

Radical Views...

from the Department of Radiology

April 2009

Mon	Tues	Wed	Thurs	Fri
Reminders: <div>✓ RSNA abstract deadline: April 15, 2009</div> <div>✓ ISMRM April 18-24, Honolulu</div> <div>✓ Morrison Research Day will be held on Tues, May 26. Abstracts are due May 1.</div>	Scholar Track Educational Talks are held twice a month on Tuesday, 12 and 5pm (residents only for the 5 pm sessions)	1 7:30-8:15 US Board Review (Sheiman) 8:15-9:00 Chest Borad Review (Eisenberg) 12:00-1:00 (weekly) Thoracic Imaging section meeting GI Oncology/GU Oncology 11:00-12:00 MSK clinical conference (weekly)	2 7:30-8:15 MSK Board Review (Geary) 8:15-9:00 MSK Board Review (Yablon) 12:00 - 1:30 Abd section meeting (weekly) 12:00-1:00 MSK section meeting (weekly)	3 7:30-8:00 Grand Rounds: Diagnostic Aopproach to Adult Cystic Lung Disease (Cantin) 8:00 - 9:00 CT-guided Dx & Tmt of Localized Lung Ca (Jeff Klein) 12:00 - 1:00 Resident Case Conference (Teich) [TCC 484] 12:00 - 1:00 Chiefs Meeting
6 7:30 - 9:00 Board Review (Wei) 3:00-4:00 ED section meeting (ED annex, WCC)	7 7:30 - 8:15 IR Board Review (Killoran) 10:30-11:30 Nuc Med staff meeting (GZ-103)	8 7:30 - 8:15 Breast Conference (Slanetz) 8:15 - 9:00 Chest Board Review (Litmanovich)	9 7:30 - 8:15 Neuro Board Review (Colen) 8:15 - 9:00 Neuro Board Review (Hackney)	10 7:30-9:00 Grand Rounds: Quality Assurance 12:00 - 1:00 Resident Case Conference (Bhadelia) [TCC 484] 12:00-1:00 US section meeting
13 7:30 - 9:00 Board Review (Lee)	14 7:30 - 8:15 IR M&M (IR Staff) 8:00 IR section meeting 12:00 Scholar Track: Authorship, Conflict of Interest (Lenkinski) [Kirstein Living Rm]	15 7:30 - 8:15 Ultrasound Cases (Romero) 8:15 - 9:00 TBA (Cantin) 12:30-1:30 Mammo section meeting EVENT: 4th yrs away: Gainesville Hotseat Conference	16 7:30 - 8:15 MSK Conference (Hall) 8:15 - 9:00 MSK Conference (Horwich) EVENT: 4th yrs away: Gainesville Hotseat Conference	17 7:30 - 9:00 Grand Rounds: Chief Rounds 3:45-6:45 NERRS EVENT: 4th yrs away: Gainesville Hotseat Conference
20	21 7:30 - 8:15 IR Board Review (Rabkin) 10:30-11:30 Nuc Med staff meeting (GZ-103)	22 7:30 - 8:15 Breast Conference (Iuanow) 8:15 - 9:00 Chest Board Review (Romero)	23 7:30 - 8:15 Neuro Board Review (Aftab) 8:15 - 9:00 Neuro Board Review (Teich)	24 7:30-8:00 Grand Rounds: Neurointerventional MRI (Colen) 8:00 - 9:00 Neuro (Sarah Nelson) 12:00 - 1:00 Resident Case Conference (Hackney) [Shapiro 484]
27 EVENT: 4th yrs away: Gainesville Hotseat Conference EVENT: ARRS WEEK [No morning conference]	28 EVENT: ARRS WEEK [No morning conference] 5:00 Scholar Track: Outcome Studies: Evidence-based Medicine (Rosen) [TCC-4 Conf Rm]	29 7:30 - 8:15 US Board Review (McArdle) 8:15 - 9:00 TBA (Spirn) EVENT: ARRS WEEK	30 EVENT: ARRS WEEK [No morning conference]	

Chair’s Message

- Of note: we will soon be reading our 500,000th case off PACS!

Thanks to all who attended the Respect Training sessions last month. This training program is a hospital-wide initiative and was very informative albeit somewhat controversial, but illustrated essential points we all need to be aware of. Here are some summary thoughts:

1. All attending radiologists and senior researchers, as well as modality managers and administrators, are leaders here at BIDMC and therefore considered managers under federal and state law. Hence, the action or lack of action by any radiologist, researcher or manager with respect to harassment or discrimination puts both you and the organization at risk.
2. The frequency of harassment and discrimination-related legal actions is increasing, often with large payouts by the organization (average of \$1M plus).
3. There are protected classes designated by federal law (and additional protected classes under state law) upon which harassment and discrimination suits can be based. Increasingly, however, actions that are intimidating, offensive or disrespectful to an employee are also subject to successful legal action against the perpetrator and the organization. BIDMC’s policies are inclusive in their coverage, such that the organization will not tolerate any lack of respect shown to any employee, without regard for membership in any protected class.
4. Offensive behavior is in the eyes of the recipient, not the perpetrator. If an action or communication intimidates, offends or makes another person uncomfortable, even if that was not the intent, then the respectful thing to do is to apologize and cease. Continuing that behavior leaves the organization, and manager who knows “or should have known” about the behavior open to legal action.
5. Sometimes employees will claim discrimination or harassment related to getting a poor performance review. The best defense is a well-documented trail identifying the poor performance issues over time, with documented remedial actions and interventions attempted to correct the poor performance. In the next few months we will work hard to re-establish valid methods for regular evaluation and documentation of performance, including for all physicians.

Departmental Awards, Honors and Grants

BIDN reached the 200K clip level this weekend. Congratulation to Dr. Rap for reading G000200001 (G000200000 was cancelled). BIDMC is coming up to 500,000 within the month. – Max Rosen

Dr. Salomao Faintuch has been named Section Editor of Nonvascular Interventions (2009-2011), for the Journal of Vascular and Interventional Radiology (JVIR).

Bernice Reznick Senior MRI Tech; Sherry Frost, MRI Tech; Lori Nugent MRI Tech will present their abstract/poster on MR Enterography at the at the 17th Annual Meeting International Society for Magnetic Resonance in Medicine in Honolulu, Hawaii in mid-April. Our department will again be well-represented with over 20 talks and posters.

On Tuesday, March 31, 2009, we were also well-represneted at the 2nd annual Silverman Symposium for Qaulity and Safety: Inpatient & ED Dashboard: **Donna Hallett**, Valerie Portway, **Betsy Grady**, **Bernie Kennedy**, **Marge Guthrie**, **Dace Jansons**, **Tim Parritt**, **Steve Flaherty**, Jennifer Hermann.

Transport Patient Location: **Donna Hallett**,Valerie Portway, **Betsy Grady**, **Yolanda Milliman-Richard**, **Marge Guthrie**, **Fritz Honore**.

Implementing Evidence Based Policies: **Neil Rofsky**, **Ivan Pedrosa**, **Donna Hallett**, **Steve Flaherty**, **Yolanda Milliman-Richard**, **Barbara Klemm**, Andrew Bennett.

Impact Of Point-of-Care Testing on Same Day Cancellations in MRI: **Usama Abraham**, Susan Chin, **Matt Boyle**, Evelyn Holdsworth, **Cheryl Bunting**, Avril Jean-Noel, Steve Flaherty, Bernadine Williams, **Donna Hallett**, Gina McCormack, **Tim Parritt**, Sandra Goodman, **Bernice Reznick**.

Evidenced Based Practice in Pre-Employment PPD Screenings: **Ronald Eisenberg**

Repetitive Stress Symptoms in Radiology: Prevalance and Response to Ergonomic Interventions: **Phil Boiselle**, Dieter Affelin, **Maxima Baudissin**, **Perry Horwich**, **Dana Lagrotteria**, **Deb Levine**, **Phil Purvis**, Kathleen Shillue, Dan Siegal, **Bettina Siewert**.

Monthly Section Updates: **Neuroradiology**

Overview: The neuroradiology section, comprising 8 full- and part-time staff and 4 fellows in an ACGME-accredited program, continues to experience growth in our diagnostic services, interpreting approximately 65,000 RVU’s per year. We also interpret neuroradiology studies from Chestnut Hill, Harrington Memorial Hospital and BID Needham campus. The most recent additions to our diagnostic armamentarium have included expanding our image analysis for tumor volumetrics, CT perfusion and permeability studies, and **Rafael Rojas** has increased our clinical and research fMRI. We have a growing presence at the major national meetings, and **David Hackney** has been nominated for Vice President of the ASNR.

Teaching: Our teaching activities include the usual medical students, residents, and fellows. Our fellowship is jointly sponsored with Tufts, so we share fellow teaching with weekly conferences alternating at the two institutions. We are currently applying to the ACGME for two additional training positions so that we will have 6 fellows total in the program, with 4 at BI at any one time. At graduation in June 2008, the Neuroradiology section was named “Section of the Year” by the residents and **Gul Moonis** won the departmental teaching award. Gul has also taken over from **Rafeeqe Bhadelia** as fellowship program director. Perhaps noting all of this, we had a great fellow recruiting year, filling one slot internally (welcome Kalpana) and going to 4 on our rank list to fill the other 3.

Clinical activities: In spite of the reductions in high tech imaging stimulated by incentives to primary care practitioners, and varying utilization from the Emergency Department, the neuroradiology volumes remain fractionally above budget and up about 8.5% year-to-date over last year. Since MR tends to be far more useful for most neurologic imaging, we do a larger volume of MR than CT. Image analysis, mainly tumor volumetrics and CTA and CTP processing, are growing parts of our practice. Thanks to **Dave Alsop**, we have long had state-of-the-art perfusion imaging, but due to upgrades to the 3T clinical scanner, we cannot process online our multivoxel MRS studies. Therefore, we are generally limited to single voxel MRS. We are expanding perfusion imaging for seizure and cognitive impairment patients, and introducing dynamic contrast enhancement for tumor patients.

March Visiting Professor: **Sarah Nelson, MD** (Grand Rounds on Friday, April 24th from 8:00-9:00 am)

Sarah J Nelson is the Margaret Hart Surbeck Distinguished Professor of Advanced Imaging. She is Director of the Surbeck Laboratory of Advanced Imaging, Director of the Magnetic Resonance Science Center at the University of California, San Francisco, and Professor of Radiology at UCSF and Professor of Bioengineering at the University of California, Berkeley. She is best known for her work in MR imaging and spectroscopy, with a particular focus on cancer and brain tumors. She received her doctoral degree from the University of Heidelberg, West Germany. She has pioneered vertical integration of advanced MRI and MRS techniques from the early developmental methods to routine application in clinical practice.

The goal of her research program is to develop data acquisition and analysis techniques for the quantification of response to therapy for individual patients through the use of sequential MR examinations. This is necessary because there are still many circumstances where conventional images are ambiguous or provide limited information concerning tissue function. The results that have been obtained using MR spectroscopic imaging have provided compelling evidence that the combination of volumetric MRI and localized spectroscopy provides new information that is valuable in elucidating changes in tissue function for the evaluation of progressive diseases. The application of these MR techniques requires the implementation of new approaches to data acquisition, as well as the development of image and signal processing algorithms for quantitative interpretation of the data. Future directions include the extension to more sensitive, high field MR scanners for high-resolution MRI and MR spectroscopic imaging.

2009 Notable Publications from our Faculty Members

We do a monthly PubMed search for new BIDMC publications and may miss those in which your affiliation is not noted. If we miss your paper, please send the reference to dwolfe@bidmc.harvard.edu to be included in next month's issue.

Anderson SW, **Kruskal JB**, **Kane RA**. Benign hepatic tumors and iatrogenic pseudotumors. Radiographics 2009; 29:211-229.

Appelbaum E, Kirtane AJ, Clark A, Pride YB, Gelfand EV, Harrigan CJ, Kissinger KV, **Manning WJ**, Gibson CM. Association of TIMI Myocardial Perfusion Grade and ST-segment resolution with cardiovascular magnetic resonance measures of microvascular obstruction and infarct size following ST-segment elevation myocardial infarction. J Thromb Thrombolysis 2009; 27:123-129.

Appelbaum E, **Manning WJ**. Science to practice: can the combination of resting first-pass myocardial perfusion and late gadolinium-enhanced cardiovascular MR imaging help identify myocardial infarction resulting from coronary microembolization? Radiology 2009; 250:609-611.

Appelbaum L, **Kane RA**, **Kruskal JB**, **Romero J**, Sosna J. Focal hepatic lesions: US-guided biopsy--lessons from review of cytologic and pathologic examination results. Radiology 2009; 250:453-458.

Bloch BN, **Lenkinski RE**, **Rofsky NM**. The role of magnetic resonance imaging (MRI) in prostate cancer imaging and staging at 1.5 and 3 Tesla: the Beth Israel Deaconess Medical Center (BIDMC) approach. Cancer Biomark 2008; 4:251-262.

Brodoefel H, Burgstahler C, Sabir A, **Yam CS**, Khosa F, Claussen CD, **Clouse ME**. Coronary plaque quantification by voxel analysis: dual-source MDCT angiography versus intravascular sonography. AJR Am J Roentgenol 2009; 192:W84-89.

Burstein D. Tracking longitudinal changes in knee degeneration and repair. J Bone Joint Surg Am 2009; 91 Suppl 1:51-53.

Burstein D, Hunter DJ. "Why aren't we there yet?" Re-examining standard paradigms in imaging of OA Summary of the 2nd annual workshop on imaging based measures of osteoarthritis. Osteoarthritis Cartilage 2009.

Chuang ML, **Manning WJ**. Left ventricular hypertrophy and excess cardiovascular mortality is late gadolinium enhancement the imaging link? J Am Coll Cardiol 2009; 53:292-294.

Ciocan R, **Lenkinski RE**, Bernstein J, Bancu M, Marquis R, Ivanishev A, Kourtellis F, Matsui A, Borenstein J, **Frangioni JV**. MRI contrast using solid-state, B(1)-distorting, microelectromechanical systems (MEMS) microresonant devices (MRDs). Magn Reson Med 2009.

Clouse ME. Coronary plaque quantification: is there a "gold standard?" J Cardiovasc Comput Tomogr 2009; 3:32-34.

Dugar A, Farley ML, Wang AL, Goldring MB, Goldring SR, Swaim BH, Bierbaum BE, **Burstein D**, Gray ML. The effect of paraformaldehyde fixation on the delayed gadolinium-enhanced MRI of cartilage (dGEMRIC) measurement. J Orthop Res 2009; 27:536-539.

Fox CS, Gona P, Hoffmann U, Porter SA, Salton CJ, Massaro JM, Levy D, Larson MG, D'Agostino RB, Sr., O'Donnell CJ, **Manning WJ**. Pericardial Fat, Intrathoracic Fat, and Measures of Left Ventricular Structure and Function. The Framingham Heart Study. Circulation 2009.

Ganguli S, **Camacho M**, **Yam CS**, **Pedrosa I**. Preparing first-year radiology residents and assessing their readiness for on-call responsibilities: results over 5 years. AJR Am J Roentgenol 2009; 192:539-544.

Gansler DA, McLaughlin NC, Iguchi L, Jerram M, Moore DW, **Bhadelia R**, Fulwiler C. A multivariate approach to aggression and the orbital frontal cortex in psychiatric patients. Psychiatry Res 2009; 171:145-154.

Gervais DA, **Goldberg SN**, Brown DB, Soulen MC, Millward SF, Rajan DK. Society of Interventional Radiology position statement on percutaneous radiofrequency ablation for the treatment of liver tumors. J Vasc Interv Radiol 2009; 20:3-8.

Gourtsoyianni S, Zamboni GA, **Romero JY**, **Raptopoulos VD**. Routine use of modified CT Enterography in patients with acute abdominal pain. Eur J Radiol 2009; 69:388-392.

Guermazi A, Eckstein F, Hellio Le Graverand-Gastineau MP, Conaghan PG, **Burstein D**, Keen H, Roemer FW. Osteoarthritis: current role of imaging. Med Clin North Am 2009; 93:101-126, xi.

Hackney DB. Forget the diffusion--do we need T2-weighted MR images to detect early central nervous system injury? Radiology 2009; 250:303-304.

Hirsch AE, Mulleady Bishop P, Dad L, Singh D, **Slanetz PJ**. An increase in medical student knowledge of radiation oncology: a pre-post examination analysis of the oncology education initiative. Int J Radiat Oncol Biol Phys 2009; 73:1003-1008; quiz 1008 e1001-1008 e1002.

House M, **Bhadelia RA**, Myers K, Socrate S. Magnetic resonance imaging of three-dimensional cervical anatomy in the second and third trimester. Eur J Obstet Gynecol Reprod Biol 2009.

Humblet V, Misra P, Bhushan KR, Nasr K, Ko YS, Tsukamoto T, Pannier N, **Frangioni JV**, Maison W. Multivalent scaffolds for affinity maturation of small molecule cell surface binders and their application to prostate tumor targeting. J Med Chem 2009; 52:544-550.

Kruskal JB, Anderson S, **Yam CS**, Sosna J. Strategies for Establishing a Comprehensive Quality and Performance Improvement Program in a Radiology Department. Radiographics 2009.

Lattanzi R, Sodickson DK, **Grant AK**, Zhu Y. Electrodynamics constraints on homogeneity and radiofrequency power deposition in multiple coil excitations. Magn Reson Med 2009; 61:315-334.

Lee EY, **Litmanovich D**, **Boiselle PM**. Multidetector CT Evaluation of Tracheobronchomalacia. Radiol Clin North Am 2009; 47:261-269.

Litmanovich D, **Boiselle PM**, **Bankier AA**. CT of pulmonary emphysema--current status, challenges, and future directions. Eur Radiol 2009; 19:537-551.

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Neema M, Goldberg-Zimring D, Guss ZD, Healy BC, Guttmann CR, Houtchens MK, Weiner HL, Horsfield MA, **Hackney DB**, **Alsop DC**, Bakshi R. 3 T MRI relaxometry detects T2 prolongation in the cerebral normal-appearing white matter in multiple sclerosis. Neuroimage 2009.

Nishino M, Lee KS, Hatabu H. The spectrum of pulmonary sarcoidosis: Variations of high-resolution CT findings and clues for specific diagnosis. Eur J Radiol 2009.

Novak V, Haertle M, Zhao P, Hu K, Munshi M, Novak P, Abduljalil A, **Alsop D**. White matter hyperintensities and dynamics of postural control. Magn Reson Imaging 2009.

Pahade JK, **Litmanovich D**, **Pedrosa I**, **Romero J**, **Bankier AA**, **Boiselle PM**. Quality Initiatives: Imaging Pregnant Patients with Suspected Pulmonary Embolism: What the Radiologist Needs to Know. Radiographics 2009.

Pedrosa I, Lafornera M, Pandharipande PV, Goldsmith JD, **Rofsky NM**. Pregnant patients suspected of having acute appendicitis: effect of MR imaging on negative laparotomy rate and appendiceal perforation rate. Radiology 2009; 250:749-757.

Reddy AS, **Dinobile D**, Orgeta JE, **Peri N**. Transoral approach to CT-guided C2 interventions. Pain Physician 2009; 12:253-258.

Robson PM, Madhuranthakam AJ, Dai W, **Pedrosa I**, **Rofsky NM**, **Alsop DC**. Strategies for reducing respiratory motion artifacts in renal perfusion imaging with arterial spin labeling. Magn Reson Med 2009.

Ruberg FL, Appelbaum E, Davidoff R, Ozonoff A, Kissinger KV, Harrigan C, Skinner M, **Manning WJ**. Diagnostic and prognostic utility of cardiovascular magnetic resonance imaging in light-chain cardiac amyloidosis. Am J Cardiol 2009; 103:544-549.

Salazar GM, **Faintuch S**, Gladstone SR, Lang EV. In vitro Analysis of Downstream Particulates with Mechanical Thrombectomy Devices: Comparison of 20-kHz Sonothrombolytic and Rotating Dispersion Wire Systems. J Vasc Interv Radiol 2009.

Solomon SD, Appelbaum E, **Manning WJ**, Verma A, Berglund T, Lukashevich V, Cherif Papst C, Smith BA, Dahlof B. Effect of the direct Renin inhibitor aliskiren, the Angiotensin receptor blocker losartan, or both on left ventricular mass in patients with hypertension and left ventricular hypertrophy. Circulation 2009; 119:530-537.

Stankiewicz JM, Neema M, **Alsop DC**, Healy BC, Arora A, Buckle GJ, Chitnis T, Guttmann CR, Hackney D, Bakshi R. Spinal cord lesions and clinical status in multiple sclerosis: A 1.5 T and 3 T MRI study. J Neurol Sci 2009; 279:99-105.

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Tognolini A, Schor-Bardach R, **Pianykh OS**, **Wilcox CJ**, **Raptopoulos V**, **Goldberg SN**. Body Tumor CT Perfusion Protocols: Optimization of Acquisition Scan Parameters in a Rat Tumor Model. Radiology 2009.

Vadnais M, Awtreay C, **Pedrosa I**. Breaking point: magnetic resonance imaging evaluation of an obstetric emergency. Am J Obstet Gynecol 2009; 200:344 e341-343.

Williams G, **Kolodny GM**. Retrospective study of coronary uptake of 18F-fluorodeoxyglucose in association with calcification and coronary artery disease: a preliminary study. Nucl Med Commun 2009.

Wykrzykowska J, Lehman S, Williams G, **Parker JA**, **Palmer MR**, Varkey S, **Kolodny G**, Laham R. Imaging of Inflamed and Vulnerable Plaque in Coronary Arteries with 18F-FDG PET/CT in Patients with Suppression of Myocardial Uptake Using a Low-Carbohydrate, High-Fat Preparation. J Nucl Med 2009.

Zhao P, **Alsop DC**, Abduljalil A, Selim M, Lipsitz L, Novak P, Caplan L, Hu K, Novak V. Vasoreactivity and peri-infarct hyperintensities in stroke. Neurology 2009; 72:643-649.