

# Radical Views...

## from the Department of Radiology

Volume 7, Number 5  
**DECEMBER 2014**



Beth Israel Deaconess  
Medical Center



HARVARD MEDICAL SCHOOL  
TEACHING HOSPITAL



### FROM THE CHIEF

Jonathan B. Kruskal, MD PhD

### RSNA Education Exhibit Awards

MKE169  
Foot for Thought:  
Metatarsalgia Imaging  
and Intervention.  
Heba Almutairi,  
**Almamooun I.  
Justaniah**, Robert  
J. French, Dmitry  
Elentuck. [Certificate  
of Merit](#)

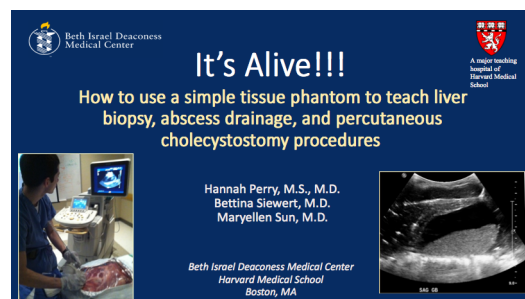
MSE142  
It's Alive!!! How  
to Use a Simple  
Tissue Phantom to  
Teach Liver Biopsy,  
Abscess Drainage  
and Percutaneous  
Cholecystostomy  
Procedures.  
**Maryellen R. Sun,  
Bettina Siewert,  
Hannah Perry.** [Magna  
cum laude](#)

NRE333  
A "Window" into  
Temporal Bone  
Pathology: Imaging of  
the Normal Anatomy  
and Pathology of  
the Oval and Round  
Windows of the  
Temporal Bone.  
Behroze Vachha, Azita  
S Khorsandi, **Gul  
Moonis.** [Certificate of  
Merit](#)

➤ I was so pleased with our efforts at RSNA's 100<sup>th</sup> Scientific Session in Chicago! Congratulations in particular to **Maryellen Sun, Bettina Siewert** and 2nd yr resident **Hannah Perry** for winning the top prize in their group, a Magna Cum Laude award for their education exhibit full of videos: *It's Alive!!! How to Use a Simple Tissue Phantom to Teach Liver Biopsy, Abscess Drainage and Percutaneous Cholecystostomy Procedures.*

In addition, see page 2 to see how well-represented our interventional Radiology has been the **RSNA Radiology Cares – Messages from our patients** webpage!

As usual, our alumni party allowed us to reconnect with former faculty and trainees and celebrate the 100th anniversary of Radiology!



Radiology Senior  
Deputy Editor  
**Deborah Levine**  
and Editor-in-  
Chief **Herbert  
Kressel** stand tall in  
Chicago, enjoying  
their efforts to help  
RSNA celebrate its  
centennial.



Our Israeli connection: BIDMC alumnus Jacob Sosna, currently Director of Radiology and Medical Imaging at Hadassah-Hebrew University Medical Center with current faculty Diana Litmanovich and Olga Brook who also came to BIDMC from Israel.



Ferris Hall, Priscilla Slanetz, and BIDMC alumni Rola Shaheen and Hans Blickman reconnect at RSNA!

*Check out page 9 where our editor Donna Wolfe shares her appreciation of Radiology not as an employee but as a patient!*

**RSNA** 100 YEARS  
Radiological Society of North America

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## The Caring Quilt: Messages from Our Patients

Click each "patch" of the **Radiology Cares Caring Quilt** to view a message of thanks from a patient to a radiologist, technologist or other medical imaging professional who made a difference in that patient's life. [Share your patient messages](#) of thanks and praise and help illustrate how appreciative patients are of those **above-and-beyond** efforts.

**Radiology Cares®**  
THE ART OF PATIENT-CENTERED PRACTICE

**"He went out of his way"**

**Terry W. Wallace, M.D.**  
Charlotte Radiology  
NC, USA

**"She gave me a hug"**

**Judith A. Wolfman, M.D., FACR**  
Northwestern Medicine  
IL, USA

**"My heartfelt gratitude for your time, expertise, kindness, and human touch"**

**Mary C. Mahoney, M.D., FACR**  
University of Cincinnati Medical Center  
OH, USA

**"He empowered me"**

**Edward Melian**  
Loyola Medical  
IL, USA

**"I can not thank you enough for how thoughtful and considerate you were"**

**Olga R. Brook, M.D.**  
Beth Israel Deaconess Medical Center  
MA, USA

*"Dr. Brook, I can not thank you enough for how thoughtful and considerate you were of my complex situation and will always be grateful for how hard you worked... given all that I was up against."*

**"I can not thank you enough for how thoughtful and considerate you were"**

**Olga R. Brook, M.D.**  
Beth Israel Deaconess Medical Center  
MA, USA

**"Treated me like royalty"**

**Laura E. Danile, M.D., and Christina M. Chaconas, M.D.**  
Charlotte Radiology  
NC, USA

**"The competence displayed... exceeded any expectations"**

**Jennifer L.**  
Diversified  
CO, USA

**"He gave us confidence"**

**Muneeb Ahmed, M.D.**  
Beth Israel Deaconess Medical Center  
MA, USA

*"We especially want to single out and acknowledge the extraordinary skill, dedication and patient understanding of Dr. Muneeb Ahmed. He would not give up nor let us fail. He gave us confidence. He made himself available whenever necessary, including meeting us at the hospital on weekends. He was communicative and patient, and his smile, warmth and personal interaction helped."*

**"I feel blessed to be a patient of yours"**

**William T. Thorwarth, Jr., M.D.**  
Catawba Radiological Associates, Inc.  
NC, USA

**"He gave us confidence"**

**Muneeb Ahmed, M.D.**  
Beth Israel Deaconess Medical Center  
MA, USA

**"They treated us like family"**

**Salomao Faintuch, M.D., and Ammar Sarwar, M.D.**  
Beth Israel Deaconess Medical Center  
MA, USA

*"We are extremely grateful to all the people who came into our lives during that time... the unit doctors, staff, and nurses who went above and beyond what we have ever experienced.... To them all, we owe a debt of gratitude. They treated us like family, and we will never forget them."*

**"They treated us like family"**

**Salomao Faintuch, M.D., and Ammar Sarwar, M.D.**  
Beth Israel Deaconess Medical Center  
MA, USA

**"You sustained me with your compassionate care"**

**Nilza Kallos, M.D.**  
The Breast Health Center and Diagnostic Ultrasound  
FL, USA

# Radiology Calendar DECEMBER 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 [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: 12 noon Sherman Auditorium, East Campus (unless stated otherwise)
<b>1</b> 7:30 - 9:00 No conference (RSNA week)	<b>2</b> 7:30 - 9:00 No conference (RSNA week)	<b>3</b> 7:30 - 9:00 No conference (RSNA week)	<b>4</b> 7:30 - 9:00 No conference (RSNA week)	<b>5</b> 7:30-8:15 Leadership 2- Health Policy (Ammar Sarwar)  12:00-1:00 pm RSNA: No Grand Rounds
<b>8</b> 7:30 - 9:00 Mammo (TBD)  12:00-1:00 MRI Meeting [Ansin 2]	<b>9</b> 7:30 - 9:00 Mammo (TBD)  10:30-11:30 NMMI meeting [GZ-103]	<b>10</b> 7:30 - 9:00 Mammo (TBD)  7:15-8:00 US meeting [WCC-304A]	<b>11</b> 7:30 - 9:00 Mammo (TBD)	<b>12</b> 7:30 - 8:15 No conference-Interview Day (Chiefs)  12:00-1:00 pm Chiefs' Rounds (Drs. Dines, Khatani, Mehta, Pinar, Watts)
<b>15</b> 7:30 - 8:15 Tumor and Tumor-like conditions (Rafeeqe Bhadelia) [tumor locations – parenchymal, pineal, ventricular, CP angle, posterior fossa] 8:15 - 9:00 Neuro Cases (Kim Smith)	<b>16</b> 7:30 - 8:15 Tumor and Tumor-like conditions (Rafael Rojas) [tumor types – glial tumors including AA, GBM, PXA, oligo, ependymoma; subependymoma, DNET, PNET, ganglioglioma, central neurocytoma, meningioma, hemangiopericytoma, lymphoma, leukemia, myeloma, Schwannoma/neurofibroma, Lhermitte duclos] 8:15 - 9:00 Neuro Cases (Neuro Fellow (TBD))  8:00-9:00 IR Meeting [West Recovery]	<b>17</b> 7:30 - 9:00 Physics (TBD)	<b>18</b> 7:30 - 8:15 Neuro Cases (Neuro fellow (TBD)) 8:15 - 9:00 Neuro - topic to be determined (Rafael Rojas)	<b>19</b> 7:30 - 8:15 No conference-Interview Day (Chiefs)  12:00-1:00 pm Grand Rounds: <i>Moving Out of the Radiology Silo: All Things Contrast: A Quality Initiative</i> (Bridget O'Bryan-Alberts, RN, Nurse Mgr. and Suzanne Swedeen, RN)
<b>22</b> 7:30 - 9:00 No conference (Christmas week)	<b>23</b> 7:30 - 9:00 No conference (Christmas week)  10:30-11:30 NMMI meeting [GZ-103]	<b>24</b> 7:30 - 9:00 No conference (Christmas week)	<b>25</b> 7:30 - 9:00 No conference (Christmas)	<b>26</b> 7:30 - 9:00 No conference (Christmas week)  12:00-1:00 pm No Grand Rounds
<b>29</b> 7:30 - 9:00 No conference (New Year's week)	<b>30</b> 7:30 - 9:00 No conference (New Year's week)	<b>31</b> 7:30 - 9:00 No conference (New Year's week)	<b>1 January</b> 7:30 - 9:00 No conference (New Year's Day)	<b>2 January</b> 7:30 - 9:00 No conference (New Year's week)

*The Gallery* at WCC-304B

*Kevin Donohoe,*  
Nuclear Medicine & Molecular Imaging  
Physician and Photographer

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



*Thanks to Betsy Grady for allowing the rescheduling of her photos of her European travels so that Kevin Donohoe could share a chronological history of his seasonal holiday cards! He gives us great ideas for staying in touch with friends and family.*

## DEPARTMENTAL NEWS - DECEMBER GRAND ROUNDS

Friday, December 19th, 2014

12 noon - 1:00 PM • Sherman Auditorium

### Moving Out of the Radiology Silo: All Things Contrast: A Quality Initiative

**Bridget O'Bryan-Alberts, RN MSN** - BIDMC Nurse Manager Radiology

**Suzanne Swedeen, RN MSN** - BIDMC Quality Improvement Specialist Radiology



Bridget O'Bryan-Alberts has been our Nurse Manager since 2009. A 1982 BSN graduate of Georgetown University, she has worked in many disciplines, including radiology nursing for over ten years. She recently received her Masters in Nursing Administration from Simmons College.



Suzanne Swedeen came to us last year as the Quality Improvement Specialist for Radiology. She is a BSN graduate of U Mass Boston in 1983, and received a certificate in legal consultation from Northeastern University. Most recently Suzanne received a masters in nursing administration from Simmons College. Prior to her transition to radiology Suzanne

was a cardiac nurse educator here at BIDMC and clinical supervisor at Norwood Hospital.

### Moving Out of the Radiology Silo: All Things Contrast: A Quality Initiative

This initiative will provide a streamlined communication process for adverse contrast events in the department. Documenting in electronic systems that don't possess interprocess communication reliability, we face a daily challenge to effectively disseminate important information to both our patients and next care providers in a timely fashion. Tools to ensure standardized documentation practices and patient education materials were developed to facilitate a less arduous pathway in achieving this goal. Included in the presentation will be instruction in the use of OMR and the patient safety reporting and feedback system.



## NEW MRI

It is with great pleasure that the MRI Operations Committee is able to announce the recent successful replacement of our oldest magnet at Shapiro 4 with a brand new state-of-the-art MRI scanner. As some of you may remember, the Symphony scanner was initially installed 16 years (!) ago in the summer of 1998 and upgraded in 2003. The scanner got replaced last month by a 1.5T Aera scanner that has, and will, undoubtedly enhance the care we can provide to patients at BIDMC. Few of the new options that are available on the Aera include MR elastography to evaluate the stiffness of the liver in chronic liver diseases, "quiet suite" a silent scanning technique for some of our neuro MRI

sequences, "Freezit" a software package to improve body MRI by reducing patient motion artifacts and accelerate the acquisition of images, and "syngo WARP" an artifact reduction technique that can be used in patients with MR conditional implants.

This successful scanner replacement would not have been possible without the help and efforts of a large number of people working in our Department and the support of the hospital. With this, I would like to sincerely thank all of our employees who were involved in the project and the MRI managers and technologists for their patience and help with the recent implementation!

— Koenraad Morteale, MD





**2014  
Radiology:**

**"Many views with ONE VISION"**

**12th Annual Imaging Technologist Recognition Dinner**

The Inn at Longwood Medical Thursday Nov 6, 2014



Carl Nickerson presents the Team Spirit Award to the Mobile Ultrasound Team based at 1101 Beacon St:

**Suzie Konopka**  
**Suzanne Leavitt**  
**Caroline Comparone**  
**Andrea Garvin**  
**Lynne Coppens**  
**Judy Eames**  
**Christine Rando**



Olga Augustus presents the Championing the Cause Award to Breast Imaging Tech **Elizabeth Cretel** for delivering personalized and excellent care to our patients



Judy Farina presents the Stepping Up Award to Lexington/Chelsea Tech **Tracy Nadeau** for assisting with staff shortages and stepping up to cover in both Mammography and Dx Radiology



IR/INR Tech **Mary Cacciatore**, sitting with Beth MacQuilken and Patty MacDonald, was awarded an Everyday Excellence Award for effectively demonstrating the principles of quality and performance excellence every day!

Not shown: Chestnut Square Tech **Hannah McArdle** who also won an Everyday Excellence Award.





Bernie Kennedy, Olga Augustus and Donna Hallett present the Neutron Dance Award to NMMI Manager **Dace Jansons** for 35 years of outstanding service!



Bernie Kennedy presents an Everyday Excellence Award to a stand-in for US tech **Ellen Howe** for effectively demonstrating the principles of quality and performance excellence every day!



Betsy Grady presents the Human First Award to Dx tech **Josmar Silva** for providing compassionate care and always putting patients first!



Jeff English presents an Everyday Excellence Award to NMMI tech **Aaron Thurston** for effectively demonstrating the principles of quality and performance excellence every day!



Bernie Kennedy presents the Deborah Walsh Award to Dx tech **Jeffrey Heinrich** for demonstrating professionalism, mentoring, compassion, and a commitment to quality patient care!



Thanks to Tim Parritt for arranging this photo of CT Tech **Jason Chagnon** who was unable to be there that evening to receive the Atlantis Award for staying cool under pressure while in challenging situations!

Not shown: MRI Tech **Krista Wolforth** who was awarded the Atlantis Award for staying cool under pressure while in challenging situations!



Bernie Kennedy presents the Green Award to MR tech **Karen Platcow** for her commitment to environmentally sustainable work and practices!



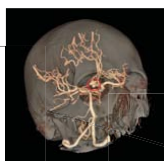
Bill Hallett presents an Everyday Excellence Award for Needham tech **Nancy Lohnes** for effectively demonstrating the principles of quality and performance excellence every day! *Accepting for Nancy is Lillian Likos.*

# 2014 Radiology: "Many views with ONE VISION"

BIDMC Radiology dedicates the entire month of November to recognizing the vital work of our Imaging Technologists and the important role medical imaging plays in patient care and healthcare safety

## Computed Tomography

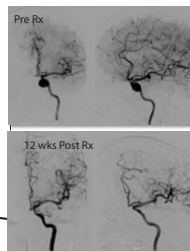
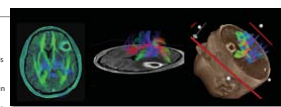
CT Angiography (CTA) is a technique used for injecting IV contrast and scanning to image peak vessel enhancement. CTA is routinely used to evaluate the aorta for dissections and aneurysms, solid organs for delineation of blood flow, lower extremity run offs for vascular integrity and the head and neck for blockages and aneurysms. A combination of fast contrast enhancement, quick table/patient movement through the gantry and thin detector selection generates high quality volume data sets that can then be transferred to an advanced workstation. Volume data sets can be processed to view only the vessels which helps localize and identify pathology for the interpretation of the CT examination. This form of scanning provides rapid diagnosis in the emergency room setting where the need for trauma and neurological evaluation is critical to patient treatment.



## MRI

Diffusion tensor imaging: This technology is currently used in the pre-surgical mapping of brain tumors.

Axial T1 weighted image with contrast, DTI tractography and 3-D volume rendering showing a ring enhancing metastatic lesion causing deviation of the association (green), commissural (red), and corticospinal tracts (blue).



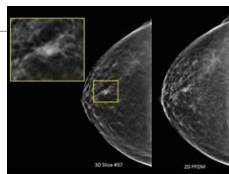
## Interventional Neuroradiology

The Pipeline device (used in these images) disrupts flow to a brain aneurysm allowing for endovascular treatment for previously untreatable aneurysms nonurgently.

Flow Diversion is a technique used to treat large or giant wide-necked brain aneurysms in which the device is placed in the blood vessel rather than in the aneurysm sac. The Pipeline device restores original, natural blood circulation while providing permanent long-term occlusion. During the procedure, the Pipeline Device is braided cylindrical mesh is implanted across the aneurysm neck. This slows the flow of blood into the aneurysm, which allows for the diseased blood vessel to heal.

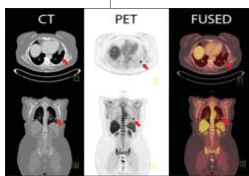
## Mammography

offers state-of-the-art digital imaging that includes a new technology in breast imaging - digital breast tomosynthesis (DBT), sometimes referred to as 3-D mammography. This new technology obtains multiple images of the breast and reconstructs them into "thin slices" rather than a single image. This may improve the detection of small cancers and has been shown to reduce the number of patients recalled for more imaging due to overlapping normal tissues also known as false positives. The 3-D study still uses breast compression, just like the routine 2-D study, and takes about 10 secs longer per image to perform. While it increases radiation dose to the breast tissues, the total radiation dose remains below federal standards for mammography. Both 2-D and 3-D technology are used for our screening patients and 3-D technology is available on one of the three machines we use for screening mammography. The 3-D technology is performed in rotation with our other 2-D machines and is also used for research purposes.



## Nuclear Medicine & Molecular Imaging

PET-CT is primarily used to image many different types of cancer, and it is now seeing some application in cardiac and Alzheimer's imaging. A PET-CT scanner is a hybrid of a nuclear medicine gamma camera and a CT scanner housed together in one footprint. The PET side utilizes nuclear medicine's higher sensitivity to detect activity in cancerous cells. Radioactive glucose is injected intravenously and collects more in cancerous lesions or masses that look like "hot spots" on the scan. The CT side utilizes a very low dose CT scan to supplement nuclear medicine's poorer anatomical localization. Since the scans are done with the patient in the same position and virtually at the same time, the two images can be dynamically merged together in a process called "fusion" that allows the physician to simultaneously utilize the strengths of both disciplines.



## Diagnostic Radiology

In Diagnostic Radiology, we use state-of-the-art digital equipment to produce quality images of internal structures such as bones, tissues and organs. X-rays are useful in identifying fractures, soft tissue swelling, foreign bodies, tumors, blockages, etc. Diagnostic Radiology uses a digital image capture device which allows us to view images instantly. We also perform a variety of other studies such as fluoroscopy exams which include barium swallows, barium enemas, arthrograms and much more. Diagnostic imaging allows the radiologist to obtain useful information in a timely manner to accurately provide the patient with almost immediate results.



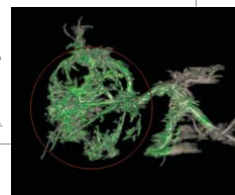
## Ultrasound

Ultrasound, also known as sonography, is a diagnostic medical procedure that uses high-frequency sound waves to produce dynamic visual images of structures within the body. It can be used to examine many parts of the body. For example, the abdomen, breast, female reproductive system, prostate, heart and blood vessels. Sonography differs from x-rays in that it is a radiation-free imaging modality. The images produced during an ultrasound often provide valuable information for diagnosis and treating a number of diseases and conditions.



## Interventional Radiology

The Division of Interventional Radiology and the Division of Nuclear Medicine and Molecular Imaging in the department of Radiology at Beth Israel Deaconess Medical Center have started a program in trans-arterial Yttrium-90 (Y-90) radioembolization as outpatient therapy for both primary and metastatic liver tumors. Y-90 radioembolization is currently FDA approved for treatment of hepatocellular carcinoma and metastatic colorectal carcinoma. Other malignancies that may be treated include cholangiocarcinoma and metastatic neuroendocrine, melanoma, renal cell, and lung cancers.



November is Imaging Month

**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!

## CT

We have recently had notes of appreciation coming in from our Customer Survey Kiosks, Physician Leadership and Letters to the President. All taking the time to recognize CT staff for extraordinary care, skill in imaging and creating a positive experience while at BIDMC. Great work Angela Blaise (not shown), Rich Munro, Carlos Silva, Jessica Butaro, Jae Kim, Michael Jones, Kristen Hill (not shown), Jaime Haugh (not shown), and Kathy Sullivan!



Rich Munro



Carlos Silva



Jessica Butaro



Jae Kim

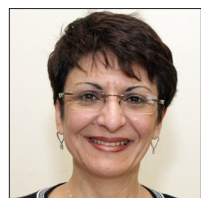


Michael Jones



Kathy Sullivan

## BREAST IMAGING



**Elena Shimonov:** we recognize your continued support and commitment to the team and our patients, your ongoing flexibility in making last minute adjustments to your personal schedule is commendable. A recent notable event was you calling in on a scheduled day off to see how we were doing, on hearing that an unplanned event meant that staffing was stretched beyond capacity of our goal in providing matched coverage to the ultrasound rooms you promptly offered to come in.

## KUDOS - BREAST IMAGING (cont'd)

**Karen Dowie** (not shown): In recognition of your continued support and commitment to the team and our patients, with the recent staffing challenges you have ensured that patient care remains seamless for those requiring combo appointments, on occasion you have worked through your shift to ensure that a "hand off" is not needed ensuring continuity of care for a patient in the midst of an invasive ultrasound guided breast procedure with whom you have created a bond.



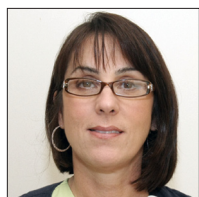
**Cynthia Smith:** In recognition of your continued support and commitment to the team and our patients. You continually have demonstrated your ongoing flexibility to support the staffing demand associated with the recent staffing challenge notably affecting breast ultrasound coverage, you have worked with me and made planned

and unplanned adjustments to your personal schedule so as to be available to back fill the staffing needs for this technical skill set, which continues to be commendable.



**Constance Mulcahy:** In recognition of your support and commitment to your co-workers and our patients, by seamlessly adjusting to the FTE shortage at the same time excelling in multi-tasking in your role as the lead for the departmental QC program for which we received a successful ACR outcome. You are also a valued and

knowledgeable resource for members of the QC team and rotating residents.



**Dorothy Sands:** You are a valued and knowledgeable resource to our internal and external customers of the diagnostic workflow. You are able to multi-task successfully while working diligently alongside your coworkers to ensure that patient schedules are met. A recent patient appreciation letter commended you for your excellent customer service

and imaging skills for accommodating her imaging needs as an "add on" to a busy schedule.

## KUDOS - A New addition to the BIDMC Radiology Community



Kate and I are excited to introduce you to **Sophia Connolly Koles**, born 12/1/14 at 12:37 pm, weighing in at 8 lbs 12 oz and 19.25 inches. Everyone is healthy and doing well.

- Caitlin Connolly, MD  
3rd yr resident

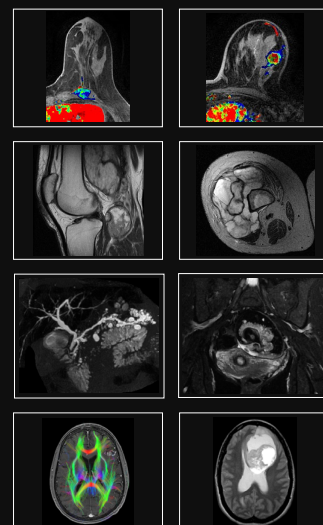


**HARVARD**  
MEDICAL SCHOOL



**Beth Israel Deaconess**  
Medical Center  
Department of Radiology

## Clinical MRI 2014 From Structure to Function



Wednesday - Friday  
**December 17 - 19, 2014**  
Boston Marriott Long Wharf  
**Boston, MA**

### Guest Faculty

Mauricio Castillo • Emmanuel Kanal  
John Leyendecker • Neel Madan  
Steven Poplack • David Rubin • Jorge Soto

### Course Co-Directors

Mary Hochman • Koenraad J. Morteale  
Rafael Rojas • Priscilla J. Slanetz

Earn Up To 20.50 AMA PRA Category 1 Credits

## Case Report: A first-hand experience of Radiology's contribution to my patient care



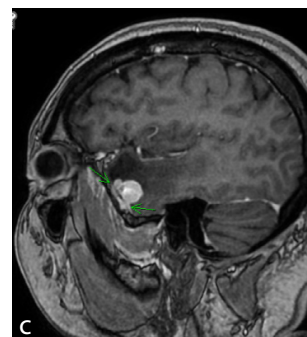
*As a medical editor at BIDMC since 1997, I have spent years helping to present and publish the advances and accomplishments in Radiology but recently, I experienced first-hand the essential contribution of Radiology to the treatment paradigm. In Oct., I was rushed to the ER with a seizure and was awed to see the role of imaging (2 CTs, a chest x-ray and 5 MRIs) required for Neurology and Neurosurgery to successfully treat my condition. Thanks to Rafael Rojas for helping explain and interpret my case history and to my surgeon Ekkehard Kasper, Neurology attending Penny Greenstein, Brain Tumor Center Director Eric Wong, and Neuro nurse practitioners Julianne Bloom and Loretta Barron!*

*- Donna Wolfe*

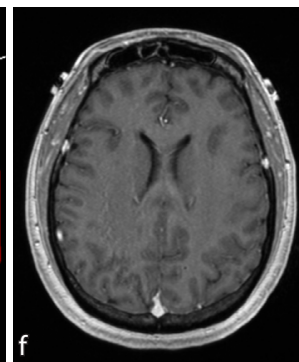
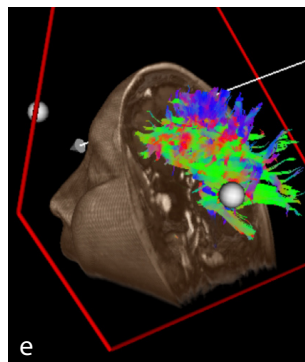
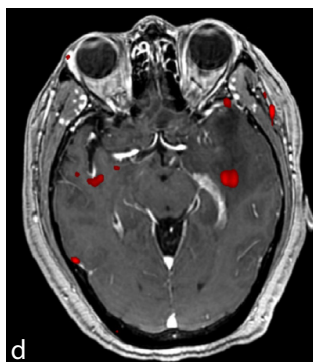


*Thank you all for your support and best wishes!*

An initial head CT (a) showed an area of edema in the left temporal lobe with minimal mass effect which was concerning for an intracranial tumoral lesion so the radiologists (Rafael Rojas and Drew Colucci) recommended an MRI of the head with contrast to better characterize the lesion. The following MRIs (b,c) showed the left temporal extra-axial enhancing lesion which was responsible for the edema, attached to the dura.

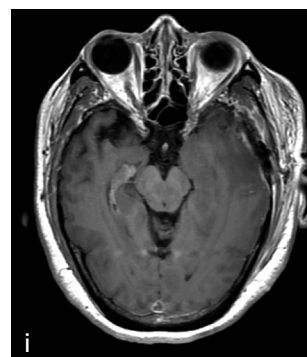
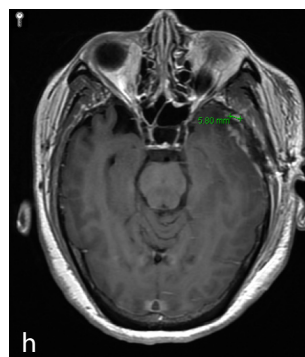
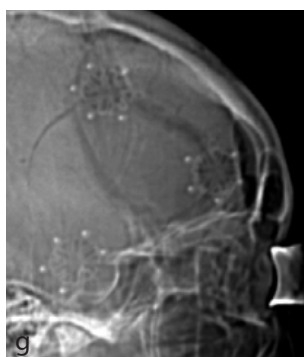


Due to the lesion's location in an eloquent area, the neurosurgeon (Dr. Ekkehard Kasper) ordered a functional MRI (d) to determine if the lesion could be removed without damage to the language areas. At the same time a 3D rendered DTI (diffusion tensor imaging) Tractography (e) was created to visualize the deviation of neural tracks adjacent to the edema. (A breast MRI was also ordered to rule out any source of potential metastatic disease.)

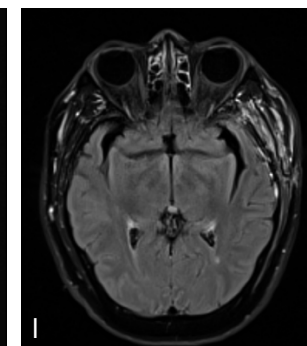
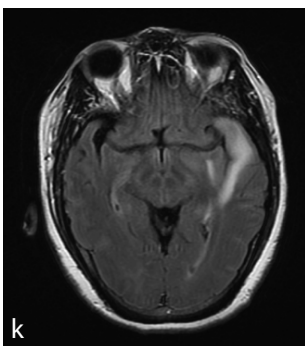
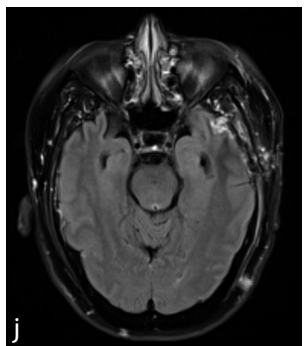


A repeat MRI (f) was performed with fiducial markers to establish coordinates of the lesion for GPS mapping for the surgeons. Characterized as a possible meningioma, the neurologists then contacted neurosurgery to schedule a resection (and biopsy) given its size and accessibility.

A presurgical contrast CTA also showed more extensive vascularization of the tumor which was invaluable for complete resection. A post surgical follow-up CT scan demonstrated in the scout view the surgical approach, consistent with left-sided craniotomy.



I was privileged to see the three small plates used to reattach the bones after the surgery (g). A post-surgical MRI (h,i, J, K) was also performed within 24 hours to establish a new baseline image and also demonstrated the resection of the mass with mild dural enhancement which needs to be followed to rule out any potential residual activity or recurrence.



Finally, a one-month follow-up contrast MRI (l) confirmed no evidence of recurrence and decreased edema and *showed that my brain was back to normal* although follow-up MRIs are in my future in keeping with protocol.

k., l. Same sequence Pre and Post surgical (1 month follow-up) shows significant decrease in edema

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