules (Alexander Bankier) 8:15 - 9:00 Chest cases (Alexander Bankier) 8:00-9:00 IR Meeting [West Recovery]	17 7:30 - 9:00 Neuro (TBD)	18 7:30 - 9:00 Neuro (TBD)	19 12:00-1:00 pm NERRS (No Grand Rounds)
22 7:30 - 8:15 Uterus, cervix, placenta, cord, and amniotic fluid abnormalities (Deborah Levine) 8:15 - 9:00 Genitourinary cases (Girish Tyagi)	23 7:30 - 8:15 Ectopic Pregnancy (Janneth Romero) 8:15 - 9:00 Approach to CT guided procedures (Robert Sheiman) 10:30-11:30 NMMI meeting [GZ-103]	24 7:30 - 8:15 Fetal abdominal and GU abnormalities (Deborah Levine) 8:15 - 9:00 Genitourinary Cases (Vassilios Raptopoulos)	25 7:30 - 8:15 Ultrasound and doppler imaging - technique pearls (Jonathan Kruskal) 8:15 - 9:00 Imaging of liver transplant complications (Jonathan Kruskal)	26 12:00-1:00 pm Chiefs' Rounds
29 7:30 - 9:00 Cardiac (TBD)	30 7:30 - 9:00 Cardiac (TBD)	<p>Save the date: Friday Oct. 3</p> <div>   </div> <p>The 8th Annual Sven Paulin Lecture will be held on Fri., Oct. 3, at 12 noon, in Sherman Auditorium. This year's speaker is Joao A.C. Lima, MD, Professor of Medicine and Radiology, and Director of Cardiovascular Imaging at Johns Hopkins Hospital.</p>		

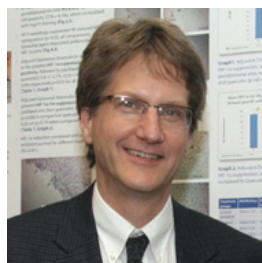
The Gallery at WCC-304B presents

Betsy Grady, Manager,
Diagnostic Radiology
& World Traveller

Knowing that Dr. Kruskal's wild game photos would be a tough act to follow, the Gallery will feature Betsy Grady's mementos of her travels to Europe, including one she brought back for her own furry friend, Lilith. Come and give her a cheer!

As always, please contact Donna Wolfe if you, too would like to share your photos, paintings or sculptures: dwolfe@bidmc.harvard.edu or 4-2515





David Alsop, PhD
Vice Chair for Research,
Director, MR Research

Pilot Research Awards, Department of Radiology, BIDMC

I am pleased to announce that we are again offering Pilot Research Awards (aka the Mini-Grant Program). The Radiology Department Pilot Research Awards are designed to enable departmental investigators to gain experience in defining objectives and testing hypotheses in preparation for external grant applications and/or submission of manuscripts. These one-year grants up to \$15,000 awards are intended to support the preliminary or pilot phase of scientific projects and are not intended to supplement major funding that has already been secured. Full-time faculty, fellows, residents and research staff employed by the Department of Radiology are eligible to apply. Eligible projects include any area of basic, clinical, or translational research related to radiology. Submissions will be reviewed in two annual cycles. Submissions received by **November 17, 2014** will be considered for funding beginning **January**

15, 2015. Submissions received by **May 18, 2015** will be considered for funding beginning **July 15, 2015**. Full instructions are listed below and are also available on the InfoRadiology homepage. Please contact me at dalsop@bidmc.harvard.edu with any questions about these awards or other research plans or needs.

Pilot Research Awards 2014-2015

Purpose: Radiology Department Pilot Research Awards are designed to enable departmental investigators to gain experience in defining objectives and testing hypotheses in preparation for external grant applications and/or submission of manuscripts. These awards are intended to support the preliminary or pilot phase of scientific projects and are not intended to supplement major funding that has already been secured.

Amount: One-year grant of up to \$15,000.

Eligibility Requirements: Awards are restricted to full-time faculty, fellows, residents and research staff employed by the Department of Radiology only. Applicants at the level of Assistant Professor or below require co-signature on the application by a departmental mentor and early involvement of the mentor in the proposal development is strongly encouraged.

Nature of Projects: Any area of basic, clinical, or translational research related to radiology is eligible to apply for support.

Submission Procedures and Deadlines: Submissions will be reviewed in two annual cycles. Submissions received by **November 17, 2014** will be considered for funding beginning **January 15, 2015**. Submissions received by **May 18, 2015** will be considered for funding beginning **July 15, 2015**. Up to \$80,000 will be awarded to this program each academic year. Proposals (hardcopy or electronic) should be submitted to Lois Gilden, assistant to David Alsop, Director of Research, (email lgilden@bidmc.harvard.edu).

Format for the Proposal: The application is limited to two single-space pages of narrative consisting of Specific Aims, Background & Significance, Preliminary Studies (if any), a brief Design and Methods section, and a section describing how this grant will lead to the preparation of external grant applications and/or the submission of high impact manuscripts. A separate Budget page with justification must be submitted. Please note that these grants are not intended for salary support of the applicant or co-investigators.

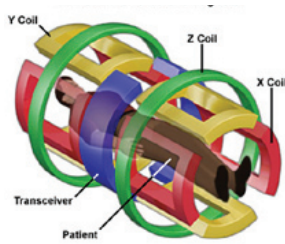
Review Process: All complete applications will be peer-reviewed by the Departmental Research Committee. Ad-hoc reviewers from outside the committee may be sought for applications with methods outside the expertise of the committee members. Recommendations for funding will be made to the Director of Research, Dr. David Alsop.

Review Criteria: The submitted proposals will be reviewed for their intrinsic merit, synergies with other activities and priorities of the Department, as well as the likelihood that funding will have a positive impact on the completion of the research project. Because these grants are intended for pilot studies, investigators who already have externally funded research projects must clearly indicate why the funds are necessary.

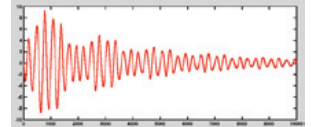
Reports and Presentations: Award recipients must present a one-page written report to the Departmental Research Committee within 30 days of completion of the project. This report should include a section indicating any future plans for the research. These reports should include any reprints or preprints of manuscripts or any request for external funding (i.e., NIH or RSNA submissions) resulting from the study in an appendix. This report should be submitted to the Director of Research, Dr. David Alsop

Questions: Please contact Dr. David Alsop at dalsop@bidmc.harvard.edu with any questions about these awards or other research plans or needs.

Radiology Residents & Fellows MRI Physics Course



National High Magnetic Field Laboratory



2014-2015 Academic Year

Purpose:

- To provide fellow and fellows residents with a basic understanding of MR physics, with emphasis on practical aspects of image acquisition such as protocol optimization and troubleshooting.
- A brief overview of fundamentals of nuclear magnetic resonance will provide an introduction to sources of image contrast in MRI.
- Techniques for image formation will be described, followed by an overview of the major families of MR pulse sequences. The physics underlying topics such as accelerated imaging, fMRI, and diffusion tensor imaging will be discussed.

Text and Topics:

The recommended textbook is "MRI in Practice," 4th Edition (2011) by Catherine Westbrook. Supplementary reading from review articles will be recommended for advanced topics.

Format:

A total of 13 sessions including 10 lectures and 3 hands-on sessions at the GE 3T research scanner. **All sessions will be held on Wednesdays, 5-6pm at the MRI Learning Lab, Ansin 220, starting on July 30th.**

For more information, contact Aaron Grant, PhD: 7-3265

TOPICS

July 30, 2014: The origin of the NMR signal. Nuclear magnetism. Nutation, precession, signal reception. Chemical shift. Relaxation, T1, T2. Spin dephasing, impact of gradients and magnetic field inhomogeneities. Overview of MR hardware.

Aug 6, 2014: Sources of contrast in MRI: T1 and T2 weighting, magnetization transfer, CEST, diffusion weighting.

Aug 13, 2014: Hands on session 1: Basics of running a scanner. Common problems in preparing a patient for imaging. Overview of coil arrays and pulse sequences.

Aug 27, 2014: Image formation. Phase and frequency encoding. Basic k-space concepts. Nyquist criterion, field-of-view, and resolution. k-space sampling for given imaging parameters, and effects of undersampling (aliasing, pseudo-noise). Preview of accelerated imaging methods.

Sept 3, 2014: SNR and accelerated imaging. Image parameters that govern SNR. Trade-offs in image optimization. Accelerated imaging. Parallel imaging and compressed sensing.

Sept 10, 2014: Pulse sequences. Gradient echo, spin echo, steady state, EPI. STIR/FLAIR/IR etc. Fat suppression. Spectroscopy with PRESS, STEAM, CSI.

Sept 24, 2014: Hands On Session 2:
Protocol optimization with basic pulse sequences.

Oct 1, 2014: Spins in motion: flow and diffusion. Flow compensation, time of flight, phase contrast. Introduction to basic diffusion weighted imaging.

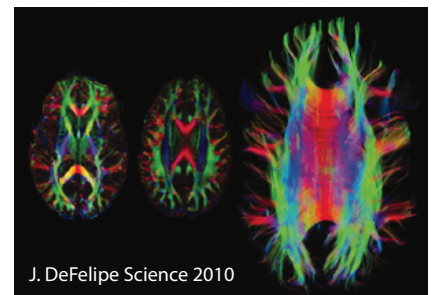
Oct 8, 2014: Contrast-enhanced MRI. Types of magnetic materials. Relaxivity and image contrast as a function of dose, TR, TE. Dynamic contrast enhanced imaging, angiography. BOLD effect, fMRI.

Oct 22, 2014: Artifacts and troubleshooting.

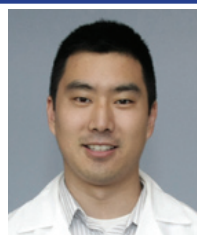
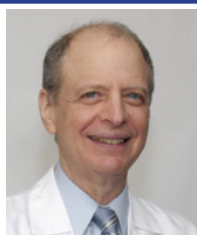
Oct 29, 2014: Hands-on session 3.
Common difficulties in practical scanning, and how to resolve them.

Nov 5, 2014: Diffusion-weighted imaging and DTI in neuro applications.

Nov 19, 2014:
Arterial spin labeling in the brain and body.



J. DeFolipe Science 2010



Priscilla J. Slanetz, MD, MPH, Director, and Ronald Eisenberg, MD JD, and Justin Kung, Associate Directors, Radiology Residency Program

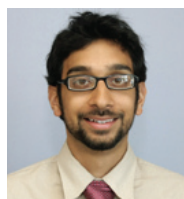
Residency News

We are pleased to start off this academic year with the following highlights:

We welcomed three chief residents to their new roles. **Mike Acord** serves as the administrative chief, whose main task is to address scheduling challenges. **Kate Troy** is handling the educational aspects of the program, focused primarily on the daily didactic conferences.

Rashmi Jayadevan is the quality point person, who is responsible for coordinating the Resident Idea program and the Friday morning non-interpretative curriculum.

We welcomed ten terrific new residents to our program, all of whom have now settled into their new roles. We want to thank everyone for making them all feel at home from the first day. We are excited to have them here and look forward to working with each of them over the next 4 years.



Sahil Mehta



Neda Sedora-Roman



Quang Nguyen

experience Botswana himself. **Neda Sedora-Roman, Quang Nguyen, and Sahil Mehta** founded a RAD-AID chapter at BIDMC, which is a program affiliated with Johns Hopkins University. As a result, we are sure to have many new global health opportunities available for our residents and fellows.

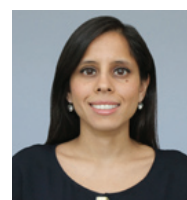
Sahil Mehta was recently awarded the 2014-2015 Goldberg-Reeder Resident Travel Grant in support of his global health elective in Molepole, Botswana. Sahil has been working with the Department of Internal Medicine at BIDMC over the past year on developing an imaging curriculum to help the internal medicine residents prior to their rotation abroad. He will now have the opportunity to



Mike Acord



Kate Troy



Rashmi Jayadevan



L to R: Jawad Hussain (BIDMC PGY-3), Annie Leylek (BIDMC PGY-5), and John Gilbert (BWH PGY-3).

Annie Leylek (PGY-5) and **Jawad Hussain** (PGY-3), were awarded 2 of 3 state-sponsored scholarships to attend the 2014 Leadership Summit of the Radiology Leadership Institute (RLI) hosted by Babson College. The event, now in its third year, offers attendees a comprehensive radiology-focused educational experience to hone their leadership and business skills. The scholarship program sponsored by the Massachusetts Radiological Society (MRS) was initiated to provide financial assistance to deserving local radiologists-in-training to provide them with the critical content included in the RLI curriculum.

Jawad was also recently elected as Alternate Resident Member of the Board of Trustees of the Massachusetts Medical Society and serves as the Resident member of the Committee on Legislation.



Drew Colucci



Lauren Ferrara



Mark Ashkan

Drew Colucci was selected to attend the Tufts Healthcare Institute 2014 Residency Program in August. In addition, he was elected to become a delegate of the Resident and Fellow Section to the Massachusetts Medical Society.

Lauren Ferrara was recently elected Vice President of the Resident and Fellow Section of the Massachusetts Radiological Society. We look forward to seeing her leadership in Boston and beyond.

2014 graduating resident **Mark Ashkan's** iPad app on healthcare economics is now available on iTunes for free. The app covers all of the milestones for healthcare economics and is a great general resource for the basics of healthcare delivery and reimbursement. The link is: <https://itunes.apple.com/us/app/healthcare-economics/id883870108?mt=8>

Residency News (cont'd)

In addition to all of these accomplishments, the residency program has been undergoing some restructuring. We continue to centralize all of the essential documentation on New Innovations. This move has allowed greater oversight and organization of the program. We have implemented a new attendance policy for residents and have created dedicated time in the didactic program for residents to complete evaluation of the morning conferences. This will allow us to provide faculty with timely feedback on their presentations. In addition, we have recently added a new evaluation to capture the excellent daily teaching that many faculty provide at the workstation. We are also working on creating a standardized block schedule for resident rotations, which will streamline resident education and make it possible for our department to embrace the new DR/IR integrated pathway.

As we move forward this academic year, as always, we welcome suggestions on how to continue to improve the program. Please feel free to contact any of us in person or by email. Thanks again for your continued support of the program.

- Priscilla, Ron and Justin

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

DX

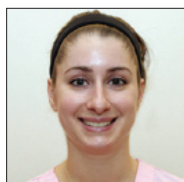


Christopher Burgos received patient kudos for outstanding assistance: *"Chris is a fine gentleman, very professional, caring and understanding. He was so nice to me and made a difficult situation easy. He deserves a special mention. He is a fine asset to your organization."*

CT



Jason Chagnon earned the Spick and Span award for being recognized by his fellow team mates for his super room cleaning!



Alex Palumbo



Bethany Purington

Alexandra Palumbo and **Bethany Purington** came in at a minute's notice to help out on the overnight shift and are being recognized by teammates for being "great to work with", "easy going" and "team players".

NMMI (Nuclear Medicine & Molecular Imaging)



Dawn Federman continues to do an outstanding job managing insurance preapprovals. The number of NMMI studies that require approvals has steadily increased. Dawn makes sure that we never have any nonpayments due to insurance issues.



Andrew Fleming has taken on 50% of the lead tech duties on the West and has played a major role in setting up the Y-90 microspheres protocol; he also continues to update the protocol manual, keeping up with current practice.

KUDOS - BIDMC in the Community & the Nation



Thank you Radiology

The Beth Israel Deaconess Cancer Center and Surgical Pavilion, a new 30,000 sq. foot

facility at Beth Israel Deaconess Hospital-Needham, will open on September 22, 2014 a staff lounge provided by a gift from BIDMC Radiology (Harvard Medical Faculty Physicians). In thanking Dr. Kruskal, BI-Needham President and CEO John Fogarty says, "Support from our own staff, physicians, and departments sends a strong, positive message to the community."



Koenraad Morteale, Newest AIRP Faculty

As of the July-August course, MRI Chief Koenraad Morteale is officially a new Faculty and Lecturer at the American Institute of Radiologic Pathology (AIRP). Annually, the AIRP, formally known

as the AFIP, organizes 6 educational courses that last 4 weeks and are held in Silver Spring, Maryland. Nearly every radiology resident training in the USA and Canada, as well as many foreign residents, attend this well-respected course that focuses on how diseases seen on imaging relate to histopathology. Currently, Dr. Morteale lectures on a vast array of diseases of the pancreas, an organ that (as he quotes) "represents the epicenter of the human body"....

KUDOS²: 2 Radiology babies are born on the same day and 2 grandfathers in Abdominal Imaging share photos!



Tamuna Chadashvili, MD PhD
- Breast Imaging

Isabel Lily Chabra was born on Saturday July 26. She came three weeks early, but is healthy and perfect! We are so happy to finally meet her. We are home and both

of us are doing great. I know she is looking forward to meeting all of you sometime soon.

- Tamuna



Vassilios Raptopoulos, MD -
CT/Abdominal Imaging

Sebastian Orselli: Rap's first grandson was born Aug. 13 in New York City. His mother, Elena, is doing fine. The Orsellis look forward to getting his passport so they can present Sebastian to family in Greece.

Speaking of grandchildren. . . . we are pleased to finally present Bob Kane's twin granddaughters by his daughter Hillary. **Koko** and **Kai** are shown here at the Kane home in Maine during their first trip away from their home in Bali.



Fatima and I are excited to announce that our son, **Awab Sarwar** was born on 7/26/2014 at 2:51 pm, clocking in at 7 lbs. 13 oz. and measuring 20 inches. Mom and son are both doing well.

- Ammar

(Ammar Sarwar, MD -
Interventional Radiology)



Robert Kane, MD - U/S,
Abdominal Imaging

Service Awards 2014 - Celebrating the Years

BIDMC hosted its annual Employee Service Award Event on April 29 at the Best Western Inn at Longwood Medical to honor employees celebrating their 20, 25, 30 and 40 year anniversaries*. A celebration for those celebrating their 10 and 15 year anniversaries was held on June 27; and those with 5 year anniversaries were honored on July 10, 2014. Congratulations to all! We present all of our Radiology Service Awardees here.



At the 10 and 15 Year Anniversary Celebration of June 27, 2014:

(L to R) HMFP Manager Carl Nickerson, Chief Admin Officer Annmarie Monks, Senior Vice President for Radiology Bob Cherry, 10-yr veteran David Hackney and Director of Operations Donna Hallett.

15 Years

Yasir Abdelbasit - Dx
Matthew Boyle - MRI
Karen Dowie - Breast Imaging
Jeanne Eason - Dx
Susan Fernandes - Patient Svc
Mary Finley - Patient Svc
S. Nahum Goldberg - Abd Imaging
Peter Gross - Breast Imaging
Ellen Howe - US
Suzanne Konopka-Leavitt - Mobile US
Barbara Lawrence - Admin
Elena Morozov - Breast Imaging
Janet Mulvey - NMMI
Matthew Palmer - Physics
Jean Petree - Patient Svc
Audris Ruiz - HMFP Admin
Maeva Stockbridge - US
Irene Tate - CT

10 Years

Erin Aker - NMMI
Linda Benasky - CT
Thao Huyen Bui - Nursing
Tara Bun - Admin
Robert Croce - Dx
Holly Peterson Dodge - Dx
Alice Fisher - Neuro
Barbara Foley - MRI
Charles Gerbrands - Dx
David Hackney - Neuro
Kristen Hill - CT
Amanda Martin - Patient Svc
Mary-Elizabeth Monroy - Dx
Jessica Munro - Dx
Linda Paul - NP
Mary Ritchie - Patient Svc
Naney Sisay - Patient Svc
Cynthia Smith - Breast Imaging
Maryellen Sun - Abd Imaging



Donna Hallett with 15-yr veterans Maeva Stockbridge (above left) and Janet Mulvey (above, right) and Bob Cherry.



40 Years

Diane Diggs - Image Archives

35 Years

Robin Griggs - RN
Debra Morris - Patient Svc
J. Anthony Parker - NMMI

30 Years

Juline Horan - Dx
Bernadette Kennedy - US
Warren Manning - Cardiac MR
Rose Stanley - Breast Imaging

25 Years

Liz Arsenault - HMFP Admin
Olga Augustus - Breast Imaging
Kevin Donohoe - NMMI
Pierre Franck - US
Jeff Fuller - MRI
Nancy Hermanns - CT
Susan Nelson - Image Archives
Karen Platcow - MRI
Rosemaine Sanon - US
Nancy Whitman - 1101 Beacon

20 Years

Margaret Appignani - Dx
Christine Boncoddio - CT
Clotell Forde - Admin
Andrea Garvin - Mobile US
Breige Ker - VIR
Herbert Y. Kressel - HMFP (MRI)
Tejas Mehta - Breast Imaging
Robert Sheiman - Abd Imaging

* Please see the May 2014 Radical Views for more detailed coverage of the Long Service Awards Event



135 years of experience in this line: Bernie Kennedy (30 yrs), Christine Boncoddio (20 yrs), Olga Augustus (25 yrs), Rose Stanley (30 yrs), and Juline Horan (30 yrs)



(L to R) 10-yr veteran Tara Bun and 15-yr veteran Barbara Lawrence.

10-yr veterans Mary-Elizabeth Monroy and Holly Peterson Dodge with Donna Hallett

5 Year Celebration, July 10, 2014:



5 yrs (L to R:) Allen Reedy, Jonny Kruskal, Annamarie Monks, Donna Hallett, Juanita Cook, Plinio Cabrera, Bridget O'Bryan, Bob Cherry, Christina Murphy, Joe Aloisi, Matthew McMahon, Dace Jansons, Jaclyn Gattonini, Subhendra Sarkar, Fred Jumba, and Matthew Palmer.

5 Years

Christina Abate - NP
Joseph Aloisi - RN
Julie Armada - Breast Imaging
Robert Beeman - MRI
Genevieve Bonner - US
Valdir Brandao - Patient Svc
Cheryl Bunting - NP
Beth Bythrow - US
Plinio Cabrera - US
Nora Call - US
Adriano Carvalho - Patient Svc

Christina Coyle - CT
Natalee Frazer - Image Archives
Jaclyn Gattonini - Dx
Ivan Geshev - US
Benjamin Jenkins - MRI
Fred Jumba - Dx
Jessica Lane - US
Tuan Luu - MRI
Matthew McMahon - NMMI
Natalia Noldseiro - Image Archives
Christine Rando - US

Julie Richardson - US/Vasc Lab
Pamela Roberge - CT
Subhendra Sarkar - MRI
Elena Shimonov - Breast Imaging
Katie Siegel - Dx
Priscilla Slanetz - Breast Imaging
Marivic Tolete - RN
Danielle Warren - Patient Svc
Tessa Weber - CT



Beth Israel Deaconess
Medical Center



HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

Interventional Services for Women's Health



at Beth Israel Deaconess Medical Center
Department of Radiology

Contact us

ELECTIVE PROCEDURES:

Outpatients: place an order for procedure in online medical records (OMR)

Inpatients: place an order for procedure in provider order entry (POE)

- Or place an order for interventional radiology consult in OMR
- Or contact Maxima Baudissin at 617-754-2523, mbaudiss@bidmc.harvard.edu to schedule an interventional radiology clinic visit
- Or email us at:
sfaintuc@bidmc.harvard.edu
obrook@bidmc.harvard.edu

Interventional Radiology was pleased to distribute this handout to BIDMC referring physicians in August in an effort to introduce **Interventional Services for Women's Health** launched by Drs. Salomao Faintuch and Olga Brook.

Meet our Interventional Radiology Team:

Salomao Faintuch, MD, MSc

Assistant Professor of Radiology HMS - BIDMC



Team leader of the largest uterine artery embolization program in New England.

Email: sfaintuc@bidmc.harvard.edu

Phone: 617-754-2652 (office),
617-754-2523 (Maxima Baudissin, AA)

Pager: 38931

Languages: Spanish, Portuguese

Olga R Brook, MD

Assistant Professor of Radiology HMS - BIDMC



Special interest in women's imaging and interventions, fellowship-trained in women's imaging and interventional radiology.

Email: obrook@bidmc.harvard.edu

Phone: 617-754-3379 (office);
617-667-1283 (Clotell Forde, AA)

Pager: 90861

Languages: Russian, Hebrew



Jonathan Underhill, PA (Outpatients)

Email: junderhi@bidmc.harvard.edu

Pager: 91162



Christina Abate, NP (Inpatients)

Email: cabate@bidmc.harvard.edu

Pager: 39567

Contact us

URGENT PROCEDURES: 24/7 coverage

- Transvaginal / percutaneous drainage:
CT/US fellow on call, pager 32628
- Vascular interventional radiology:
Interventional radiology fellow on call,
pager 38011

Interventional Services for Women's Health
at Beth Israel Deaconess Medical Center
Department of Radiology
©2014

SERVICES:

Interventional Radiology at BIDMC offers a wide range of services tailored to treatment of women's health, including:

UTERINE ARTERY EMBOLIZATION

- Fibroids
- Adenomyosis
- Postpartum hemorrhage
- Preoperative embolization to reduce surgical bleeding
- Treatment of uterine vascular lesions (arteriovenous malformations, AV fistula)

PERIOPERATIVE TEMPORARY INTERNAL ILIAC ARTERY BALLOON OCCLUSION

- For reduction of surgical blood loss in placenta accreta / percreta or pelvic tumors

INFERTILITY

- Fallopian tube recanalization
- Varicocele embolization

MANAGEMENT OF PREGNANCY-RELATED CONDITIONS

- Ultrasound-guided paracentesis in hyperstimulation syndrome
- Ectopic pregnancy ultrasound-guided direct methotrexate injection
- Radiofrequency ablation of acardiac twin umbilical cord in twin-to-twin transfusion syndrome / TRAP sequence

IMPLANON / NEXPLANON ULTRASOUND GUIDED REMOVAL

EMBOLIZATION FOR PELVIC CONGESTION SYNDROME / OVARIAN VEIN INCOMPETENCE (CHRONIC PELVIC PAIN)

TRANSVAGINAL DRAINAGE OF TUBO-OVARIAN ABSCESES

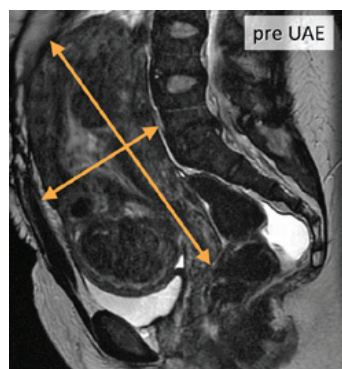
ONCOLOGY

- CT and ultrasound-guided percutaneous and transvaginal biopsies
- Venous access (PICC, chest ports, temporary and tunneled central venous lines)
- Peritoneal and pleural tunneled catheters (PleurX) or subcutaneous ports for recurrent ascites, pleural effusion or chemotherapy administration
- Percutaneous tumor ablation (radiofrequency and cryotherapy) for oligometastatic disease

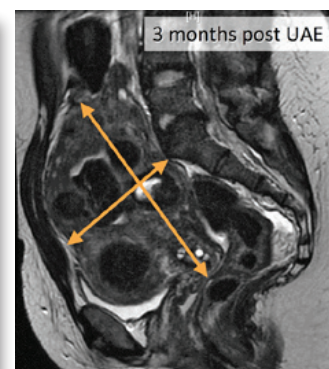
Interventional Services for Women's Health

at Beth Israel Deaconess Medical Center
Department of Radiology

46 yo woman with fibroids s/p myomectomy, menorrhagia causing iron deficiency anemia



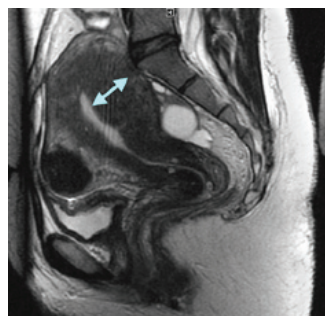
Uterus: 17.6 x 8.6 x 17.6 cm



Uterus: 15.3 x 7.4 x 11.5 cm

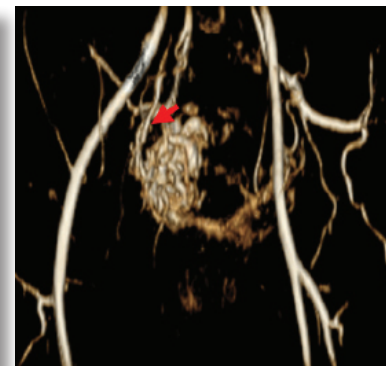
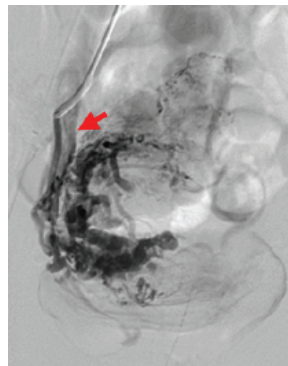
Significant improvement in length and amount of menstrual bleeding

43 yo woman with fibroids and adenomyosis with menorrhagia



Significant reduction in uterine size and thickness of junctional zone (arrows) and improvement in menorrhagia and pelvic pain

41 yo woman, s/p TAB at 8 w, heavy vaginal bleeding, uterine arteriovenous fistula diagnosed at MRI, confirmed and treated with angiography



Arrows show early draining vein

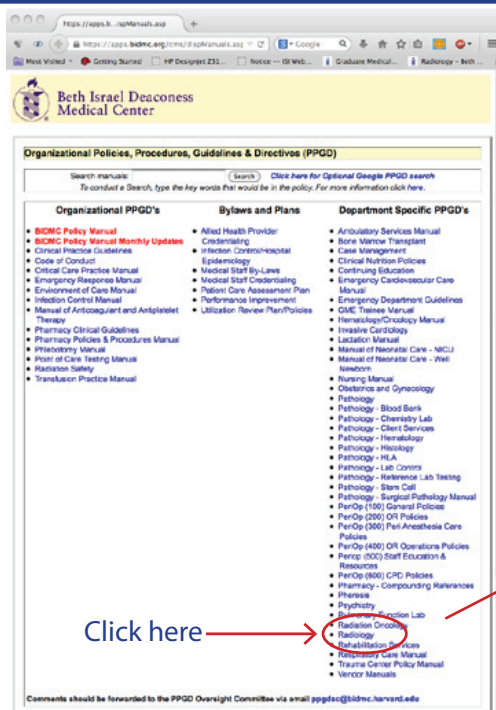
Departmental News: Updated Policy Notification



Donna Hallett, BSc
Director of Operations

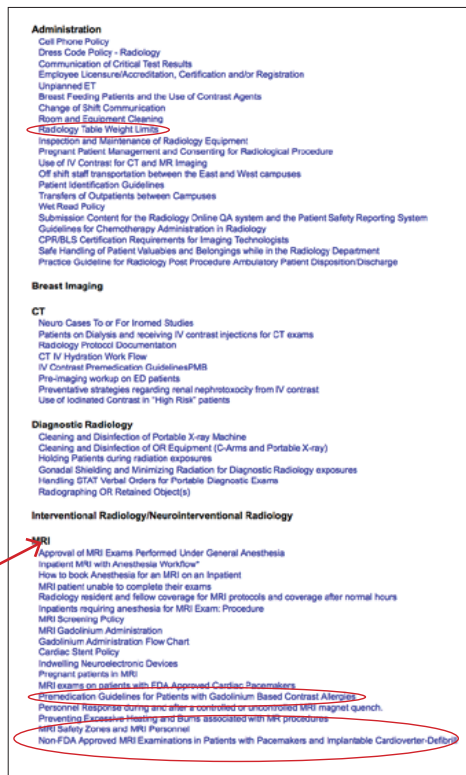
As we announced in July, the following departmental policies, procedures, guidelines and directives (PPGD) have

been edited or reviewed with no change (see below). To ensure that you are up to date on the newest, most current information, please click on the link below to view the specific PPGD.



Click here →

Note that PPGDs are organized by section rather than Policy Number on this webpage



<https://apps.bidmc.org/cms/dispManuals.asp>

Title	Comment
Mobile MRI emergency guidelines	Changes made were to add specific mobile egress information on how to handle codes, or other emergency events due to space constraints.
MR Insulin Pump guidelines	Added glucometer locations, resource contact information and resource availability for off hours and weekends.
Dress Code Policy	Inappropriate work attire includes: <ol style="list-style-type: none"> 1. Sweatshirts/Polar fleece/Hoodies with logos, writing or images (department approved BIDMC RADIOLOGY jackets, and plain apparel are acceptable). 2. T-shirts with logos, writing or images. ("BIDMC RADIOLOGY" and plain apparel are acceptable).
Pt Identification Policy revised	The only change was next review date
Rad Dept. Risk For Fall Prevention Guide	The only change was next review date
Radiology Cell Phone Policy	The only change was next review date
Change of Shift Communication Policy	The only change was next review date
Radiology Employee Licensure Verification	The only change was next review date

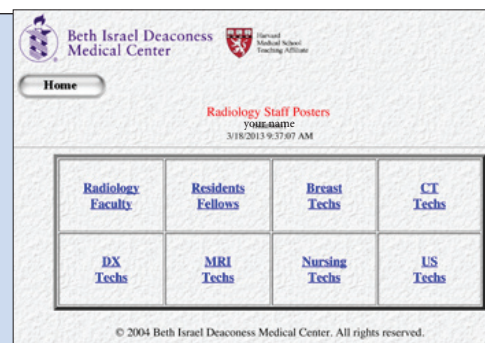
The Radiology Staff posters

are now available on InfoRadiology in pdf format for viewing, downloading, and printing. Log in to the portal: <https://portal.bidmc.org/>

If you don't already have InfoRadiology displayed in **My Applications**, Click on the **Applications** tab and then under **Clinical**, click on **Inforadiology**.

Log into Inforadiology, Click on **Staff Posters**

Managers please contact Michael Larson (mlarson1@bidmc.harvard.edu) to update rosters as needed.



Agarwal MD, Levenson RB, Siewert B, Camacho MA, Raptopoulos V. Limited added utility of performing follow-up contrast-enhanced CT in patients undergoing initial non-enhanced CT for evaluation of flank pain in the emergency department. *Emerg Radiol.* 2014 Aug 1. PMID: 25082439.

Ahmed M, Solbiati L, Brace CL, Breen DJ, Callstrom MR, Charboneau JW, Chen MH, Choi BI, de Baère T, Dodd GD 3rd, Dupuy DE, Gervais DA, Gianfelice D, Gillams AR, Lee FT Jr, Leen E, Lencioni R, Littrup PJ, Livraghi T, Lu DS, McGahan JP, Meloni MF, Nikolic B, Pereira PL, Liang P, Rhim H, Rose SC, Salem R, Sofocleous CT, Solomon SB, Soulen MC, Tanaka M, Vogl TJ, Wood BJ, **Goldberg SN; For the International Working Group on Image-guided Tumor Ablation, Interventional Oncology Sans Frontières Expert Panel, Technology Assessment Committee of the Society of Interventional Radiology, and the Standard of Practice Committee of the Cardiovascular and Interventional Radiological Society of Europe. Image-guided Tumor Ablation: Standardization of Terminology and Reporting Criteria-A 10-Year Update. *Radiology.* 2014 Jun 13;132958. PMID: 24927329.**

Akçakaya M, Gulaka P, Basha TA, Ngo LH, Manning WJ, Nezafat R. Free-breathing phase contrast MRI with near 100% respiratory navigator efficiency using k-space-dependent respiratory gating. *Magn Reson Med.* 2014 Jun;71(6):2172-9. doi: 10.1002/mrm.24874. PMID: 23900942; PMCID: PMC3870033.

Al-Hawary MM, Francis IR, Chari ST, Fishman EK, Hough DM, Lu DS, Macari M, Megibow AJ, Miller FH, **Mortele KJ, Merchant NB, Minter RM, Tamm EP, Sahani DV, Simeone DM.** Pancreatic ductal adenocarcinoma radiology reporting template: consensus statement of the society of abdominal radiology and the american pancreatic association. *Gastroenterology.* 2014 Jan;146(1):291-304.e1. doi: 10.1053/j.gastro.2013.11.004. PMID: 24355035.

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

Alkalay RN, Burstein D, Westin CF, Meier D, Hackney DB. MR diffusion is sensitive to mechanical loading in human intervertebral disks ex vivo. *J Magn Reson Imaging.* 2014 Jun 3. doi: 10.1002/jmri.24624. PMID: 24889510.

Alsop DC, Detre JA, Golay X, Günther M, Hendrikse J, Hernandez-Garcia L, Lu H, Macintosh BJ, Parkes LM, Smits M, van Osch MJ, Wang DJ, Wong EC, Zaharchuk G. Recommended implementation of arterial spin-labeled perfusion MRI for clinical applications: A consensus of the ISMRM perfusion study group and the European consortium for ASL in dementia. *Magn Reson Med.* 2014 Apr 8. doi: 10.1002/mrm.25197. PMID: 24715426.

Andriyanov AV, Koren E, Barenholz Y, **Goldberg SN.** Therapeutic Efficacy of Combining PEGylated Liposomal Doxorubicin and Radiofrequency (RF) Ablation: Comparison between Slow-Drug-Releasing, Non-Thermosensitive and Fast-Drug-Releasing, Thermosensitive Nano-Liposomes. *PLoS One.* 2014 May 1;9(5):e92555. doi: 10.1371/journal.pone.0092555. eCollection 2014. PMID: 24786533; PMCID: PMC4006748.

Anter E, Silverstein J, Tschabrunn CM, Shvilkin A, Haffajee CI, Zimetbaum PJ, Buxton AE, Josephson ME, Gelfand E, **Manning WJ.** Comparison of Intracardiac Echocardiography and Transesophageal Echocardiography for Imaging of the Right and Left Atrial Appendages. *Heart Rhythm.* 2014 Jul 14. pii: S1547-5271(14)00764-4. doi: 10.1016/j.hrthm.2014.07.015. PMID: 25034183.

Appelbaum L, Ben-David E, Faroja M, Nissenbaum Y, Sosna J, **Goldberg SN.** Irreversible electroporation ablation: creation of large-volume ablation zones in in vivo porcine liver with four-electrode arrays. *Radiology.* 2014 Feb;270(2):416-24. doi: 10.1148/radiol.13130349. PMID: 24126371.

Appelbaum E, **Manning WJ.** Left atrial fibrosis by late gadolinium enhancement cardiovascular magnetic resonance predicts recurrence of atrial fibrillation after pulmonary vein isolation: do you see what I see? *Circ Arrhythm Electrophysiol.* 2014 Feb 1;7(1):2-4. doi: 10.1161/CIRCEP.114.001354. PMID: 24550404.

Ashitate Y, Hyun H, Kim SH, Lee JH, Henary M, **Frangioni JV, Choi HS.** Simultaneous mapping of pan and sentinel lymph nodes for real-time image-guided surgery. *Theranostics.* 2014 Apr 24;4(7):693-700. doi: 10.7150/thno.8721. eCollection 2014. PMID: 24883119; Central PMCID: PMC4038751.

Barille MF, **Wu JS, McMahon CJ.** Femoral head avascular necrosis: a frequently missed incidental finding on multidetector CT. *Clin Radiol.* 2014 Mar;69(3):280-5. doi: 10.1016/j.crad.2013.10.012. PMID: 24295736.

Berkowitz SJ, **Kung JW, Eisenberg RL, Donohoe K, Tsai LL, Slanetz PJ.** Resident iPad Use: Has It Really Changed the Game? *J Am Coll Radiol.* 2014 Feb;11(2):180-4. doi: 10.1016/j.jacr.2013.04.017. PMID: 23809171.

Bogusz AM, Joyce R, **Kolodny G, Buck T, Pihan G, Bhargava P.** An unusual patient with shortness of breath—clinical, radiologic, and pathologic pitfalls. *Am J Hematol.* 2014 May;89(5):558-63. doi: 10.1002/ajh.23689. PMID: 24496963.

Boiselle PM. A new year brings new opportunities. *J Thorac Imaging.* 2014 Jan;29(1):1. doi: 10.1097/RTI.0000000000000063. PMID: 24361972.

Boiselle PM. "Readers' opinion". *J Thorac Imaging.* 2014 Mar;29(2):67. doi: 10.1097/RTI.0000000000000074. PMID: 24552881.

Boiselle PM. Lung Cancer Screening: Narrowing the Gaps. *J Thorac Imaging.* 2014 Aug 5. [Epub ahead of print] PMID: 25100143.

Boiselle PM, Bluemke D, Moon J, Wince WB. Expert opinion: how and when to perform cardiac magnetic resonance myocardial t1 mapping. *J Thorac Imaging.* 2014 May;29(3):133. doi: 10.1097/RTI.0000000000000085. PMID: 24743857.

Boiselle PM, Chiles C, Patz E, Tammemägi M, Wood DE. Expert Opinion: United States Preventive Services Task Force Recommendation on Screening for Lung Cancer. *J Thorac Imaging.* 2014 Jul;29(4):197. PMID: 24905632.

Boiselle PM, Collins J, Sosna J, Woodcock R. Expert Opinion: What is the Greatest Challenge or Barrier for Performing Peer Review in Cardiothoracic Imaging? *J Thorac Imaging.* 2014 Aug 5. [Epub ahead of print] PMID: 25100142.

Boiselle PM, Nensa F, Ohno Y, Torigian DA. Expert Opinion: Which Cardiothoracic Imaging Applications of PET/CT are Most Likely to be Replaced by PET/MRI? J Thorac Imaging. 2014 Jan;29(1):3. doi: 10.1097/RTI.0000000000000066. PMID: 24322909.

Boiselle PM, Reddy GP. Reviewer awards and acknowledgements editors' recognition awards for distinction in reviewing in 2013. J Thorac Imaging. 2014 Jan;29(1):2. doi: 10.1097/RTI.0000000000000065. PMID: 24361973.

Boiselle PM, White CS, Ravenel JG. Computed tomographic screening for lung cancer: current practice patterns at leading academic medical centers. JAMA Intern Med. 2014 Feb 1;174(2):286-7. doi: 10.1001/jamainternmed.2013.12693. PMID: 24322527.

Brook OR, Abadi S, Shreiber R, Engel A, Mendiratta-Lala M, **Brook A**, **Sheiman RG**. Calcium score: semiautomatic calculation using different vendors versus fully automatic software. J Comput Assist Tomogr. 2014 May-Jun;38(3):434-8. doi: 10.1097/RCT.0000000000000063. PMID: 24681862.

Brook OR, Mullan CP, Mendiratta-Lala M, Joyce R, **Sheiman R**, **Brook A**, **Siewert B**. Pancreatic atrophy in patients with chronic graft-versus-host disease. Abdom Imaging. 2014 Apr;39(2):342-7. doi: 10.1007/s00261-013-0072-y. PMID: 24441578.

Cantisani V, Grazhdani H, Ricci P, **Morteale K**, Di Segni M, D'Andrea V, Redler A, Di Rocco G, Giacomelli L, Maggini E, Chiesa C, Erturk SM, Sorrenti S, Catalano C, D'Ambrosio F. Q-elastasonography of solid thyroid nodules: assessment of diagnostic efficacy and interobserver variability in a large patient cohort. Eur Radiol. 2014 Jan;24(1):143-50. doi: 10.1007/s00330-013-2991-y. PMID: 23979108.

Chang PT, Lee EY, Restrepo R, **Eisenberg RL**. Gastrointestinal tract filling defects in pediatric patients. AJR Am J Roentgenol. 2014 Jul;203(1):W3-W13. doi: 10.2214/AJR.13.12421. PMID: 24951227.

Chan RH, Maron BJ, Olivotto I, Pencina MJ, Assenza GE, Haas T, Lesser JR, Gruner C, Crean AM, Rakowski H, Udelson JE, Rowin E, Lombardi M, Cecchi F, Tomberli B, Spirito P, Formisano F, Biagini E, Rapezzi C, De Cecco CN, Autore C, Cook EF, Hong SN, Gibson CM, **Manning WJ**, Appelbaum E, Maron MS. Prognostic value of quantitative contrast-enhanced cardiovascular magnetic resonance for the evaluation of sudden death risk in patients with hypertrophic cardiomyopathy. Circulation. 2014 Aug 5;130(6):484-95. doi: 10.1161/CIRCULATIONAHA.113.007094. PMID: 25092278.

Chen PH, **Slanetz PJ**. Incremental clinical value of ultrasound in men with mammographically confirmed gynecomastia. Eur J Radiol. 2014 Jan;83(1):123-9. doi: 10.1016/j.ejrad.2013.09.021. PMID: 24161780.

Chuang ML, Gona P, Hautvast GL, Salton CJ, Breeuwer M, O'Donnell CJ, **Manning WJ**. CMR reference values for left ventricular volumes, mass, and ejection fraction using computer-aided analysis: The Framingham Heart Study. J Magn Reson Imaging. 2014 Apr;39(4):895-900. doi: 10.1002/jmri.24239. PMID: 24123369; PMCID: PMC3961548.

Chuang ML, Gona P, Oyama-Manabe N, Manders ES, Salton CJ, Hoffmann U, **Manning WJ**, O'Donnell CJ. Risk factor differences in calcified and noncalcified aortic plaque: the framingham heart study. Arterioscler Thromb Vasc Biol. 2014 Jul;34(7):1580-6. doi: 10.1161/ATVBAHA.114.303600. PMID: 24833796.

Crema MD, Hunter DJ, **Burstein D**, Roemer FW, Li L, Krishnan N, Marra MD, Hellio Le-Graverand MP, Guermazi A. Delayed Gadolinium-Enhanced Magnetic Resonance Imaging of Medial Tibiofemoral Cartilage and Its Relationship With Meniscal Pathology: A Longitudinal Study Using 3.0T Magnetic Resonance Imaging. Arthritis Rheumatol. 2014 Jun;66(6):1517-24. doi: 10.1002/art.38518. PMID: 24577996.

De Filippis EA, Sabet A, **Sun MR**, Garber JR. Pemberton's sign: explained nearly 70 years later. J Clin Endocrinol Metab. 2014 Jun;99(6):1949-54. doi:10.1210/jc.2013-4240. PMID: 24646105.

Delling FN, Gona P, Larson MG, Lehman B, **Manning WJ**, Levine RA, Benjamin EJ, Vasan RS. Mild expression of mitral valve prolapse in the framingham offspring: expanding the phenotypic spectrum. J Am Soc Echocardiogr. 2014 Jan;27(1):17-23. doi: 10.1016/j.echo.2013.09.015. PMID: 24206636.

Eisenberg RL, **Cunningham ML**, **Siewert B**, **Kruskal JB**. Survey of faculty perceptions regarding a peer review system. J Am Coll Radiol. 2014 Apr;11(4):397-401. doi: 10.1016/j.jacr.2013.08.011. **Epub 2013 Oct 19**. PMID: 24144835.

Eisenberg RL, Ngo LH, **Bankier AA**. Honorary authorship in radiologic research articles: do geographic factors influence the frequency? Radiology. 2014 May;271(2):472-8. doi: 10.1148/radiol.13131710. PMID: 24475845.

Faintuch J, Hayashi SY, Nahas SC, Yagi OK, **Faintuch S**, Cecconello I. Do colorectal cancer resections improve diabetes in long-term survivors? A case-control study. Surg Endosc. 2014 Mar;28(3):1019-26. doi: 10.1007/s00464-013-3273-0. PMID: 24178865.

Fleming LM, **Manning WJ**. Extracardiac findings on echocardiography: blissful ignorance or a call to improve our training? J Am Soc Echocardiogr. 2014 May;27(5):547-8. doi: 10.1016/j.echo.2014.03.006. PMID: 24767434.

Franquet E, **Palmer MR**, Gifford AE, Selen DJ, Chen YC, Sedora-Roman N, Joyce RM, **Kolodny GM**, Moss AC. Rifaximin suppresses background intestinal 18F-FDG uptake on PET/CT scans. Nucl Med Commun. 2014 Jul 29. [Epub ahead of print] PMID: 25076161.

Gareen IF, Duan F, Greco EM, Snyder BS, **Boiselle PM**, Park ER, Fryback D, Gatsonis C. Impact of lung cancer screening results on participant health-related quality of life and state anxiety in the National Lung Screening Trial. Cancer. 2014 Jul 25. doi: 10.1002/cncr.28833. PMID: 25065710.

George RT, Mehra VC, Chen MY, Kitagawa K, Arbab-Zadeh A, Miller JM, Matheson MB, Vavere AL, Kofoed KF, Rochitte CE, Dewey M, Yaw TS, Niinuma H, Brenner W, Cox C, **Clouse ME**, Lima JA, Di Carli M. Myocardial CT Perfusion Imaging and SPECT for the Diagnosis of Coronary Artery Disease: A Head-to-Head Comparison from the CORE320 Multicenter Diagnostic Performance Study. Radiology. 2014 Aug;272(2):407-16. doi: 10.1148/radiol.14140806. PMID: 24865312.

Girard OM, Prevost VH, Varma G, Cozzone PJ, **Alsop DC**, Duhamel G. Magnetization transfer from inhomogeneously broadened lines (ihMT): Experimental optimization of saturation parameters for human brain imaging at 1.5 Tesla. Magn Reson Med. 2014 Jun 24. doi: 10.1002/mrm.25330. [Epub ahead of print] PMID: 24962257.

Goldberg SN. Science to Practice: Can We Turn the Undesired Heating Effects of MR Imaging into Effective Cancer Therapies? Radiology. 2014 Feb;270(2):315-7. doi: 10.1148/radiol.13132417. PMID: 24471379.

Goldberg SN. Science to practice: why debate the role of dbait for improving tumor ablation? Radiology. 2014 Mar;270(3):635-7. doi: 10.1148/radiol.13132824. PMID: 24568699.

Gruner C, Chan RH, Crean A, Rakowski H, Rowin EJ, Care M, Deva D, Williams L, Appelbaum E, Gibson CM, Lesser JR, Haas TS, Udelson JE, **Manning WJ**, Siminovitch K, Ralph-Edwards AC, Rastegar H, Maron BJ, Maron MS. Significance of left ventricular apical-basal muscle bundle identified by cardiovascular magnetic resonance imaging in patients with hypertrophic cardiomyopathy. Eur Heart J. 2014 May 8. PMID: 24810389.

Guideline developed in collaboration with the American College of Radiology (ACR); Society for Pediatric Radiology (SPR); Society of Radiologists in Ultrasound (SRU). AIUM practice guideline for the performance of an ultrasound examination of solid-organ transplants. *J Ultrasound Med*. 2014 Jul;33(7):1309-20. doi: 10.7863/ultra.33.7.1309. PubMed PMID: 24958421. **[MR Sun, Collaborator]**

Hall FM. Breast density categorization creep. *Radiology*. 2014 Jun;271(3):927. doi: 10.1148/radiol.14140169. PMID: 24848964.

Hall FM. Old dogs and plain radiographs. *Radiology*. 2014 Aug;272(2):613. doi: 10.1148/radiol.14140779. PMID: 25058139.

Hyun H, Wada H, Bao K, Gravier J, Yadav Y, Laramie M, Henary M, **Frangioni JV**, Choi HS. Phosphonated Near-Infrared Fluorophores for Biomedical Imaging of Bone. *Angew Chem Int Ed Engl*. 2014 Aug 19. doi: 10.1002/anie.201404930. [Epub ahead of print] PMID: 25139079.

Jon AF, **Cheema AR**, Khan AN, **Raptopoulos V**, **Hauser T**, Nasser I, Welty FK, Karellas A, **Clouse ME**. Assessment of liver fat in an obese patient population using noncontrast CT fat percent index. *Clin Imaging*. 2014 May-Jun;38(3):259-64. doi: 10.1016/j.clinimag.2014.01.005. PMID: 24559751; PMCID: PMC3999172.

Khoury MN, **Alsop DC**, Agnihotri SP, Pfannl R, Wuthrich C, Ho ML, **Hackney D**, Ngo L, Anderson MP, Koralnik IJ. Hyperintense cortical signal on magnetic resonance imaging reflects focal leukocortical encephalitis and seizure risk in progressive multifocal leukoencephalopathy. *Ann Neurol*. 2014 May;75(5):659-69. doi: 10.1002/ana.24144. PMID: 24752885.

Kisilevsky N, **Faintuch S**. Is Prostatic Artery Embolization Similar to Uterine Artery Embolization? *Cardiovasc Intervent Radiol*. 2014 Mar 20. PMID: 24647656.

Kressel HY. Editor's Recognition Awards. *Radiology*. 2014 Jan;270(1):8-9. doi: 10.1148/radiol.13132229. PMID: 24354370.

Kressel HY. Radiology editorial board 2014. *Radiology*. 2014 Jan;270(1):7. doi: 10.1148/radiol.13131900. PMID: 24354369.

Kressel HY. Beyond the impact factor: enhancing the impact of imaging research published in radiology. *Radiology*. 2014 Jan;270(1):3-6. doi: 10.1148/radiol.13132314. PMID: 24354368.

Kroll KE, Camacho MA, Gautam S, **Levenson RB**, Edlow JA. Findings of chronic sinusitis on brain computed tomography are not associated with acute headaches. *J Emerg Med*. 2014 Jun;46(6):753-9. doi: 10.1016/j.jemermed.2013.08.016. PMID: 24750900.

Kung JW, **Wu JS**, Shetty SK, Khasgiwala VC, Appleton P, **Hochman MG**. Spectrum and detection of musculoskeletal findings on trauma-related CT torso examinations. *Emerg Radiol*. 2014 Aug;21(4):359-65. doi: 10.1007/s10140-014-1201-9. PMID: 24557456.

Larson DB, Duncan JR, Nagy PG, **Kruskal JB**. Guide to effective quality improvement reporting in radiology. *Radiology*. 2014 May;271(2):561-73. doi: 10.1148/radiol.14131930. PMID: 24555635.

Levine D. Waiting, not rushing, to diagnose a failed pregnancy. *Ultrasound Q*. 2014 Mar;30(1):11-2. doi: 10.1097/RUQ.0000000000000069. PMID: 24901773.

Li X, **Sarkar SN**, Purdy DE, Briggs RW. Quantifying cerebellum grey matter and white matter perfusion using pulsed arterial spin labeling. *Biomed Res Int*. 2014;2014:108691. doi: 10.1155/2014/108691. Epub 2014 May 15. PMID: 24949416; PMCID: PMC4052111.

Lin YC, Goldsmith JD, Gebhardt MG, **Wu JS**. Bursal synovial chondromatosis formation following osteochondroma resection. *Skeletal Radiol*. 2014 Jul;43(7):997-1000. doi: 10.1007/s00256-014-1821-x. PMID: 24453028.

Litmanovich DE, Ghersin E, Burke DA, Popma J, **Shahrzad M**, **Bankier AA**. Imaging in Transcatheter Aortic Valve Replacement (TAVR): role of the radiologist. *Insights Imaging*. 2014 Feb;5(1):123-45. doi: 10.1007/s13244-013-0301-5. PMID: 24443171; PMCID: PMC3948900.

Litmanovich DE, Hartwick K, **Silva M**, **Bankier AA**. Multidetector computed tomographic imaging in chronic obstructive pulmonary disease: emphysema and airways assessment. *Radiol Clin North Am*. 2014 Jan;52(1):137-54. doi:10.1016/j.rcl.2013.09.002. PMID: 24267715.

Litmanovich DE, Tack D, **Lee KS**, **Shahrzad M**, **Bankier AA**. Cardiothoracic imaging in the pregnant patient. *J Thorac Imaging*. 2014 Jan;29(1):38-49. doi: 10.1097/RTI.0000000000000064. PMID: 24361975.

Magnani JW, Yin X, McManus DD, Chuang ML, Cheng S, Lubitz SA, Arora G, **Manning WJ**, Ellinor PT, Benjamin EJ. Genetic Loci associated with atrial fibrillation: relation to left atrial structure in the framingham heart study. *J Am Heart Assoc*. 2014 Apr 2;3(2):e000616. doi: 10.1161/JAHA.113.000616. PMID: 24695651.

Mauri G, Cova L, De Beni S, Ierace T, Tondolo T, Cerri A, **Goldberg SN**, Solbiati L. Real-Time US-CT/MRI Image Fusion for Guidance of Thermal Ablation of Liver Tumors Undetectable with US: Results in 295 Cases. *Cardiovasc Intervent Radiol*. 2014 May 8. PMID: 24806953.

McWilliams JP, Kuo MD, Rose SC, Bagla S, Caplin DM, Cohen EI, **Faintuch S**, Spies JB, Saad WE, Nikolic B. Society of Interventional Radiology Position Statement: Prostate Artery Embolization for Treatment of Benign Disease of the Prostate. *J Vasc Interv Radiol*. 2014 Jun 30. pii: S1051-0443(14)00496-5. doi: 10.1016/j.jvir.2014.05.005. [Epub ahead of print] PMID: 24993818.

Mendiratta-Lala M, **Sheiman R**, **Brook OR**, Gourtsoyianni S, Mahadevan A, **Siewert B**. CT-guided core biopsy and percutaneous fiducial seed placement in the lung: can these procedures be combined without an increase in complication rate or decrease in technical success? *Eur J Radiol*. 2014 Apr;83(4):720-5. doi: 10.1016/j.ejrad.2014.01.006. PMID: 24534120.

Mhuirheartaigh JN, Lin YC, **Wu JS**. Bone tumor mimickers: A pictorial essay. *Indian J Radiol Imaging*. 2014 Jul;24(3):225-36. doi: 10.4103/0971-3026.137026. PMID: 25114385; PMCID: PMC4126137.

Millo NZ, Yee EU, **Mortele KJ**. Mammary-type myofibroblastoma of the liver: multi-modality imaging features with histopathologic correlation. *Abdom Imaging*. 2014 Jun;39(3):482-7. doi: 10.1007/s00261-014-0078-0. PMID: 24463957.

Molinari F, Madhuranthakam AJ, **Lenkinski R**, **Bankier AA**. Ultrashort echo time MRI of pulmonary water content: assessment in a sponge phantom at 1.5 and 3.0 Tesla. *Diagn Interv Radiol*. 2014 Jan-Feb;20(1):34-41. doi: 10.5152/dir.2013.13232. PMID: 24317335.

Moussa M, **Goldberg SN**, **Kumar G**, Sawant RR, Levchenko T, Torchilin VP, **Ahmed M**. Nanodrug-enhanced radiofrequency tumor ablation: effect of micellar or liposomal carrier on drug delivery and treatment efficacy. *PLoS One*. 2014 Aug 18;9(8):e102727. doi: 10.1371/journal.pone.0102727. eCollection 2014. PMID: 25133740; PMCID: PMC4136708.

Nam S, Hong SN, Akçakaya M, Kwak Y, Goddu B, Kissinger KV, **Manning WJ**, Tarokh V, Nezafat R. Compressed sensing reconstruction for undersampled breath-hold radial cine imaging with auxiliary free-breathing data. *J Magn Reson Imaging*. 2014 Jan;39(1):179-88. doi: 10.1002/jmri.24098. PMID:23857797; PMCID: PMC3800245.

Pahade J, **Rosen MP**. Direct communication of results to patients. *AJR Am J Roentgenol*. 2014 Jan;202(1):W121. doi: 10.2214/AJR.13.11170. PMID: 24370158.

Palacios E, **Rojas R**, Rodulfa J, González-Toledo E. Magnetic resonance imaging in fungal infections of the brain. *Top Magn Reson Imaging*. 2014 Jun;23(3):199-212. doi: 10.1097/RMR.0000000000000025. PMID: 24887690.

Park MH, Hyun H, Ashitate Y, Wada H, Park G, Lee JH, Njiojob C, Henary M, **Frangioni JV**, Choi HS. Prototype nerve-specific near-infrared fluorophores. *Theranostics*. 2014 Jun 7;4(8):823-33. doi: 10.7150/thno.8696. eCollection 2014. PMID: 24955143; PMCID: PMC4063980.

Parker JA, Christian P, Jadvar H, Sattler B, Wallis JW. The SNMMI and EANM Practice Guideline for Tele-Nuclear Medicine 2.0. *J Nucl Med Technol*. 2014 Mar;42(1):15-9. doi: 10.2967/jnmt.113.133231. PMID: 24375155.

Patel SP, Anthony SG, Zurakowski D, **Didolkar MM**, Kim PS, **Wu JS**, **Kung JW**, Dolan M, Rozental TD. Radiographic scoring system to evaluate union of distal radius fractures. *J Hand Surg Am*. 2014 Aug;39(8):1471-9. doi: 10.1016/j.jhsa.2014.05.022. PMID: 24996677.

Pflugi S, Roujol S, Akçakaya M, Kawaji K, Foppa M, Heydari B, Goddu B, Kissinger K, Berg S, **Manning WJ**, Kozerke S, Nezafat R. Accelerated cardiac MR stress perfusion with radial sampling after physical exercise with an MR-compatible supine bicycle ergometer. *Magn Reson Med*. 2014 Aug 8. doi: 10.1002/mrm.25405. [Epub ahead of print] PMID: 25105469.

Phillips J, **Fein-Zachary VJ**, **Mehta TS**, **Littlehale N**, **Venkataraman S**, **Slanetz PJ**. Breast imaging in the transgender patient. *AJR Am J Roentgenol*. 2014 May;202(5):1149-56. doi: 10.2214/AJR.13.10810. Review. PMID: 24758673.

Ravenel JG, Rosenzweig KE, Kirsch J, Ginsburg ME, Kanne JP, Kestin LL, **Parker JA**, Rimner A, Saleh AG, Mohammed TL. ACR Appropriateness Criteria Non-invasive Clinical Staging of Bronchogenic Carcinoma. *J Am Coll Radiol*. 2014 Jul 30. pii: S1546-1440(14)00285-3. doi: 10.1016/j.jacr.2014.05.020. [Epub ahead of print] PMID: 25086958.

Reddy UM, Abuhamad AZ, **Levine D**, Saade GR; Fetal Imaging Workshop Invited Participants. Fetal imaging: executive summary of a joint Eunice Kennedy Shriver National Institute of Child Health and Human Development, Society for Maternal-Fetal Medicine, American Institute of Ultrasound in Medicine, American College of Obstetricians and Gynecologists, American College of Radiology, Society for Pediatric Radiology, and Society of Radiologists in Ultrasound fetal imaging workshop. *J Ultrasound Med*. 2014 May;33(5):745-57. doi: 10.7863/ultra.33.5.745. PMID: 24764329.

Reddy UM, Abuhamad AZ, **Levine D**, Saade GR; Fetal Imaging Workshop Invited Participants. Fetal imaging: Executive Summary of a Joint Eunice Kennedy Shriver National Institute of Child Health and Human Development, Society for Maternal-Fetal Medicine, American Institute of Ultrasound in Medicine, American College of Obstetricians and Gynecologists, American College of Radiology, Society for Pediatric Radiology, and Society of Radiologists in Ultrasound Fetal Imaging Workshop. *Am J Obstet Gynecol*. 2014 May;210(5):387-397. doi:10.1016/j.ajog.2014.02.028. Review. PMID: 24793721.

Reddy UM, Abuhamad AZ, **Levine D**, Saade GR; Fetal Imaging Workshop Invited Participants. Fetal imaging: executive summary of a joint Eunice Kennedy Shriver National Institute of Child Health and Human Development, Society for Maternal-Fetal Medicine, American Institute of Ultrasound in Medicine, American College of Obstetricians and Gynecologists, American College of Radiology, Society for Pediatric Radiology, and Society of Radiologists in Ultrasound fetal imaging workshop. *Obstet Gynecol*. 2014 May;123(5):1070-82. doi: 10.1097/AOG.0000000000000245. PMID: 24785860.

Ridge CA, Hobbs BD, Bukoye BA, Aronson MD, **Boiselle PM**, Leffler DA, Sternberg SB, Roberts DH. Incidentally detected lung nodules: clinical predictors of adherence to Fleischner Society surveillance guidelines. *J Comput Assist Tomogr*. 2014 Jan-Feb;38(1):89-95. doi: 10.1097/RCT.0b013e3182a939a5. PMID: 24424558.

Rojas R. MRI in brain and spinal infection. *Top Magn Reson Imaging*. 2014 Jun;23(3):151. doi: 10.1097/RMR.0000000000000022. PMID: 24887689.

Roujol S, Weingärtner S, Foppa M, Chow K, Kawaji K, Ngo LH, Kellman P, **Manning WJ**, Thompson RB, Nezafat R. Accuracy, Precision, and Reproducibility of Four T1 Mapping Sequences: A Head-to-Head Comparison of MOLLI, ShMOLLI, SASHA, and SAPHIRE. *Radiology*. 2014 Apr 4:140296. PMID: 24702727.

Roujol S, Foppa M, Weingärtner S, **Manning WJ**, Nezafat R. Adaptive registration of varying contrast-weighted images for improved tissue characterization (ARCTIC): Application to T(1) mapping. *Magn Reson Med*. 2014 May 5. doi: 10.1002/mrm.25270. PMID: 24798588.

Runner GJ, Corwin MT, **Siewert B**, **Eisenberg RL**. Gallbladder wall thickening. *AJR Am J Roentgenol*. 2014 Jan;202(1):W1-W12. doi: 10.2214/AJR.12.10386. Review. PMID: 24370153.

Rutkove SB, Geisbush TR, Mijailovic A, Shklyar I, Pasternak A, Visyak N, **Wu JS**, Zaidman C, Darras BT. Cross-sectional Evaluation of Electrical Impedance Myography and Quantitative Ultrasound for the Assessment of Duchenne Muscular Dystrophy in a Clinical Trial Setting. *Pediatr Neurol*. 2014 Feb 28. pii: S0887-8994(14)00143-X. doi: 10.1016/j.pediatrneurol.2014.02.015. PMID: 24814059.

Rutkove SB, Geisbush TR, Mijailovic A, Shklyar I, Pasternak A, Visyak N, **Wu JS**, Zaidman C, Darras BT. Cross-sectional evaluation of electrical impedance myography and quantitative ultrasound for the assessment of Duchenne muscular dystrophy in a clinical trial setting. *Pediatr Neurol*. 2014 Jul;51(1):88-92. doi: 10.1016/j.pediatrneurol.2014.02.015. PMID: 24814059; PMCID: PMC4063877.

Sarkar SN, Papavassiliou E, **Hackney DB**, **Alsop DC**, Shih LC, Madhuranthakam AJ, Busse RF, La Ruche S, **Bhadelia RA**. Three-dimensional brain MRI for DBS patients within ultra-low radiofrequency power limits. *Mov Disord*. 2014 Apr;29(4):546-9. doi: 10.1002/mds.25808. PMID: 24442797.

Sarkar SN, Sarkar PR, Papavassiliou E. Subthalamic Nuclear Tissue Contrast in Inversion Recovery MRI Decreases with Age in Medically Refractory Parkinson's Disease. *J Neuroimaging*. 2014 Mar 19. doi: 10.1111/jon.12111. [Epub ahead of print] PMID: 24641526.

Sarkar SN, Sarkar PR, Papavassiliou E, **Rojas RR**. Utilizing fast spin echo MRI to reduce image artifacts and improve implant/tissue interface detection in refractory Parkinson's patients with deep brain stimulators. *Parkinsons Dis*. 2014;2014:508576. doi: 10.1155/2014/508576. PMID: 24724036; PMCID: PMC3956280.

Scheidegger R, Wong ET, **Alsop DC**. Contributors to contrast between glioma and brain tissue in chemical exchange saturation transfer sensitive imaging at 3Tesla. *Neuroimage*. 2014 Oct;99:256-68. doi: 10.1016/j.neuroimage.2014.05.036. PMID: 24857712.

Schonberg MA, Birdwell RL, Bychkovsky BL, Hintz L, **Fein-Zachary V**, Wertheimer MD, Silliman RA. Older women's experience with breast cancer treatment decisions. *Breast Cancer Res Treat*. 2014 May;145(1):211-23. doi: 10.1007/s10549-014-2921-y. PMID: 24682710.

Schonberg MA, Silliman RA, Ngo LH, Birdwell RL, **Fein-Zachary V**, Donato J, Marcantonio ER. Older Women's Experience with a Benign Breast Biopsy-A Mixed Methods Study. *J Gen Intern Med*. 2014 Aug 20. [Epub ahead of print] PubMed PMID: 25138983.

[Sekhar A](#), [Sun MR](#), [Siewert B](#). A Tissue Phantom Model for Training Residents in Ultrasound-guided Liver Biopsy. *Acad Radiol*. 2014 Jul;21(7):902-8. doi: 10.1016/j.acra.2014.03.002. PMID: 24928159.

Sekiya K, Watanabe M, Nadgir RN, Buch K, **Flower EN**, Kaneda T, Sakai O. Nasopharyngeal cystic lesions: Tornwaldt and mucous retention cysts of the nasopharynx: findings on MR imaging. *J Comput Assist Tomogr*. 2014 Jan-Feb;38(1):9-13. doi: 10.1097/RCT.0b013e3182a77699. PMID: 24378893.

[Shahrzad M](#), [Le TS](#), [Silva M](#), [Bankier AA](#), [Eisenberg RL](#). Anterior mediastinal masses. *AJR Am J Roentgenol*. 2014 Aug;203(2):W128-38. doi: 10.2214/AJR.13.11998. PMID: 25055288. [Residents' Section, Pattern of the Month]

Sheth RA, Walker TG, Saad WE, Dariushnia SR, Ganguli S, Hogan MJ, Hohenwarter EJ, Kalva SP, Rajan DK, Stokes LS, Zuckerman DA, Nikolic B; Society of Interventional Radiology Standards of Practice Committee. Quality improvement guidelines for vascular access and closure device use. *J Vasc Interv Radiol*. 2014 Jan;25(1):73-84. doi: 10.1016/j.jvir.2013.08.011. PMID:24209907.[**Goldberg SN**, collaborator]

Shklyar I, Geisbush TR, Mijalovic AS, Pasternak A, Darras BT, **Wu JS**, Rutkove SB, Zaidman CM. Quantitative muscle ultrasound in duchenne muscular dystrophy: A comparison of techniques. *Muscle Nerve*. 2014 May 23. doi: 10.1002/mus.24296. PMID: 24862337.

Tam AL, Abdelsalam ME, Gagea M, Ensor JE, [Moussa M](#), [Ahmed M](#), **Goldberg SN**, Dixon K, McWatters A, Miller JJ, Srimathveeravalli G, Solomon SB, Avritscher R, Wallace MJ, Gupta S. Irreversible Electroporation of the Lumbar Vertebrae in a Porcine Model: Is There Clinical-Pathologic Evidence of Neural Toxicity? *Radiology*. 2014 Apr 25;132560. PMID: 24766034.

[Telischak NA](#), [Wu JS](#), [Eisenberg RL](#). Cysts and cystic-appearing lesions of the knee: A pictorial essay. *Indian J Radiol Imaging*. 2014 Apr;24(2):182-91. doi: 10.4103/0971-3026.134413. PMID: 25024531; PMCID: PMC4094974.

Tummers QR, Verbeek FP, Prevoo HA, Braat AE, Baeten CI, **Frangioni JV**, van de Velde CJ, Vahrmeijer AL. First Experience on Laparoscopic Near-Infrared Fluorescence Imaging of Hepatic Uveal Melanoma Metastases Using Indocyanine Green. *Surg Innov*. 2014 Jun 5. pii: 1553350614535857. PMID: 24902685.

[Varma G](#), Duhamel G, de Bazelaire C, **Alsop DC**. Magnetization transfer from inhomogeneously broadened lines: A potential marker for myelin. *Magn Reson Med*.2014 Mar 6. doi: 10.1002/mrm.25174. PMID: 24604578.

Venkataraman S, **Dialani V**, **Fein-Zachary V**, **Brook A**, **Slanetz PJ**. Targeted patient education: does it improve outcome of minimally invasive breast biopsy? *Breast J*. 2014 Jul-Aug;20(4):444-6. doi: 10.1111/tbj.12293. PMID: 24862234.

Verbeek FP, Schaafsma BE, Tummers QR, van der Vorst JR, van der Made WJ, Baeten CI, Bonsing BA, **Frangioni JV**, van de Velde CJ, Vahrmeijer AL, Swijnenburg RJ. Optimization of near-infrared fluorescence cholangiography for open and laparoscopic surgery. *Surg Endosc*. 2014 Apr;28(4):1076-82. PMID: 24232054; PMCID: PMC4021038.

Verbeek FP, Troyan SL, Mieog JS, Liefers GJ, Moffitt LA, Rosenberg M, Hirshfield-Bartek J, Gioux S, van de Velde CJ, Vahrmeijer AL, **Frangioni JV**. Near-infrared fluorescence sentinel lymph node mapping in breast cancer: a multicenter experience. *Breast Cancer Res Treat*. 2014 Jan;143(2):333-42. doi: 10.1007/s10549-013-2802-9. PMID: 24337507; PMCID: PMC3899688.

Verbeek FP, van der Vorst JR, Tummers QR, Boonstra MC, de Rooij KE, Löwik CW, Valentijn AR, van de Velde CJ, Choi HS, **Frangioni JV**, Vahrmeijer AL. Near-Infrared Fluorescence Imaging of Both Colorectal Cancer and Ureters Using a Low-Dose Integrin Targeted Probe. *Ann Surg Oncol*. 2014 Feb 11. PMID: 24515567.

Wang X, Bullock AJ, Zhang L, Wei L, Yu D, Mahagaokar K, **Alsop DC**, Mier JW, Atkins MB, Coxon A, Oliner J, Bhatt RS. The role of angiopoietins as potential therapeutic targets in renal cell carcinoma. *Transl Oncol*. 2014 Apr;7(2):188-95. doi: 10.1016/j.tranon.2014.02.003. PMID: 24704536; PMCID: PMC4101387.

Warraich HJ, Gandhavadi M, **Manning WJ**. Mechanical discordance of the left atrium and appendage: a novel mechanism of stroke in paroxysmal atrial fibrillation. *Stroke*. 2014 May;45(5):1481-4. doi: 10.1161/STROKEAHA.114.004800. PMID: 24643411.

Wax J, Minkoff H, Johnson A, Coleman B, **Levine D**, Helfgott A, O'Keeffe D, Henningsen C, Benson C. Consensus report on the detailed fetal anatomic ultrasound examination: indications, components, and qualifications. *J Ultrasound Med*. 2014 Feb;33(2):189-95. doi: 10.7863/ultra.33.2.189. PMID: 24449720.

Weingärtner S, Akçakaya M, Roujol S, Basha T, Stehning C, Kissinger KV, Goddu B, Berg S, **Manning WJ**, Nezafat R. Free-breathing post-contrast three-dimensional (1) mapping: Volumetric assessment of myocardial T(1) values. *Magn Reson Med*. 2014 Feb 5. doi: 10.1002/mrm.25124. PMID: 24554395.

Weiss N, **Goldberg SN**, **Sosna J**, Azhari H. Temperature-density hysteresis in X-ray CT during HIFU thermal ablation: Heating and cooling phantom study. *Int J Hyperthermia*. 2014 Feb;30(1):27-35. doi: 10.3109/02656736.2013.860241. PMID: 24325282.

Weiss N, **Sosna J**, **Goldberg SN**, Azhari H. Non-invasive temperature monitoring and hyperthermic injury onset detection using X-ray CT during HIFU thermal treatment in ex vivo fatty tissue. *Int J Hyperthermia*. 2014 Mar;30(2):119-25. doi: 10.3109/02656736.2014.883466. PMID: 24571175.

[Wells CL](#), [Slanetz PJ](#), [Rosen MP](#). Mismatch in Breast and Detector Size during Screening and Diagnostic Mammography Results in Increased Patient Radiation Dose. *Acad Radiol*. 2014 Jan;21(1):99-103. doi: 10.1016/j.acra.2013.10.005. PMID: 24331271.

Westra C, **Dialani V**, **Mehta TS**, **Eisenberg RL**. Using t2-weighted sequences to more accurately characterize breast masses seen on MRI. *AJR Am J Roentgenol*. 2014 Mar;202(3):W183-90. doi: 10.2214/AJR.13.11266. PMID: 24555613.

Weingärtner S, Akçakaya M, Roujol S, Basha T, Stehning C, Kissinger KV, Goddu B, Berg S, **Manning WJ**, Nezafat R. Free-breathing post-contrast three-dimensional T(1) mapping: Volumetric assessment of myocardial T(1) values. *Magn Reson Med*. 2014 Feb 5. doi: 10.1002/mrm.25124. PMID: 24554395.

Xie H, Hanai J, Ren JG, Kats L, Burgess K, Bhargava P, Signoretti S, Billiard J, Duffy KJ, **Grant A**, **Wang X**, Lorkiewicz PK, Schatzman S, Bousamra M 2nd, Lane AN, Higashi RM, Fan TW, Pandolfi PP, Sukhatme VP, Seth P. Targeting lactate dehydrogenase--a inhibits tumorigenesis and tumor progression in mouse models of lung cancer and impacts tumor-initiating cells. *Cell Metab*. 2014 May 6;19(5):795-809. doi: 10.1016/j.cmet.2014.03.003. PMID: 24726384; PMCID: PMC4096909.

[Yamada K](#), [Slanetz PJ](#), [Boiselle PM](#). Perceived benefits of a radiology resident mentoring program: comparison of residents with self-selected vs assigned mentors. *Can Assoc Radiol J*. 2014 May;65(2):186-91. doi: 10.1016/j.carj.2013.04.001. PMID: 24054832.

Yarmish GM, **Smith MP**, **Rosen MP**, Baker ME, Blake MA, Cash BD, **Hindman NM**, Kamel IR, Kaur H, Nelson RC, Piorkowski RJ, Qayyum A, Tulchinsky M. ACR appropriateness criteria right upper quadrant pain. J Am Coll Radiol. 2014 Mar;11(3):316-22. doi: 10.1016/j.jacr.2013.11.017. PMID: 24485592.

Yee J, Kim DH, **Rosen MP**, Lalani T, Carucci LR, Cash BD, Feig BW, Fowler KJ, Katz DS, **Smith MP**, Yaghmai V. ACR Appropriateness Criteria colorectal cancer screening. J Am Coll Radiol. 2014 Jun;11(6):543-51. doi: 10.1016/j.jacr.2014.02.006. PMID: 24793959.

Yeon SB, Salton CJ, Gona P, Chuang ML, Blease SJ, Han Y, Tsao CW, Danias PG, Levy D, O'Donnell CJ, **Manning WJ**. Impact of age, sex, and indexation method on MR left ventricular reference values in the framingham heart study offspring cohort. J Magn Reson Imaging. 2014 May 12. doi: 10.1002/jmri.24649. PMID: 24817313.

Zhang E, **Kircher MF**, Koch M, Eliasson L, **Goldberg SN**, Renström E. Dynamic Magnetic Fields Remote-Control Apoptosis via Nanoparticle Rotation. ACS Nano. 2014 Apr 22;8(4):3192-201. doi: 10.1021/nn406302j. PMID: 24597847.



Radiology Alumni: Where in the world is another Goldberg?

It seems that Nahum, current Head of the Interventional Oncology Unit and Director of the Applied Radiology Research Lab at Hadassah Medical Center, Jerusalem, is not the only Goldberg

in the news. In July 2014, a video by Yaron Shane was uploaded on Youtube showing the spirit of the Efrat community and which includes pretty much

everyone Nahum knows, including his daughter Abby (seen below on the right). Check out the video at:

<https://www.youtube.com/watch?v=xsXayPkNlyw>



*New citations in blue...

Thanks to technology, PubMed is able to immediately list citations as they are published online (*Epub Ahead of Print*). These are listed in our bibliography in blue type denoting "new" publications; however, please note that when the print version comes out, the citation does not appear in blue as a new item, it is merely updated. So when updating your CVs from this bibliography, please keep checking for final citations which include print data. For example:

Ellis RJ, Norton AC, Overy K, Winner E, **Alsop DC**, Schlaug G. Differentiating maturational and training influences on fMRI activation during music processing. **Neuroimage. 2012 Feb 9.**

Ellis RJ, Norton AC, Overy K, Winner E, **Alsop DC**, Schlaug G. Differentiating maturational and training influences on fMRI activation during music processing. **Neuroimage. 2012 Apr 15;60(3):1902-12.**

Note that publications with PMCID numbers denote NIH-funded author manuscripts. (PMCID numbers are also required by BIDMC grant administration policy for further funding applications and are included in this bibliography for your convenience.)

Radical Views is published monthly (with a hiatus in August). To submit corrections, news, comments, and publications, please email Donna Wolfe, Editor at: dwolfe@bidmc.harvard.edu or call 617-754-2515

